



MIGHTY
EARTH

COMPLICIT

AN INVESTIGATION INTO DEFORESTATION AT **MICHELIN'S**
ROYAL LESTARI UTAMA PROJECT IN SUMATRA, INDONESIA





Rubber resin, Jambi Province. Credit: CIFOR (2013)

Acknowledgements

Author/Editor: Alex Wijeratna, Mighty Earth

Satellite Imagery Analysis: Leo Bottrill, MapHubs

Technical Advice: Phil Aikman, Mighty Earth

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Jambi landscape. CREDIT: CIFOR (2017)

EXECUTIVE SUMMARY

On May 18, 2015, Michelin celebrated the launch of a new joint venture to “produce natural, eco-friendly rubber” – a key component in Michelin’s tire products – in Indonesia.¹ The press release promised that the flagship project, undertaken with Barito Pacific Group, would include the “reforestation of three concessions, representing a total surface area of 88,000 hectares, ravaged by uncontrolled deforestation” and touted a commitment to dedicate half of this area to “re-creating a natural environment and community crops.” The project was later backed by Asia’s first \$95 million green corporate “Sustainability Bond” and presented to global investors as a contributor toward Indonesia’s national climate change targets.

The message was clear: Michelin, the largest tire manufacturer in the world, was embracing sustainable practices and would be a responsible custodian of these lands. But this report demonstrates that Michelin’s rhetoric concealed an ugly truth.

Much of the deforestation and destruction that Michelin promised to address had been committed by subsidiaries of a company within the Barito Pacific Group – Michelin’s very own partner in the new joint venture. These

subsidiaries destroyed forests that were home to Indigenous peoples and endangered species, cleared land to make way for their rubber plantations and then sought public recognition – and investment – for a project to restore half of it.

The following pages document the findings of Mighty Earth’s investigation into that joint venture, the Royal Lestari Utama (RLU) Project. RLU covers an area of over 88,000 hectares (ha) across the provinces of Jambi and East Kalimantan, on the island of Sumatra. Lying adjacent to a large national park, the RLU concession areas in Jambi, the focus of this study, were identified as home to local communities and highly vulnerable forest-dependent Indigenous peoples and provide critical forest habitat for the endangered Sumatran elephant and critically endangered Sumatran tigers and reintroduced orangutans.

Evidence presented in this report shows that between mid-June 2012 and mid-January 2015, just prior to the project’s agreement, some 2,590 hectares of forest – over seven times the size of New York’s Central Park, or equivalent to the size of central Paris – were industrially deforested to make way for rubber plantations in one of the key RLU Jambi concession areas.

The question that remains now: Did Michelin know?

RLU Project

Agreed on December 17, 2014, the vision of the RLU Project is to “promote ecosystem-friendly rubber plantation practices aiming at providing alternative livelihoods for communities while protecting and enhancing natural forest for wildlife.”² According to the RLU Project website, the Jambi area had been previously “ravaged by years of uncontrolled illegal logging, deforestation and fires,” with RLU’s ambition being to “restore these areas through responsible rubber plantation and conservation.”³

Today the RLU Project sets aside roughly half the land for conservation, restoration, livelihoods, carbon stock protection and smallholder rubber production. The set-aside areas are intended to provide a contiguous buffer zone to protect threatened tropical lowland forest, mega-fauna and biodiversity hotspots around the Bukit Tigapuluh National Park – also known as the “Thirty Hills” National Park.

Backed by a first tranche \$95 million green “Sustainability Bond” issued in March 2018 and presented to investors as contributing toward Indonesia’s climate change targets, the RLU Project is supported and financed by a host of international organizations, banks and financial institutions. These include the Tropical Landscapes Finance Facility (TLFF), BNP Paribas, Sail Ventures, ADM Capital/ADM Capital Foundation, UN Environment, World Agroforestry Centre

(ICRAF), Norway's International Climate and Forests Initiative (NICFI), Global Environment Facility (GEF), USAID, the UK government-funded Partnerships for Forests, &Green Fund, Unilever, Vigeo Eiris and the World Wide Fund for Nature (WWF).

Investigation Findings

Our findings, based on analysis of high-resolution satellite images complemented by research and interviews conducted with local people living in the concession areas, reveal widespread industrial deforestation was occurring right up to the point where the joint venture was launched, and that monoculture rubber planting was already occurring prior to the RLU Project's agreement in December 2014.

Using official corporate ownership data, we found that Barito Pacific founder Prajogo Pangestu owned PT Lestari Asri Jaya (LAJ) and Barito Pacific affiliated companies majority-owned PT Wanamukti Wisesa (WMW) – the two key operating subsidiaries behind the RLU Project in Jambi – since September 2008. We also uncovered that Barito Pacific President and founder Prajogo Pangestu had owned RLU (originally named PT Inti Energi Perkasa) since July 2008. Pangestu is a billionaire businessman who was previously known as Indonesia's "timber king."

We assessed all five of the RLU Project's Jambi concessions – LAJs 1, 2, 3 and 4, and WMW – and concentrated on LAJ 4 because it contained the majority (59%) of the overall rubber planted areas under the RLU Project. We then focused on:

- i) An area in the south-eastern tip of the LAJ 4 concession (**Case Study Area 1**), which was identified as home to Orang Rimba and Talang Mamak Indigenous peoples, as well as being a critical habitat for the endangered Sumatran elephant and critically endangered Sumatran tiger and orangutan; and
- ii) A subregion within the wider LAJ 4 Case Study Area 1 (**Case Study Area 2**) that was designated by the RLU Project as a Wildlife Conservation Area, due to its role as a critical habitat for endangered Sumatran elephants and critically endangered Sumatran tigers and reintroduced orangutans.

The investigation found industrial deforestation spiked and intensified significantly in the two LAJ 4 case study areas (see Maps 1 and 2) between April 12, 2012, and January 15, 2015 – the 33-month period immediately prior to and during the key "due diligence" phase of Michelin's joint venture RLU Project with a company within the Barito Pacific Group. Throughout

this period, there were highly visible and vocal public concerns raised by aggrieved local communities, Indigenous peoples, civil society and community-based organizations, forest and illegal logging watchdog groups and local media reports about the controversial and sometimes violent forest clearances, evictions and industrial-scale deforestation carried out in the Jambi concessions by LAJ, RLU's key subsidiary in the area. Public protests against these alleged landgrabs continue to this day in Jambi.⁴

Specifically, between April 12, 2012, and January 15, 2015, we found:

- 2,590 ha of forest was industrially deforested in **Case Study Area 1** in the south-eastern tip of the LAJ 4 concession in Jambi, of which
- 1,298 ha of forest was industrially deforested in a Wildlife Conservation Area within the LAJ 4 **Case Study Area 2** subregion and is now planted with rubber trees.

Other findings include:

Overall Jambi concessions:

- 40,537 ha of forest remained within all five RLU Jambi concessions on November 22, 2009; however, just 3,233 ha remained on January 15, 2015.

LAJ 4 concession:

- 26,149 ha of forest remained throughout the entire LAJ 4 concession on November 22, 2009; however, just 3,233 ha of forest remained on January 15, 2015.

LAJ 4 Case Study Area 1:

- 3,966 ha of forest remained in the LAJ 4 **Case Study Area 1** on April 12, 2012, but only 138 ha remained on January 15, 2015.
- 2,590 ha of this forest loss in the LAJ 4 **Case Study Area 1** from April 12, 2012, to January 15, 2015, was the result of industrial deforestation – over seven times the size of New York's Central Park, or equivalent to the size of central Paris.

Our analysis found the scale, speed and coordinated manner of the industrial deforestation identified in the two case study areas within LAJ 4 from April 12, 2012, to January 15, 2015, was outside the ability of other actors (such as smallholders, migrants, encroachers and land speculators) to orchestrate. We conclude that the industrial deforestation identified in the LAJ 4 case study areas was most likely carried out by the LAJ 4 concession owner RLU and its subsidiary LAJ for the purpose of planting rubber.

In correspondence with Mighty Earth about our findings from LAJ 4, Michelin said the RLU Project only commenced concrete activities on the ground in March 2015.⁵ They claim “the region was undergoing massive deforestation at the time” and said earlier in 2006 “a permit to open a corridor road was granted in the [LAJ 4] area ... this led to a period of open access that resulted in the almost total destruction of the previously partly preserved forest area.”⁶ Michelin stated that: “In the face of this large-scale ecological disaster ... the Government decided to grant southern buffer zone area as production forest areas and approached companies to actively manage and regain control of parts of the area. The Barito Pacific Group then designed a rubber plantation project to plant a rubber belt along the southern boundary of the Bukit Tigapuluh National Park, over a length of about 120 km, to create jobs and alternative sources of income to deforestation activities.”⁷

According to Michelin, the President of Barito Pacific first asked the President of Michelin for their technical expertise to strengthen the RLU rubber plantation project in Jambi, which was experiencing a multitude of difficulties, towards the end of 2013.⁸ In correspondence with Mighty Earth, Michelin said:

*During 2014, the Michelin Group carried out several missions of economic, agricultural, social and environmental analysis on site [in Jambi], using internal and external expertise. On the basis of this analysis, the Michelin Group proposed to the Barito Pacific Group to reconsider the entire project, in all its dimensions, and in particular the environmental and social aspects.*⁹

However, based on corporate ownership findings and Michelin’s disclosures to Mighty Earth, this report contends that, as a result of Michelin’s extensive on-site economic, social and environmental due diligence assessments in 2014, Michelin must have been fully aware of RLU and LAJ’s involvement in the extensive industrial deforestation for rubber plantation development in the two LAJ 4 case study areas, before agreeing to invest \$55 million in the RLU Project in December 2014.

These findings cast serious doubt over Michelin and RLU’s public narrative about the extent, cause and timing of the widespread industrial deforestation identified by Mighty Earth within the RLU concession areas in Jambi. It also raises questions about what due diligence, if any, RLU Project partners, funders and financiers undertook or relied on to pre-assess industrial conversion of forest areas into rubber plantations in LAJ 4 in the lead up to the RLU Project.

Recommendations

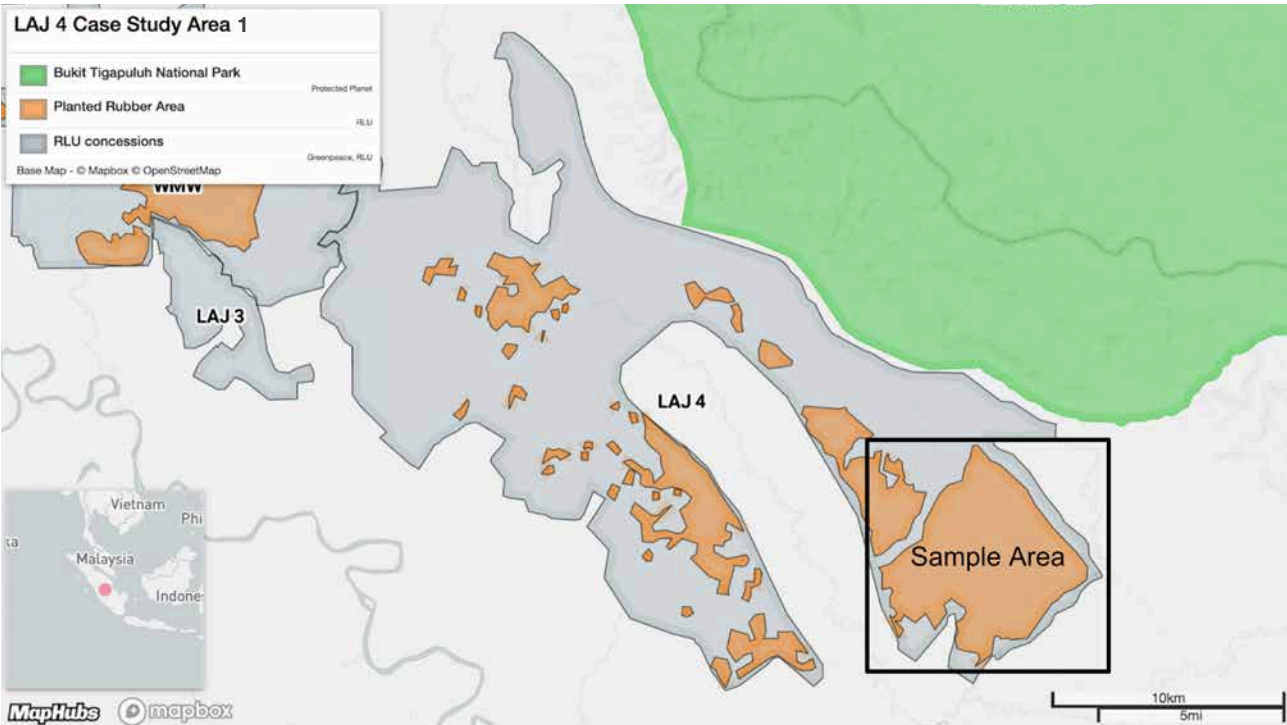
Based on the key findings of this report, Mighty Earth is calling for:

- An independent investigation to establish the total amount of industrial deforestation carried out by RLU, LAJ and WMW in the five Jambi concessions in the period leading up to the establishment of the joint venture RLU Project with Michelin and a company within the Barito Pacific Group on 17 December 2014. This should be predicated on a commitment to full transparency and the public disclosure of all relevant documents.
- Michelin and RLU should urgently work with funders and financiers to set up an independent multi-stakeholder taskforce - involving local and Indigenous communities - to ensure restitution and reparations for all local and Indigenous communities affected by the loss of their ancestral forests, lands and other natural resources in the Jambi RLU concession areas.
- Michelin and RLU should commit to work with all negatively affected local and Indigenous communities to restore and rehabilitate their damaged, destroyed or degraded forests, and support wider efforts to conserve key habitats critical for these affected communities, as well as for the survival of the remaining endangered Sumatran elephants, tigers and orangutans in the Project area.



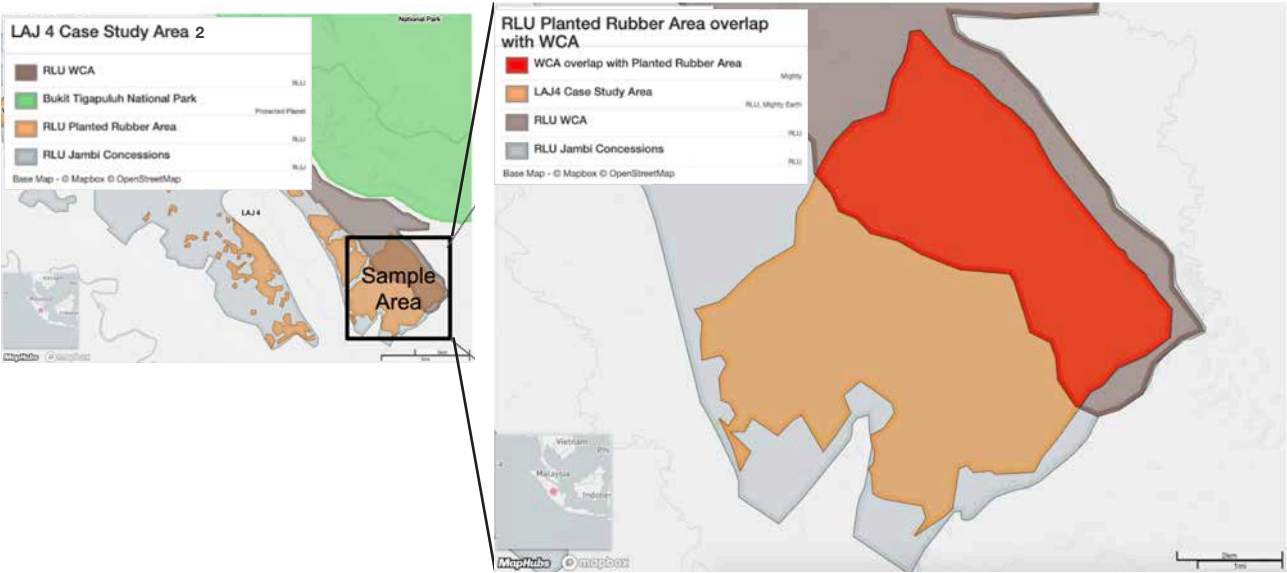
Endangered Sumatran tiger. Credit: Roger Smith Pix

Map 1: LAJ 4 Case Study Area 1, Jambi, Sumatra



Source: MapHubs (2020)

Map 2: LAJ 4 Case Study Area 2, Jambi, Sumatra



Source: MapHubs (2020)

ACRONYMS

ABT	PT Alam Bukit Tigapuluh
AMDAL	Indonesian Environmental Impact Assessment (Analisis Mengenai Dampak Lingkungan)
APP	Asia Pulp & Paper
DPSL	Wildlife Protection Zone (Daerah Perlindungan Satwa Liar)
FPIC	Free, Prior and Informed Consent
ESDD	Environmental and Social Due Diligence Assessment
ESG Standards	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessment
GPSNR	Global Platform for Sustainable Natural Rubber
HCS	High Carbon Stock
HCV	High Conservation Value
HTI	Industrial Forest Plantation (Hutan Tanaman)
ICRAF	World Agroforestry Centre
IEP	PT Inti Energi Perkasa
IFC	International Finance Corporation
LAJ	PT Lestari Asri Jaya
MOU	Memorandum of Understanding
NDC	Nationally Determined Contributions
PBI	PT Petrokimia Butadiene Indonesia
RLU	PT Royal Lestari Utama
SMG	Sinar Mas Group
TLFF	Tropical Landscapes Finance Facility
WMW	PT Wanamukti Wisesa
WWF	World Wide Fund for Nature



Jungle rubber, Jambi Province. Credit: World Agroforestry

CHAPTER 1: THE ROYAL LESTARI UTAMA (RLU) PROJECT

RLU Project in Jambi

The “RLU Project” – a joint venture between French tire and rubber company Michelin and RLU owner PT Satria Cemerlang – a company described as “within the Barito Pacific Group” in TLFF’s Sustainability Bond Offering Circular¹⁰ – involves three large Industrial Forest Plantation (HTI) concessions with a total area of 91,511 hectares (ha) in Jambi and East Kalimantan in Indonesia.¹¹ The Jambi concessions (see Figure 1) cover 71,872 ha and are the focus of Mighty Earth’s investigation.¹² The RLU Project’s five concessions in Jambi Province provide a contiguous buffer zone to protect the threatened rainforest and biodiversity

hotspot the Bukit Tigapuluh National Park in Sumatra – also known as the “Thirty Hills” National Park. This landscape in Jambi is especially important because it was identified in 2010 as home to and critical to the survival to local communities and forest-dependent Indigenous peoples, the Orang Rimba and Talang Mamak, and provides critical habitats and a source of food for the endangered Sumatran elephant and critically endangered Sumatran tiger and reintroduced orangutan (see Figure 4).¹³

Bukit Lawang orangutan, Sumatra
Credit: Arian Zwegers



Figure 1: Jambi Concessions in the Bukit Tigapuluh Forest Landscape

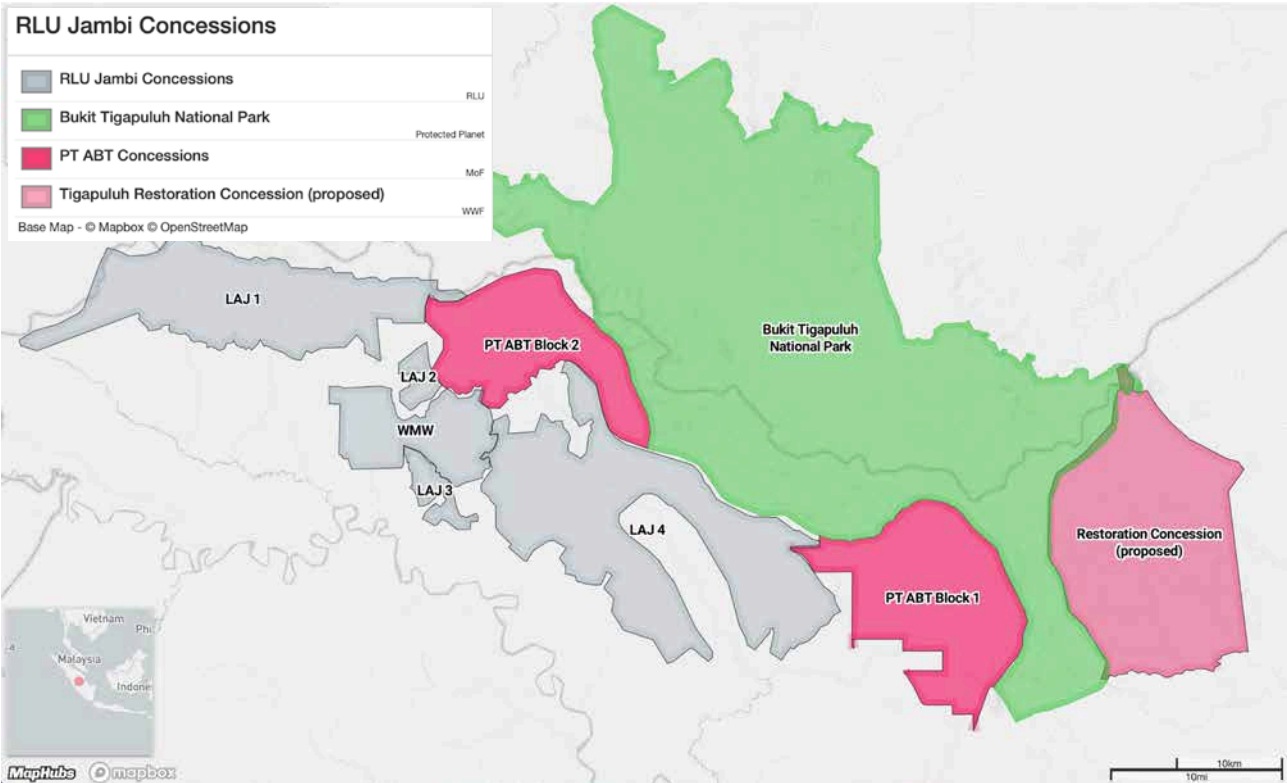
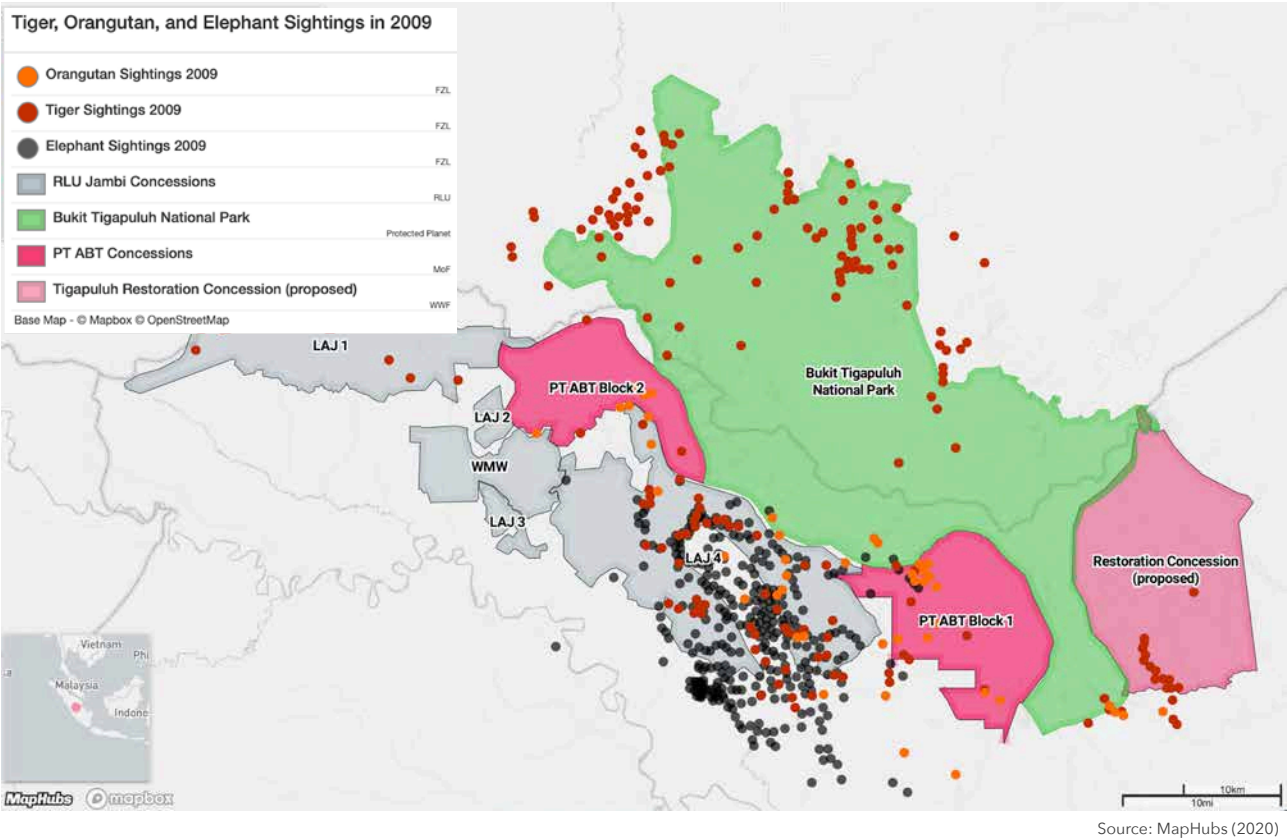


Figure 2: Sumatran Elephant, Tiger and Orangutan Sightings in Jambi, 2009



Michelin's \$55 million and 49% joint venture stake in the RLU Project was agreed to on December 17, 2014. It was premised that within the flagship sustainable natural rubber plantation, roughly half the land area would be set aside for wildlife conservation, restoration, carbon stock protection, smallholder rubber cultivation and other livelihood opportunities.¹⁴ The RLU Project's target in Jambi and East Kalimantan is to plant 34,000 ha of commercial rubber, create 16,000 local fair-wage jobs, enhance the livelihoods of 50,000 local people and double rubber yields to 1.7 tons per hectare a year.¹⁵ In Jambi, the RLU Project's concessions are run by the following wholly owned RLU subsidiaries:¹⁶

- PT Lestari Asri Jaya (LAJ) - 61,495 ha
- PT Wanamukti Wisesa (WMW) - 9,105 ha

RLU Project: Michelin's Eco-Flagship for Rubber

The RLU Project is hailed by Michelin as a flagship of the new "green economy" and heralds the company's shift toward more sustainable "eco-friendly" rubber and tire production.¹⁷ The RLU Project has a total value of \$345 million¹⁸ and was boosted by a first tranche \$95

million loan raised through Asia's first green corporate Sustainability Bond issued by the Tropical Landscapes Finance Facility (TLFF) on March 7, 2018, on the Singapore Exchange.¹⁹ The Sustainability Bond was presented to investors as helping Indonesia achieve its climate change targets stated in its Nationally Determined Contributions (NDCs), and a second tranche Sustainability Bond loan of \$120 million for the RLU Project is further planned by TLFF.²⁰

Backed by a large \$70 million loan guarantee by USAID's Development Credit Authority, the RLU Project is supported by a host of international organizations including TLFF, BNP Paribas, ADM Capital/ADM Capital Foundation, Sail Ventures, UN Environment, World Agroforestry Centre (ICRAF), Norway's International Climate and Forests Initiative (NICFI), Global Environment Facility, USAID's Green Invest Asia, the UK government-funded Partnerships for Forest initiative, &Green Fund, Unilever, Vigeo Eiris and the World Wide Fund for Nature (WWF) (see Figures 5²¹ and 6).²² TLFF say that they have more agriculture and energy opportunities worth over \$1.5 billion in their pipeline. More widely, UN Environment and French bank and project financier BNP Paribas agreed to target further innovative finance of \$10 billion by 2025 for other new 'green economy' agriculture and forestry initiatives in an effort to protect carbon-rich forests and tackle climate change.²³

Figure 3: LAJ 4 Case Study Area 1

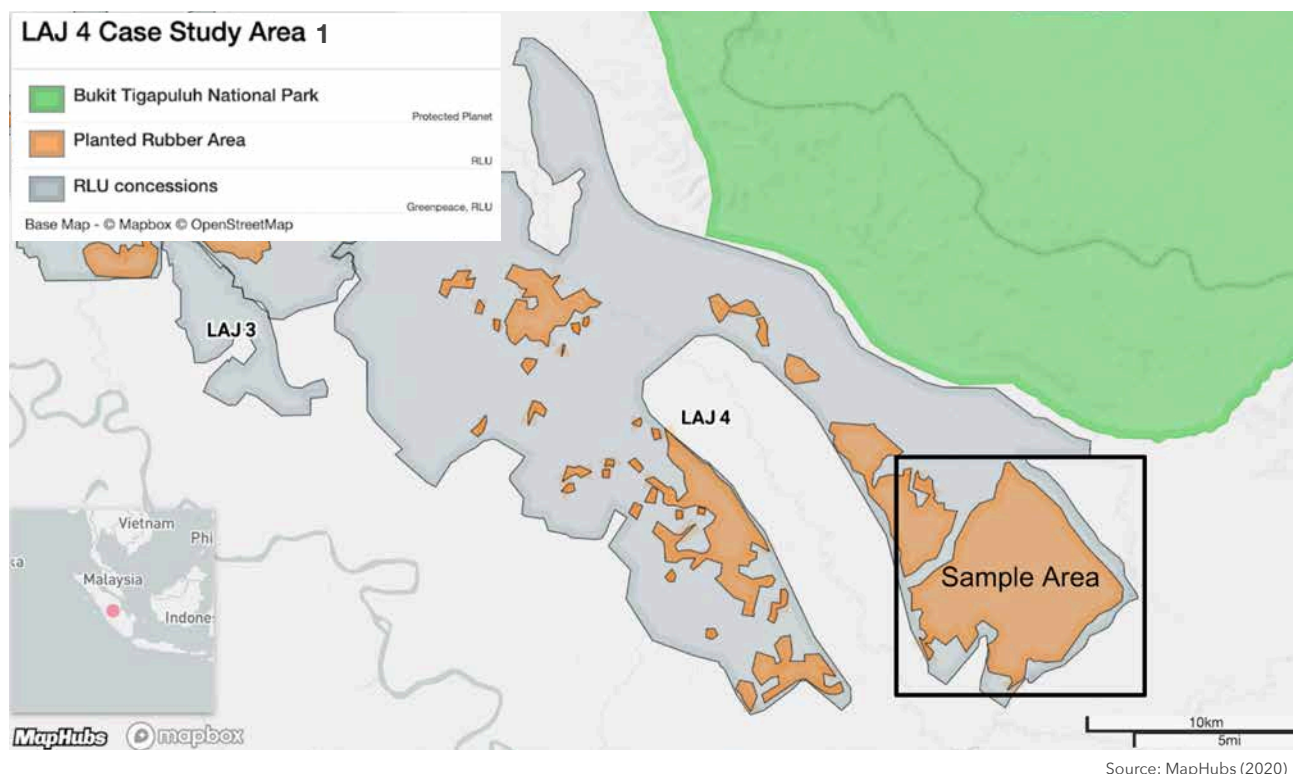


Figure 4: LAJ 4 Case Study Area 2

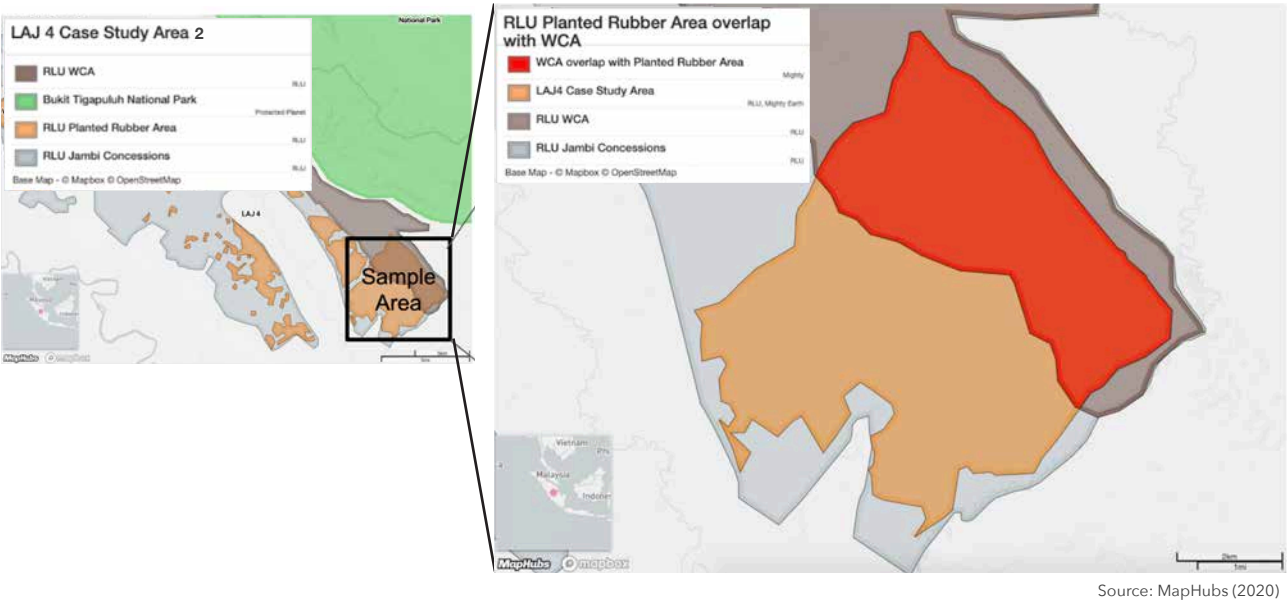
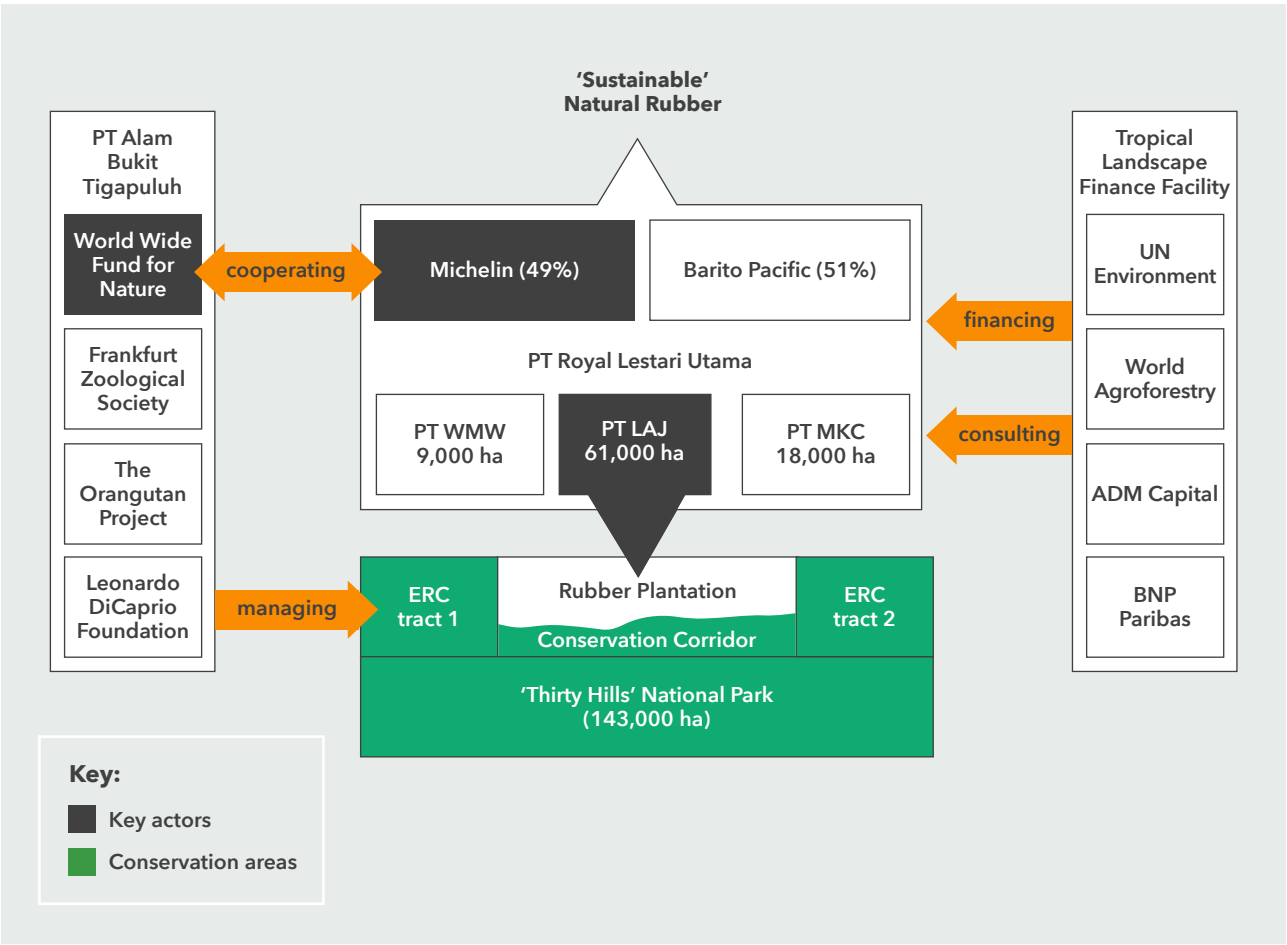


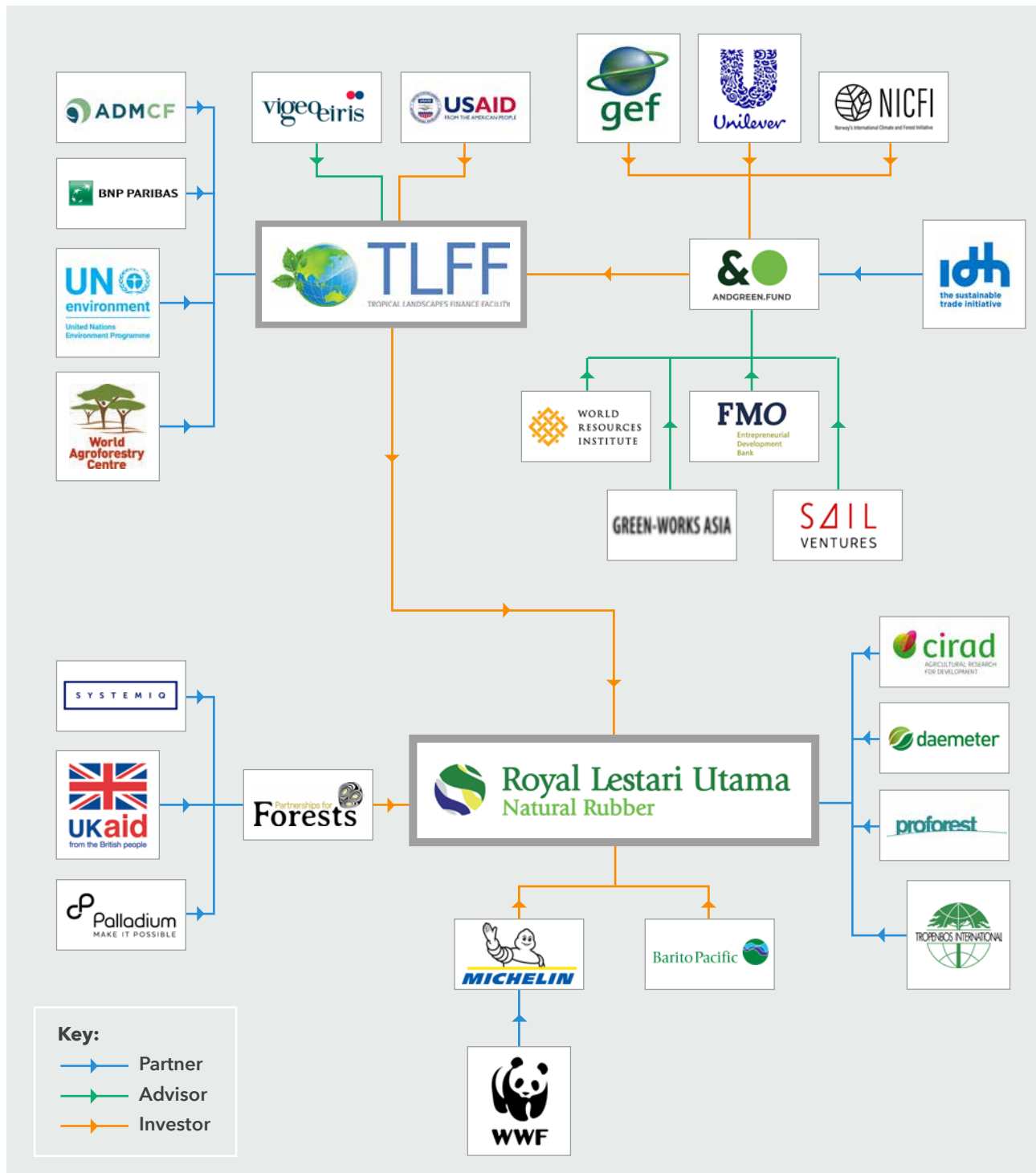
Figure 5: RLU Project Transnational Network of Actors



As part of the RLU Project in Indonesia, Michelin also partnered with conservation group WWF to assess Jambi's unique ecosystem, abundant wildlife,²⁵ its High Conservation Value (HCV), High Carbon Stock (HCS) forest cover, and to establish protected areas and ecological "corridors" for Sumatran elephants and other endangered species and wildlife.²⁶ Together, the RLU

and joint WWF and Frankfurt Zoological Society (FZS) Ecosystem Restoration Concessions (known as PT Alam Bukit Tigapuluh, or ABT, see Figure 1) intend to form a 38,000ha contiguous "buffer zone" to prevent illegal encroachment into the densely forested Bukit Tigapuluh National Park.²⁷

Figure 6: RLU Investors, Partners and Advisors



Source: MapHubs (2020)

Public Opposition to Deforestation by LAJ in Jambi since 2010

Public action, protests and local campaigns against industrial deforestation, land clearances and land grabs by key RLU-owned company LAJ in Jambi go back to 2010 – and public protests against land grabs continue there to this day.²⁸ A global coalition of four Sumatra-focused civil society organizations (CSOs) campaigned in 2010 to highlight and protect the threatened flagship endangered and critically endangered species, Indigenous peoples, flora and fauna and unique so-called “eco-floristic” natural lowland forests from local extinction caused by the deforestation by timber, pulp, palm oil and rubber agribusinesses in the unprotected natural forests near the Bukit Tigapuluh National Park.²⁹

The coalition of CSOs – including KKI Warsi, Frankfurt Zoological Society, Eyes on the Forest and WWF Indonesia – warned in the report, *Last Chance to Save Bukit Tigapuluh*, that 82,000 ha of unprotected natural forest in the area was under imminent threat and could be cleared in the concessions of two key companies, including LAJ, which was clearly identified as being owned by the Barito Pacific Group, to supply timber to nearby pulp mills operated by Asia Pulp & Paper (APP) of the Sinar Mas Group (APP/SMG).³⁰

The same report identified eight pending Industrial Forest Plantation (HTI) concessions, “Including those of PT Lestari Asri Jaya [LAJ] of the Barito Pacific Group, which could start clearing natural forest as soon as permits are given by the government, and supply the cleared wood to APP,”³¹ and further warned that since April 2010:

“PT Lestari Asri Jaya [LAJ] of the Barito Pacific Group appears to be allowed to start clearing dense High Conservation Value Forests in the south of Bukit Tigapuluh...and APP/SMG is expected to receive the wood from this deforestation.”

To enable this, the report says that “in apparent far-sighted preparation for the clearing of these concession blocks, APP had opened a logging highway through these [LAJ’s] concessions as early as 2007 and, by doing so, has been facilitating illegal encroachment even into the [Bukit Tigapuluh] National Park.” The report warned “the operation of PT LAJ will inevitably increase tension as local communities lose the forest,” and highlighted that six villages affected by LAJ’s four forest concession blocks in Jambi – including the village of Muara Sekalo – were concerned about “upcoming deforestation by PT LAJ,” and listed a host of other villages dependent upon forests in Jambi “now being cleared by PT LAJ.”³²

Lack of Consent by Forest Communities, and Risk of Illegal Logging

Soon after this public alarm, an ecosystem conservation and restoration plan now newly refocused on rubber production was developed to seemingly allay the serious concerns raised in the 2010 *Last Chance to Save Bukit Tigapuluh* report. However, there were clear public warnings for Michelin in the crucial same 33-month period prior to agreeing their second joint venture with Barito Pacific in the RLU Project. A host of local villagers and affected local and Indigenous communities reported to local media and CSOs that they were not consulted and that their right to Free, Prior and Informed Consent (FPIC) was not given before RLU’s subsidiary LAJ started industrial-scale clearing and deforesting of their ancestral forests and lands.³³

The 2010 report claimed that five villages “[reported] there had been no consultations with them during the environmental impact assessment, or AMDAL, study” and alleged that a review of LAJ’s 2009 AMDAL environmental impact assessment study “revealed that the signatures of at least five local village representatives were falsely added to the list of attendants of an ‘AMDAL socialization meeting’ in September 2009,” despite the fact that the village representatives claim they did not attend the meeting.³⁴

Villagers from Muara Sekalo village in Tebo district in Jambi that saw their ancestral lands industrially deforested by LAJ have since told academics they were they were never consulted about the planned deforestation and did not give their prior consent.³⁵ An academic from the University of Göttingen in Germany, Fenna Otten, found that only a few villagers in Muara Sekalo – which is near our Case Study Area 1 in south-eastern LAJ 4 – had heard about co-operation between LAJ, Michelin and WWF, and none of the villagers knew exactly how they were involved. They said nobody mentioned other co-operating partners, nor were any villagers aware about “sustainable” or “eco-friendly” rubber production at all.

One villager from Muara Sekalo, Pak Junaidi, said: “The company only came to take benefit from the village. It has never gotten in touch with the village community and took account of their interests. Thus, the community barely understands about LAJ’s activities.”³⁶ Furthermore, the head of Pemayungan village in Sumay district in Jambi has also alleged local villagers were terrorized, intimidated, coerced and forcibly evicted from their forests and lands by LAJ – backed by the National Police (Polri) and National Army (TNI) – in 2012.³⁷

Between 2011 and 2014, a series of local and Indigenous communities, forest watchdog groups, CSOs and local media reports and statements highlighted reports of sometimes violent disputes, clashes, evictions and land conflicts with villagers and Indigenous peoples associated with LAJ’s industrial deforestation in its Jambi concessions.³⁸ In addition, there was a public report that LAJ was carrying out illegal logging on its concessions in Jambi, even some months after Michelin agreed to its joint venture with RLU and Barito Pacific in December 2014.³⁹ For example, a timber monitoring legality report on LAJ in Jambi by KKI Warsi and WWF Indonesia, published in November 2015 and covering a monitoring period from October 2014 to June 2015, presented geo-tagged evidence of illegal logging inside a designated Wildlife Protection Zone (DPSL), industrial deforestation and clearing of natural forests both inside and outside LAJ concession areas to make way for the rubber plantation, and evidence of illegal logging, harvesting and untagged logs being trucked out of LAJ’s concessions along the APP logging corridor road.⁴⁰



APP main logging corridor inside the LAJ 4 concession on 26 April 2010. Credit: Heriyadi Asyari/KKI Warsi (2010)

Jambi Deforestation: Michelin and RLU's Narrative

At the public launch of the RLU Project with Barito Pacific Group on May 18, 2015, Michelin said in a press release that, "The project involves the reforestation of three concessions, representing a total surface area of 88,000 hectares, ravaged by uncontrolled deforestation."⁴¹ This public narrative has been used throughout the RLU Project to date. Project financier TLFF in their \$95m Sustainability Bond Offering Circular to investors in 2018 said the Bukit Tigapuluh landscape in Jambi was originally a fully forested landscape but "has suffered severe deforestation in recent years. Only 230,000 ha of forest cover remained in 2014, mostly in two government protected areas and two licensed and one potential ecosystem restoration concession blocks. All remaining forests face increasing degradation and deforestation threats mainly from illegal harvesting of timber, clearance for slash and burn agriculture, and illegal development of oil palm plantations."⁴²

Similarly, the RLU Landscape Protection Plan report from 2019 says, "...both concessions in Jambi and East Kalimantan have suffered severe deforestation and degradation over the last two decades from illegal encroachment, slash & burn practices, migrants & [sic] illegal development of oil palm plantations and illegal logging."⁴³ The RLU Landscape Protection Plan report further explains the causes of the deforestation in the Jambi concessions:⁴⁴

RLU, when taking on the entirety of the concessions in 2010, inherited a significant amount of historical deforestation and encroachment, including the social complexity. The two ethnic groups present in the area (Orang Rimba and Talang Mamak groups) had some role in deforestation. However, the main pressure came from migrants into the area. The population in and around the LAJ concession in particular grew rapidly in the years just prior to Barito [Pacific] taking over.

By the time a survey was undertaken in 2016, there were more than 50,000 people officially resident in the 18 villages and two informal settlements in and around the Jambi concessions. These people, and land speculators largely from North Sumatera [sic], were

eager to stake a claim in hopes of future land compensation or to clear land for food, palm oil and rubber. It was this collective pressure that primarily led to the rapid deforestation experienced between 2010 and 2017.

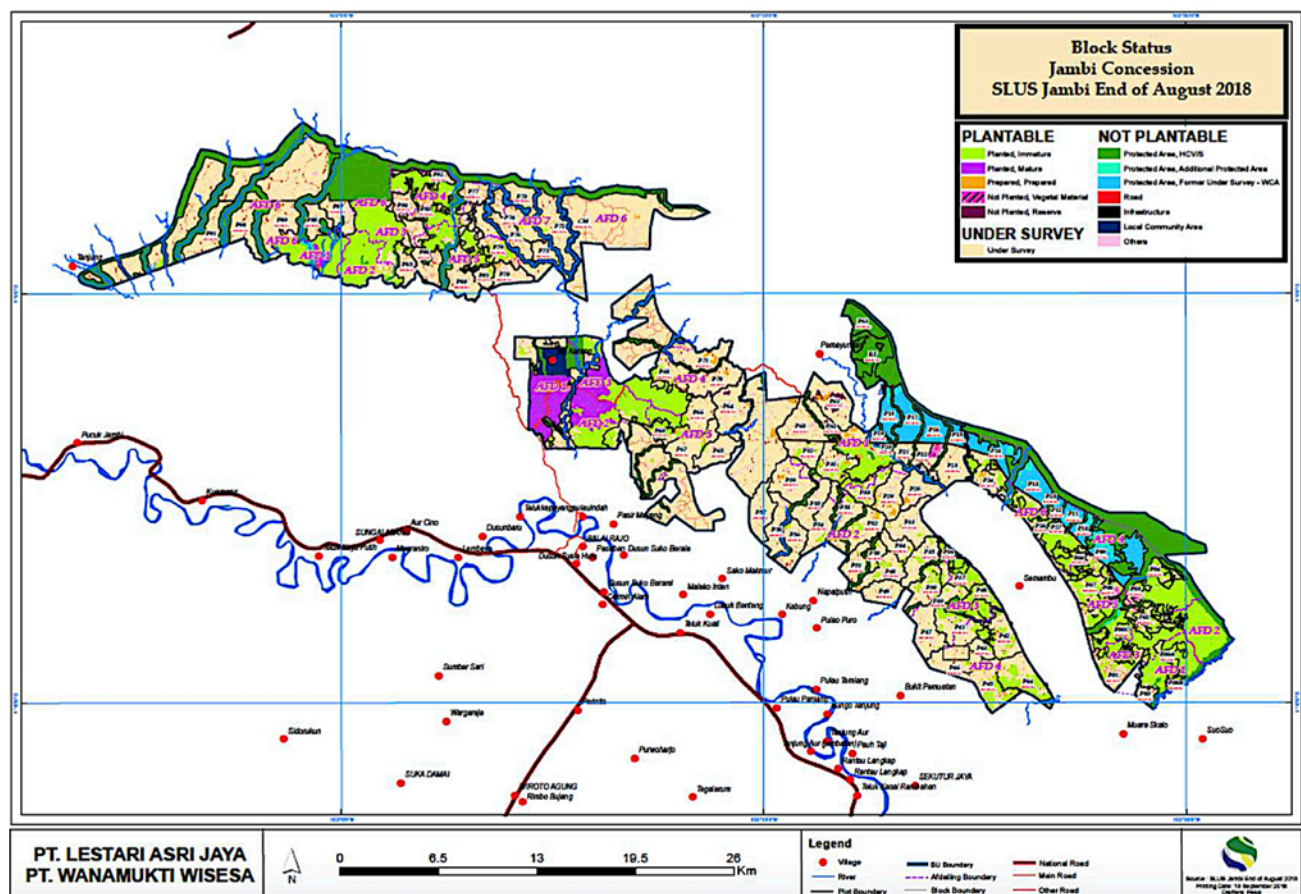
However, we were unable to identify or obtain any public RLU Project-related documents that mentioned any Barito Pacific Group or Pangestu-owned company role or involvement in industrial deforestation in the two focus LAJ 4 case study areas – nor in the other Jambi concessions – prior to the agreement of the RLU Project in December 2014.

Echoing numerous contemporaneous reports, accounts and warnings, academics from the University of Göttingen said in January 2020 from research in nine villages and in Muara Sekalo village near the LAJ 4 concession in Jambi that local villagers claimed to have been coerced into assigning their land to the rubber company LAJ, and local farmers reported environmental destruction because rubber plantation establishment involved deforestation.⁴⁵

As such, Mighty Earth endeavored to look behind the public reports and information published by RLU, Michelin, TLFF and &Green and sought to identify the true drivers of deforestation that led to the expansion of new rubber plantations in the Jambi concessions and in particular the LAJ 4 focus case study areas (see Maps 1 and 2) that were to become part of Michelin's eco-flagship of sustainable natural rubber. To do this, Mighty Earth asked Michelin and RLU to supply them with the spatial data files of their five Jambi concessions, LAJ's Environmental and Social Impact Assessment (ESIA) from 2010 and a baseline study by Tropenbos environmental consultancy assessing the High Conservation Value (HCV) and High Carbon Stock (HCS) forest cover in the Jambi concessions in 2015.

We also requested details of the "Go" and "No-Go" conservation zones established with WWF, and a key Environmental and Social Due Diligence Assessment (ESDD) report by Daemeter, Proforest and CIRAD in 2017, which evaluated social and deforestation trends in all of RLU's Jambi concessions, including LAJ 4. We also asked Michelin for all their on-site environmental, social and agricultural due diligence in Jambi from 2014. Despite Michelin's policy commitment to transparency, none of these key maps, studies or reports were forthcoming from Michelin, or from RLU, despite repeated requests (see Annex 1).

Figure 7: RLU Baseline Jambi Concessions, 2018



Source: RLU (2019)

With those efforts proving fruitless, Mighty Earth commissioned deforestation monitoring specialists MapHubs (www.maphubs.com) to digitize the RLU Project's Jambi concessions (LAJs 1, 2, 3 and 4, and WMW) from the publicly available RLU Landscape Protection Plan report from 2019 (see Figure 7),⁴⁶ trace

four forest cover layers using high-resolution NASA Landsat 5, 7 and 8 and commercial Airbus SPOT 6 satellite images, and analyze Hansen Annual Tree Cover Loss data from November 2009 to January 2015 (see Methodology).

Methodology: Deforestation Analysis

To identify the drivers of deforestation prior to the RLU Project, three variables were examined by MapHubs:

- The timeline of deforestation was analyzed to determine the overall trajectory of forest cover loss inside LAJ 4 and the four other Jambi concessions between November 2009 and January 2015.⁴⁷
- The RLU Planted Rubber Areas, and the High Carbon Stock (HCS), High Conservation Value (HCV) and Wildlife Conservation Areas (WCA) within LAJ 4 and the other Jambi concessions were analyzed for deforestation between November 2009 and January 2015.

For the purpose of this report, the RLU Planted Rubber Areas (known in this report as RLU Rubber Areas) are identified as the commercially important plantation areas within LAJ 4 and the other Jambi concessions where RLU and subsequently the RLU Project holds rubber plantations. The RLU Rubber Areas were defined according to the RLU Project's publicly disclosed Jambi Concession Land Use map from 2018 (see Figure 7).⁴⁸

- The method of deforestation was analyzed within the RLU Rubber Areas and the Wildlife Conservation Areas (WCAs). This was used to determine whether the deforestation in point b) was cleared using

industrial deforestation or smallholder or other non-industrial deforestation methods between November 22, 2009 and January 15, 2015 (see Figures 8 and 9).

To calculate industrial and non-industrial forest clearance within the RLU Rubber and Wildlife Conservation Areas, a variety of data sources and Geographic Information System (GIS) tools were used. These include the MapHubs Portal (map making), Forest Report (deforestation and fire analytics) and QGIS (spatial analytics), which were used to digitize the land use maps published by the RLU Project and a deforestation analysis based on medium- and high-resolution satellite imagery. Print and interactive maps were produced using MapHubs Pro and additional GIS and land classification analysis was conducted using QGIS.

To analyze forest cover data, four forest cover layers were developed using NASA Landsat 5, 7 and 8 and commercial Airbus SPOT 6 satellite imagery scenes, which used high-resolution satellite imagery ranging from 50 cm to 1.5 m resolution. These layers were used to identify locations and hectarage of forest loss. The following dates of satellite images were selected, as they closely align with key points during Barito Pacific Group's ownership of the Jambi concessions and Michelin's expanding business partnership with Barito Pacific prior to the foundation of the RLU Project:

Table 1: Key Satellite Imagery Dates

Key Satellite Imagery Dates	
November 22, 2009	Since September 2008, LAJ and WMW - two key operating companies in LAJ 4 and the Jambi concessions - were owned and majority owned respectively by Barito Pacific Group companies
April 12, 2012	Reports of industrial deforestation involving LAJ in Jambi appear in local media ⁴⁹
June 18, 2013	On June 17, 2013, Michelin established its 1st joint venture with the Barito Pacific Group, to build a \$435m synthetic rubber plant in Cilegon in Banten, Indonesia
June 18, 2013	On December 17, 2014, Michelin established its 2nd joint venture with the Barito Pacific Group, the RLU Project



Hills outside Bukit Tigapuluh National Park.
Credit: Wild Tiger (2015)

Identifying Industrial and Non-Industrial Deforestation

Using high-resolution satellite imagery ranging from 50 cm to 1.5 m resolution, MapHubs was able to distinguish between industrial deforestation and smallholder or encroachment-based deforestation. Industrial deforestation is identified by its distinctive pattern of coordinated road construction and land terracing, which is characteristic of industrial land preparation techniques used within oil palm concessions;⁵⁰ non-industrial deforestation is identified by a mosaic of burned, cultivated and semi-cultivated areas accessed through existing roads and trails. Examples of non-industrial and industrial deforestation are illustrated in Figure 2.

Figure 8: Examples of Industrial and Non-Industrial Deforestation in the Jambi Concessions



Latitude: -0.958 Longitude: 101.992

Source: SPOT 6



Latitude: -0.954 Longitude: 102.022

Source: SPOT 6

To quantify and timestamp industrial deforestation, areas of road development and land terracing were outlined from high-resolution satellite images for each time period (see below).

Industrial Deforestation Mapping and Dating Examples



Source: MapHubs (2020)



Source: MapHubs (2020)

Michelin and Barito Pacific Corporate Links

A corporate ownership history for Sustainability Bond investors in the RLU Project by bond issuer TLFF in 2018 highlights that the borrower PT Royal Lestari Utama (RLU) acquired the majority of the shares in LAJ on July 29, 2011, and the majority of the shares in PT Wanamukti Wisesa (WMW) on April 25, 2014, making WMW its subsidiary, in addition to LAJ.⁵¹

However, our research found TLFF omitted to inform investors in their Offering Circular in March 2018⁵² that Barito Pacific President and founder Prajogo Pangestu had in fact owned RLU (then named PT Inti Energi Perkasa, IEP)⁵³ since as early as July 16, 2008, and that RLU and another company owned by Pangestu (PT Putra Bara Utama) had owned LAJ since September 19, 2008.⁵⁴ TLFF also omitted to inform investors that WMW had been majority owned by a Barito Pacific-owned company (PT Industries Et Forets Asiatiques) since August 15, 2008.⁵⁵

Using official corporate ownership data, Mighty Earth investigated the secretive corporate ownership structures and history of PT Royal Lestari Utama (RLU) and its related companies:

- On July 16, 2008, 99.9% of the shares in PT Inti Energi Perkasa (IEP) were owned by Barito Pacific's

President and founder Prajogo Pangestu. In June 2011, IEP was renamed PT Royal Lestari Utama (RLU).⁵⁶

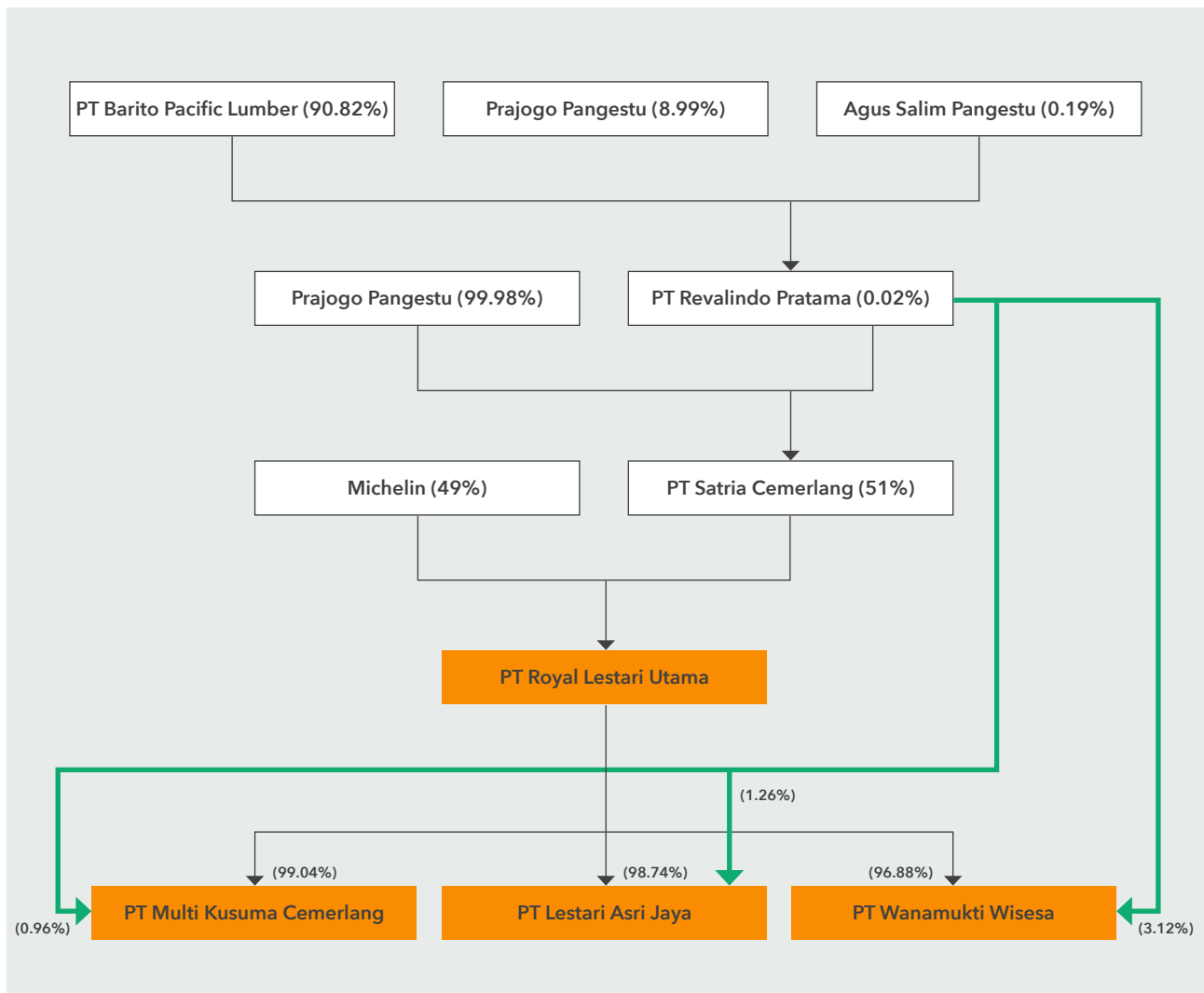
- In August 2008, WMW was majority owned by a Barito Pacific company (PT Industries Et Forets Asiatiques); WMW became jointly owned by two Barito Pacific Group companies in December 2012, and became an RLU subsidiary in June 2014.⁵⁷
- In September 2008, LAJ was jointly owned by IEP (before the name changed to RLU in June 2011) and another Pangestu-owned company (PT Putra Bara Utama), and became a subsidiary of RLU in August 2011.⁵⁸
- Since September 2008, LAJ and WMW – the two key operating companies in LAJ 4 and the Jambi concessions⁵⁹ – have been owned and majority owned respectively by Prajogo Pangestu-owned or Barito Pacific companies.

Prajogo Pangestu – an Indonesian billionaire, timber baron and alleged illegal logger – is described by the International Consortium of Investigative Journalists as a crony of the disgraced (former President of Indonesia) Suharto and of having vast forestry holdings in Indonesia. Once described as Indonesia's "timber king,"⁶⁰ Pangestu is also alleged to have been involved in land grabbing, deforestation, illegal logging and offshore tax evasion through his opaque network of timber, pulp and oil palm companies under the Barito Pacific conglomerate.⁶¹



Sumatran rainforest.
Credit: Wild Sumatra (2013)

Figure 9: RLU Shareholder Structure, March 2018



Source: TLFF (2018) ⁶²

RLU was fully acquired in June 2014 by PT Satria Cemerlang,⁶³ a company which was 99.9% owned by Pangestu.⁶⁴ Months later, PT Satria Cemerlang – a company described by TLFF as “within the Barito Pacific Group (but which is not a PT. Barito Pacific Tbk. Subsidiary)”⁶⁵ – became a 51% joint venture majority shareholder with Michelin in RLU and the RLU Project in December 2014 (see Figure 9).

The corporate ownership chronology below (see Table 2) highlights the key events and joint venture agreements involving Michelin and Barito Pacific and its share ownership of RLU, LAJ and WMW.

Table 2: Corporate Ownership Chronology ⁶⁶

Year	Event
July 16, 2008	RLU established as PT Inti Energi Perkasa. Barito Pacific President and founder Prajogo Pangestu owns 99.9% of the shares in PT Inti Energi Perkasa (IEP) . ⁶⁷
Aug 15, 2008	PT Wanamukti Wisesa (WMW) majority owned by Barito Pacific Group company PT Industries Et Forets Asiatiques . ^{68, 69}
Sept 19, 2008	PT Lestari Asri Jaya (LAJ) owned by two Pangestu-owned companies: PT Inti Energi Perkasa (later named RLU) and PT Putra Bara Utama . ⁷⁰
June 13, 2011	PT Inti Energi Perkasa changes its name to PT Royal Lestari Utama (RLU) .
July 29, 2011	RLU acquired the majority of the shares in LAJ , making the company its subsidiary.
June 17, 2013	Michelin and Barito Pacific subsidiary PT Petrokimia Butadiene Indonesia (PBI) sign a majority-owned \$435m joint venture to build a synthetic rubber processing plant in Cilegon in Banten, Indonesia. ⁷¹
April 25, 2014	RLU acquired the majority of the shares in WMW and PT Multi Kusuma Cemerlang , making both companies its subsidiaries in addition to LAJ .
Dec 17, 2014	A joint venture in relation to an industrial natural rubber forest and mill project in Indonesia began following the execution of a Shareholders' Agreement between RLU and PT Satria Cemerlang and Michelin .
Mar 3, 2015	Michelin and PT Satria Cemerlang officially invested in the concession area as shareholders in RLU . Change of company status to a Foreign Investment Company.
Feb 22, 2017	Both shareholders agreed to subscribe for more equity. Michelin subscribed for more equity with cash and PT Satria Cemerlang subscribed for more equity with assets.
Nov 13, 2017	Debt to equity conversion of RLU in LAJ , WMW and PT Multi Kusuma Cemerlang , effectively increasing levels of shareholding in the subsidiaries.

Deforestation Key Findings

Mighty Earth developed our first phase of deforestation analysis in the Jambi concessions through field research in Jambi in March 2019.⁷² Later armed with the knowledge that LAJ had in fact been owned by RLU and another Barito Pacific Group company since as early as

September 2008,⁷³ and became a subsidiary of RLU in August 2011, we further commissioned MapHubs to assess high-resolution commercial satellite images of deforestation across the Jambi concessions. In particular, we asked MapHubs to focus in and assess evidence of industrial deforestation inside RLU's LAJ 4 concession in Jambi, covering the period from November 22, 2009, to January 15, 2015.



Endangered Sumatran elephants. Credit: Tafrianto Silalahi

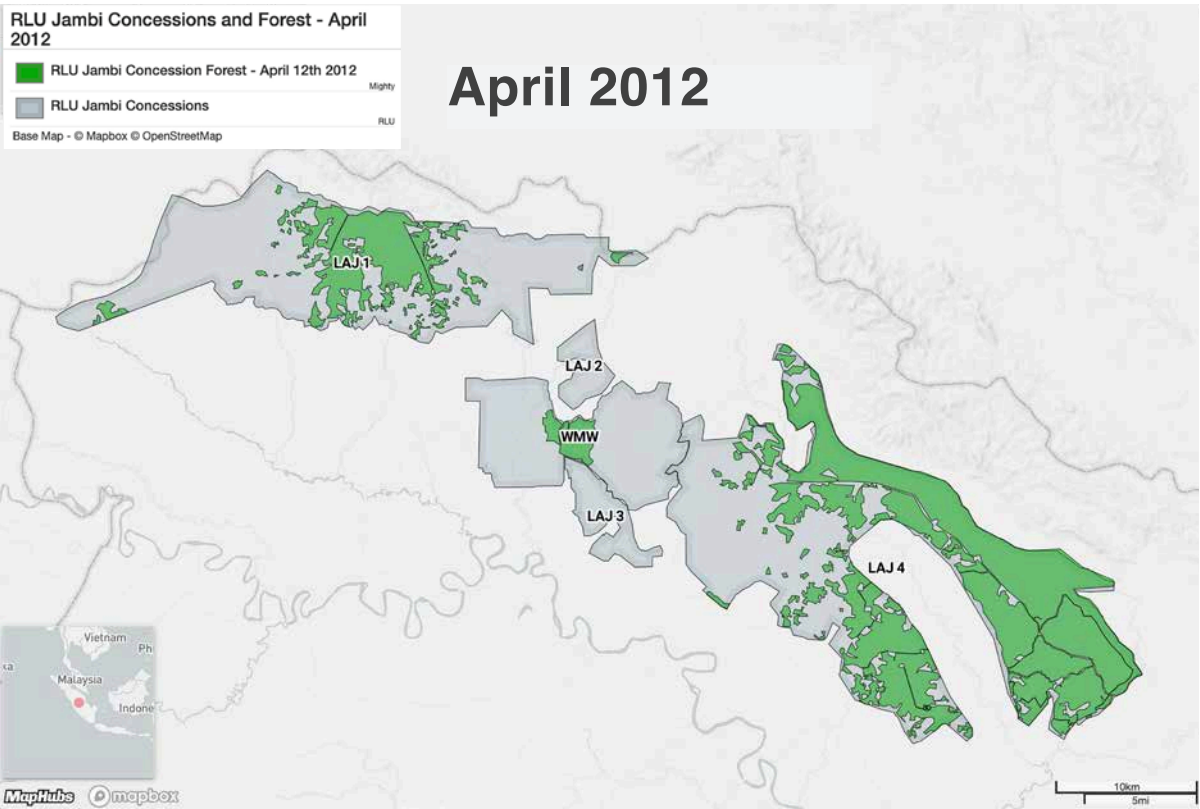
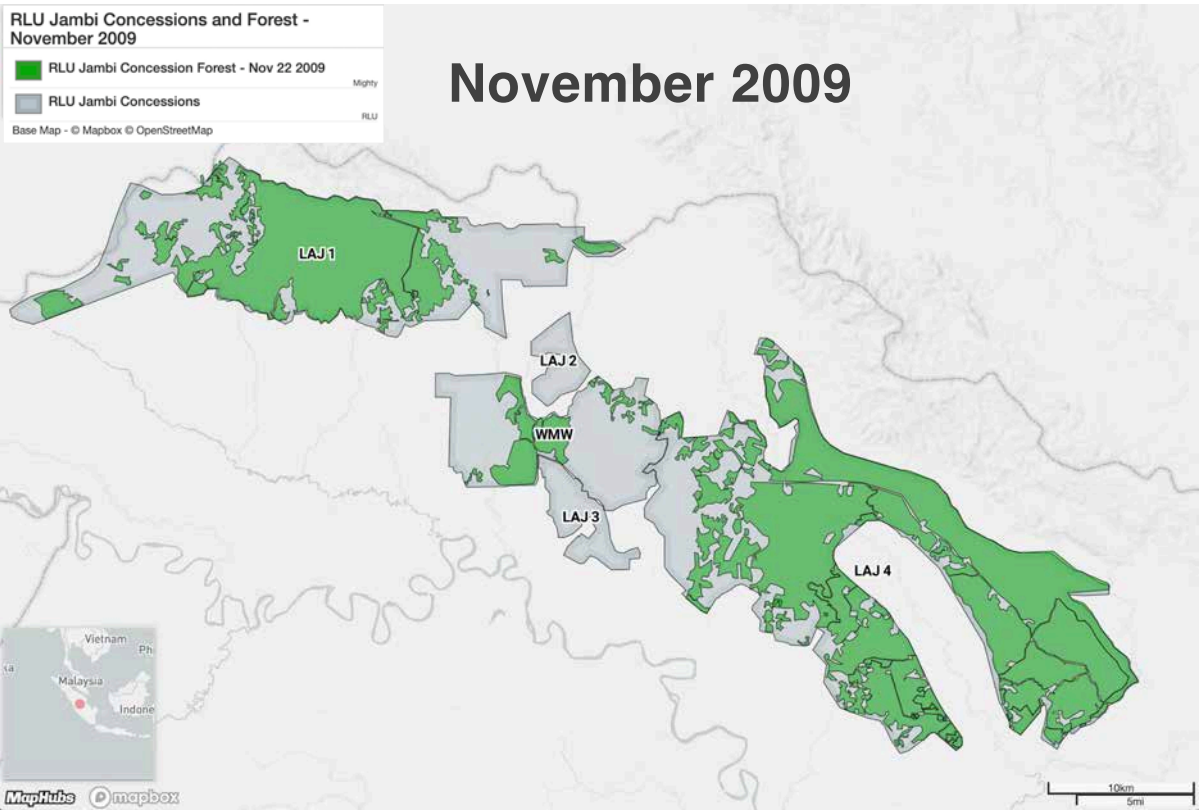
CHAPTER 2: CASE STUDIES

Overall, as of November 22, 2009, an analysis found there was a total area of 40,963 ha of natural forests within the five RLU Jambi concessions, according to analysis of high-resolution NASA Landsat and Airbus SPOT satellite images.⁷⁴ In LAJ 1, 52% (12,454 ha) of the concession area remained as natural forest. Although the far east and far west sections of LAJ 1 had seen extensive non-industrial encroachment, a large contiguous central forest block in the center of the concession remained largely undisturbed (see Map 5 above). In LAJ 4, remaining forest areas were concentrated in the south-eastern leg of the concession. While the concession's western section had largely been

deforested by non-industrial clearance, 72% (26,149 ha) of the LAJ 4 concession area remained largely intact and directly bordered the Bukit Tigapuluh National Park.⁷⁵ However, between November 22, 2009, and April 12, 2012, forest cover declined by 13,760 ha within all five Jambi concessions (see Figure 12). Deforestation intensified between April 12, 2012, and June 18, 2013, with 14,235 ha forest lost during this period, including 3,670 ha of the remaining forest in LAJ 1. Finally, between June 18, 2013, and January 15, 2015, the Jambi concessions lost 9,308 ha of forest, leaving just 3,233 ha remaining.⁷⁶

Deforestation in Jambi Concessions

Figure 10: Deforestation inside Jambi Concessions, November 22, 2009-January 15, 2015



Source: MapHubs (2020)

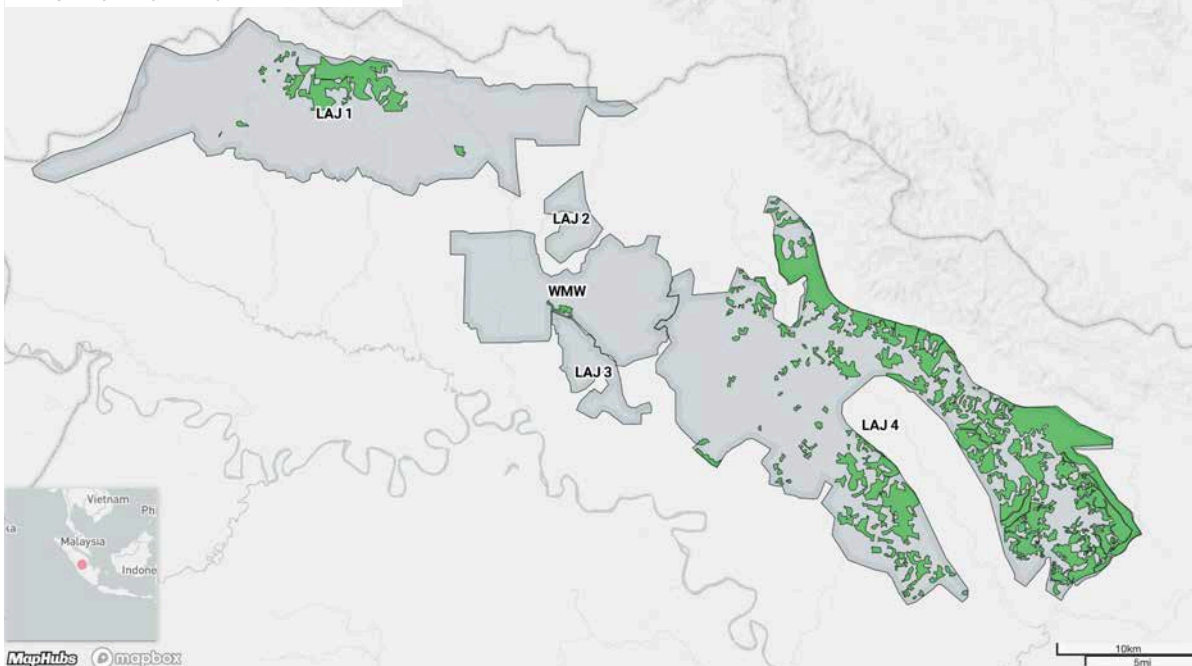
RLU Jambi Concessions and Forest - June 2013

RLU Jambi Concession Forest - June 18 2013

RLU Jambi Concessions

Base Map - © Mapbox © OpenStreetMap

June 2013



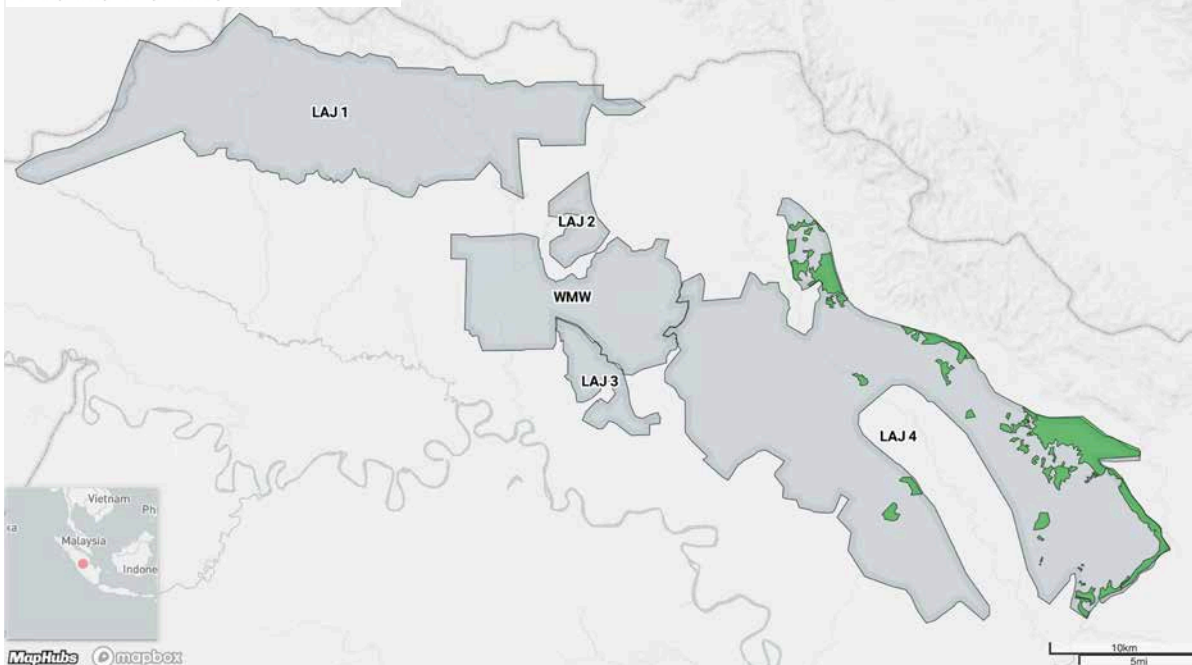
RLU Jambi Concessions and Forest - January 2015

RLU Jambi Concession Forest - January 15 2015

RLU Jambi Concessions

Base Map - © Mapbox © OpenStreetMap

January 2015



Source: MapHubs (2020)

Figure 11. RLU Jambi Concessions Forest Cover, November 22, 2009-January 15, 2015

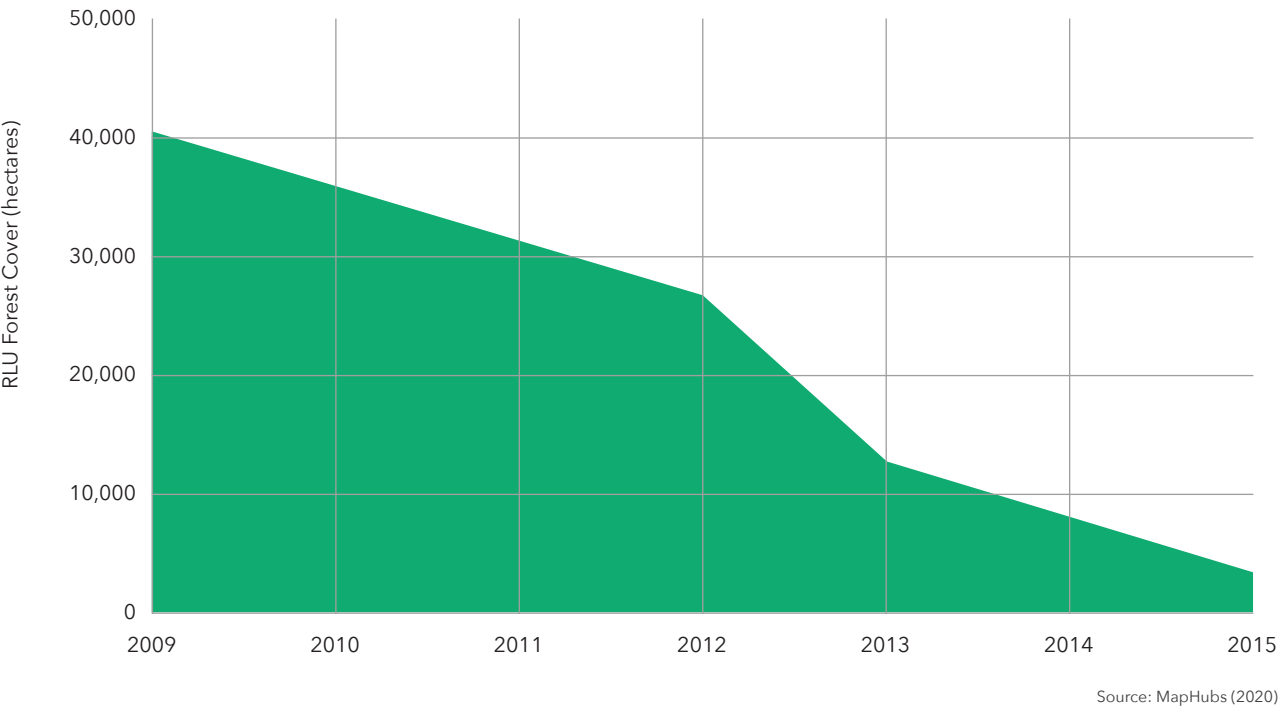
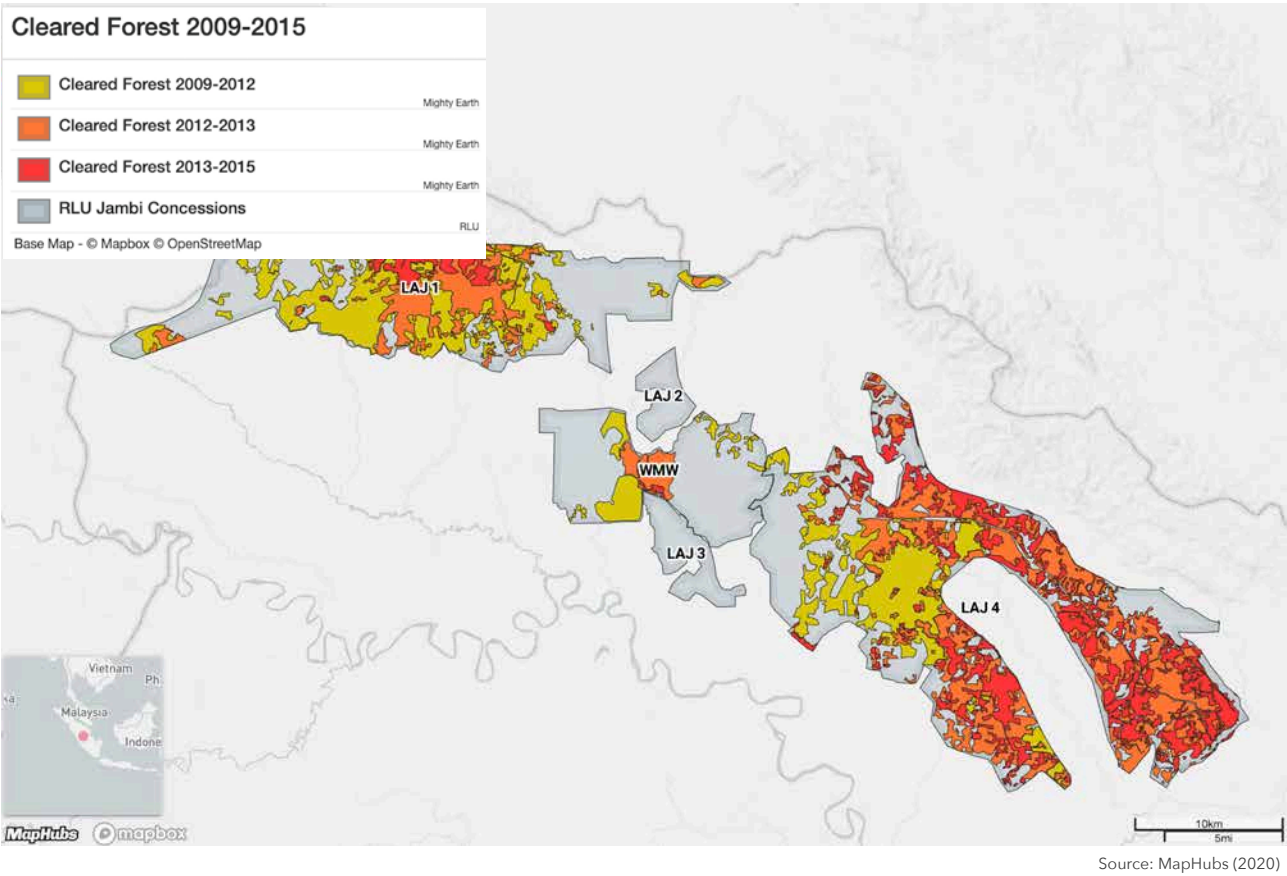


Figure 12: Jambi Concessions Deforestation, 2009-2015



LAJ 4 Deforestation, November 22, 2009-January 15, 2015

The baseline forest cover in the whole of the LAJ 4 concession on November 22, 2009, was concentrated in the south-eastern leg of the concession, with 26,149 ha of forest (or 72% of the LAJ 4 concession area) remaining largely intact and directly bordering the Bukit Tigapuluh National Park.⁷⁷ However, by January 15, 2015, just 3,233 ha of forest remained in the LAJ 4 concession⁷⁸ – soon after Michelin's joint-venture RLU Project began.

Between November 22, 2009, and January 15, 2015, a total of 22,916 ha was deforested in LAJ 4 (see Table 3): 24% of the deforestation was in the period between November 22, 2009, and April 12, 2012; 43% in the period between April 12, 2012, and June 18, 2013; and 33% in the period between June 18, 2013, and January 15, 2015.

November 22, 2009, to April 12, 2012

- Deforestation continued within the western and central sections of LAJ 4, losing 5,422 ha of forest. The eastern leg of the remaining forest bordering the Bukit Tigapuluh National Park remained largely intact.

April 12, 2012, to June 18, 2013

- Deforestation continued within LAJ 4, with 9,840 ha of forest lost. In the eastern leg of LAJ 4, there was increased fragmentation.

June 18, 2013, to January 15, 2015

- Deforestation was extensive in LAJ 4, which lost a further 7,654 ha of forest. The remaining forest areas in the eastern leg of LAJ 4 bordering the Bukit Tigapuluh National Park were almost entirely cleared, leaving only small fragmented patches of forest inside the RLU Project's Protected Area.

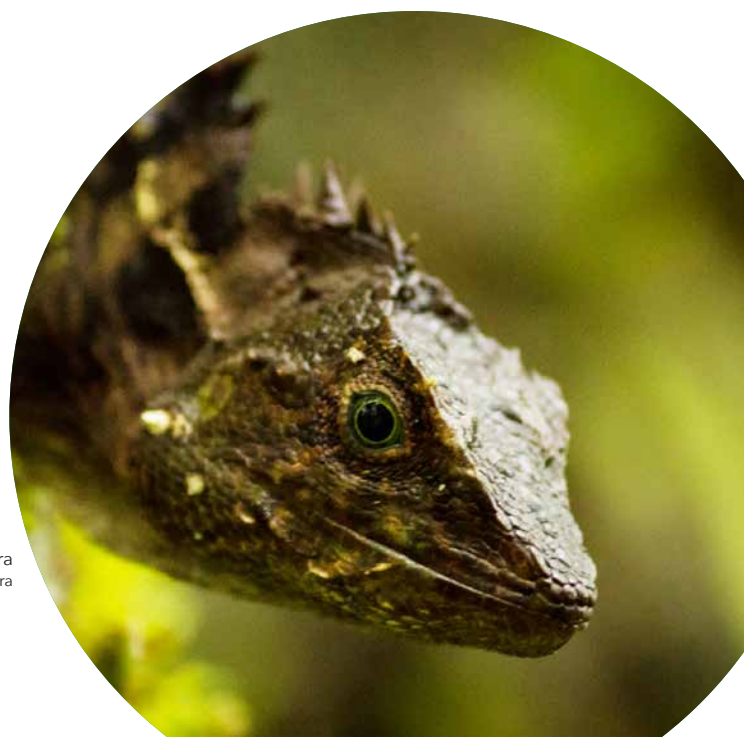
Table 3: LAJ 4 Deforestation: November 22, 2009-January 15, 2015⁷⁹

Date	Identified deforestation - by hectares and percentage of LAJ 4 concession area
Nov 22, 2009 - Apr 12, 2012	5,422 (21%)
Apr 12, 2012 - Jun 18, 2013	9,840 (47%)
Jun 18, 2013 - Jan 15, 2015	7,654 (70%)
Total (ha)	22,916 (88%)

Source: MapHubs (2020)

LAJ 4 Deforestation, November 22, 2009-January 15, 2015

We focused on LAJ 4, as the RLU Project map shows that the majority (59%) of the RLU Rubber Area is located in LAJ 4, followed by LAJ 1 and WMW.⁸⁰ As Figures 13 to 16 illustrate, LAJ 4 lost almost all forest between April 12, 2012, and January 15, 2015, within the RLU Rubber Areas. Our research identified that industrial methods were direct and indirect drivers of this deforestation.⁸¹



Boulenger's Tree Agama, Sumatra
Credit: Wild Sumatra

Figure 13: RLU Rubber Areas and Forest in LAJ 1, LAJ 4 and WMW, November 22, 2009

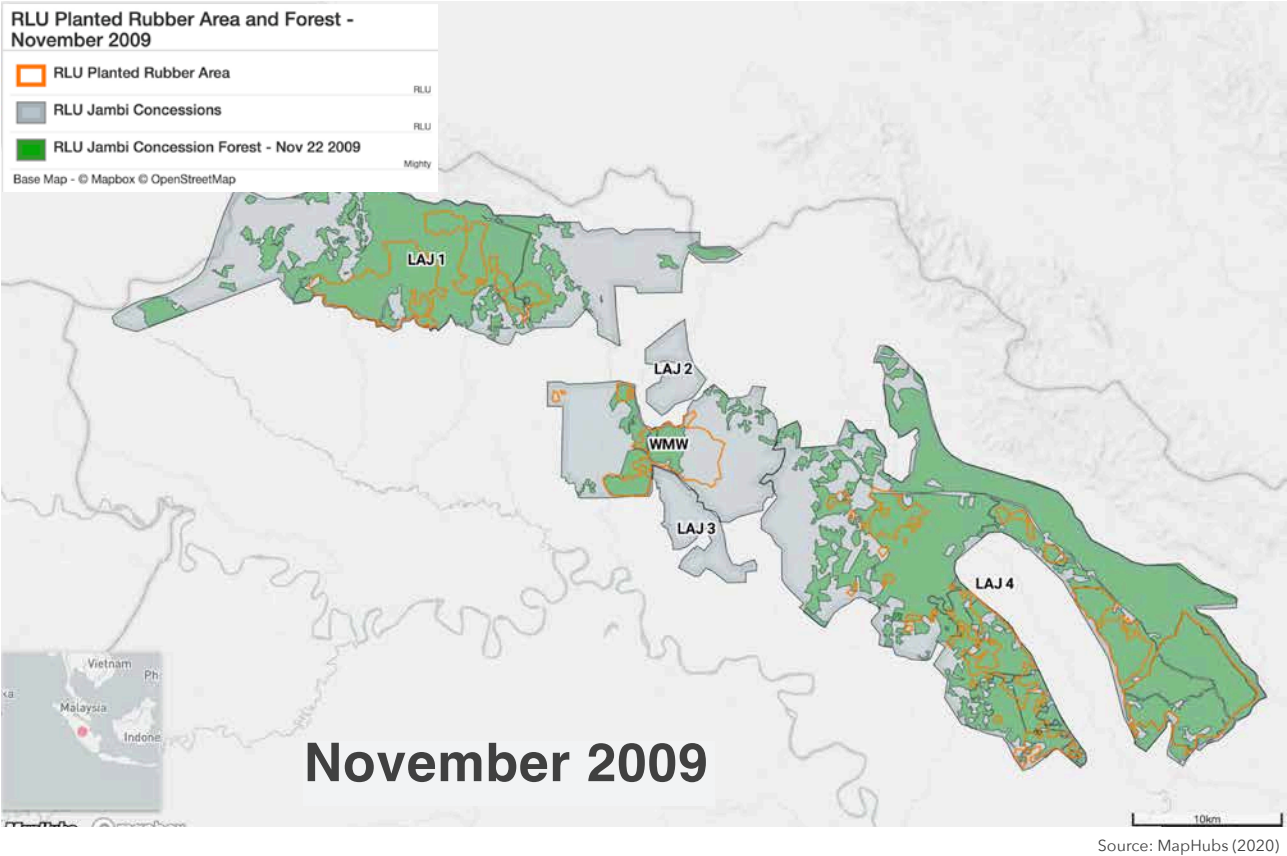


Figure 14: RLU Rubber Areas and Forest in LAJ 1, LAJ 4 and WMW, April 12, 2012

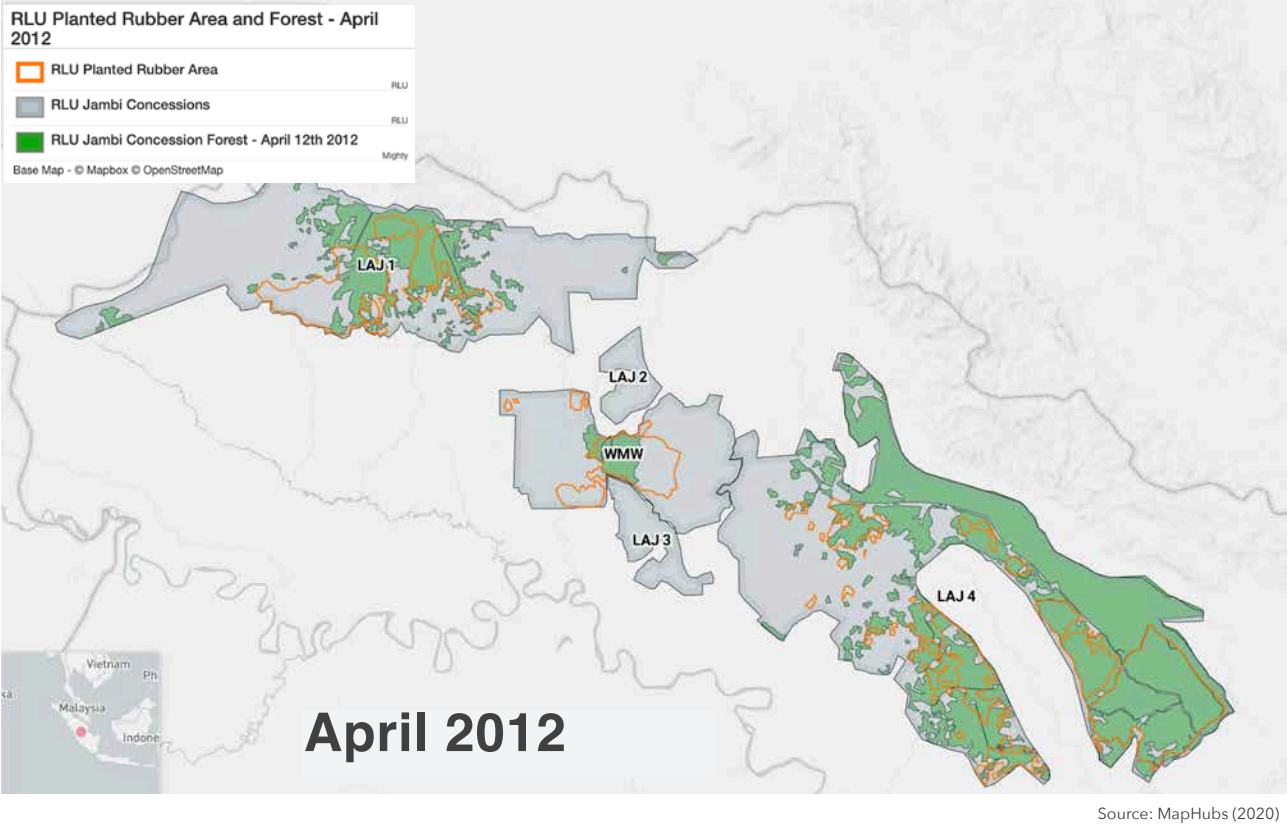


Figure 15: RLU Rubber Areas and Forest in LAJ 1, LAJ 4 and WMW, June 18, 2013

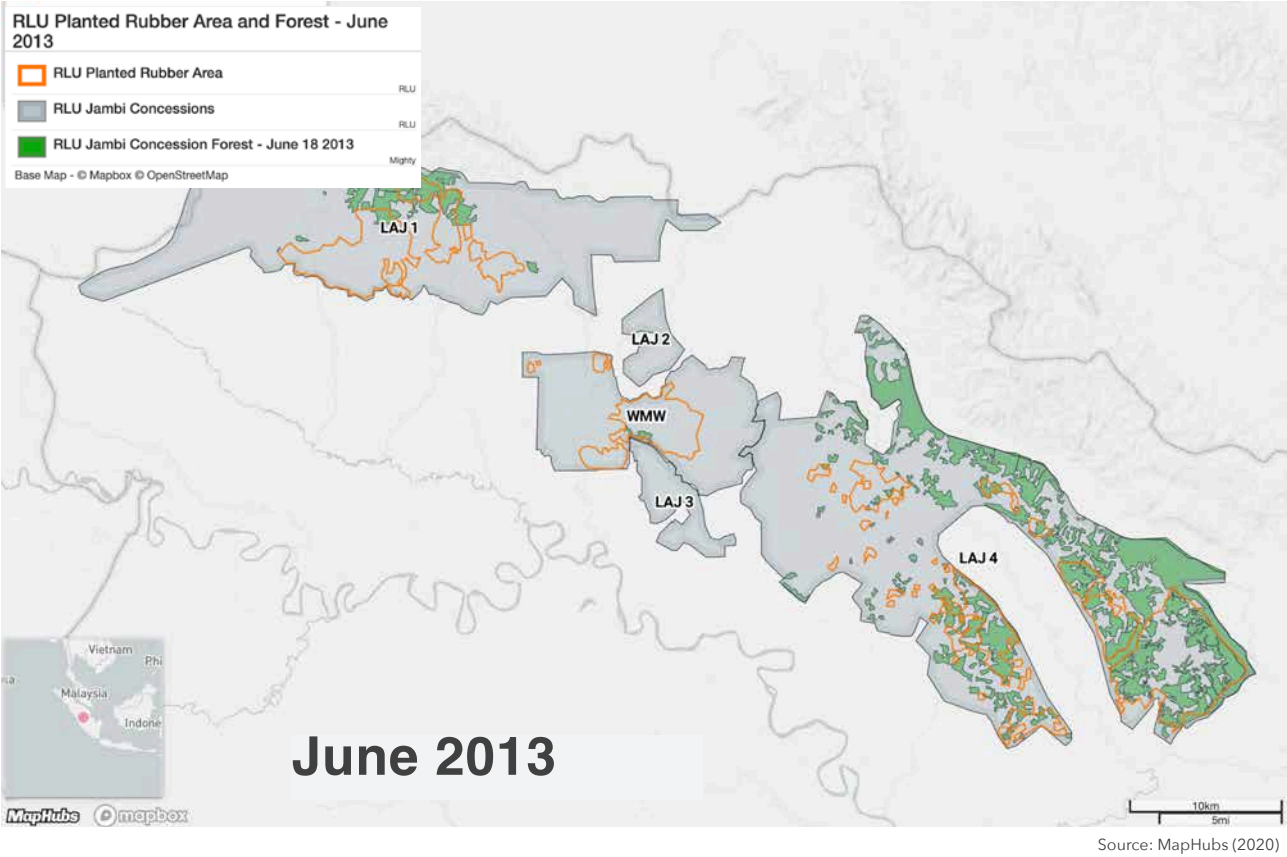
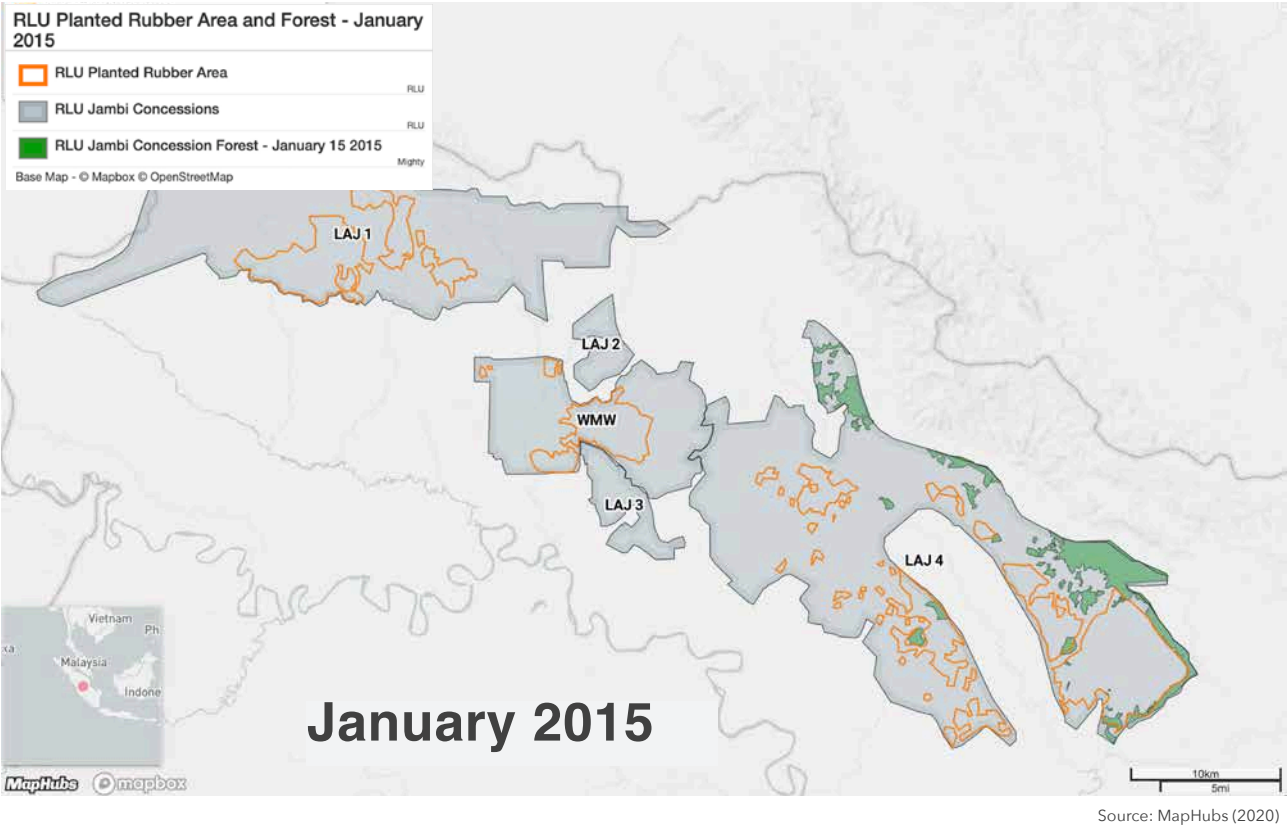


Figure 16: RLU Rubber Areas and Forest in LAJ 1, LAJ 4 and WMW, January 15, 2015

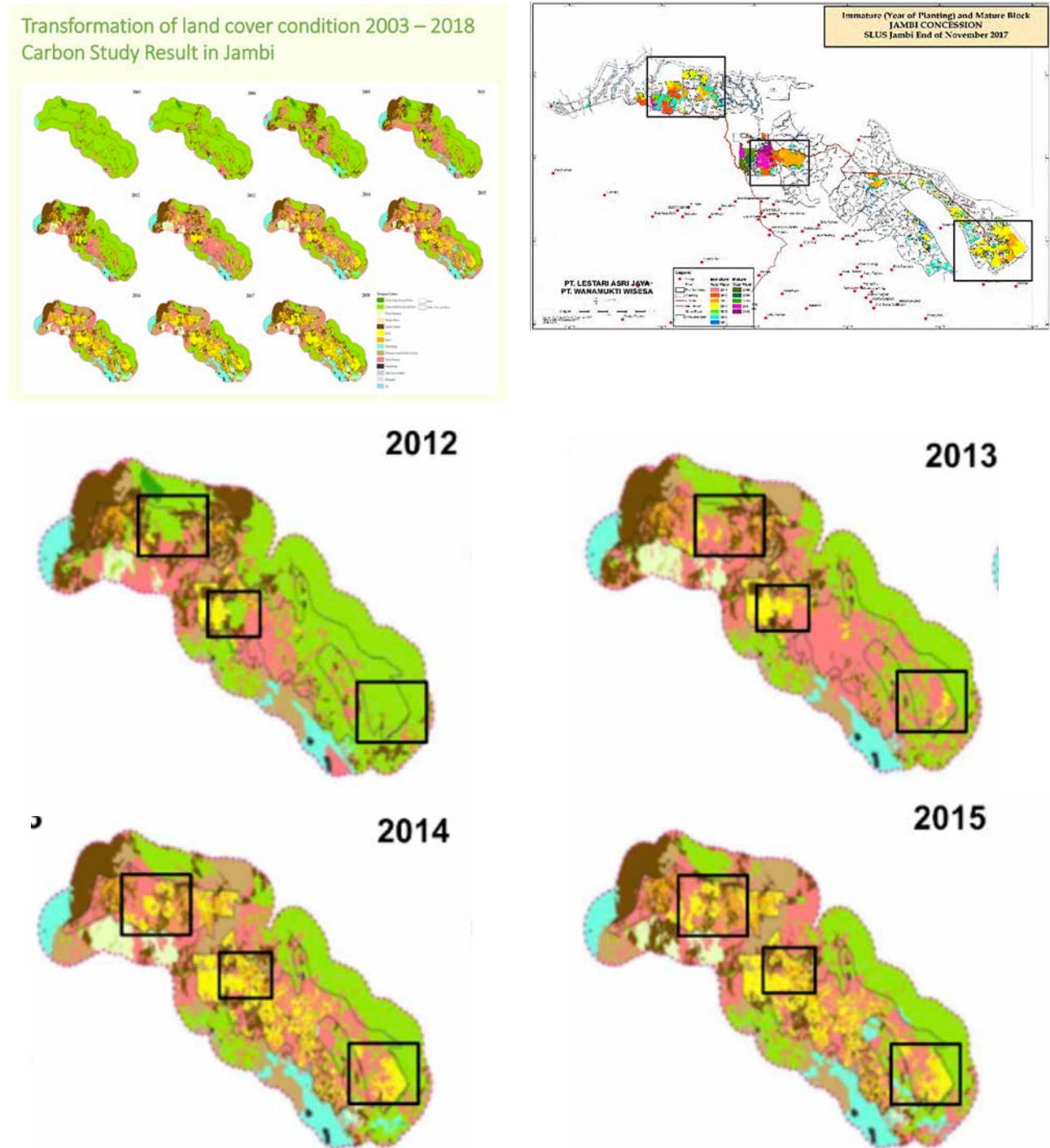


RLU Project Land Use Maps and Deforestation

RLU has not published annual deforestation statistics for LAJ 4 or the other Jambi concessions. However,

forest loss maps provided by the RLU Project to Mighty Earth illustrate that rubber plantations (seen in yellow in Figure 17) were established in areas that were natural forest in 2012.⁸²

Figure 17: Transformation of Land Cover Condition in Jambi, 2012-2015

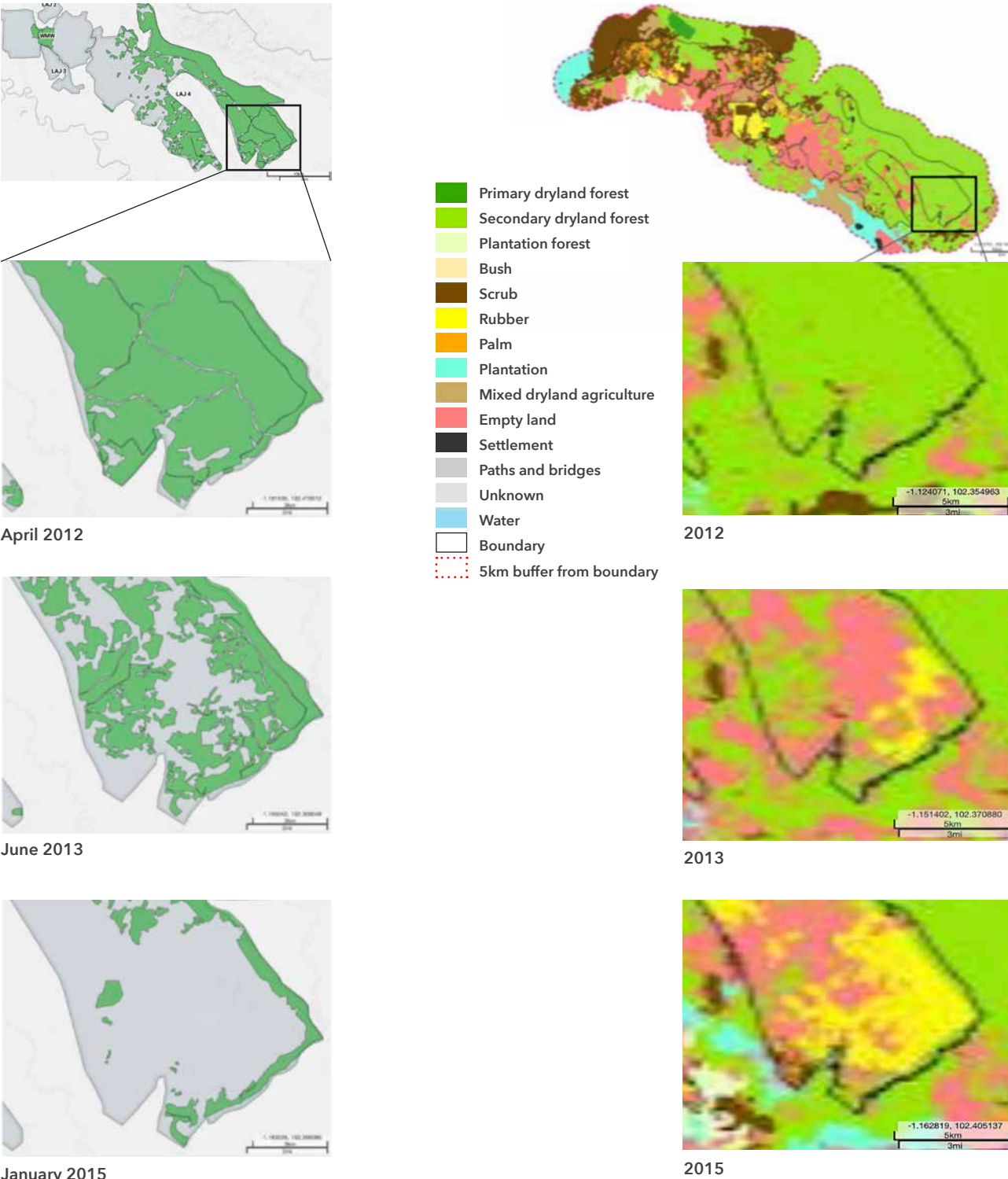


Source: Royal Lestari Utama Environment and Social Highlights (2019)

Below we compare forest cover maps (created by MapHubs)⁸³ of the Jambi concessions (Figure 18) with RLU’s “Transformation of Land Cover Condition” maps from 2012 to 2015 (see Figure 17 above).⁸⁴ In particular,

we focus on our Case Study Area 1 in the south-eastern section of LAJ 4 (see Figure 22), where between 2012 and 2015, forest areas were converted to rubber plantations – this is clearly mirrored in the two sets of maps.

Figure 18: MapHubs Forest Cover Maps and RLU Transformation of Land Cover Condition Maps in LAJ 4 Case Study Area 1 - 2012-2015



Source: MapHubs (2020)

Source: Royal Lestari Utama Environment and Social Highlights (2019)

Furthermore, RLU project financiers TLFF confirmed in their Sustainability Bond Circular Offering in 2018 that RLU started planting rubber trees in the Jambi concessions in 2008 (planting 94,056 rubber trees in an area covering 224 ha that year) and confirm that the planted area and the number of planted rubber

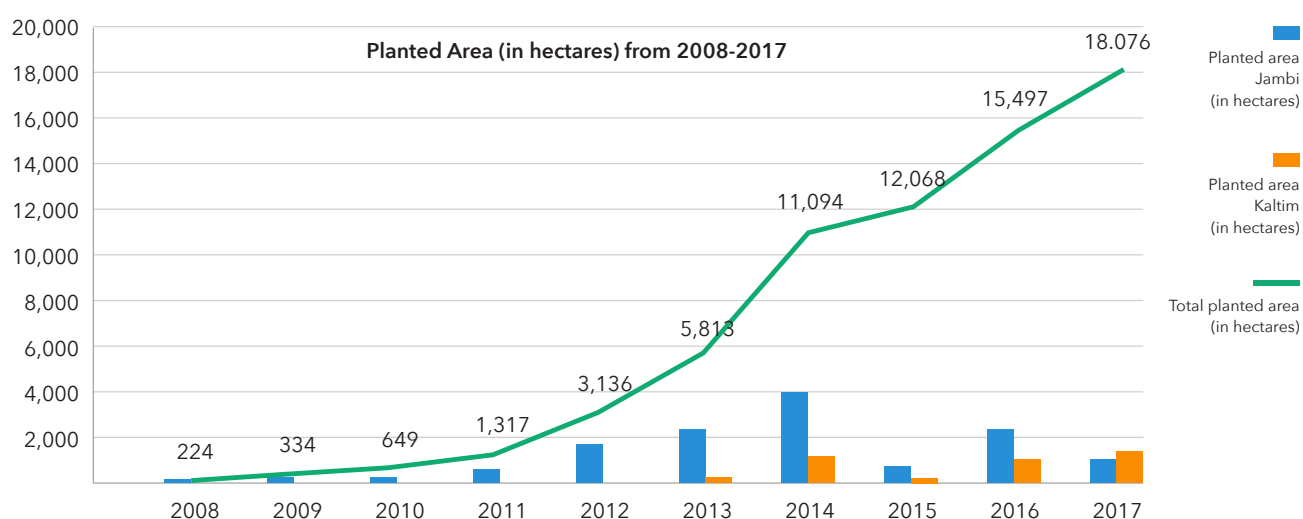
trees jumped and increased significantly in the Jambi concessions in the three key years of 2013, 2014 and 2016 – during the period immediately prior to Michelin agreeing to the joint venture RLU Project in December 2014 (see Table 4 and Figures 19 and 20).⁸⁵

Table 4: RLU Project: Hectares of Land Planted for Natural Rubber Trees, Jambi Province

Jambi Province	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Planted area (in hectares)	224	120	305	668	1,819	2,361	4,011	758	2,342	1,118
Number of trees planted	94,056	50,652	129,931	285,123	741,569	980,662	1,462,494	334,656	1,020,394	579,478

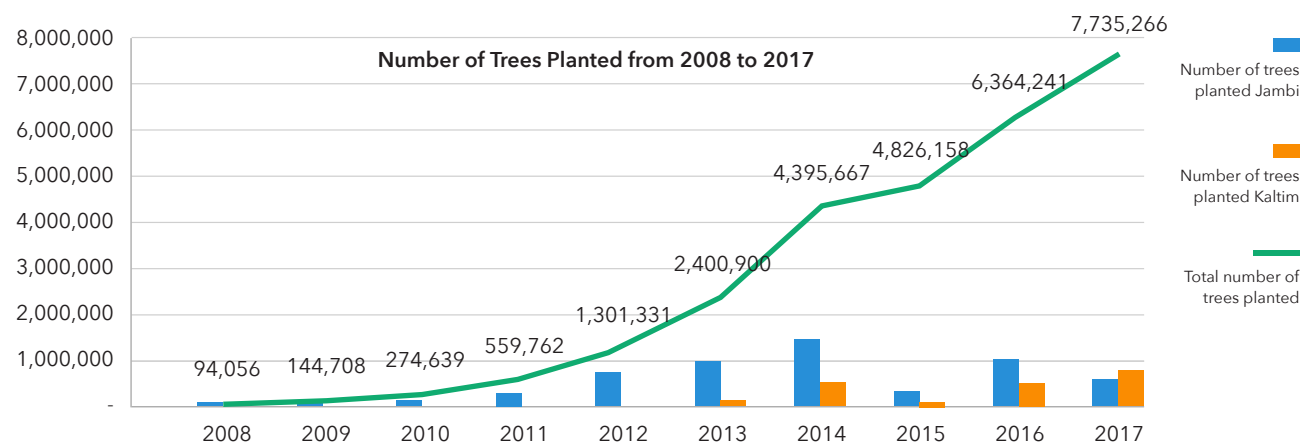
Source: TLFF (2018)

Figure 19. RLU Planted Rubber Area in Jambi, 2008-2017



Source: TLFF (2018)

Figure 20. RLU Project: Number of Trees Planted, Jambi, 2008-2017



Source: TLFF (2018)



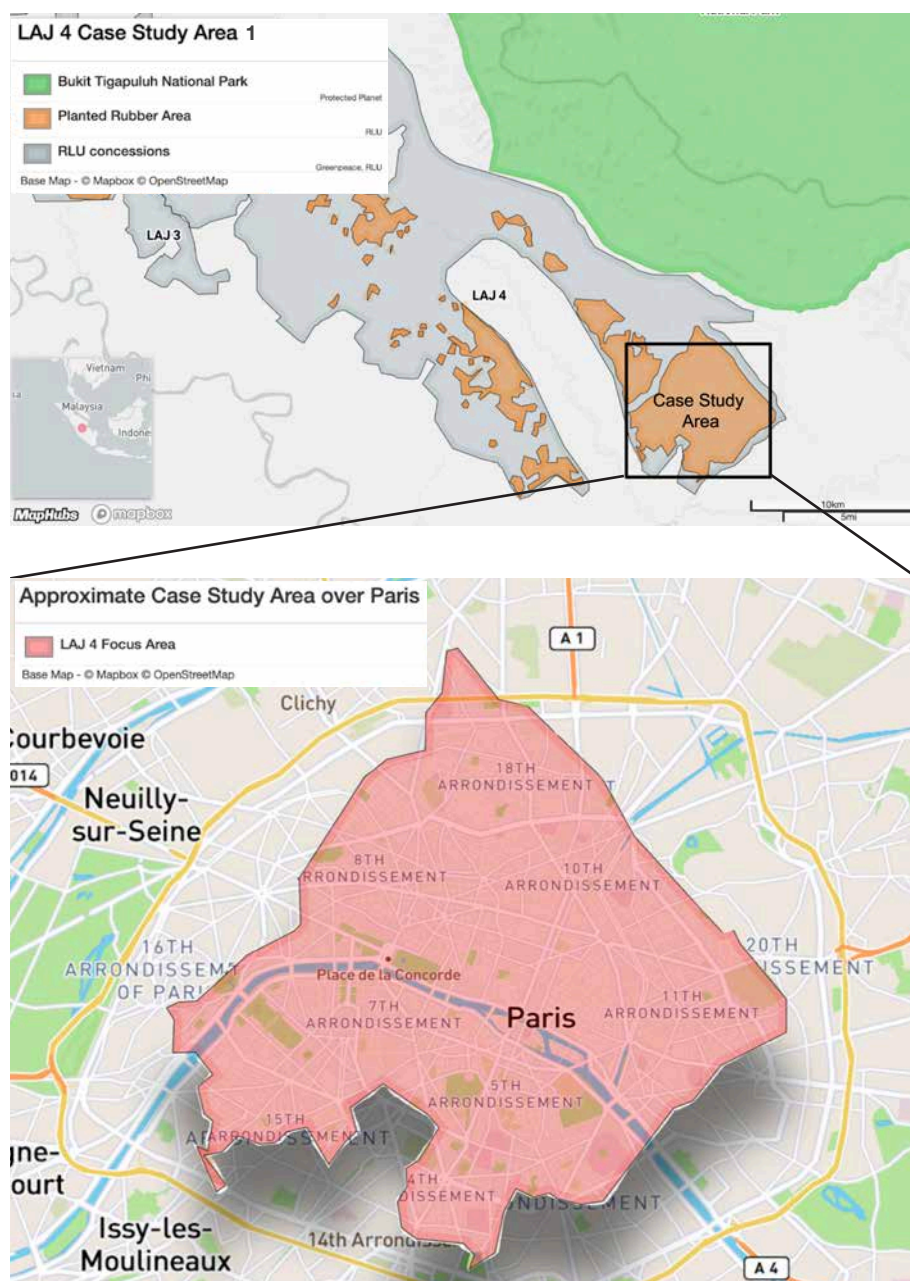
LAJ 4 Case Study Area 1:

Industrial Deforestation in LAJ 4

In order to identify industrial deforestation in LAJ 4, we focused on the largest contiguous RLU Rubber Area (covering 4,260 ha) located in the south-eastern tip of the concession that borders the Bukit Tigapuluh National Park (see Figure 22). The forest area was highlighted in a 2010 report (*Last Chance to Save Bukit Tigapuluh*)⁸⁶ by WWF, Eyes on the Forests, KKI Warsi and the Frankfurt Zoological Society as being home to

the forest-dependent Indigenous peoples the Orang Rimba and Talang Mamak and a critical habitat for local communities and endangered Sumatran elephants and critically endangered Sumatran tigers and orangutans (see Figures 20 and 23). To get more a sense of scale, the illustration in Figure 21 (below) compares the Case Study Area 1 to central Paris in France.

Figure 21: Illustration of the LAJ 4 Case Study Area 1 Compared to Central Paris, France



Source: MapHubs (2020)

Figure 22: LAJ 4 Case Study Area 1, Jambi

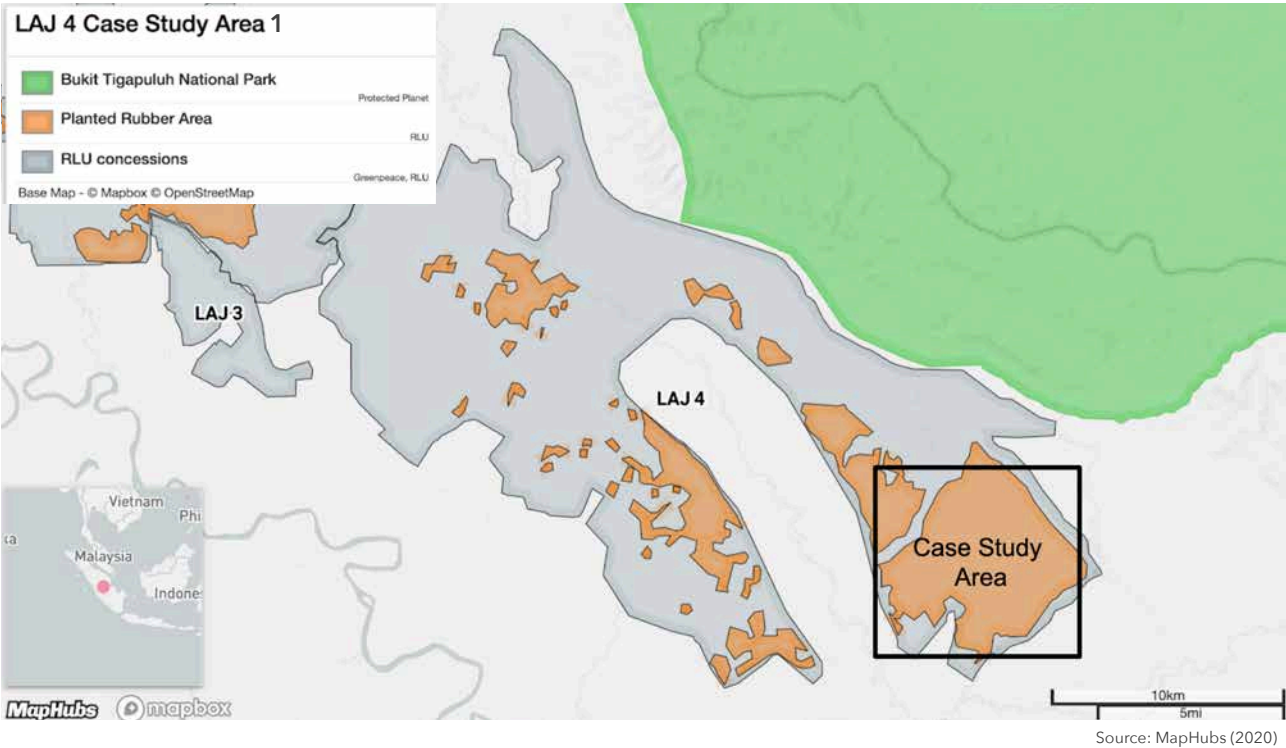
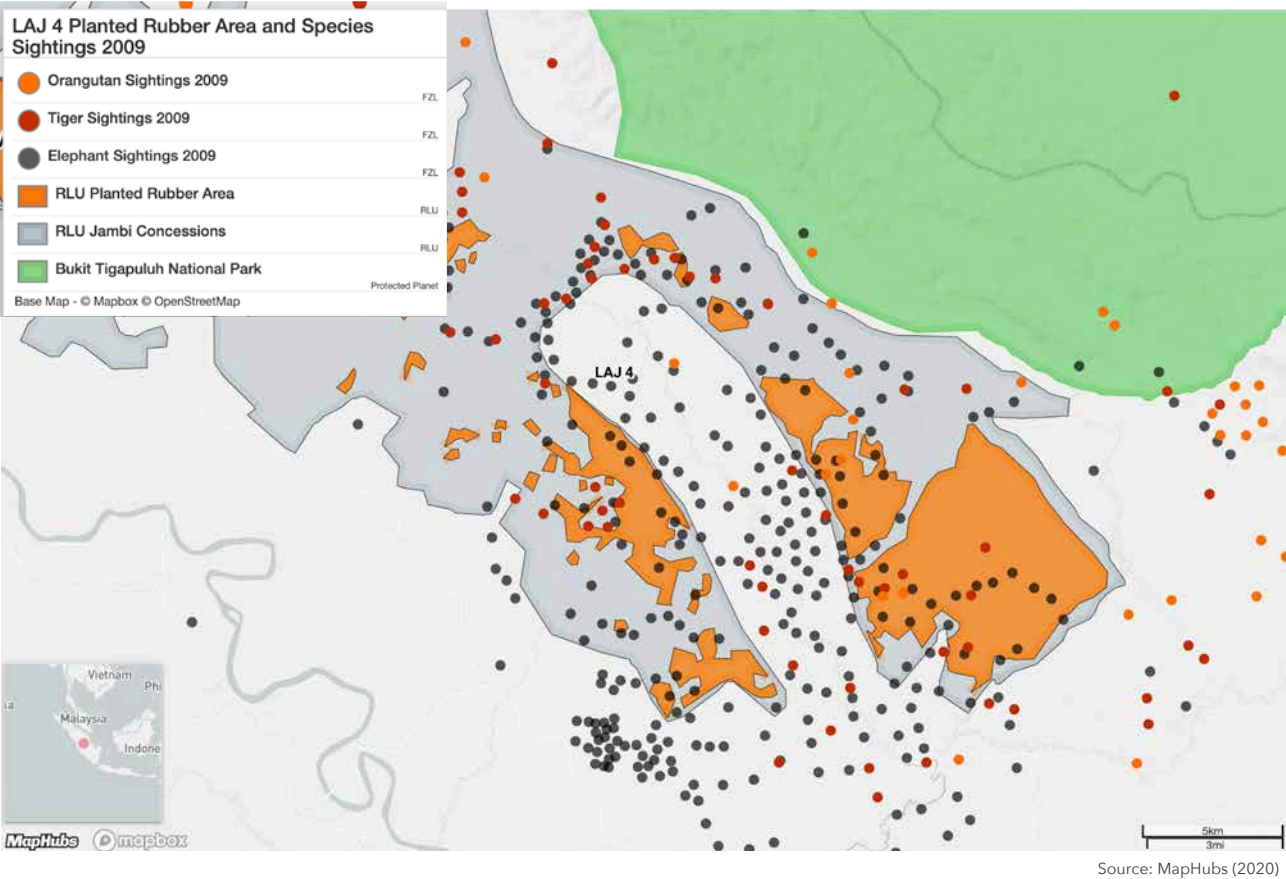


Figure 23: LAJ 4 Case Study Area 1 and Species Sightings in Jambi, 2009



On April 12, 2012, there was 3,966 ha of forest in the LAJ 4 Case Study 1 Area, which was largely undisturbed and had previously been commercially logged with evidence of unused logging roads throughout the area. This area is bisected by a road known locally as the “APP Access Road,” built by Asia Pulp & Paper (APP). In a very short period between April 12, 2012, and June 18,

2013, 44% (1,745 ha) of the remaining forest was lost, with deforestation concentrated along the APP Access Road. Between June 18, 2013, and January 15, 2015, a further 2,083 ha of forest was lost, declining to just 3% forest cover in the Case Study Area 1 (see Tables 5 and 6).⁸⁷ Industrial deforestation was extensive throughout the entire Case Study Area 1 (see Figure 25).

Table 5: Forest Cover in LAJ 4 Case Study Area 1, November 22, 2009-January 15, 2015⁸⁸

Jambi Province	Nov 22, 2009	April 12, 2012	June 18, 2013	Jan 15, 2015
Area of forest cover, ha (percentage of Case Study Area 1)	3,966 (93%)	3,966 (93%)	2,221 (52%)	138 (3%)

Source: MapHubs (2020)

Table 6: Deforestation in LAJ 4 Case Study Area 1, November 22, 2009-January 15, 2015⁸⁹

Jambi Province	Nov 22, 2009- April 12, 2012	April 12, 2012- June 18, 2013	June 18, 2013- Jan 15, 2015
Deforestation (ha) (percentage of Case Study Area 1)	0 (0%)	1,745 (44%)	2,083 (94%)

Source: MapHubs (2020)

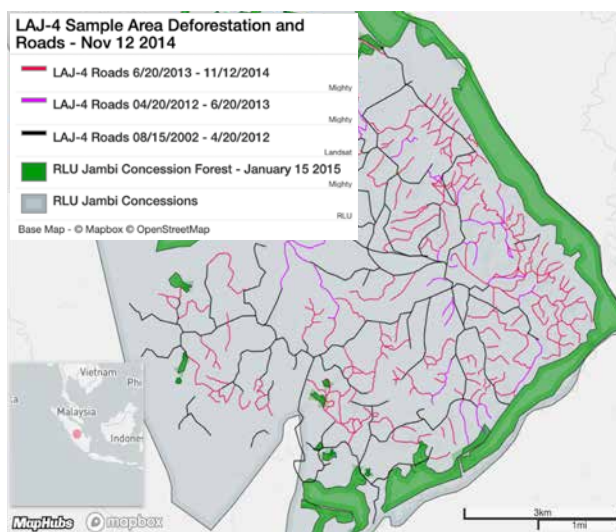
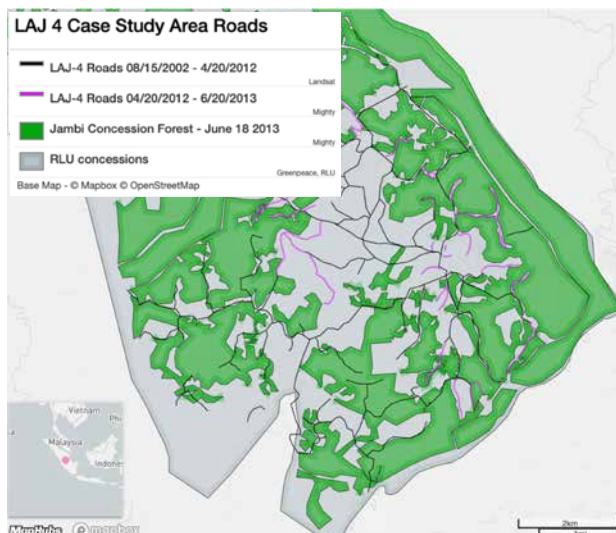
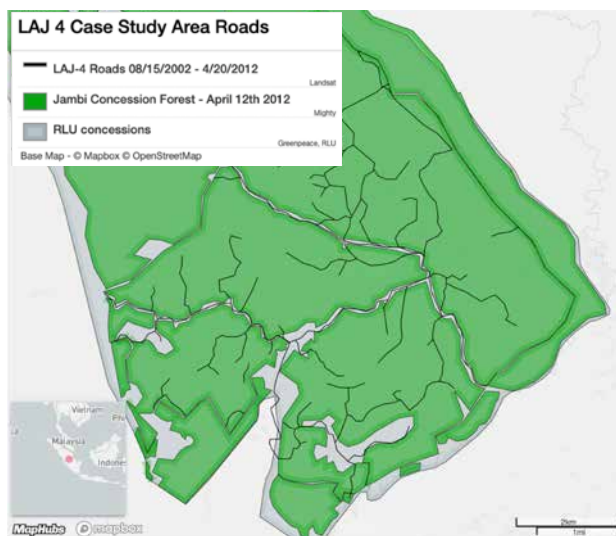
Road Expansion in LAJ 4 Case Study Area 1 - April 12, 2012, to January 15, 2015

We found that both industrial and non-industrial deforestation were facilitated by the reopening of former logging roads and construction of a new network of roads to reach previously inaccessible forest areas in the LAJ 4 Case Study Area 1. Based on a 30 cm satellite image dated November 22, 2009, the APP Access Road appeared to be the only frequently trafficked road in Case Study Area 1, as the road was bare ground and former logging roads were covered

with vegetation. The conditions of roads remained in this state until mid-2012, when former logging roads were reopened to vehicle-based traffic. On April 12, 2012, we estimate that the APP Access Road and former logging roads totalled 72 km.⁹⁰

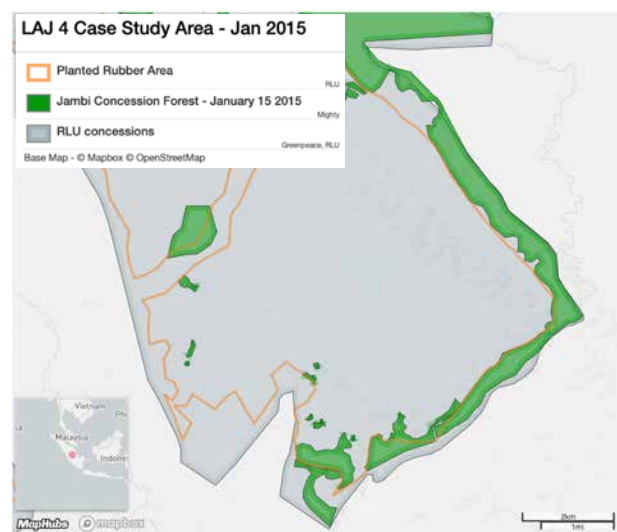
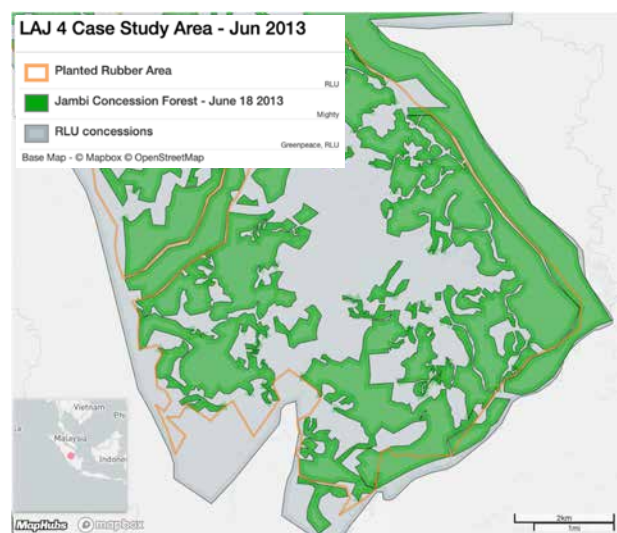
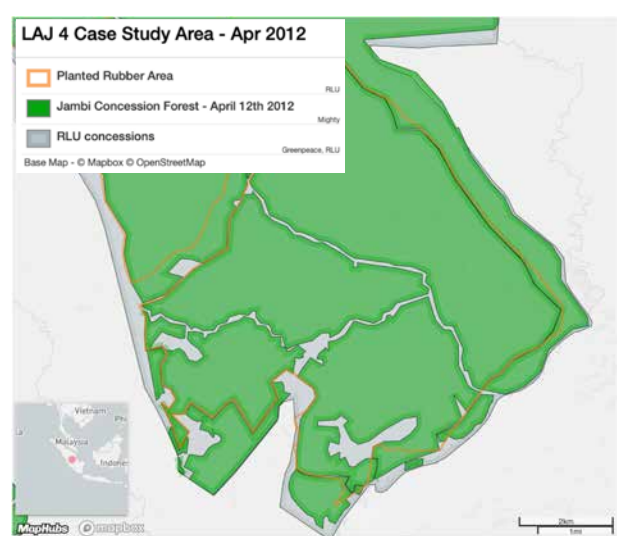
Between April 12, 2012, and June 18, 2013, former logging roads were resurfaced, and 22 km of new connecting roads were constructed. Between June 18, 2013, and January 15, 2015, we estimate some 87 km of new roads were constructed – this established a new extensive network of roads facilitating industrial deforestation and preparing the land for rubber plantations (see Figure 24).⁹¹

Figure 24: Road Expansion and Forest in LAJ 4 Case Study Area 1 - April 12, 2012, June 18, 2013, and November 12, 2014



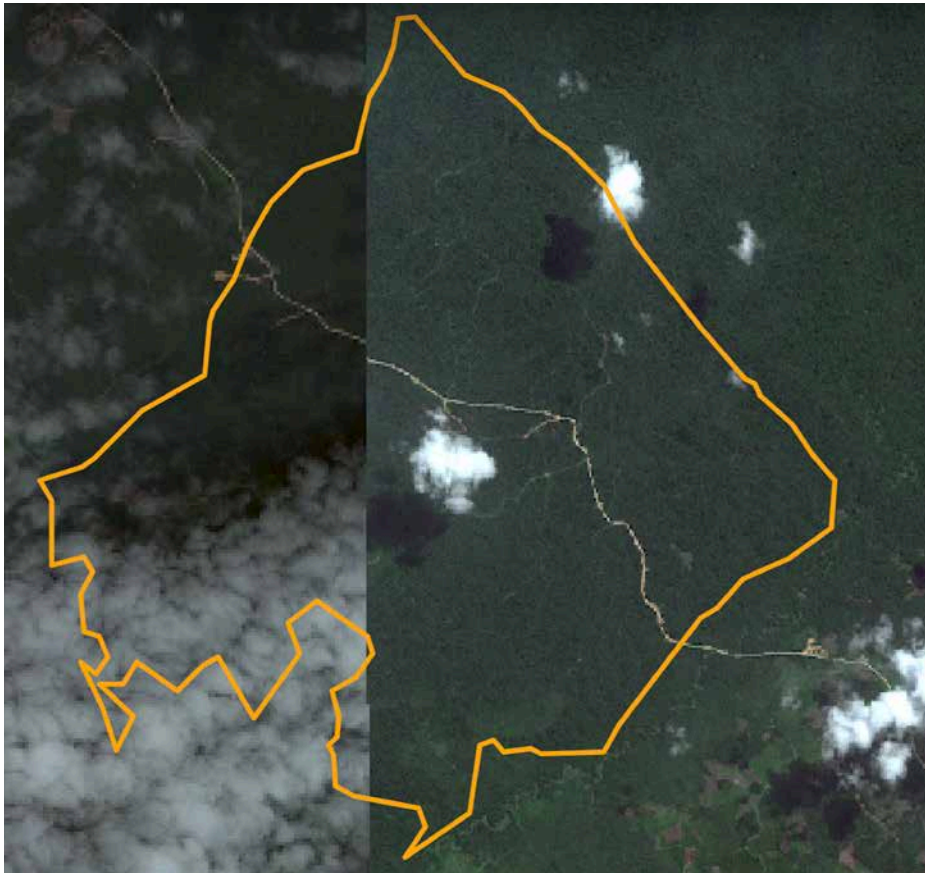
Source: MapHubs (2020)

Figure 25: Deforestation in LAJ 4 Case Study Area 1, April 12, 2012, June 18, 2013, and January 15, 2015⁹²



Source: MapHubs (2020)

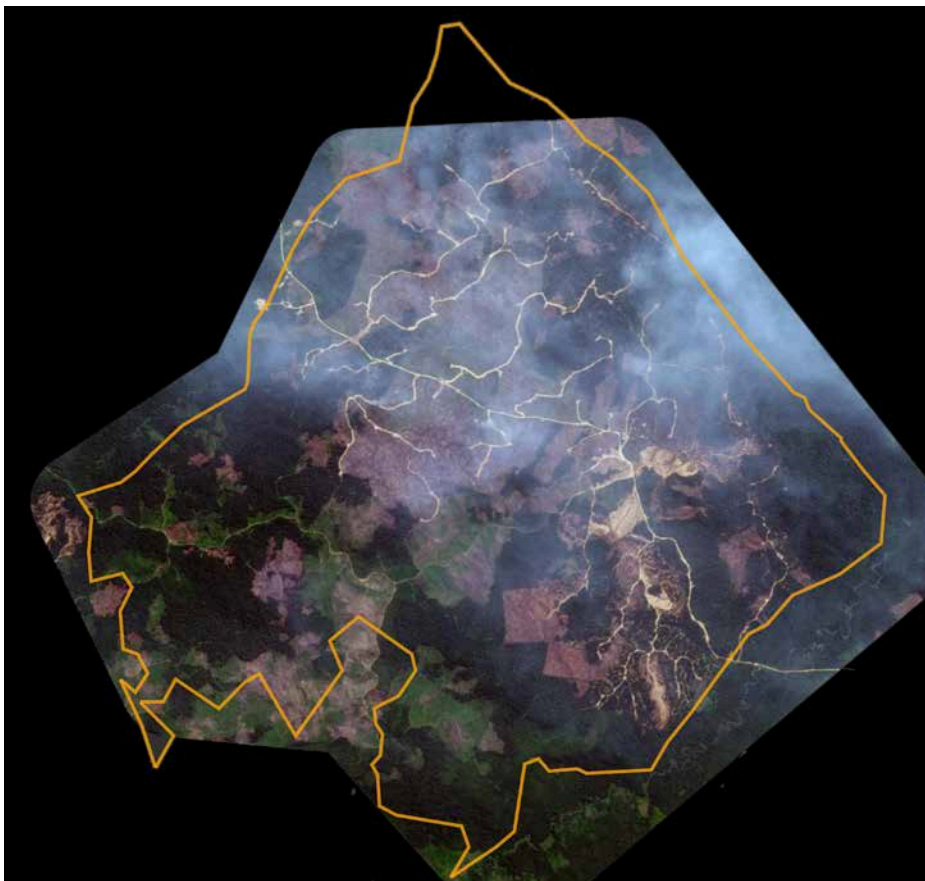
Figure 26: LAJ 4 Case Study Area 1 Satellite Images, April 1, 2012, June 20, 2013, January 5, 2015, and January 7, 2020



April 1, 2012

Satellite images show the LAJ 4 Case Study Area 1 was fully intact natural rainforest on April 1, 2012, and was not “ravaged by uncontrolled deforestation.”

Sources: GeoEye-1/WorldView-1



June 20, 2013

Bisected by the APP logging corridor, the image shows rapid industrial forest road development and evidence of extensive industrial clearance and deforestation.

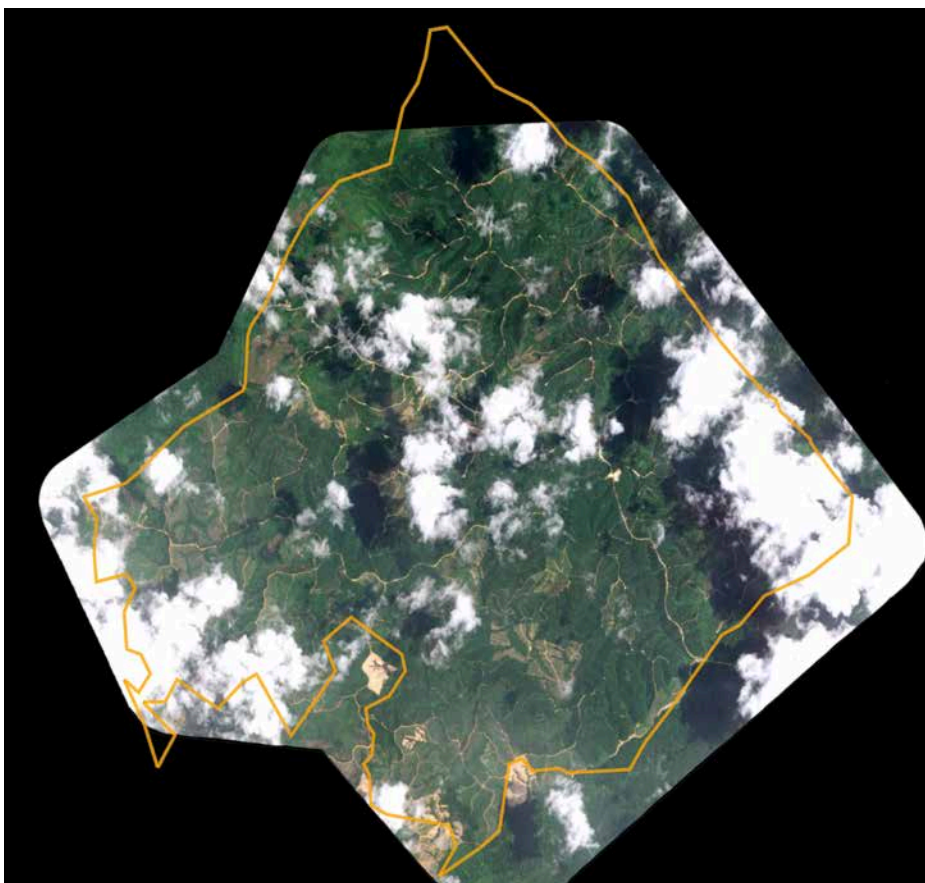
Source: SPOT-6



January 5, 2015

Taken at the start of the RLU Project, the image shows evidence of extensive industrial deforestation throughout Case Study Area 1, leaving just 3% of the original forest remaining (138 hectares) that was there on April 1, 2012.

Source: SPOT-6



January 7, 2020

The industrially deforested areas have been replanted with immature natural rubber trees under Michelin's joint venture RLU Project with Barito Pacific Group.

Source: SPOT-6

Causes of Deforestation in LAJ 4 Case Study Area 1

Between April 12, 2012, and January 15, 2015, we found that industrial deforestation accounted for 2,590

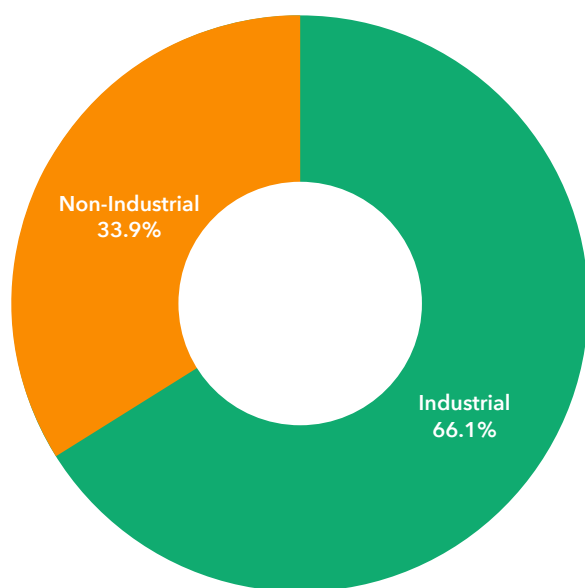
ha (66.1%) of forest loss in the LAJ 4 Case Study Area 1: non-industrial deforestation accounted for 1,329 ha (33.9%) of the forest loss (see Table 7). Both industrial and non-industrial deforestation were facilitated by the opening of former logging roads and the construction of new roads in the area.

Table 7: LAJ 4 Case Study Area 1, Industrial and Non-Industrial Deforestation, November 22, 2009, April 12, 2012, January 15, 2015⁹³

	2009-2012	2012-2013	2013-2015	Total
Industrial Deforestation (ha)	0 (0%)	863 (22%)	1,727 (78%)	2,590 ha
Non-Industrial Deforestation (ha)	0 (0%)	943 (24%)	386 (17%)	1,329 ha

Source: MapHubs (2020)

Figure 27: LAJ 4 Case Study Area 1: Industrial vs Non-Industrial Deforestation, April 12, 2012-January 15, 2015⁹⁴



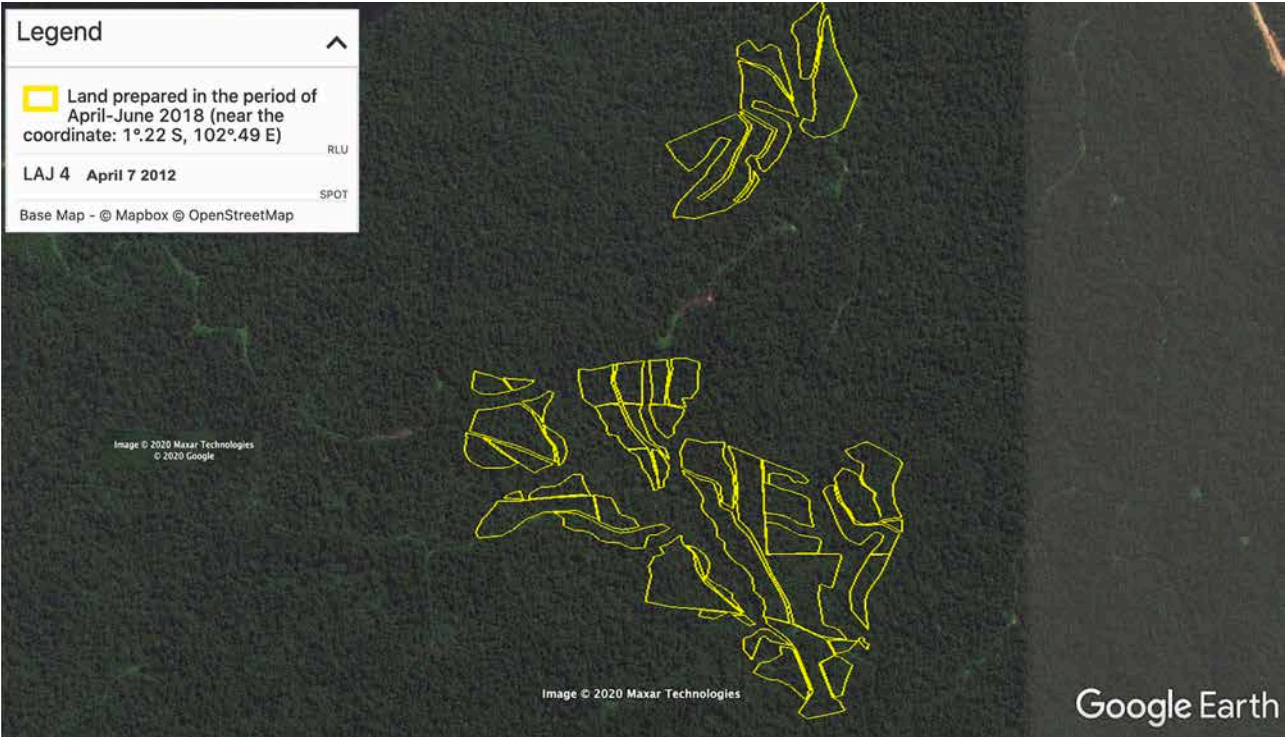
Identifying Non-Industrial Deforestation in LAJ 4 Case Study Area 1

Our analysis recognizes that the relationship between non-industrial (eg by smallholders and encroachers) and industrial deforestation within the RLU Project

area can be complex. For example, in late 2019, RLU provided Mighty Earth with the locations of a small number of smallholder areas that were operating inside the RLU Rubber Area in the LAJ 4 Case Study Area 1 in Jambi. RLU said they signed Memorandum of Understanding (MOU) agreements with, and provided compensation to, smallholders living in the RLU Project.⁹⁵ Satellite imagery over time illustrates the relationship between these smallholders and the industrial actors operating in the same area (see Figures 28 to 32).

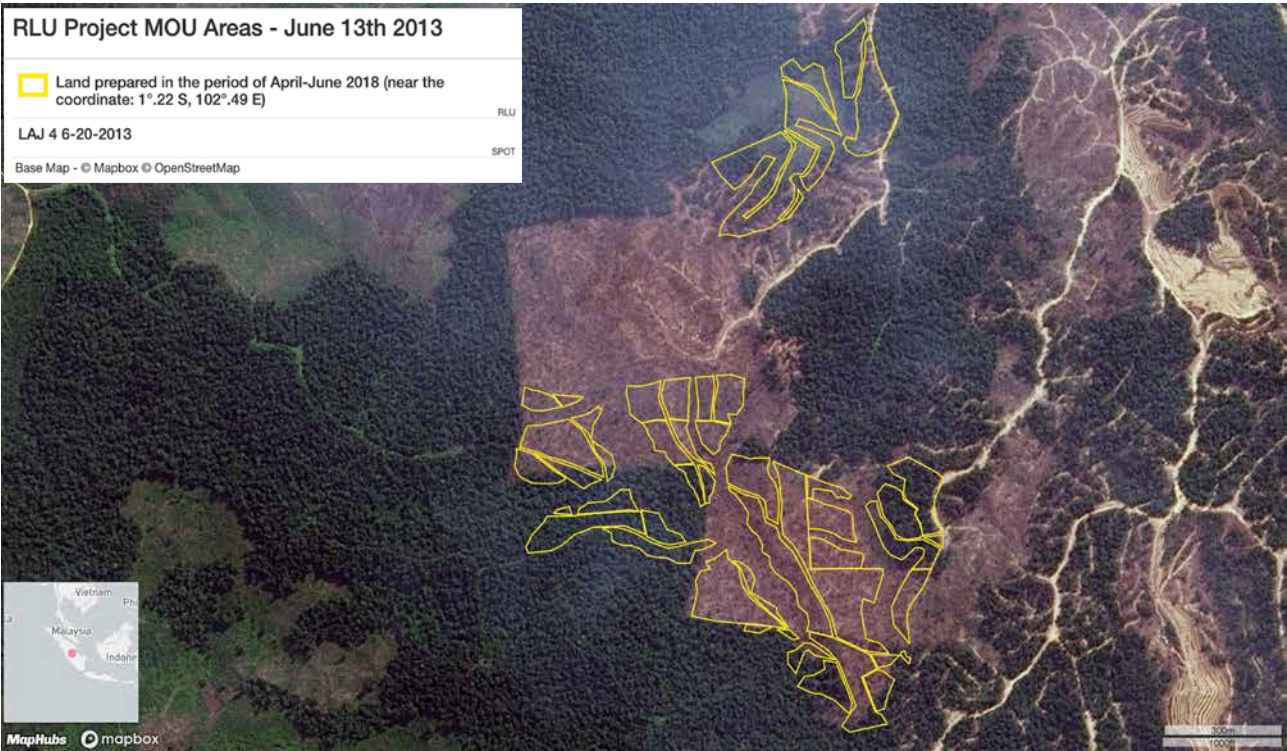
As illustrated below (see Figure 28), in April 2012 the smallholder areas in the LAJ 4 Case Study Area 1 were still lowland forest and only accessible via old logging roads. Between April 7, 2012, and June 20, 2013, the logging roads were reopened and it is possible to see that one of the smallholder farm areas had already burned forest for crop cultivation. To the northeast of the farms, industrial deforestation was ongoing as evidenced by newly constructed land terraces. Between June 20, 2013, and January 5, 2015, the smallholder farms were surrounded by industrially cleared forest as evidenced by newly constructed roads and land terraces. We found no evidence of industrial land preparation in the smallholder areas provided by RLU (see Figure 32 below).⁹⁶ According to RLU, the company signed a series of MOU agreements with these smallholder farmers to cultivate mixed crops and participate in the RLU Project; however, there was no information included about when these MOUs were signed.⁹⁷

Figure 28: RLU Project MOU Smallholdings in LAJ 4 Case Study Area 1 - April 7, 2012, June 20, 2013, January 5, 2015, and January 7, 2020



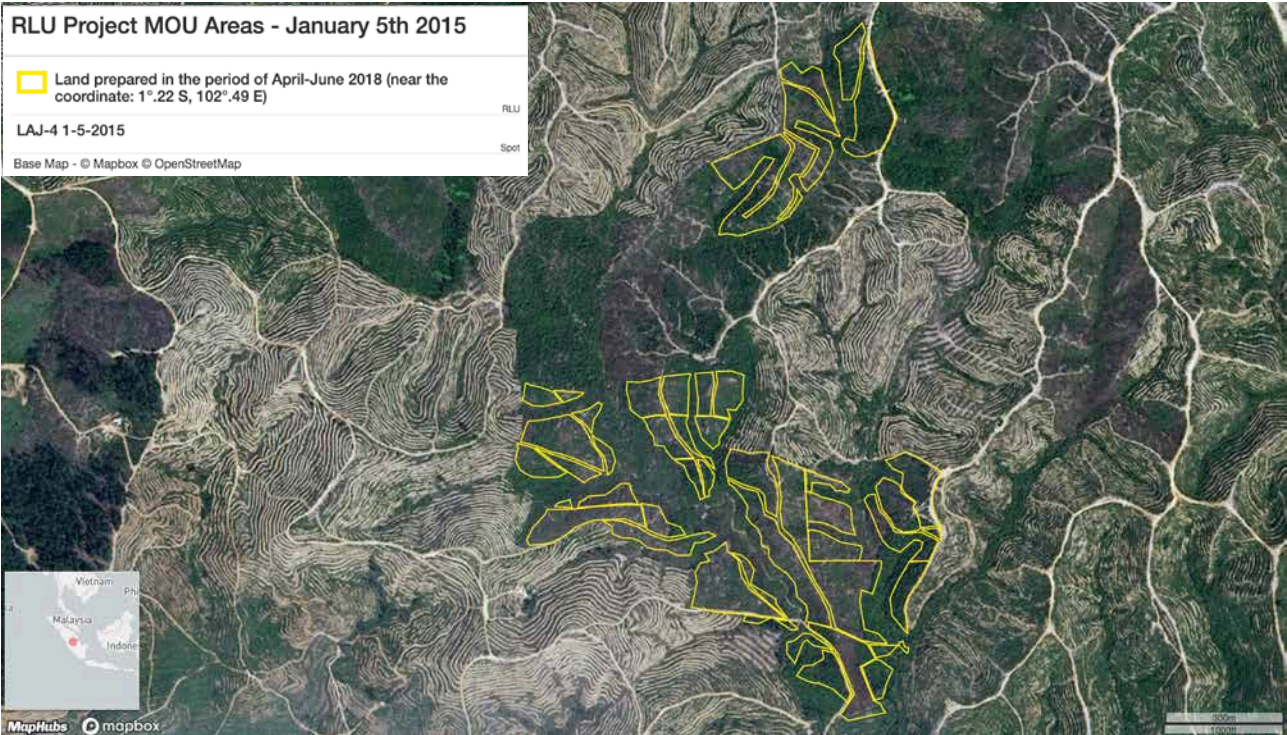
Source: Google Earth (2020)

Figure 29: RLU Project Smallholder MOU Farms in LAJ 4 Case Study Area 1, June 20, 2013



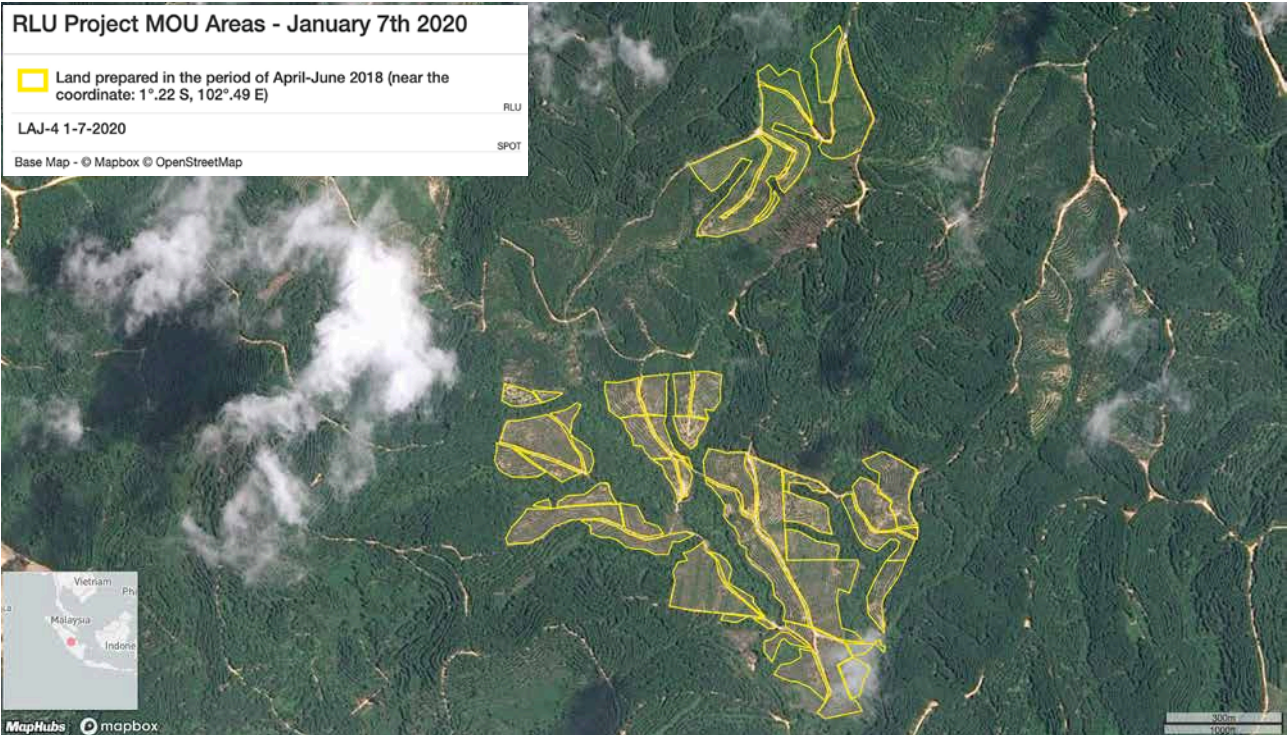
Source: MapHubs (2020)

Figure 30: RLU Project Smallholder MOU Farms in LAJ 4 Case Study Area 1, January 5, 2015



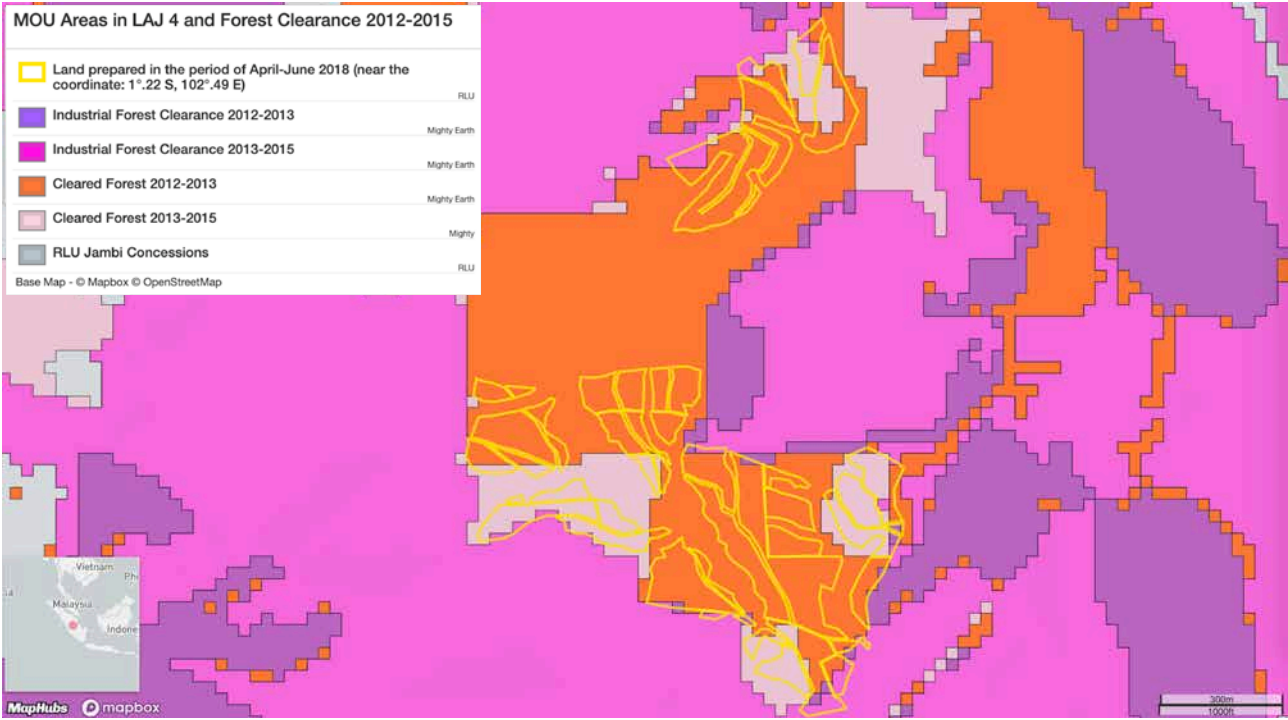
Source: MapHubs (2020)

Figure 31: RLU Project Smallholder MOU Farms in LAJ 4 Case Study Area 1, January 7, 2020



Source: MapHubs (2020)

Figure 32: LAJ 4 Case Study Area 1 RLU Project MOU Smallholder Areas and Deforestation, April 12, 2012–January 15, 2015



Source: MapHubs (2020)



LAJ 4 Case Study Area 2: Wildlife Conservation Area within LAJ Case Study Area 2

Our investigation also identified that between April 12, 2012, and January 15, 2015, 1,298 ha (or 75%) of forest was industrially deforested within a subregion area designated by RLU as a Wildlife Conservation Area within the wider LAJ 4 Case Study Area (see Figure 33).⁹⁸ This industrial deforestation was facilitated by the development of a network of reopened logging roads and newly constructed roads. As the satellite images in Figures 34 and 35 illustrate, in April 2012 the remaining forest was still intact and formed a contiguous buffer zone adjacent to the Bukit Tigapuluh National Park. Between April 12, 2012, and June 18, 2013, old logging

roads had been reopened and new roads constructed. The roads probably facilitated extensive forest burning taking place throughout the Wildlife Conservation Area. There was also evidence of industrial deforestation and land development in the form of land terracing, used in plantation development. By January 15, 2015, almost all the remaining forest had been industrially cleared and the land prepared for monoculture rubber plantation development.⁹⁹ Satellite images show that all of the remaining forest areas that had previously been lost to industrial deforestation were planted with rubber by January 5, 2020.¹⁰⁰

Figure 33: Industrial Deforestation of Wildlife Conservation Area within LAJ 4 Case Study Area 2, Jambi

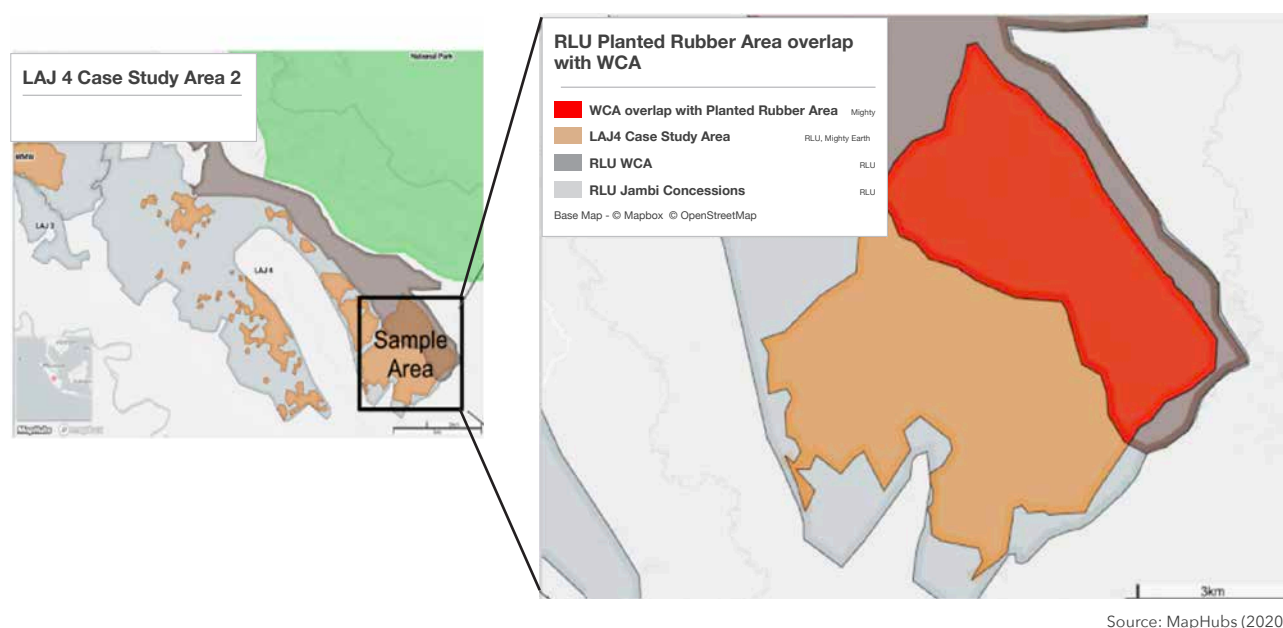


Table 8: Forest Cover within LAJ 4 Wildlife Conservation Area (Case Study Area 2), November 22, 2009 - January 15, 2015

	November 22, 2009	April 12, 2012	June 18, 2013	January 15, 2015
Forest (ha)				
Includes percentage of forest within WCA that overlaps with Case Study 2 Area	1,736 (97%)	1,736 (97%)	973 (54%)	24 (1%)

Source: MapHubs (2020)

Table 9: Deforestation within LAJ 4 Wildlife Conservation Area (Case Study Area 2 Only), November 22, 2009-January 15, 2015

	November 22, 2009-April 12, 2012	April 12, 2012-June 18, 2013	June 18, 2013-January 15, 2015
Loss (ha)	0	775	950

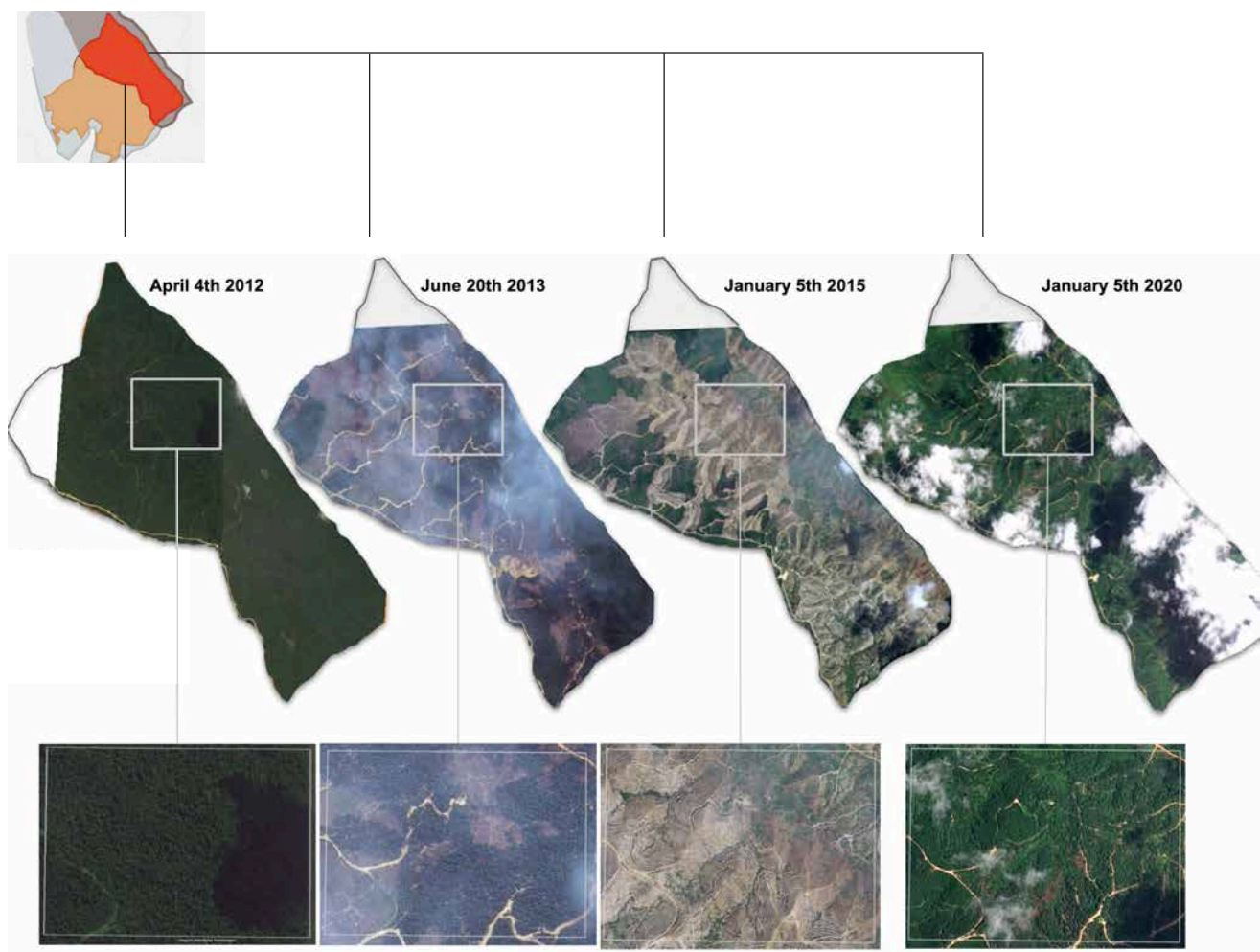
Source: MapHubs (2020)

Table 10: Industrial and Non-Industrial Deforestation within the LAJ 4 Wildlife Conservation Area (Case Study Area 2 Only), November 22, 2009-January 15, 2015

	November 22, 2009-April 12, 2012	April 12, 2012-June 18, 2013	June 18, 2013-January 15, 2015	Total
Industrial Deforestation (ha)				
Includes % of deforestation in relation to total area.	0 (0%)	466 (27%)	832 (86%);	1,298 ha
Non-Industrial Deforestation (ha)	0 (0%)	309 (18%)	119 (12%)	428

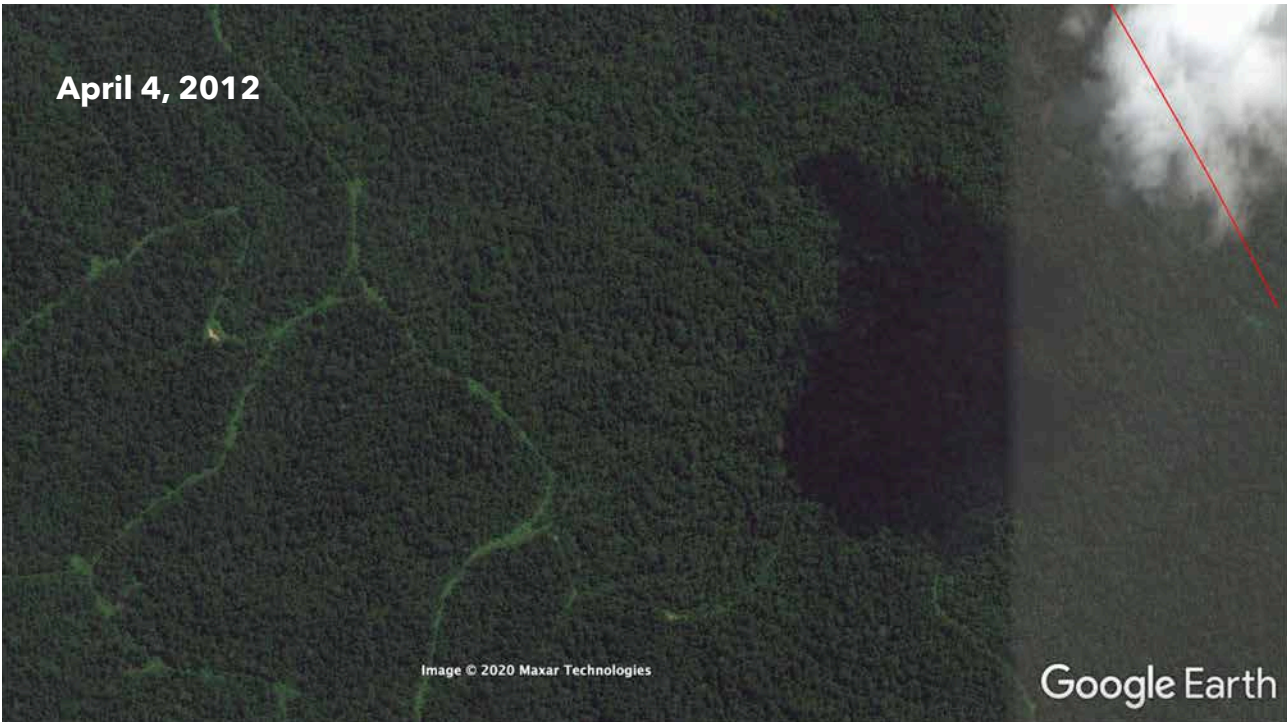
Source: MapHubs (2020)

Figure 34: Industrial Deforestation within LAJ 4 Wildlife Conservation Area (Case Study Area 2), Jambi



Sources: GeoEye-1 and SPOT-6 (2020)

Figure 35: Industrial Deforestation between April 4, 2012 and January 5, 2015 inside WCA overlap with LAJ 4 Case Study Area



Latitude: -1.184486 Longitude: 102.489268

Source: Google Earth (2020)

— WCA Boundary



Latitude: -1.184486 Longitude: 102.489268

Source: SPOT 6

— WCA Boundary

Conclusion: LAJ 4 Case Studies

The focus case study areas illustrate that industrial deforestation acted as both a direct and indirect driver of deforestation in the LAJ 4 concession during this period. We estimate 108 km of new road construction in the south-eastern part of the LAJ 4 Case Study Area 1 provided access for both heavy machinery and non-industrial actors such as smallholders, encroachers and land speculators. In the 33-month period before the joint venture RLU Project between Michelin and a company within Barito Pacific Group was agreed in December 2014, we found industrial deforestation was responsible for the rapid loss of 2,590 ha of the remaining forest within the LAJ 4 Case Study Area 1. Between April 12, 2012, and January 15, 2015, we also

identified 1,298 ha of forest was industrially deforested in a Wildlife Conservation Area subregion within the LAJ 4 focus Case Study Area 2.

The widespread deforestation in the LAJ 4 case study areas in this period almost certainly had a negative impact on the livelihoods of local communities and forest-dependent Indigenous peoples the Orang Rimba and Talang Mamak, who lost traditional and customary rights and access to their forests as well as to food, fiber, medicines, shelter, wildlife and their ancestral and sacred sites. It is also conceivable that the human-elephant conflict that was recently documented by German academics in nearby Muara Sekalo village in Jambi was a result of the disbursement of endangered Sumatran elephant populations into surrounding villages due to forest loss in LAJ 4.¹⁰¹



A village in the Jambi region, Sumatra. Credit: Rainforest Action Network



APP logging corridor inside traditional home of the Orang Rimba, Jambi. Credit: Rainforest Action Network

CHAPTER 3: MICHELIN



Yellow-handed Mitered Langur, Sumatra.
Credit: Wild Sumatra

Michelin Ramp Up Capacity in Indonesia

Besides the public reports, allegations, and evidence highlighted above, our final point is that Michelin was almost certain to have known about the extensive industrial deforestation in the Jambi concessions in the 33-month period prior to agreeing its joint venture RLU Project with a company within Barito Pacific Group on December 17, 2014. This is reinforced through the significant strengthening of Michelin's close partnership with Barito Pacific and its President and founder Prajogo Pangestu during the period that our research shows the industrial deforestation in the two LAJ 4 focus case study areas intensified.

During this period, Michelin committed to a significantly increased presence in Indonesia and targeted producing 10% of its global natural rubber supply in Indonesia. Michelin has been involved in tire production in Indonesia since at least 2004, when it made an agreement with Indonesian tire manufacturer PT Gajah Tunggal to produce 5 million Michelin tires per year for export by 2010.¹⁰² Michelin took a 10% stake in PT Gajah Tunggal in 2007,¹⁰³ but it significantly increased its strategic commitment to rubber production and processing in Indonesia in June 2013 – at the time the industrial deforestation in the LAJ 4 focus case study areas started to spike and intensify – when Michelin agreed its first joint venture with a Barito Pacific Group subsidiary to establish a state-of-the-art \$435 million synthetic rubber processing plant in Cilegon in Banten province in western Java in Indonesia.¹⁰⁴

Michelin's 55% majority stake in this major and first joint venture with Barito Pacific's PT Chandra Asri Petrochemical and its wholly owned subsidiary PT Petrokimia Butadiene Indonesia (PBI)¹⁰⁵ on June 17, 2013, cemented Michelin's close strategic partnership with Barito Pacific, and it was evidently a highly strategic decision that both Michelin's rubber plantations and rubber processing capacity ramped up in Indonesia in tandem.

The Indonesian Minister of Industry Saleh Husin told Reuters news agency that Michelin would invest \$500m in a rubber processing factory and plantations in Indonesia to produce synthetic rubber for export on October 8, 2015.¹⁰⁶ He also hailed Michelin's partnership with Barito Pacific and said Michelin would build a factory in Banten province and rubber plantations in Sumatra [ie Jambi] and Kalimantan.¹⁰⁷

Months earlier, Husin, the Minister of Industry, had urged and encouraged Michelin to ensure that it bought rubber from its new rubber plantation and absorbed rubber from local farmers first for its new rubber and tire factory with Barito Pacific when the factory came on-stream in 2019.¹⁰⁸

Michelin's Response to Mighty Earth

In correspondence with Mighty Earth about our findings from LAJ 4, Michelin said the RLU Project only commenced concrete activities on the ground in March 2015.¹⁰⁹ They claim "the region was undergoing massive deforestation at the time" and said earlier in 2006 "a permit to open a corridor road was granted in the [LAJ 4] area ... this led to a period of open access that resulted in the almost total destruction of the previously partly preserved forest area."¹¹⁰ Michelin further stated that: "In the face of this large-scale ecological disaster ... the Government decided to grant southern buffer zone area as production forest areas and approached companies to actively manage and regain control of parts of the area. The Barito Pacific Group then designed a rubber plantation project to plant a rubber belt along the southern boundary of the Bukit Tigapuluh National Park, over a length of about 120 km, to create jobs and alternative sources of income to deforestation activities."¹¹¹

According to Michelin, the President of Barito Pacific first asked the President of Michelin for their technical expertise in November or December 2013 (at the inauguration of their first joint venture project, the \$435 million synthetic rubber plant in Banten province).¹¹² In correspondence with Mighty Earth, Michelin's Director of NGO and Civil Society Relations said:

*During 2014, the Michelin Group carried out several missions of economic, agricultural, social and environmental analysis on site, using internal and external expertise. On the basis of this analysis, the Michelin Group proposed to the Barito Pacific Group to reconsider the entire project, in all its dimensions, and in particular the environmental and social aspects."*¹¹³

This process was elaborated upon in subsequent correspondence:

"[T] the first Michelin field mission in Jambi took place in February 2014. A second one was organized to evaluate the environmental and social context and challenges in April 2014... Based on the conclusions of this mission, it was decided to organize a third one in October 2014. The decision to go for the project was taken end of 2014 and the RLU JV was founded in March 2015, starting its operations thereafter.

"During the field investigations prior to the decision to create the joint venture, Michelin tried to identify who were the numerous stakeholders operating on the ground - LAJ, LAJ contractors, Old Malay, Indigenous populations, transmigrasi (legal migrants), illegal migrants, unorganized and organized 'mafias' and all sorts of encroachers, and what were the social dynamics between these actors. The most important for us, the absolute priority, was to understand whether despite of the chaotic situation it was still possible to regain control of the land, to build state of the art rubber plantations, to save the remaining forests on the concessions and to protect the nearby Bukit Tigahpuluh national park by creating agricultural activities and offering alternative job opportunities to the thousands of encroachers. One must recall that all this was achieved under terrible time pressure, as the forest was burning everywhere at that time. We were literally running against the clock. The priority was to focus on the future."¹¹⁴

To date, Michelin and RLU have refused to publicly share their internal and external social and environmental due diligence assessments from 2014 onwards with Mighty Earth, despite repeated requests since September 2019 (see Annex 1).

Michelin Commitment to Zero Deforestation

Michelin only adopted a "Zero deforestation" policy for rubber production after RLU and LAJ had finished clearing the forest areas in Jambi that were converted to monoculture rubber plantations (see above). Michelin published its Sustainable Natural Rubber (SNR) Policy in June 2016.¹¹⁵ The policy says Michelin intends to ensure that the natural rubber it uses only comes exclusively from plantations and suppliers that comply with its

"Zero Deforestation" principles – such as ensuring primary forests and areas of High Conservation Value (HCV) and High Carbon Stock (HCS) are "completely protected and preserved."¹¹⁶

Michelin has further committed to no deforestation through the Global Platform for Sustainable Natural Rubber (GPSNR) and the company also has a substantial due diligence duty of vigilance (Devoir de Vigilance (2017)) legal obligation under French law to identify and mitigate social, environmental and human rights risks throughout its global supply chain – including accountability for the actions of direct and indirect subsidiaries.¹¹⁷

Global investors in the RLU Project Sustainability Bond in 2018 were also assured that the bond issuer TLFF was bound by TLFF's Economic, Social and Governance (ESG) Policy and Standards – which includes no deforestation commitments – and applies International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability in managing the RLU Project loan facility. TLFF also committed to refer for guidance and reporting to the ICMA Green Bond Principles and Forest Stewardship Council (FSC) standards.¹¹⁸ While Michelin commits to ensure the natural rubber it uses in its tires comes exclusively from plantations and suppliers that fully comply with its Zero Deforestation principles, Michelin's policy does not address legacy deforestation issues involving subsidiaries or joint venture partners and overlooks the issue of restoration of important natural habitats and fair compensation for negatively affected local and Indigenous communities.

A Jambi villager.
Credit: CIFOR



CONCLUSION

At the time Michelin announced its joint venture RLU Project with a company within Barito Pacific Group in May 2015, Michelin said, “The [RLU] project involves the reforestation of three concessions, representing a total surface area of 88,000 hectares, ravaged by uncontrolled deforestation.” Our satellite image-based analysis challenges this misleading narrative and raises serious questions about the cause and timing of the industrial deforestation that lies behind Michelin’s flagship eco-friendly rubber project in Jambi in Indonesia. What due diligence, if any, did Michelin – as well as the project partners, funders and financiers – conduct into RLU and LAJ’s ongoing conversion of forest areas into rubber plantations in the lead up to establishing the RLU Project on December 17, 2014?

Mighty Earth identified that a total of 2,589 ha of forest – over seven times the size of New York’s Central Park, or an area equivalent to the size of central Paris – was industrially deforested in the case study areas of the LAJ 4 concession in Jambi between April 12, 2012, and January 15, 2015, to make way for rubber plantations now under Michelin’s joint venture RLU Project with a company within Barito Pacific Group. Of this total, 1,298 ha was industrially deforested within a Wildlife

Conservation Area (WCA) in the LAJ 4 Case Study Area 2 subregion, and an area that was identified as home to the forest-dependent Indigenous peoples the Orang Rimba and Talang Mamak and a crucial habitat of the endangered Sumatran elephant and critically endangered Sumatran tiger and reintroduced orangutan.

Our research identified that Barito Pacific companies, and its founder Prajogo Pangestu, had in fact owned RLU, LAJ and WMW since September 2008 and that project funders and global investors were not informed about this in the TLFF Sustainability Bond Offering Circular in March 2018. When presented with our findings, Michelin confirmed that they conducted several missions of economic, agricultural, social and environmental analysis on site in Jambi in 2014, using internal and external expertise. Therefore, based on our satellite images from that period, Michelin must have been aware of RLU and LAJ’s ongoing involvement in the industrial deforestation and clearance of remaining forests in the LAJ 4 case study areas to convert them to the rubber plantations that were to become Michelin’s flagship eco-rubber and conservation project in Jambi.

Recommendations

Based on the findings of this report, Mighty Earth is calling for:

- An independent investigation to establish the total amount of industrial deforestation carried out by RLU, LAJ and WMW in the five Jambi concessions in the period leading up to the establishment of the joint venture RLU Project with Michelin and a company within Barito Pacific Group on December 17, 2014. This should be predicated on a commitment to full transparency and the public disclosure of all relevant documents.
- Michelin and RLU should urgently work with funders and financiers to set up an independent multi-stakeholder taskforce – involving local and Indigenous communities – to ensure restitution and reparations for all local people affected by the loss of their ancestral forests, lands and other natural resources in the Jambi RLU concession areas.
- Michelin and RLU should commit to work with all negatively affected local and Indigenous communities to restore and rehabilitate their damaged, destroyed or degraded forests, and support wider efforts to conserve key habitats critical for these affected communities, as well as for the survival of the remaining endangered Sumatran elephants, tigers and orangutans in the Project area.

ANNEX 1

Mighty Earth's Transparency Chronology with Michelin and RLU

Despite Michelin's commitment in its Sustainable Natural Rubber Policy to providing full transparency of its operations,¹¹⁹ Mighty Earth has found that Michelin and RLU have proved to be highly un-transparent in response to Mighty Earth's repeated requests for access to key reports, maps, satellite images and external audits and social and environmental due diligence assessments in relation to our investigation of the RLU Project.

We have tried but failed since September 2019 to date of publication (September 2020) to get access to key documents from Michelin and RLU crucial to

confirming the concession boundaries of the 71,872 ha RLU Project in Jambi, as well as detailed maps of the High Conservation Value (HCV), High Carbon Stock (HCS), "No-Go Zones" and Wildlife Conservation Areas (WCAs), plus key social and environmental internal and external audits, and a shared baseline understanding of the forest cover in the Jambi concessions at the time the RLU Project was agreed by Michelin and a company within Barito Pacific Group in 2014. When approached, external auditors such as Daemeter said they were unable to release their key Environmental and Social Due Diligence Assessment report from 2017 to us because they were bound by a Non-Disclosure Agreement (NDA) with RLU.¹²⁰ Others, such as TLFF, failed to respond to our requests. Below is Mighty Earth's chronology of key events and requests for information and transparency from Michelin and RLU since February 2019.

Table 11: Chronology

2019	February	Aidenvironment researcher conducts field research investigation of the RLU Project in Jambi, Sumatra, Indonesia.
2019	March	Aidenvironment finalize their unpublished Field Report on PT Alam Bukit Tigapuluh, LAJ & WMW in Jambi. The report alleges industrial deforestation by PT LAJ in Jambi and highlights social conflict between local communities and LAJ and WMW.
2019	September 3	Conference call between Mighty Earth, Michelin and RLU on Aidenvironment's initial findings.
2019	September 9	Follow up letter from Mighty Earth CEO Glenn Hurowitz to Michelin and RLU requesting RLU provide and publish various project data, including spatial data requests for the following in the RLU Project in Jambi: • Go Zone and No-Go Zone areas • High Conservation Value (HCV) areas • High Carbon Storage (HCS) areas • Spatial data files for the LAJ and WMW concessions • Spatial data files for customary land claims and agreements with cadastre authorities • Spatial data files for 30,000 ha planted areas inside RLU concessions and 15,000 ha already planted with rubber • Spatial data files for the 9,700 ha Wildlife Conservation Area in 2018 adjacent to the Bukit Tigapuluh National Park • Spatial files for 2015 forest cover layer created by RLU Project partners • Satellite imagery

2019	October 14	Letter from RLU President Director Hussein P. Katradjoemena to Mighty Earth CEO Glenn Hurowitz fails to provide the requested project data information, spatial data files, or satellite imagery, but says RLU is “working to share more information and data on its website” and invites Mighty Earth to check RLU’s website regularly for updates.
2019	October 31	Email and memo from Mighty Earth CEO Glenn Hurowitz to Michelin’s Director of NGO and Civil Society Relations Hervé Deguine and Senior Vice President Luc Minguet repeating the spatial data files request from Mighty Earth’s letter dated September 9, 2019.
2019	November 8	Email to Mighty Earth’s CEO Glenn Hurowitz from Michelin’s Hervé Deguine says RLU is working to share more information and data on RLU’s website but it cannot be provided by Mighty Earth’s deadline. Instead, Michelin invites Mighty Earth to attend the RLU offices in Jakarta in Indonesia to address all of Mighty Earth’s concerns.
2019	November 18	Email from Mighty Earth Campaign Director Dr Julian Oram to Michelin’s Hervé Deguine confirming attendance on a forthcoming conference call with Michelin and requesting the following documents: • LIDAR (2016) and Sentinal (2017) satellite imagery of RLU’s Jambi concessions • Daemeter, ProForest and CIRAD (2017) study on forest loss in Jambi • RLU’s Environmental and Social Action Plan (ESAP) • The IDH Compact with WWF establishing a Green Growth vision
2019	November 21	Conference call with Mighty Earth’s Dr Julian Oram, Phil Aikman and Alex Wijeratna and Michelin’s Hervé Deguine and Luc Minguet. Michelin’s Luc Minguet said Mighty Earth’s Phil Aikman “could have all the requested documents at his disposal” in a forthcoming meeting at the RLU’s offices in Jakarta on November 25, 2019.
2019	November 25	Mighty Earth’s Phil Aikman attends a meeting at the RLU offices in Jakarta. He was not presented with the detailed spatial data files and concession maps as requested in Mighty Earth’s letter from September 9, 2019, but was presented with the following: • “Transformation of land cover condition 2003-2018 carbon study result in Jambi” diagram • General maps of Go Zone and No-Go Zones in Jambi, 2019 • General map of the Wildlife Conservation Area (WCA) in Jambi • A general HCV/HCS land cover map 2015, from Jambi • LIDAR satellite image of land prepared in LAJ 4 concession from April to June 2018 • LIDAR sample satellite image of MOU 452 in LAJ 4 in 2016
2019	November 30 to December 19	Mighty Earth’s Campaign Directors Phil Aikman and Alex Wijeratna send four emails to Michelin’s Hervé Deguine and RLU requesting the following additional key documents, external audits, satellite imagery and Memorandums of Understanding (MOUs): • Tropenbos Indonesia’s 2015 HCV/HCS study in Jambi • LIDAR (2016) and Sentinal (2017) high-resolution satellite imagery for Jambi • Daemeter, ProForest and CIRAD’s Environmental and Social Due Diligence Assessment (ESDD), from 2017 • MOU between Michelin, Barito Pacific and RLU • MOU between Michelin, RLU and WWF
2020	January 11	Email from Mighty Earth’s Senior Advisor Alex Wijeratna to Michelin and RLU repeating Mighty Earth’s request for disclosure and access to the key maps, satellite images and documents listed under the entry (above) from December 19, 2019.

2020	February 6	Email from Michelin's Hervé Deguine to Mighty Earth's Alex Wijeratna and Dr Julian Oram confirming that Mighty Earth's document request from January 13, 2020, [sic] had been declined by RLU's Environmental and Social Advisory Board - on the grounds that Mighty Earth's specific requests related to RLU's business operations, development and safety, and were therefore sensitive and confidential.
2020	March 18	Letter from Mighty Earth CEO Glenn Hurowitz to RLU's President Director Paolo Kartadjoemena and Meizani Irmadhiany, and Michelin's Hervé Deguine, requesting detailed Shapefile maps confirming the areas of natural forest that were either cleared or not cleared in a large south-eastern section of the LAJ 4 concession by RLU subsidiary LAJ in the three years prior to the 2015 moratorium on further forest clearance. To date, Mighty Earth has not received a formal response to this information request from either Michelin or RLU.
2020	July 1	Letter from Mighty Earth Senior Director Dr Julian Oram to Michelin's Hervé Deguine and RLU Director Meizani Irmadhiany providing two sets of satellite images from 2012, 2013, 2015 and 2020 highlighting evidence of industrial deforestation in the case study south-eastern section of the LAJ 4 concession and in a Wildlife Conservation Area (WCA) within the LAJ 4 case study area. The letter invited Michelin and RLU to explain in detail their knowledge of the total area of natural forest that was industrially deforested by PT RLU subsidiary PT LAJ in the LAJ 4 case study areas in 2012, 2013 and 2014. The letter notified our intention to publish our research findings and sought details of any public disclosures made about this alleged industrial deforestation to RLU Project investors and invited Michelin and RLU to provide evidence that the Free, Prior and Informed Consent (FPIC) was fairly and adequately obtained from all local and Indigenous communities affected by the industrial deforestation identified in this section of LAJ 4 over this period.
2020	July 7	Michelin's Hervé Deguine replied via email on July 7, 2020. He reiterated "that the region was undergoing massive deforestation at the time" and that a permit to re-open a corridor road was granted in 2006, which led to a "period of open access that resulted in the almost total destruction of the previously partly preserved forest area." He said the Barito Pacific Group later designed a rubber plantation project to plant a rubber belt along the southern boundary of the national park, and during 2014, the Michelin Group carried out several on site economic, social and environmental missions before agreeing to the joint venture in December 2014.
2020	July 30	Conference call with Hervé Deguine (Michelin), Olivia Noury (Michelin), Meizani Irmadhiany (RLU), Yasmine Sagata (RLU), Julian Oram (Mighty Earth), Alex Wijeratna (Mighty Earth), Leo Bottrill (MapHubs).
2020	July 31	Follow up correspondence from Mighty Earth to Michelin to seek clarification on several points arising from the conference call.
2020	August 4	Reply from Michelin on the requested points of clarification (see p52). Michelin's Hervé Deguine said he "contacted the two NGOs that went to the field with us in October 2014 and they agreed to disclose their names (we had a confidentiality agreement signed at that time). For the environmental side of the project, we asked WWF (contact: Nicolas Loz), for whom the protection of the nearby Bukit Tigah Pulu National Park, as well as the numerous tigers and elephants still living around was a priority, to share with us their expertise. For the social aspects of the project, TFT was our partner (now EarthWorm, contact: Bastien Sachet.) In both cases, it was the first time we were working together on a specific project. I wish to confirm the precise chronology: the first Michelin field mission in Jambi took place in February 2014. A second one was organized to evaluate the environmental and social context and challenges in April 2014 (the one to which I participated). Based on the conclusions of this mission, it was decided to organize a third one with independent third parties from the civil society, for the same purpose (evaluate environmental and social context and the chances of success of our project). That's the October 2014 mission. The decision to go for the project was taken end of 2014 and the RLU JV was founded in March 2015, starting its operations thereafter."
2020	September 24	Michelin Vice President and Chief Procurement Officer Helene Paul confirmed in notes from a call with Mighty Earth CEO Glenn Hurowitz the following: "First contact of Barito was made mid-2013. They asked us for technical advisory on it. Sent someone in October 2013. Provide some advice on doing that. He saw 1-300 ha of land, plenty of things have to change. End 2013, they asked if we would agree to open stronger cooperation. We cannot go further with you unless you change."

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c/o Center for International Policy,
2000 M Street NW, Suite 720,
Washington, DC 20036

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