

Making boundaries, disputing land: Frictions, palimpsests, and relational injustices in Central Kalimantan, Indonesia

EPE: Nature and Space

1–24

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DOI: 10.1177/25148486261442727

journals.sagepub.com/home/ene

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Abstract

Drawing boundaries around land and forest involves diverse actors, technologies, and claims. Legal tools and territorial strategies function to control access, regulate movement, enable land investment, assert ownership, maintain customary relationships, and manage conflicts. In three ethnographic stories from Central Kalimantan, Indonesia, involving state forestry officials, plantation companies, and local communities, we conceptualise boundary making as an active and relational process mediating what type of land and resource use is sanctioned, whose knowledge and claims are recognised, and who benefits and bears the consequences of multiple and interacting forms of intervention. The concepts of friction and palimpsest provide a nuanced framework for examining land disputes and relational injustices in processes of frontier transformation. We argue that boundary making is an entry point for attending to forms of authority, exclusion, resistance and continuing negotiation of relationships, and relational injustices that are latent and less visible on the surface of interactions.

Keywords

Boundaries, land claims, resource frontiers, environmental governance, relational justice, tropical peatlands, Indonesia

Introduction

This paper examines boundary making in Indonesian land and resource claims. Turning land to “productive” use ‘requires regimes of exclusion that distinguish legitimate from illegitimate uses and users, and the inscribing of legal and material boundaries through devices such as fences, title

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deeds, laws, zones, regulations, landmarks and story-lines' (Li, 2014: 589). Drawing boundaries around land and forest both results from and shapes such regimes (Blomley, 2003; Rasmussen and Lund, 2018). Diverse actors—colonial and state authorities, corporations, civil society organisations, international agencies, and local people—construct, ignore, enforce, erase, and negotiate boundaries. Territorial strategies and managerial techniques (re)produce inequalities while opening avenues for resistance and alternative forms of engagement in land and resource claims.

Frontier studies examining these strategies focus on state borders, cross-border movements, economic expansions, and social and political upheavals (Eghenter, 2007; Eilenberg, 2012). The concept of 'borderlands' directs attention to the edges of state control and state efforts to govern and manage resources, territories and people. We attend to how frontier processes are entwined with histories of colonisation, land disputes, and resource extraction (Barney, 2009; Blomley, 2003; Cons and Eilenberg, 2019; Peluso and Vandergeest, 2001; Rasmussen and Lund, 2018; Vandergeest and Peluso, 2015). In Indonesia, as elsewhere in Southeast Asia, different and overlapping modes of governing and constructs of 'land' and 'resources' intersect with state forest claims, nature commodification, extractive industries, and customary land tenure (Kunz et al., 2017; Lounela, 2021; Wadley, 2003). This work critically addresses boundary making and what we call relational injustices—forms of exclusion and harm that are often latent and less visible on the surface of interactions.

How and why certain actors and claims are recognised or excluded from land's life-giving affordances demands critical scrutiny (Li, 2014: 592). We draw on Li's (2007: Chap 4) discussion of 'rendering technical'. This discussion focuses on managerial techniques that separate technical from contingent knowledge. It also focuses on legal instruments and tools that flatten and incorporate pre-existing and heterogenous land tenure and livelihood practices suited to local forest, riverine, and agricultural systems. Goldstein and Yates (2017: 211) comment that land is not a stable commodity at the ready for investment. 'Rendering land investable' (Goldstein and Yates, 2017; Li, 2014, 2017b) focuses on active processes of changing land's value into new forms of property, labour, and corporate investment (Blomley, 2003). These processes use legal tools to demarcate land for infrastructure, settlements, forest management, plantation and agricultural development, resource extraction, ecosystem restoration and conservation. Such rendering and territorial demarcation characterise the modalities of speculative investment, resource rushes, land grabbing, and inequalities examined in the vast literatures on global environmental governance and resource frontiers (Borras and Franco, 2013; Fairhead et al., 2012; Hall et al., 2011, 2015).

Environmental degradation, repeated disasters, and climate change are adding to existing insecurities and inequalities in Indonesia's carbon-rich peatlands and forest frontiers. Complex rural marginalisation and livelihood restrictions—such as forbidding swidden burning practice (Afiff, 2021)—have intersected with loss of land, income and food insecurities. Many people have directly lost land and livelihoods, or their land has been incorporated on adverse terms for economic activities (McCarthy et al., 2022). In that frontier context, we ask, how do local and Dayak Ngaju communities perceive, make, encounter, and contest boundaries in land and resource claims? In three ethnographic stories from Central Kalimantan, involving state forestry officials, plantation companies, and local communities, we highlight how people strategically interpret, utilise, and resist boundary making and its implications for their land and livelihoods.

Our focus on boundary making attends to contextual complexities, human-nature relations, ontological intersections surrounding land, historical issues, and relational injustices. Tsing's (2005) concept of friction characterises awkward, unstable, and unequal interactions and global encounters—boundary making is productive in forging alliances, negotiating differences, and managing conflicts, while laden with inequalities. We aim to show the layered complexity of claims using the palimpsest concept. From archaeology, a palimpsest is a landscape, manuscript, or piece of material bearing traces of imperfectly effaced marking or earlier writing beneath superimposed

text. This concept has been used to discuss translation practices in environmental anthropology (West, 2020), historical erasure and simplification of identities from colonial and state formations (Balaton-Chrimes, 2021; De Sousa Santos, 2006), and overlapping land and resource claims (McCarthy et al., 2012). We return to this palimpsest concept in the discussion section and its relevance to historical erasures and underlying problems of justice.

Boundary making and frontier transformation

Extensive scholarship has examined territorial control from Dutch colonisation to Indonesian state formations and resource control strategies (e.g., Lucas and Warren, 2013a; McCarthy et al., 2016; Peluso and Vandergeest, 2001; Resosudarmo et al., 2014). These strategies assert state power and regulatory control, often aligning state and corporate interests for plantations and resource extraction (Borras and Franco, 2013; Goldstein, 2016; Hall et al., 2015; Lamb et al., 2017; Leach et al., 2012). This has enabled large infrastructure and food estate projects, mining and plantations to expand into frontier space, while establishing environmental regulations and forest management and conservation zones (Li, 2014, 2017b; Peluso and Vandergeest, 2001; Vandergeest and Peluso, 2015).

Legal and material boundaries often legitimise state control through technologies and devices of governance in mapping and claiming of ostensibly ‘uninhabited’ peripheries or borderlands (Peluso and Vandergeest, 2001; Vandergeest and Peluso, 2015). These boundaries serve to delineate territory as bounded legal space, asserting state power, regulating movement, mediating conflicts, and legitimating claims (Rasmussen and Lund, 2018). Understanding the relations of territory and space as an active process (Elden, 2010, 2013) and a complex capability with embedded power and claims (Sassen, 2013) informs our approach to boundary making.

Through maps, survey instruments, and permits, local and customary rights become subject to state laws and regulations. Colonial and state maps demarcating ‘political forest’ have erased customary land tenure to establish state forest zones while justifying and enabling territorial control and extractive industries (Arnold, 2008; Lucas and Warren, 2013b; Peluso and Vandergeest, 2001; Vandergeest and Peluso, 2015). This includes defining land as ownable property and state forest boundaries, diverging from customary land tenure’s often porous and natural boundaries (Chao, 2017; Li, 2014). These tools and instruments have unequal impacts yet are often overlooked in assessing how states control and govern land and territories (Blomley, 2003; Fletcher, 2020). For example in Central Kalimantan, Indigenous cartographic-legal strategies have resisted state territorial claims (Astuti and McGregor, 2017; Kurniawan and Rye, 2024; Rye and Kurniawan, 2017), while mapping and satellite fire detection have been used to enforce peatland burning restrictions and criminalise smallholders (Affiff, 2021).

Drawing from this literature, we conceptualise boundary making as an active and relational process through which certain types of knowledge, actors, and claims are recognised while others are excluded. Borders and boundaries¹ are understood—not merely as dividing lines—but as practices and performances within scalar politics and relational networks (Novak, 2016). We emphasise this performativity and relationality: territorial strategies and claims are performed and in a constant state of becoming (Brambilla, 2015; Sohn, 2016). We approach boundary making as a continuous and active process, focusing on tools and practices (the active doing) of land and resource claims (Blomley, 2003; Li, 2014; McCarthy, 2013).

Our conceptualisation of boundary making emphasises the relational character of justice and need to reimagine legal tools (Bava, 2022; Casanovas and Poblet, 2008; Seck, 2019; Wielsch, 2013). A relational understanding of justice is interactive and processual in overlapping modes of governing and continuous enactment and relational encounter (see examples in Kusumaningrum et al., 2022; Lake, 2018). Attending to the establishment, modification, enforcement, and dismantling of borders (Eghenter, 2007) and boundaries (Lounela, 2021; Wadley, 2003) reveals such

encounters—how locally negotiated modes of governing and relationships become displaced and altered. It also reveals how these processes both produce and justify relational injustices in land and resource claims.

Rupture and transformation after the ‘mega rice project’

Processes of frontier transformation, occurring in Central Kalimantan’s tropical peatlands, are an intense historical conjuncture of climate change, forest conservation, environmental degradation, and resource extraction.² This region is characterised by failed projects, rapid changes and instabilities, and competition between state forest management, biodiversity conservation and climate change interventions, local livelihoods, oil palm plantations and extractive industries.

Dense peat-swamp forests were first commercially logged under concessions during the 1970s–1980s then cleared in the 1990s for the Mega Rice Project. This failed state engineering project attempted to convert more than a million hectares into productive agricultural use. McCarthy (2013) describes a series of spatial redefinitions through state maps and classifications for flattening and incorporating customary land tenure and livelihoods as abstract space (a form of organised forgetting in Blomley, 2003: 128). Under the Suharto regime, World Bank sponsored transmigration programs (Fearnside, 1997) moved poor and landless farmers from densely populated centres to ‘remote’ islands including for the Mega Rice Project. State planners, forestry officials, and experts from Java envisaged modern agricultural practices and transmigrant settlement and labour for the project. Roads, settlements and drainage canals were constructed, and forest clearance destroyed customary land tenure and swidden agricultural systems (Afiff et al., 2010; McCarthy, 2013).

Peat ecologies were unsuitable for industrial rice production. After the project was abandoned, a rush of logging extracted valuable timber from the interior, followed by the first of many devastating fires. This coincided with rapid decentralisation and oil palm expansion. From the early 2000s, District Heads (Bupati) needed to generate revenue and develop the region, making oil palm concessions the most desirable option for degraded peatlands. Multiple location permits (*izin lokasi*) were issued in quick succession. Each location permit between 10–20,000 hectares, but sometimes smaller in size, rendered ‘location’ (*lokasi*) as plots for corporate land investment (Li, 2014). These permits provided the legal basis for oil palm companies to commence land acquisition for plantation establishment. After more than two decades, the licencing approval process remains unfinished with ongoing attempts to legalise illegal plantations (Astuti et al., 2022).

Oil palm expansion after the Mega Rice Project distributed advantages to investors while reducing local land access and livelihood options (Sanders et al., 2019). This has coincided with international funding for conservation of orangutan habitat and new mechanisms like Reducing Emissions from Deforestation and Forest Degradation (REDD+). Where we conducted fieldwork in Kapuas District, the Australian Government funded REDD+ demonstration project, the Kalimantan Forest and Climate Partnership (KFCP) ended in 2014 (Lounela, 2015; Miles, 2020; Sanders et al., 2017, 2020). The following year, massive fires devastated local environments emitting vast quantities of greenhouse gas emissions and severely impacting people’s health and livelihoods.

Governmental responses to the 2015 fires have added more territorial projects that progressively reorder human-nature relations (Lounela, 2021). New restrictions on peatland burning and surveillance technologies have impacted livelihood practices and contributed to local fear of practising swidden and rice cultivation using burning techniques (Afiff, 2021; Astuti, 2020; Astuti et al., 2022; Goldstein, 2020; Schreer, 2024). Meanwhile, pro-business and environmental deregulation reforms, new food estate projects, and speculative investment in carbon markets contain promises of food security, economic prosperity, and revenue from emissions reduction.

The concept of ‘rupture’ (Mahanty et al., 2023) is here relevant to the Mega Rice Project and its unfolding consequences. Rupture conveys intense and adverse episodes of disturbance and

transformation, and how cumulative displacement and material deprivation (slow violence) are exposed during ‘crisis’ moments like the 2015 fires. The southern part of Kapuas District continues to be one of the worst affected sections where forest gardens were bulldozed for transmigration settlements and drainage canals cut into the peatlands, followed by massive fires. Climate change is amplifying disasters and health and food insecurities for local people within and around the Mega Rice Project who navigate multiple interventions, disruptions, and land disputes. This is locally expressed in diminishing land and loss of forest; difficulties finding local plants, animals and fish; declining rubber prices and food staples; precarious livelihoods such as logging and gold mining; patterns of movement to find work and income generation; and difficulties accessing capital for farming and supporting children’s education within traditional villages. Memories of arrests for illegal logging, confiscation of equipment and dismantling of fish traps, among other events, have influenced concerns about conservation rules and the extension of state authority into local lives and livelihoods.

The promises and anxieties of modern industrial schemes (Lounela, 2019; Lounela and Wilenius, 2025) are locally embodied in resource rushes and gold mining activities (Schreer, 2020). Those involved in making boundaries and disputing land are not passive victims nor singular actors who have shared social aims. We attempt to do justice to the strategic endeavours, difficulties, and dilemmas characterising their interactions.

Research methods

Three stories of boundary making are primarily drawn from the first author’s doctoral fieldwork (2013–2015) in Central Kalimantan. The stories have been developed through collaborative discussion and multitemporal research (Aijazi et al., 2021; Howell and Talle, 2012) with the second author at repeated time intervals (2021–2025). This fieldwork focused on locations of conservation and climate change mitigation projects in proximity to oil palm plantations (Sanders et al., 2017, 2019). Methods included: (i) in-depth interviews with government, corporations, civil society and communities; (ii) document review (regulations, permits, and land documents); (iii) listening and observation of livelihood practices and environmental histories with Dayak Ngaju people—an ethnic group with shared histories, languages, and customary identities along rivers and forests (Klokke and Mahin, 2012; Riwut, 2007).

People locally identify by place/river names as ‘Dayak Kapuas’ in the story locations. The first story focuses on forest boundary determination in a remote village. Most residents are descendants of several families who travelled upriver from the district capital, Kuala Kapuas, to escape the constraints of Dutch colonial rule. This is a far less disrupted context (environmentally and socially/culturally) than the two stories of oil palm expansion characterised by rapid changes and conflicts.³ While we engaged with transmigrant communities in the location of the second story, we primarily focus on Dayak Kapuas responses to boundary making.

In developing the analysis and conceptualisation, we draw insight from collaborative discussion with the third author’s research on climate justice and environmental governance (Pascoe et al., 2019; Pascoe and Minnegal, 2023; Pascoe and Sanders, 2025) and the fourth author’s research with Indonesian customary communities on agrarian justice and customary rights (Mulyani, 2023; Mulyani and Sanders, 2023). Our research is grounded in political ecology, legal geography, and environmental anthropology to explore the diffuse and latent consequences of boundary making and relational injustices in land and resource claims.

Three stories of boundary making

Story 1: Plotting the lines on state forest maps: Removal of concrete markers

Throughout Indonesia, there are major discrepancies between national forestry maps, designated forest boundaries, village administrative boundaries, and customary land tenure (e.g., Kunz

et al., 2017 from Sumatra). State forest maps during the Suharto regime claimed around 120 million hectares—more than half of Indonesian territories— as ‘forest area’ (*kawasan hutan*) under centralised authority. This territorial strategy was based on Dutch maps and followed bureaucratic steps under the Indonesian process known as ‘forest land use by consensus’ (Tata Guna Hutan Kesepakatan – TGHK) (Contreras-Hermosilla, 2005). These colonial legacy maps are substantially inaccurate on the ground. This situation has created many conflicts and ongoing processes to determine forest boundaries (*penetapan tata batas hutan*) while forestry regulations are selectively enforced.

The following narrative is drawn from conversations in early 2015 between the second author and small groups of villagers talking in local Ngaju language. This village is situated in a remote section of the Mega Rice Project where remaining forest has been zoned for protection and utilised for internationally funded orangutan conservation. In this story, forestry officials had recently travelled upriver for several hours to survey and place concrete markers to establish state forest boundaries.⁴ The concrete markers revealed the proximity and overlap of forest boundaries with local gardens and livelihood activities. Bapa Talong⁵, an elderly man and customary leader (Mantir) expressed anger about this incident:

We are so angry at the Forestry Department ... They came here and suddenly placed markers of the forest area ... there was no consultation with the community about this. They even didn't report to the Village Head (Kepala Desa) about their plan to place the markers for their conservation area ... They [the forestry representatives] are all Javanese people. They made their own map without consulting the community and suddenly they placed markers made of concrete. These markers were placed ... in the middle of community rubber gardens. They claimed the land based on the map from the national government without really thinking or considering who lives in the area.

This incident prompted a series of phone calls and communications between the village government and forestry officials:

The Head of the Village was really angry talking to the Forestry Department people on the phone. He and we – the community – decided to remove all the markers, and we did. After that issue, [the forestry representatives] came to this village and conducted a meeting with us. We all disagreed with [them] that we don't want the Forestry Department to claim our gardens as their area. We don't care about forest management if they do their activity 10 km away from village area, that's fine. But, if they do activity inside our village and gardens, that's a big problem.

The decision to remove the markers had followed intensive communication and warning of potential conflicts. Bapa Talong recalled:

I asked Pak Agus [forest manager] whether he understood community rights or not. I asked him whether he understood the concept of 'rights' in Java. If people in Java understand about rights and also try to protect their rights, so do we. He was quiet and said that: "We just do our job." I said: "Luckily you didn't get killed or hit because the community got angry ..."

We said to him: "Because you are Javanese, don't make yourself more superior than us and not respect us. We were born and have lived here before Indonesia gained its Independence." [Adding] "You are more educated than me, but I want to ask you one thing, have you ever seen protected forest with no trees but grass? What can you protect from the grass? We understand what type of vegetation needs to be protected. We need to protect the real forest because we understand the function of forest for our environment. It provides services to supply clean water and prevent erosion and so on, but you let the companies –

logging in particular – to cut them down. We become the victim of your policies, meanwhile we are affected by the impacts of the companies' activities." Pak Agus said to me: "I also don't understand, and I just do my job and follow the government instructions." I replied: "You are an educated person, and you know how to address things that are not right. This sort of thing will cause conflicts."

This remote village is relationally distant from Jakarta and regional capital cities where government forestry offices are located. While the concrete markers could be removed without disrupting daily activities, they were legally and symbolically important to assert state authority and displace customary relationships. In removing the markers, villagers challenged the assertion of state authority through managerial techniques and forest boundaries.

Would their livelihood activities be permitted in the future? For those whose lands were enclosed, this had uncertain future implications for their simultaneous efforts to draw boundaries around customary land through making land documents (Surat Keterangan Adat – SKTA). These customary land documents provided local ownership proof and were enmeshed in the efforts of Indigenous social movements to control land and achieve state recognition of customary claims (Kurniawan and Rye, 2024). Thus, the markers were entangled with local identities and bordering practices. Relational injustices were produced in placing the markers and failing to notify village government in advance.

Bapa Kuting, another elderly man, narrated how similar and repeated incidents added to feeling powerless, trapped or surrounded by conservation rules and governmental restrictions:

Why is [our village] highly affected by the conservation in comparison to other villages? Our land is mostly claimed as conservation area. We are not allowed to cut down trees because of the conservation ... The government can only claim this area for this and that, but they don't give any solution for the community, in particular for our livelihood ... We are powerless because [forestry authorities and conservation rules] are supported by the law and regulations. We don't have rights because of the government. We understand that government has rights but we also have rights. We just want to protect our own rights and customary (adat) rights.

While feeling powerless, this story coincided with land use negotiations involving forestry officials and participatory mapping conducted during the final year of the KFCP's implementation. This mapping identified the overlap of state forest boundaries, livelihood activities, village boundaries, and customary land (Figure 1). These are continuing negotiations with state planners and forestry officials, and removing the concrete markers was an act of refusal and site of protest against historical erasures and forest boundaries.

Story 2: At the edges of, and in the middle of an oil palm plantation: 'Hidden' protest

Plantation infrastructures incorporate and erase prior relationships and claims. Following decentralisation, district officials selectively relied on maps to issue location permits to oil palm corporations. The maps and permits visualised an abstract space to fill with plantations—thus rendering land investible. These erasures intertwined with the values, interests, and aspirations of those seeking to develop the 'abandoned' Mega Rice Project, providing legal, economic, and moral justification for oil palm expansion.

In Kapuas District, the first location permit was issued in 2003. Over the next decade, several hundred thousand hectares of former swidden and smallholder agricultural land were acquired and converted to oil palm plantations. The company named on the location permit became the legal entity authorised to directly negotiate with communities for land acquisition. Thus, the permit selectively recognised prior relationships: oil palm companies acquired the land documents in



Figure 1. Village land use and state forest boundaries. Photo by Author.

processes of making agreements, paying compensation, clearing land, building roads, and planting palm trees. Companies utilised the acquired documents to gain bank loans and progress the licensing approval process—and to operate in a space of legal ambiguities (Sanders et al., 2019).

Acquisition and land clearing where we conducted fieldwork had been rapid and disorderly using tactics of pressure, persuasion, intimidation, and violence. Both the remaining transmigrant and Dayak Kapuas farmers felt deceived to hand over their land documents for promised jobs and economic benefits. Tactics had involved verbal promises, forged agreements to obtain nationally registered land ownership titles (Sertifikat Hak Milik – SHM) from transmigrants, and hidden mechanisms to acquire abandoned SHM documents from district government officials. Several people told us that Dayak Kapuas farmers had received more compensation for customary land documents (SKTA), which are issued and registered locally, because of their historical ties to land in comparison to transmigrants' land titles (SHM). Manipulation and collusion had occurred in forging signatures, while many compensation payments were made after land clearing and planting had already occurred.

Donald, a middle aged man narrated his memories of illegal land clearing and intimidation:

In 2008, we first heard about the plantation company when we checked our land [and it had been cleared], and when we checked the company only had obtained the permit for the nursery and not planting the palm trees. It's wrong because the District Head (Bupati) claimed our land... even though we tried to protest to the Village Head (Kepala Desa) it didn't help because the Bupati had the authority, and when we tried to protest, the company always brought the police to intimidate us and make us afraid. Some people didn't want to raise their voice because they were afraid of being sent to jail.

Dayak Kapuas farmers like Donald expressed feeling deep injustice and sometimes remarked that transmigrants had received government assistance/training and land titles (SHM) while their

forest and swidden agricultural systems had been destroyed. Their expressions of loss and harm strongly related to customary land and ancestors (e.g., grave markers were destroyed/incorporated in plantations). Despite differences, transmigrant and Dayak farmers nonetheless described their situation was “the same” when narrating land clearances, manipulations, and power disparities between them and companies with government and police/military backing.

Over the subsequent years, most people who lost land and livelihoods had accepted monetary compensation while waiting on promised jobs and benefit sharing. More maps and roads internally divided the plantation zones. Li (2014: 589) observes that land is ‘not like a mat: you cannot roll it up and take it away’. Nonetheless, thousands of hectares of palm trees in uniform rows had performed magic in swallowing the socio-cultural and economic functions of land into plantation infrastructures (see Li, 2017a on infrastructural violence).

We observed, in the hidden protest location, the company’s ‘inti-plasma’ benefit-sharing map placed the community’s *plasma* section at the edge of the concession. The lines on the map told a further chapter of abuse and dispossession compared to other nearby plantations that allocated *plasma* close to settlements and thus locally accessible.

In early 2014, we (the first and second authors) visited the plantation zones with two elderly men. Over several meetings and car journeys, the two men told us their stories: their families’ rattan and livelihood activities had enabled them to go to school and university. Each from Dayak Kapuas families, this was their ancestral land. They had left as young men to become activists campaigning against government policies and joining the Indonesian Indigenous People’s Alliance (AMAN) in Jakarta. They had returned to Kapuas after witnessing the land conflicts. Pak Jovi was a lawyer who had collected maps and permits as evidence of violations. His friend, Pak Eran narrated historical events:

The company just directly did the land clearing. After the land has been cleared, it’s not possible to see what was there previously, meaning if the community already had established trees or other livelihoods, it’s already gone—been cleared away. After the community had already been evicted, they tried to obtain compensation (ganti rugi) but what was offered was not appropriate to their wishes. They didn’t want their land converted to become the plantation, but as soon as the company got the licence, they directly did the land clearing.

Pak Eran accompanied us to meet local residents who had refused compensation. We met a small group of men at the edge of the plantation. They brought land documents to show us. But to what land is such a document attached? Pointing in the direction of the vast plantation, Memet, a middle aged man signalled toward a hidden parcel of land:

From the north (1000 metres) to the south (600 metres), and four kilometres to the east: this land is all owned by communities. This is the former ‘Mega Rice Project’ and comprises both transmigrants and local [Dayak] peoples’ land. This [plantation] is the fault of the Bupati who claimed our land and gave it to the company. We first heard about the company in 2008 when we checked our land [the land had been cleared]. We tried to protest, but the Bupati had the authority, and the police were used to intimidate us and make us afraid.

Producing another document, he explained:

Only the Village Head (Kepala Desa), Customary Leader (Damang), and the company signed this letter. The letter said that all the people had given away their land. And we became confused, why suddenly was our name on that document when we still have our [land] certificates? This letter said we had given our land away and wanted to be relocated, but we didn’t want this and still had our certificates.

After several years of protest and negotiation, the previous Chinese investment group had sold the plantation with the new owners from Malaysia claiming no knowledge of previous agreements. Memet narrated their frustrated efforts:

We already started to blockade our land from the [previous] company, since 2008, when the company started to plant—that's why this oil palm, we have never taken care of it—and we never let the company come to harvest the fruit—this is our area of land.

We asked in 2009 to do partnership (plasma) and the [previous] company refused. I had an agreement with previous manager of company signed on 29 October 2009 [in a letter] but despite this, the company said that this [my land] is inti [company] area, and the person who helped us in 2009 resigned. This person wanted to listen but then the people changed—this is just their trick by fooling us around.

In 2013, the [new] company paid 200,000 rupiah [less than USD 20] and we accepted this to stop protesting – this was just 'tali asih' as a sign that the company is willing to do something—so we agreed with that—but then company didn't want to do anything... But this payment had no connection to the land, only a show of commitment by company, just tali asih... so this is another of the tricks of the company.

We asked Memet if he would want his land back? His response had been no, his land had long since been cleared and swallowed into plantation infrastructures. By continuing the protest, he hoped to negotiate a higher amount of compensation and more equitable benefit sharing.

At the edge of the plantation, the meeting had been chaotic and tense. After it ended, the first author recorded the following observation:

[I]t was very hot, unpleasant with no shelter... a group of about eight men moved towards us... talking all at once... they were very emotional and it was hard to understand their story. There was an appearance of desperation. Where we stood was the site of their land, and one man produced a number of legal documents—the use of law here has irony. They said, "here are our legal documents, but it was the Bupati who gave away our land" and showed the documents as evidence... I asked them, what did they hope to achieve? They answered: only more compensation—a larger sum of money than what had been offered. They wanted 1.5 million rupiah [less than USD 150] per hectare and partnership (kemitraan) to share in the company's profits. There was no 'real' land anymore; their gardens had already been swallowed by the plantation infrastructure, whilst distributing the profits from crude palm oil to foreign and domestic investors, among government officials and local supporters.

It is hard to convey their desperation and poverty—their invisibility was part of the erasure and transformation that had created the plantation. The promise of future profits and carving out of land for the small-holder plantations (plasma) had persuaded many people to accept a small sum in compensation. The company's maps showed the division between the company (inti) and smallholder (plasma) plantations of the community. The plasma was at the furthest point from the village, in the least arable land, and it was partially established. Meanwhile, the company plantation (inti) accommodated the makeshift dwellings for temporary workers from other parts of Indonesia with few local jobs. Workers were paid 68-70,000 rupiah [less than USD 7] per day without transport or meals being provided, and their lives were invisible to those who travelled the edge of the plantation.

The next day, we drove into the plantation getting bogged down on poorly maintained muddy roads. Having navigated the rows of trees, trucks, and labourers harvesting palm fruit, we eventually found a thin rope (Figure 2) and recorded the following observation:



Figure 2. ‘Hidden’ protest inside the plantation. Photo by Author.

[A] rope as a border blocking entry to a row of palm trees with fruit rotting on the ground. The group maintained a makeshift blockade to stop the fruit from being harvested. The rope that demarcated their land was a flimsy border that marked their refusal to accept the company’s offers to pay compensation and relocate their land for benefit sharing (*plasma*).

The oil palm plantations were already established. In this sense, the rope’s boundary was observable on the ground but not visible on government maps nor legally recognised. The rope’s warning not to harvest the fruit bunches invoked the Ngaju Dayak ritual response of *hinting pali*. This ritual called ancestors/spirits for help during land disputes and maintained customary relationships to the place/land.⁶ Thus, the rope was a sacred line that should not be crossed and marked a violation against local entitlement and belonging.

This hidden protest, deep within the plantation’s infrastructure, differed from public demonstrations to government offices. The rope was a form of authorship, a refusal, and customary approach to mediate conflict. It was a trace of the land’s socio-cultural values that reminded and exposed the violence and disruption to local boundaries.

Story 3: Untidy oil palm expansion: A hand-dug trench and removal and replanting of trees

Two location permits were issued to oil palm companies on adjoining sides of the river and incorporated land from three villages. The first company’s permit was issued in 2011. The second company’s permit overlapped the southern part of the KFCP’s REDD+ demonstration site. This permit was issued in 2014, following the Australian Government’s announcement that the KFCP would end. Soon after, this second company commenced rapid land clearance using large machinery to

prepare degraded peatlands. This rapid clearance of the second company did not provide time for organised protest—whereas first company undertook more careful and gradual action to expand the internal plantation borders through first acquiring land documents and signing agreements, then clearing and planting.

On several occasions during 2014 and 2015, we (the first and second authors) visited the permit locations. A district government official introduced us to Pak Gerang, a plantation manager from the first company. The next day, Pak Gerang and his staff showed us where plantation establishment was occurring. He explained that the location permit had been issued on ‘sleeping land’ (*lahan tidur*) and ex-logging land that was abandoned and under-utilised after the Mega Rice Project. But he lamented: ‘*when oil palm comes to get established, they [villagers] return to say this is their land.*’ Later on in the conversation he added:

We are quite late to establish here because first we would like to do the ground check, we are afraid to have problems in the future because [we might receive] information about who owns the land, but maybe this information is not accurate. We want to make sure about who owns the land before we establish our activities.

The community always thinks the company got the location permit (izin lokasi) so will clear the area and convert it to oil palm. But we try to explain – doing the local meetings and information dissemination (sosialisasi) – we won’t do that – we want to establish a good relationship with the community and not to disturb their land. And this is why we make a MoU to make sure there is not a problem in the future – and this is why we don’t open all the land and convert it to be oil palm, so we leave them, not disturb their land. But to explain this to the community is hard because in their mind the company will disturb the community land. Some people understand and they joined our company but still some people don’t believe it.

This comment underscores the complexity of land disputes. Locally, people had heard and shared the stories of land conflict and dispossession. Deep anxieties about oil palm expansion intertwined the promises of jobs and economic benefits with power disparities and lack of alternatives. Some land documents had been made opportunistically when suspected people (*oknum*) took advantage by falsely claiming land ownership to get compensation. These fraudulent documents were sometimes called “flying” documents (*SP-terbang*) that did not attach to land (Sanders et al., 2019: 204). According to Pak Gerang, this had created issues in verifying land ownership and financial impacts for the company more than budgeted for overlapping claims. Multi-layered corruption involving local brokers and village government *oknum* was suspected when actual land-owners received less compensation than agreed. This had created disputes between villagers and the company rather than the *oknum* who had kept part of the payment.

Frictions arose between different ways of relating to and valuing land. What was perceived as dormant land had overlapping claims and customary relationships invisible to plantation staff when commencing land acquisition. Their problem of verification—of who owns what parcel of land—was prone to manipulation. The company’s effort to gain consent and build trust had slowed down land acquisition and showed internal contradictions, problems identifying whose claims were legible, and power relations of those translations.

This ‘gradual’ process of land acquisition over more than two years had resulted in irregular palm trees of different sizes abutting local gardens. Pointing to the untidy plantings, Pak Gerang remarked that the landscape was ‘spotty’ or ‘broken-up’ (*pecah-pecah*) because of irregular time intervals when people joined. Some villagers had planted their own palm trees then asked to join, creating difficulties with the company’s refusal due to the different origin and quality of locally sourced trees.

Baja, a Dayak Kapuas man and prominent member of a local farmers group involved in a dispute took us to the same location we had earlier visited with plantation staff. He pointed to the ‘spotty’ landscape as evidence of the company’s failure to verify land ownership prior to clearing and planting. He explained that the company’s encroachment onto community land was due fraudulent and overlapping claims:

In 2012, the company had started their operation but this had not disturbed the community land. In May 2013, this company started to operate inside community land. Eight hectares of land was planted with oil palms. The community [on the contested land] was confused. How could this company disturb them and plant on their land? So the community ripped up all of the oil palm seedlings in this eight hectares of land. We [the community] just ripped it all up and placed it outside the borders of the community land.

The land in question is individually owned but managed collectively. The land has been owned for long time. Because we have a farmers group, that’s why so many people own the land – because for eight hectares – there are eight people directly affected – but in addition to that the larger group might feel threatened because the land is managed communally.

[After this discovery] we tried to find out who was involved. Who sold the land? Then we found out who sold it – the land was sold by someone who got a [false] land document signed from the Head of Village in order to sell the land to the company.

The farmers group claimed the disputed eight hectares of land has been illegally sold without their consent using fraudulent land documents, and then cleared and planted by the company. After removing the palm seedlings, the men carefully stacked them outside their land to avoid criminalisation risk of destroying plantation assets. Then, the women dug small trenches using hand tools to make new boundaries. Collectively, they replanted rubber trees to reclaim the land. The removal of the palm trees, replanting with rubber, and the small trench (Figure 3) showed collective and strategic efforts to resist the plantation’s encroachment.

The company lodged a formal complaint and requested 50 million rupiah [less than USD 5000] in compensation for removal of palm trees. Local police became involved. A letter was sent to Baja directly along with several other members of the farmers group to attend the sub-district (Camat) office. A lengthy process ensued involving local officials and police, community organising and protesting at government offices. The farmers group raised 2 million rupiah [less than USD 200] to pay for local officials to inspect the disputed location for land verification and conflict resolution (Figure 4). Baja explained:

We returned to the Camat (Sub-District Head) and agreed to give the money and asked to send the team as soon as possible to do the ground check and investigation. Not long after this the investigation team went to the field. In the field, they kept saying, “it’s not the community’s fault — it’s the company’s fault”

But a formal letter communicating this outcome did not eventuate. He lamented: ‘*The community is still trying to work out how to keep their land there – so it’s not disturbed by the oil palm company.*’

Indu Siti, an elderly woman from a nearby village complained that people from Baja’s village had sold land to the company. Although people from her village had not, she observed: ‘*Now the land is broken up.*’ While the farmers group had been successful in that moment, the breaking up and acquisition processes put pressure on those with rubber and mixed-use gardens to join the plantation. Future changes were glimpsed: promised jobs and economic benefits, while traditional gardens became shadowed with palms and internal expansion filled the plantation.



Figure 3. A trench boundary (*batas*) marking community land. Photo supplied with permission.

Discussion

Our three stories reveal how boundary making is influenced by histories of intervention, land conflicts, and environmental degradation after the Mega Rice Project. Local claiming practices were entangled with state administrative tools such as maps and regulations in proximity to oil palm plantations and internationally funded conservation and climate change interventions. The lines drawn on state maps for forest boundary determination and the location permits for plantation development mediated and reproduced power relations and inequalities (Hall et al., 2011: 4). Processes of rendering technical (Li, 2007) using governance devices and maps obscured and flattened the social, cultural, and local economic functions of land and forest sustained over generations. These maps and documents influenced the legitimization of claims and forms of authorship and authority—making it difficult for locally negotiated relationships and modes of governing to become legible through the analytics of boundaries and territorialisation (Lounela, 2021; Wadley, 2003).

State planners and forestry officials in the first story relied on regulations and maps that ignored, simplified, and enclosed customary land tenure as ‘political forest’ (Peluso and Vandergeest, 2001). Technical and bureaucratic management approaches led to the concrete markers being placed over community rubber gardens without consultation. In the second and third stories, the maps and permits rendered land (location/*lokasi*) investable for plantation establishment. These frontier processes generated frictions that became visible in removing concrete markers, mediating conflicts, and replanting trees. Overlapping forms of governance and power—state authority, corporations, customary (*adat*) traditions—were revealed when boundaries and relationships became disrupted and contested in what locally was considered a boundary violation.



Figure 4. Verification team with local officials at the site of the disputed land. Photo supplied with permission.

Tsing's (2005) concept of friction helps to reflect on the ambiguities: how legally defined 'forest' is bounded for conservation, how customary tenure is displaced, and how mixed use agricultural land (with myriad informal and internal borders) is swallowed into plantations. Managerial techniques produced relational injustices through foregrounding and marginalising of different ontological assumptions and knowledge practices (Pascoe and Sanders, 2025; Sanders et al., 2023). This had immediate and long-term consequences for local lives, livelihood options, and altered human-nature relations. While Tsing's (2005) friction concept illuminates the struggles and ambiguities in boundary making, we next use the concept of a palimpsest to understand the historical erasures and layered complexity of claims.

Palimpsest landscapes and historical erasures

Boundary making involves processes of creation, erasure, and translation illuminated in the palimpsest concept through attention to layered claims and historical traces. Using the palimpsest concept, Balaton-Chrimes (2021) describes bordering practices as forms of authorship that produce subjectivities within larger frames of reference. Her research on the ethnic classification of Kenyan tribes uses the palimpsest concept to underscore the ambiguities and markings—including relations of presence and absence, legibility and illegibility, authorship and authority, and opacity surrounding census documents and colonial authorities (Balaton-Chrimes, 2021: 55).

The palimpsest concept draws from archaeology's understanding of objects bearing traces of markings, incomplete erasure, and residue. Emphasising this layering, de Sousa Santos (2006)

uses the palimpsest as a metaphor in Mozambique to characterise ‘the intricate ways in which very different political and legal cultures and very different historical durations are inextricably intertwined’ (De Sousa Santos, 2006: 47). McCarthy and colleagues (2012) similarly use the palimpsest in reference to overlapping land claims, competing land uses, and tensions and interactions between ‘vernacular’ (socially embedded) and ‘legal’ (formal) land acquisition processes in Indonesia. As palimpsests, the concrete markers, rope, hand-dug trench and trees underscore the material and epistemic complexity of whose knowledge and claims are recognised, who benefits and makes decisions, and who bears the consequences.

West (2020) reflects that in environmental anthropology, ‘the figure of the palimpsest allows us to think about who can read and translate what layers’. West describes semiotic material layering of translation practices over time: ‘surfaces that have been written over and over and over and which, when refracted through certain kinds of methodologies, yield cracks that give us insight into the networks that brought them into being’ (West, 2020: 121). Drawing on West’s characterisation, the palimpsest concept encourages us to carefully examine the historical erasures and traces still discernible in the layers and incompleteness of land and resource claims. What new relationships and alternative futures could be imagined? What historical past and ruins bleed through into the present in protest and violence? Whose futures are imagined, contested, and enacted through territorial strategies and claims? The palimpsest concept helps to interpret this complexity and to attend to problems of justice ‘hidden’ in legal and material forms.

In the second story, the rope in the middle of the plantation is a palimpsest: it is a trace and reminder that the histories and violence have not been erased even after the socio-cultural and economic functions of land had been swallowed into plantation infrastructures. The forms of authority, ritual and protest strongly relate to identity, culture and tradition. This was seen in the first story in the anger and frustration of those who removed the concrete markers laid by forestry officials over their gardens, and in the third story in the actions of those who removed the palm trees and dug trenches to (re)border their land from the plantation. The rope and trench wrote old and new boundaries over plantation infrastructure in an effort to reclaim community gardens. These acts function as palimpsests that layer claims while asserting local agency and customary rights in relation to state and corporate actors.

Removing and replanting did not resolve the tensions but made them visible. These actions revealed relational problems of justice. In the third story, reclaiming the disputed land was in part possible because the company’s ‘gradual’ land acquisition differed from other plantation development through rapid land clearances. Those involved had successfully replanted rubber when fieldwork was conducted but they did not obtain a legal outcome despite having paid for land verification. Removing the concrete markers in the first story did not alter the forest boundaries according to state maps nor resolve future implications for land use and livelihoods. Those markers were not only palimpsests but friction points in which the villagers exercised their critical voice as more than spectators or victims of territorial strategies. Through these dynamics, legal and material boundaries and managerial techniques became contested in practice: the markers, rope, trench and trees made visible the layered complexity of claims and underlying justice problems.

Relational injustices in land and resource claims

Boundary making as an analytical lens helps to shed light on forms of injustice that are latent and less visible on the surface of interactions. This analytical lens contributes to a relational understanding of law’s normative, interactive, and constitutive relations (see discussion in Seck, 2019; Wielsch, 2013). In Indonesia, the legal and bureaucratic steps for forest boundary determination (Penetapan Tata Batas Hutan) have been expected to ‘finish’ in 2025. However, this is still mainly ‘one sided’ establishment. It follows governmental logics described by Li (2007: 126) to render a

set of processes technical and improvable: ‘an arena of intervention must be bounded, mapped, characterised, and documented’. Although surveyed on the ground, the claimed hectares and percentages had not been agreed through negotiation and conflict resolution.⁷ The story of the concrete markers shows that even when forest boundary determination is ‘finished’ officially, it does not address cumulative displacement and disputes on the ground.

We highlight the pervasive and diffuse harm for those whose land, identities, and spiritual connections are displaced (Chao, 2022; Pascoe and Sanders, 2025; Sanders et al., 2023). These relational injustices have material and epistemic dimensions—from the imposition of colonial framings to the rupture and slow violence of frontier transformation (Mahanty et al., 2023; Nixon, 2013). Material and epistemic dimensions of land disputes are both important for asking who and what are being recognised or excluded from land and resource claims. The lines drawn on maps in all three stories had uneven consequences for whose lives and livelihoods are located on either side of those lines. Here, boundary making is a lens to reveal tensions and differences in local agency in negotiating territorial strategies and deep structural inequalities.

Grey area interconnections between climate change, resource politics, and land grabs occur when multiple pressures intersect in ways that obscure causation and have cumulative effects (Franco and Borrás, 2019). The ‘hidden protest’ in the second story is one such grey area: where plantation, conservation, and climate change interventions intersect with conflict, degradation, and displacement. This story is about those interconnections, their cumulative effects, and relational injustices: how the plantations had swallowed up local environments and displaced people and livelihoods. Economic inequalities, daily hardship, and environmental degradation in the transmigration settlement spilled over into protest and violence through noisy demonstrations, enlisting supporters, burning to claim land, and other volatile interactions. Differences were locally apparent such as between Dayak Kapuas residents and transmigrants who had received agricultural aid and government financial support. Some had prospered, while for others, marginalisation and degradation had rendered their lives invisible, meaning that many people who lived and worked in the surrounding plantations were busied with survival. Their diminished lives appeared to be reinforced by massive plantations in contrast to nearby REDD+ and conservation sites that attracted global attention, highlighting how some spaces are deemed valuable for emission reduction and conservation while the hidden protest location became a site of neglect.

These differences and interconnections are specific and relational. As the third story indicated, companies and local landowners can both be victims of corrupt land dealings but the impacts between them are not commensurate. Overlapping claims signalled the impossibility of accurate (just) translation of customary land tenure into individual land documents for plantation establishment. Relational injustices for affected communities were not only land and livelihood losses but also disruption to identity and belonging. Prior events and traumas influenced local perceptions and interactions in the plantation and concrete marker stories. Those maintaining a makeshift blockade and removing trees and markers expressed critical ways of negotiating boundaries for positional bargaining, developing local strategies, and learning from the past in continuing efforts to secure their rights and claims.

The second story, where we stood at the edge of the plantation with the men and their documents, is a well-travelled road. During the peak of the KFCP’s implementation, many environmental activists, researchers, and project staff passed through the transmigration and plantation zones to the river access point to reach participating villages. International and national media reported on issues of consent and customary rights during the KFCP’s implementation, turning attention to new events and issues after the project ended. We wondered how many people had stopped when travelling through the plantation zones to wonder what had happened on the way?

Ongoing changes and relational injustices limit people’s options despite successful moments of resistance. The KFCP ended in 2014, and since then, more projects have reformulated objectives for

improving local environments and people (see Li, 2007: 277 on managing failures). More projects have brought more activists, bureaucrats, researchers and experts along the road to the river access point. Recently, we observed in the transmigration settlement, emerging signs of prosperity with new businesses, farming ventures, and improved housing for plantation workers. But we do not know what happened to the rope of hidden protest. The elderly man and activist who guided us to the location has since passed away. Despite the controversies, many of those involved in the KFCP remembered that project staff had treated them well and supplemented their income more than subsequent projects. Across the river from the former KFCP site is the location of the hand dug trench where around a quarter of people now work for the two oil palm companies alongside other livelihood activities. Around half (mostly men) also travel for gold mining, preferring the risky conviviality of mining (see Schreer, 2020 from nearby Katingan) and the freedom to work on their own terms. Due to fluctuating rubber prices, those involved in the protest and (unfinished) land verification have since replaced some rubber with oil palm trees that are more profitable. Careful attention is needed here to understand these impacts and their intersections with climate change and repeated interventions.

Conclusion

Our analysis demonstrates how boundary making generates frictions emerging from land and resource claims. The concepts of friction and palimpsest provide a nuanced framework for examining how legal tools create ambiguities, historical erasures and traces of previous relationships that in turn generate resistance. Moments of rupture (Mahanty et al., 2023) in the disaster of the Mega Rice Project have created new territorial orders that interweave colonisation and capitalism with environmental governance, plantation development, failed projects and industrial schemes.

As palimpsests—the markers, rope, trench and trees—reveal historical layers and trace the forms of injustice that are latent and less visible on the surface of interactions. This analysis is important in Indonesia and other countries where inadequate recognition of local communities and customary rights in state forest boundaries and land administration has created many conflicts (Mulyani, 2023) amid intensifying climate pressures and expanding economic activities. Relational injustices are reproduced through maps, permits, documents, and associated managerial techniques that limit recognition of customary land and territories while favouring corporations and adding more territorial projects.

Boundary making is historically complex, as we observed in land disputes and strategic endeavours, difficulties and dilemmas of those living after the Mega Rice Project. In that frontier context, repeated interventions continue to shape locally negotiated relations to land and forest including oil palm plantations abutting forest management, biodiversity conservation, peatland restoration and carbon sequestration projects. Our analysis invites further exploration of causal complexity and interconnections between environmental governance, land questions, and relational justice. Conceptualising boundary making as an active and relational process is an entry point for critically examining legal tools and instruments, and for reflecting on converging climate change and land questions.

Highlights

- Boundary making is an active and relational process that generates frictions and reveals relational injustices in land and resource claims
- State forest maps and permits obscure customary land tenure while enabling plantation development

- Inadequate formal recognition of local and customary land and territories underlies many conflicts in Indonesian frontiers
- The palimpsest concept shows how historical erasures become visible during land disputes and contested claims

Acknowledgements

We are grateful and indebted to the people of Kapuas for sharing their stories and lives with us and give thanks and honour the memory of Pak Dehen. The first and second authors were responsible for all fieldwork in Indonesia. The first author thanks her doctoral research supervisors for their guidance and support. The Center for International Forestry Research (CIFOR) provided funding under several grants: the Norwegian Agency for Development Cooperation (Norad) [grant numbers QZA-10/0468, QZA-12/0882, QZA-16/0110], European Commission (EC) [grant number DCI-ENV/2011/269-520], United Kingdom Department for International Development (UKAID) [grant number TF069018], the Australian Agency for International Development (AusAID, currently DFAT) [grant numbers 46167, 63560], and the CGIAR Research Programme on Forests, Trees and Agroforestry (CRP-FTA) [grant number TF No. 069018], with financial support from the donors contributing to the CGIAR Fund.

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Author contributions

AS conceived of and designed the study. AS wrote the first draft. AS and RD collaborated for research fieldwork. RD, SP, and LM contributed to the design, conceptualisation, and writing. All authors contributed to the article and approved the submitted version.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data availability

Due to the ethnographic nature of data and potential to identify research partners, data is not available for this article.

Notes

1. Borders and boundaries in common uses denote a limit, division or separation, and relationship between entities. Some examples of translated Indonesian terms are: *batas* (border or boundary), *pembuatan batas* (boundary making), *garis batas* (border or boundary line), *penetapan tata batas hutan* (forest boundary determination).
2. There is substantial ethnographic literature on resource frontiers and environmental governance in Central Kalimantan (Some examples are Astuti and McGregor, 2017; Galudra et al., 2011; Goldstein et al., 2020; Lounela, 2019; McCarthy, 2013; Sanders et al., 2019; Schreer, 2020).

3. See summary information about oil palm companies (Myers et al., 2016: 61–64).
4. See Lounela's (2021: 24) description and photo of state boundary pillars in Central Kalimantan.
5. All names are pseudonyms.
6. The Ngaju Dayak ritual of *hinting pali* has been observed in many land disputes (Berenschot et al., 2022: 43; Colchester and Chao, 2013: 80; Kurniawan, 2016; Lounela and Wilenius, 2025; Schreer, 2024: 759; Usop and Perdana, 2021; Yuliana, 2019). *Hinting* is a barrier and *pali* means forbidden (*larangan/pantangan*). When invoked during land disputes, no one is permitted cross the line of where the *hinting pali* ritual took place until there is a clear resolution.
7. According to Forestry Data from December 2022, the realisation of forest determination has reached almost 80% of Indonesian forest area covering approximately 90 million hectares. However, the numbers have not been verified with local and customary (*adat*) communities on the ground.

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