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NDPE Policies Cover 83% of Palm Oil Refineries; Implementation at 72%

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Palm oil refiners are a strategic bottleneck in the global supply chain. Since 2014, the largest refiners have adopted No Deforestation, No Peat, No Exploitation (NDPE) policies, the strongest private instrument to cut the direct link between deforestation and palm oil. Refiners commit to NDPE policies that cover their own plantations and the plantations of their third-party suppliers. This market mechanism functions best when the entire industry follows commitments. However, non-cooperating refiners continue to leak unsustainable palm oil into the market.

Key Findings:

- **As of April 2020, NDPE policies cover 83 percent of palm oil refining capacity in Indonesia and Malaysia.** In [November 2017](#), this percentage stood at 74 percent. The increase is the result of six company groups with large refining capacity adopting NDPE policies.
- **Because of weak implementation, effective NDPE coverage falls to 72 percent.** Due to lagging transparency and grievance processes, three of the eleven largest refiners in Indonesia and Malaysia remain part of the leakage market.
- **The seven largest leakage refiners in Indonesia and Malaysia are FGV Holdings, Permata Hijau Group, Salim Group, BEST Group, Tunas Baru Lampung, Darmex Agro and the Wings Group.** In India, the world's largest importer of crude palm oil, there are three leakage refiners: Emami Agrotech, Patanjali Ayurved and Gokul Agro Resources.
- **The Indonesian government offered local leakage refiners an escape from NDPE market requirements through the palm oil diesel market.** Before COVID-19, palm oil diesel use was expected to account for 18 percent of Indonesia's palm oil production in 2020. Leakage refiners Darmex Agro, Permata Hijau Group, BEST Group and Tunas Baru Lampung were expected to account for 25 percent of the production.
- **NDPE policies, along with government measures and low prices for palm oil, have contributed to lower deforestation for oil palm.** In Indonesia, 16 out of the 21 largest oil palm growers are compliant with NDPE policies when it comes to clearing forests and peatlands. Some growers continue deforestation for oil palm.

Deforestation-free palm oil depends on refiners implementing sustainable sourcing policies

As of 2020, nearly all large companies in the global palm oil supply chain have committed to **No Deforestation, No Peat, No Exploitation (NDPE)**. These large companies include growers, traders, traders, consumer goods companies and financial institutions. After pressure from NGOs and customers, market leader Wilmar International became the first company to commit to an NDPE policy by the [end of 2013](#).

The palm oil supply chain has a characteristic hour-glass shape. A few dozen refiners source from thousands of palm oil mills and in turn supply numerous consumer goods companies. Their function is to convert Crude Palm Oil (CPO) to refined ingredients for food, cosmetics and fuel. Most refiners largely depend on the supplies from third-party oil palm growers. NDPE has been successful as a result of economic leverage refiners have over oil palm growers. Refiners' NDPE engagement with oil palm growers also raises awareness of environmental and social impacts. When growers refuse to adhere to NDPE, refiners may suspend trade with them, exposing oil palm growers to [market access risks](#).

NDPE policies include commitments to the following: Free, Prior and Informed Consent (FPIC) for indigenous and other local communities, zero burning, preventing poor working conditions, and preserving High Conservation Value (HCV) areas, High Carbon Stock (HCS) areas and peatlands. The [Accountability Framework](#), established by conservation NGOs, provides a guideline for NDPE implementation.

Given their market position, palm oil refiners are key to NDPE's success. The following are Key Performance Indicators (KPIs) for NDPE implementation by palm oil refineries:

- **Supply chain transparency.** Traceability of all sourcing at the palm oil mill level, preferably also at the [plantation](#) level and publication of mill lists that include coordinates and parent company names.
- **An operational grievance system.** Publication of the company's grievance mechanism, along with the publication of all grievances, actions taken and [outcomes](#).
- **Engagement** with non-compliant oil palm growers and suspension of trade whenever the engagement is unsatisfactory.
- **Protocols for re-entry** of earlier non-compliant suppliers.
- **Showing progress** through regular reports.

For this report, CRR assessed refiners with NDPE policies based on implementation of the two main KPIs: 1) Supply chain transparency and 2) Operational grievance systems. KPIs on engagement and showing progress are mostly self-emerging from regular supplier and grievance updates by refiners. The fifth KPI, re-entry protocols, has not been developed yet by all main refiners.

Refiners with 72 percent of capacity implement NDPE policies; additional 11 percent lacks meaningful NDPE action

In [2017](#), NDPE policies covered 74 percent of refining capacity in Indonesia and Malaysia, where most refineries are located. As of April 2020, this amount has increased to 83 percent. Six company groups with large refining capacity have adopted NDPE policies since November 2017: [HSA Group/Pacific Inter-Link](#),

[Nisshin Oillio](#), [IFFCO](#), [BLD Plantation](#), [Wings Group](#) and [Kwantas Corporation](#). Some of the companies -- HSA Group/Pacific Inter-Link, Nisshin Oillio, IFFCO and BLD Plantation -- are also transparent about their supply chains and have operational grievance systems. IFFCO took action by [removing](#) the repeatedly offending oil palm growers Sawit Sumbermas Sarana and Austindo Jaya Nusantara from its supply chain in 2018.

The eleven largest refiners in Indonesia and Malaysia now have NDPE policies. But three of the eleven fall short in their NDPE implementation. Currently, 72 percent of palm oil production is covered by refiners that are transparent about their supply chains and have an operational grievance system. The laggards are FGV Holdings (Felda), Indofood Agri Resources and Permata Hijau Group.

Some leakage actors have recently increased their refining capacity or started operating new refineries. These leakage refiners are Darmex Agro, Permata Hijau Group (both related to Indonesia's palm oil diesel boom), [Rimbunan Hijau](#) and a company [related](#) to Sawit Sumbermas Sarana.

Figure 1: The 25 largest palm oil refiners in Indonesia/Malaysia in 2020

Palm oil refiner	Palm oil refining capacity in Indonesia/Malaysia (million tonnes/year)	NDPE policy?	NDPE implementation?	
			Supply chain transparency	Operational grievance system
Wilmar International	18.9	Yes	Yes	Yes
Musim Mas	7.5	Yes	Yes	Yes
Golden Agri-Resources	6.1	Yes	Yes	Yes
Royal Golden Eagle (Apical)	4.2	Yes	Yes	Yes
Mewah International	3.2	Yes	Yes	Yes
FGV Holdings (Felda)	2.5	Yes	No	No
Sime Darby	2.5	Yes	Yes	Yes
HSA Group/Pacific Inter-Link	2.4	Yes	Yes	Yes
IOI Group	2.4	Yes	Yes	Yes
Permata Hijau Group	2.2	Yes	No	No
Salim Group	1.7	Yes	No	No
BEST Group	1.3	No	No	No
Kuala Lumpur Kepong (KLK)	1.4	Yes	Yes	Yes
Tunas Baru Lampung	1.3	No	No	No
Louis Dreyfus Company	1.2	Yes	Yes	Yes
Darmex Agro	1.2	No	No	No
Astra Agro Lestari	1.1	Yes	Yes	Yes
Nisshin Oillio	1.0	Yes	Yes	Yes
Wings Group	0.9	Yes	No	No

Palm oil refiner	Palm oil refining capacity in Indonesia/Malaysia (million tonnes/year)	NDPE policy?	NDPE implementation?	
			Supply chain transparency	Operational grievance system
Gunawan family (Incasi Raya)	0.9	No	No	No
IFFCO	0.9	Yes	Yes	Yes
First Resources	0.9	Yes	Yes	Yes
BLD Plantation	0.8	Yes	Yes	Yes
Kwantas Corporation	0.7	Yes	No	No
PT Perkebunan Nusantara (PTPN)	0.7	No	No	No
Other refiners	10.8	8.1 No; 2.7 Yes	8.7 No; 2.1 Yes	
Total palm oil refining capacity	78.7	78.7	78.7	78.7

Source: Company websites, industry sources.

For 50:50 joint ventures half of the capacity is attributed to each company group.

The seven largest leakage refiners in Indonesia/Malaysia are described below. They are considered “leakage” refiners because they either do not have an NDPE policy or fall short on NDPE implementation with no supply chain transparency and no operational grievance system. The palm oil industry’s reputation may remain [feeble](#) so long as these refiners do not improve their performance in sourcing sustainably.

FGV Holdings is majority-owned by the government of Malaysia. Its refining capacity in Malaysia (Peninsular and Sabah) totals around 3 million metric tonnes (MT) per year, of which 0.8 million MT in a 50/50 joint venture with IFFCO. The company also produces annually around [3 million MT](#) of CPO from its own plantations. FGV Holdings has an [NDPE policy](#), but it does not publish mill and grievance lists, except for its joint venture with IFFCO.

The Permata Hijau Group has five refineries in North Sumatra and Riau, with a combined capacity of over 2 million MT per year. It is Indonesia’s largest processor/trader of palm oil that does not reveal its third-party suppliers, though it relies heavily on them. Permata Hijau has published an [NDPE policy](#), yet no public information is available about implementation of this policy. [U.S. trade data](#) show that the NDPE trader/processor Cargill is a regular customer of Permata Hijau.

The Salim Group’s company Indofood Agri Resources has refining capacity of [1.7 million MT](#) per year. The company’s own CPO production amounted to [840,000](#) MT in 2019. Indofood states that [23](#) percent of the CPO used in its refineries comes from third parties. The Roundtable on Sustainable Palm Oil (RSPO) [terminated](#) Indofood’s membership in February 2019, after the company refused to respond to a RSPO complaint about alleged violation of labour rights. Indofood has an [NDPE policy](#), yet it does not publish its supplying mills. IndoGunta, a related entity to Salim Group and a likely supplier to Indofood, has three palm oil mills and is presently clearing forest for oil palm in Papua.

Indonesian BEST Group owns three refineries with a combined capacity of 1.3 million MT. The company also ranks among the top-20 largest oil palm growers in Indonesia, with an estimated CPO annual

production of 700,000 MT in Central Kalimantan. BEST Group cleared almost [2,300](#) hectares (ha) of peatland for oil palm in 2019, and presently it is involved in a [land conflict](#) for over 1,800 ha that it allegedly planted illegally.

Tunas Baru Lampung, listed on the Indonesia Stock Exchange, owns 1.3 million MT of annual refining capacity. It aims to operate a new refinery with annual capacity of [750,000](#) MT by October 2020. The new refinery, which will sharply increase the company's dependency on third-party sourcing, will mainly serve the domestic palm oil diesel market. Tunas Baru Lampung's CPO production stood at [375,000](#) MT in 2018. The company cleared [2,900](#) ha of peatland for oil palm in South Sumatra in 2019.

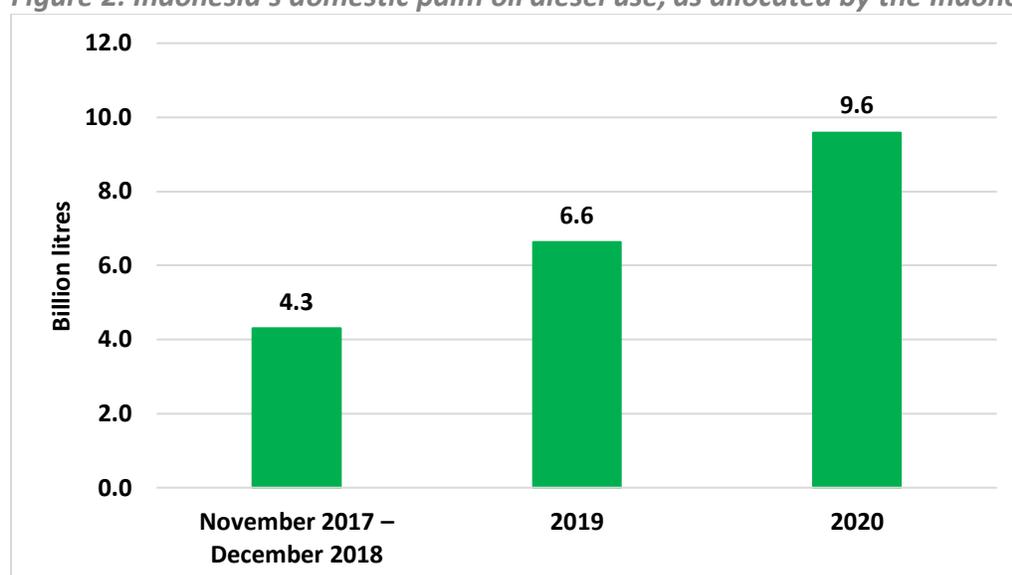
Darmex Agro ranks among the top-20 largest oil palm growers in Indonesia. Its plantations are in Sumatra (Riau and Jambi districts) and West Kalimantan (Sambas and Bengkayang districts), and yearly CPO production is around 700,000 MT. Its refining capacity is estimated to be 1.6 million MT per year. In 2020, Darmex Agro plans to deliver [1.2](#) billion litres (equivalent to 1.1 million MT of CPO) of palm oil diesel to the Indonesian domestic market. The company is considered opaque with a poor record on environmental and social issues. In May 2013, the RSPO [terminated](#) Darmex Agro's membership. Currently, main NDPE refiners/traders source only a small amount of palm oil from Darmex Agro. The company and its owner, Surya Darmadi, are under [investigation](#) by Indonesia's Corruption Eradication Commission. The governor of Riau allegedly received a bribe of IDR 3 billion (USD 250,000) in February 2014 from the entities under investigation.

The Indonesian Wings Group owns a refinery with capacity of 900,000 MT per year in East Java, mainly relying on third-party sourcing. The company group has planted [33,000](#) ha of oil palm in Kalimantan. The Wings Group is also a large shareholder (38 percent) in the oleochemical company PT Ecogreen Oleochemicals, and it has a Singaporean trading arm called Gideon Agri Pte Ltd. The Wings Group has published an [NDPE policy](#), yet it does not publicly list mills and grievances.

Indonesia's palm oil diesel provides an escape route for leakage refiners

Indonesia's domestic use of palm oil diesel has increased sharply in the last two years, as shown in the graph below. In 2020, the country is expected to use 9.6 billion litres of palm oil diesel, the equivalent of 8.8 million MT of CPO (it takes [0.92](#) kilogram of CPO to produce one litre of palm oil diesel). This amount would make up 18 percent of Indonesia's projected palm oil [production](#) in 2020. Total consumption, however, may end up lower due to the effects of the novel coronavirus on transportation demand and the economy.

Figure 2: Indonesia's domestic palm oil diesel use, as allocated by the Indonesian government



Source: Minister of Energy and Mineral Resources, Biodiesel allocations, bit.ly/2PvrKxX, bit.ly/34IDqjp, bit.ly/2WARP2g, bit.ly/2Ccl3Yu, bit.ly/36gSqGd, bit.ly/2pEaThS.

Over the last five years, the Indonesian government spent around USD 2.1 billion to financially support its palm oil sector via targets for domestic use of palm oil diesel. As a result, the government created extra demand for palm oil after global prices fell due to oversupply created by the palm oil industry.

Through the increased use of palm oil diesel, the Indonesian government has provided an escape route for leakage refiners, reducing the leverage companies with NDPE policies have over leakage actors. The Indonesian government does not apply sustainability criteria for selecting its palm oil diesel refiners. In 2020, leakage actors Darmex Agro, Permata Hijau Group, Tunas Baru Lampung and BEST Group will produce one quarter of the total volume. In 2020, Darmex Agro will use almost all of its refining capacity for palm oil diesel, while Tunas Baru Lampung is presently building an extra refinery (capacity of 750,000 MT per year) eying the domestic palm oil diesel market.

Figure 3: Indonesia's 2020 palm oil diesel allocation

Company group	Applying NDPE policy?	Allocation (billion litres)
Wilmar International	Yes	3.1
Musim Mas	Yes	1.8
Darmex Agro	No	1.2
Royal Golden Eagle	Yes	0.8
Golden Agri-Resources	Yes	0.8
Permata Hijau Group	No	0.6
Louis Dreyfus Company	Yes	0.4
Tunas Baru Lampung	No	0.3
BEST Group	No	0.3

Company group	Applying NDPE policy?	Allocation (billion litres)
First Resources	Yes	0.3
Total		9.6

Source: Minister of Energy and Mineral Resources, Biodiesel allocation for 2020, bit.ly/2PvrKxX.

China, India, Indonesia, Pakistan and Bangladesh are likely the largest leakage markets

The main countries importing refined palm oil from Indonesia and Malaysia are China, India, Pakistan and Bangladesh, accounting for some 43 percent of the exports by Indonesia and Malaysia. As there are only a few companies with NDPE policies inside China, India, Pakistan and Bangladesh, these countries are likely the main end markets for exported leakage palm oil. Inside Indonesia, the government is presently driving the leakage market (which is mainly comprised of cooking oil) by creating a market for palm oil diesel produced by non-NDPE refiners.

India has added three refiners to the top-10 largest leakage refiners. India is the world's largest importer of CPO of the world, followed by the European Union. While large European refiners and exporters to Europe have adopted NDPE policies, Indian refiners rarely have them. This divergence explains the importance of Indian refiners to the leakage market. Refined palm oil produced by Indian leakage refiners is mainly used domestically.

India has three large leakage refiners

As covered in CRR's report in November 2018, India has a large leakage market for palm oil. Trade data show that India imported 10.8 million MT of CPO in 2019, almost 15 percent of global CPO production. Of the CPO imported by India, 71 percent was used by refiners without NDPE policies.

However, leakage palm oil exports to India account for less than 71 percent as a portion is covered by the NDPE policies of the Indonesian and Malaysian exporters. Of the total Indian CPO imports of 10.8 million MT, 49 percent was covered by exporters with NDPE policy, while 26 percent was covered by exporters without NDPE policy. For the remaining 25 percent, NDPE coverage was unclear as exporter names were not revealed in trade data. Therefore, the leakage volume of Indian CPO is in the range of between 2.8 million and 5.5 million MT.

India's four largest palm oil refiners are Emami Agrotech, Adani Wilmar (including their joint venture with KTV), Patanjali Ayurved and Gokul Agro Resources. Together, the four companies accounted for 40 percent of India's CPO import in 2019. While Adani Wilmar has an NDPE policy, the other three companies do not.

Figure 4: Largest refiners India, NDPE and CPO import share in 2019

NDPE refiner	% CPO import 2019	Non-NDPE refiner	% CPO import 2019
Adani Wilmar (50:50)	10	Emami Agrotech	12
Bunge	5	Patanjali Ayurved	10
Musim Mas	3	Gokul Agro Resources	6
Cargill	3	Mayur Group	4
Golden Agri-Resources	2	Allana/IFFCO	4
Adani Wilmar / KTV (50:50)	2	Cofco	3
Louis Dreyfus Company	2	Santhoshimathaa	3
Other	1	Edible Group	3
		3F Industries	3
		Other	23
Total	29		71

Source: Infodrive, Refiners' websites. HS codes 15119020 RBD Palm Olein (Edible Grade) In Bulk and 15111000 Crude Palm Oil (Edible Grade) In Bulk. Harbours: Kandla, Kolkata Sea, Krishnapatnam, Chennai Sea, Kakinada, Nhava Sheva Sea, Mangalore Sea, Tuticorin Sea and Mundra.

Emami Agrotech is a large consumer goods company in India. It has a refining capacity of 2.0 million MT per year, likely also for other vegetable oils than palm oil. Its CPO imports amounted to 1.3 million MT in 2019. Part of the sourcing by Emami Agrotech was from oil palm growers **Posco** and **Torganda**, companies with a proven track record on forest clearing in Papua and Sumatra, respectively. Emami Agrotech is a member of the RSPO, but it did not sell **any** RSPO-certified palm oil in 2018.

Patanjali Ayurved, also a large Indian consumer goods company, took over the bankrupt edible oil player Ruchi Soya Industries in **2019**, including its refining capacity of **3.3** million MT year. This capacity is also used for soybean, sunflower and mustard oils. The company imported 1.1 million MT of CPO in 2019, with the largest amount still on the account of Ruchi Soya Industries. Patanjali Ayurved, which is not a member of the RSPO, does not publish information on its palm oil suppliers.

Gokul Agro Resources is an Indian business in edible oils with refining capacity of **0.6** million MT. Gokul Agro Resources is also a palm oil trader. Its Singaporean trade arm Riya International Pte Ltd exported 275,000 MT of CPO to India in 2019, of which 60 percent was sold to other Indian refiners than Gokul Agro Resources. Gokul imported 0.7 million MT of CPO in 2019. The company has been a member of the RSPO since **September 2019**, yet it has not published any information on its palm oil suppliers.

Together, India's three largest leakage refiners imported 3.1 million MT of CPO in 2019, equivalent to 29 percent of India's total CPO import. With the exception of a small number of NDPE traders/refiners selling them CPO, the three leakage refiners appear to have little if any business relations with NDPE companies in the palm oil supply chain.

Refinery policies have contributed to reduced palm oil deforestation rates

Refiners' NDPE policies have contributed to the reduction of deforestation for oil palm in Indonesia, though attribution is hard to measure. Deforestation rates have declined in Indonesia in recent years.

Along with NDPE implementation, government actions and weak CPO prices (due to oversupply created by the palm oil industry) have [contributed](#) to lower forest loss. Two examples below provide insight on how NDPE policies reduce deforestation for oil palm, while also looking into NDPE’s limitations.

In Indonesia, 16 out of the 21 largest oil palm growers are compliant with NDPE policies

Of the 21 largest oil palm growers in Indonesia, 11 have NDPE policies and are effective in implementing them. Five other oil palm growers, meanwhile, have in practice stopped clearing forests and peatlands for oil palm, but they have not made NDPE commitments. The oil palm planted area of these 16 oil palm growers comprises 19 percent of Indonesia’s total oil palm planted area of [16.3](#) million ha. Most of these 16 oil palm growers had been clearing forests and peatlands before market players began adopting NDPE policies.

Out of the 21 oil palm growers, seven companies do not own refining capacity. They are KPN Corp, Bumitama Agri, Dharma Satya Nusantara, Triputra Agro Persada, Eagle High Plantations, Makin and Sampoerna Agro. Large traders/refiners with NDPE policies are main customers of these oil palm growers. The customer base of these seven growers appears in the lists of supplying mills from the traders/refiners, and in the corporate filings of publicly listed growers ([Dharma Satya Nusantara](#), [Eagle High Plantations](#) and [Sampoerna Agro](#)). Most likely, the refiners’ economic leverage over these oil palm growers has contributed to them no longer clearing forests and peatlands.

Figure 5: The 21 largest oil palm growers in Indonesia and their NDPE status

NDPE policy and implementation	No NDPE policy, yet not significantly clearing forests or peatlands for oil palm	No NDPE implementation, large deforestation risk
Golden Agri-Resources (GAR)	Gunawan family (Incasi Raya)	PT Perkebunan Nusantara (PTPN)
Astra Agro Lestari	Triputra Agro Persada	Salim Group
First Resources	Eagle High Plantations	BEST Group
Sime Darby	Makin	Darmex Agro
KPN Corp (GAMA plantation)	Sampoerna Agro	Torganda
Wilmar International		
Bumitama Agri		
Royal Golden Eagle (Asian Agri)		
Musim Mas		
Kuala Lumpur Kepong		
Dharma Satya Nusantara		

Source: Annual reports and websites of the companies, screening of concessions maps for planted areas, registry profiles of plantation companies.

Some oil palm growers still continue to deforest for oil palm

Recent analysis by CRR shows that 10 palm oil companies were alone responsible for approximately 39,500 ha of deforestation and peat development in Indonesia in 2019. The 10 company groups were Sulaidy, Jhonlin Group, Mulia Sawit, Indonusa, Rugao Shuangma Group, BEST Group, Peputra Group,

Musirawas, Golden Land Bhd and Tunas Baru Lampung. The following list shows how companies continue to clear forests:

- Leakage refiners Tunas Baru Lampung and to a lesser extent BEST Group no longer appear in the supply chains of traders/refiners with NDPE policies. Tunas Baru Lampung and BEST Group now mainly operate outside of NDPE markets.
- Sulaidy, Rugao Shuangma Group and Golden Land do not (yet) own palm oil mills, so traders/refiners with NDPE policies cannot use their economic leverage with these companies. It remains unclear where the FFB ends up.
- Mulia Sawit, Indonusa and Musirawas are currently suspended by the main traders/refiners after their engagement with the companies. Beginning in January 2019, Wilmar International started its “[Suspend then Engage](#)” program. In practice, however, it takes often a year before all main traders/refiners have investigated grievances, engaged, and made a decision about non-compliant growers.
- For the Jhonlin Group and Peputra Group, the main traders/refiners are still investigating cases linked to land clearing. In the case of Jhonlin, the case involves whether the deforestation connected to the company was driven by oil palm. Presently, Jhonlin is also clearing forests in another concession, and that clearing is most likely for oil palm. In the case of Peputra, the case centres on whether Peputra has management control over the plantation company involved in clearing.

Four of the companies among the top ten deforesters in 2019 also appeared in the [2018](#) list published by CRR: Sulaidy, Jhonlin Group, Mulia Sawit and Tuna Baru Lampung. For the other six companies on the 2018 list, their present situations are as follows:

- [BLD Plantation](#) (in May 2019) and [Austindo Nusantara Jaya](#) (in October 2019) signed an NDPE policy. However, both companies have not yet developed a recovery plan to compensate for their forest and/or peatland clearing.
- The [Tee Family](#) and the HSA Group claim that they sold their plantations in Papua New Guinea and Papua, respectively. The sales happened after engagement by traders/refiners. The plantation companies’ present owners are not known since they are registered in secrecy jurisdictions. NGOs Environmental Investigation Agency (EIA) and Greenpeace submitted an RSPO complaint against [HSA Group](#) in October 2018 on the control/ownership and operational development of four palm oil plantation companies in Papua. As of April 2020, there had been little progress in resolving the complaint. Similar to BLD Plantation and Austindo, the Tee family and HSA Group have not yet developed recovery plans to compensate for their forest and/or peatland clearing.
- Ciliandry Anky Abadi (owned by [Martias](#), a business partner of Mr. Sulaidy) and a company related to Sawit Sumbermas Sarana (SSMS) continued their non-compliance with NDPE policies in 2019. For the most part, both companies no longer appear in the supply chains of traders/refiners with NDPE policies. In the first nine months of 2019, a new refinery company PT Citra Borneo Utama bought [86 percent](#) of SSMS’ produce. The refinery is a related party of SSMS.

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