



MIGHTY EARTH



# RAPID RESPONSE Palm Oil Report

Report 45  
August 2024



Prepared with support from



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## Cases identified using Planet and other spatial imagery

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## Supply chain information:

Supply chain information included in Rapid Response reports is based on the latest public versions of mill disclosures, recent export data, and/or company grievance logs. Mighty Earth encourages companies to send updated versions of mill disclosures as soon as they become available and to share any decision to suspend relations with a given group/company listed in those mill disclosures with [rapidresponse@mightyearth.org](mailto:rapidresponse@mightyearth.org).

Mighty Earth is including biofuel companies and other manufacturers in the supply chain tables of Rapid Response reports, as these companies have both direct and indirect trading relationships with groups highlighted in these reports and should be filing grievances on these cases. These companies are listed in the "Supply Chain Information" tables.

# New Case

## Group: NSS Group

PT Prasetya Mitra Muda

Concession location: -1.608418, 113.718054

### Deforestation and/or peat development

Report	Forest Loss/Clearance Preparation (ha)	Peat development inc forest areas (ha)	Peat forest development (ha)	Clearance prep/Stacking lines (ha)	Time period
Report 6	45				June 3, 2018 - July 6, 2018
Report 17	~7				May 19, 2019 - June 20, 2019
Report 19	~19				July 15, 2019- August 15, 2019
Report 45	~918		-	-	June 2023 and June 2024

During the period between June 2023 and June 2024, there was 918 ha of forest loss and clearance preparation in the PT Prasetya Mitra Muda concession. Source: Planet Inc. 2023-2024

## Background information on Ownership, the Concession and other relevant issues.

PT Prasetya Mitra Muda is part of the PT Nusantara Sawit Persada Group ([NSS Group](#)).

In July of 2018, Mighty Earth published [Rapid Response report 6](#) which included clearing in the PT Prasetya Mitra Muda concession (location permit area). On 10 August 2019, following the publication of RR report 6, PT Prasetya Mitra Muda commissioned an integrated HCV-HCS assessment for HGU (Hak Guna Usaha) permit areas of the concession.

On 3 October 2019, the resulting integrated HCV-HCS assessment was submitted to the HCV Resource Network (HCVRN) Assessor Licensing Scheme (ALS) for quality review. The assessment passed the review process on 22 September 2020.

The [final assessment report](#) states: 'The total area of HCV-HCS in concession area of PT. PMM is 8,249.44 Ha or 100% of the total [HGU] area of the company (8,249.44 Ha).' Since PT Prasetya Mitra Muda developed most of these areas before the integrated HCV-HCS assessment was completed, the company will need to develop a Recovery Plan for impact areas.

Given the satisfactory result of the HCVRN review process, most traders closed the grievance against PT Prasetya Mitra Muda.

Mighty Earth queried the recent development featured in this report with a customer of the NSS Group. In its response to the customer, PT Prasetya Mitra Muda confirmed that they were responsible for the recent land development outside the HGU area and have now agreed to stop further land clearing. Further, the company will now commission a new integrated HCV-HCS assessment for the new areas of development and submit the assessment to the HCVRN for review.

The customer told Mighty Earth that PT Prasetya Mitra Muda 'will be responsible for a recovery plan program for HCS loss in the 2023-2024 land development following the guidance in the peer-reviewed HCS/HCV study (This will be added on to the whole "recovery plan package") - i.e. including HCS/HCV areas cleared in the HGU permit area.

Given the above commitments, customers of NSS Group palm oil should still file this case as a grievance and monitor the company's adherence to these commitments including how they develop and implement the whole recovery plan.

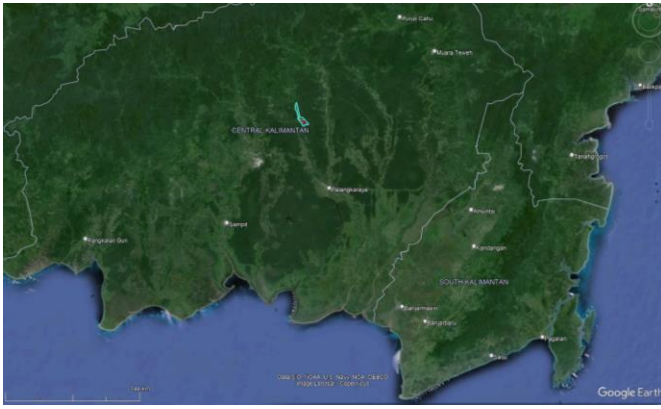
As the following pages show:

- Since June 2023 PT Prasetya Mitra Muda developed around 918ha of land due south of the HGU area and within the 'Location Permit' (Ikin Locasi).
- No additional HCV-HCS assessment was submitted to the HCVRN for the area recently developed.
- The impacted area is not within a HGU boundary published on the Indonesian government geospatial [BHUMI website](#).

## Supply Chain Information

Company/Group	Trader	Biofuel / other manufacturer	Consumer Brand
PT Prasetya Mitra Muda	n/a	n/a	n/a
PT Nusantara Sawit Persada (NSS Group)	AAK, ADM, Fuji oil, GAR, KLK, LDC, OFI, Sime Darby, Wilmar	Barry Callebaut, BASF, Biesterfeld, Imdorama, KAO, Oleon, Nikko, Nisshin Oillio, Stearinerie Dubois, Symrise, Zschimmer & Schwarz	Avon, Colgate, Friesland Campina, General Mills, Grupo Bimbo, Hershey, Kellogg, Mondelēz, Neste, P&G, Pepsi, PZ Cussons, Reckitt, Unilever

# Mapping analysis



The image below shows the HCV-HCS areas distribution in the HGU areas and around the concession area.

The [final assessment report](#) concludes: 'The total area of HCV-HCS in concession area of PT. PMM is 8,249.44 Ha or 100% of the total [HGU] area of the company (8,249.44 Ha).'

Both [HCV 1 and HCV2 areas](#) cover a total of 8,219 ha of the HGU concession area.

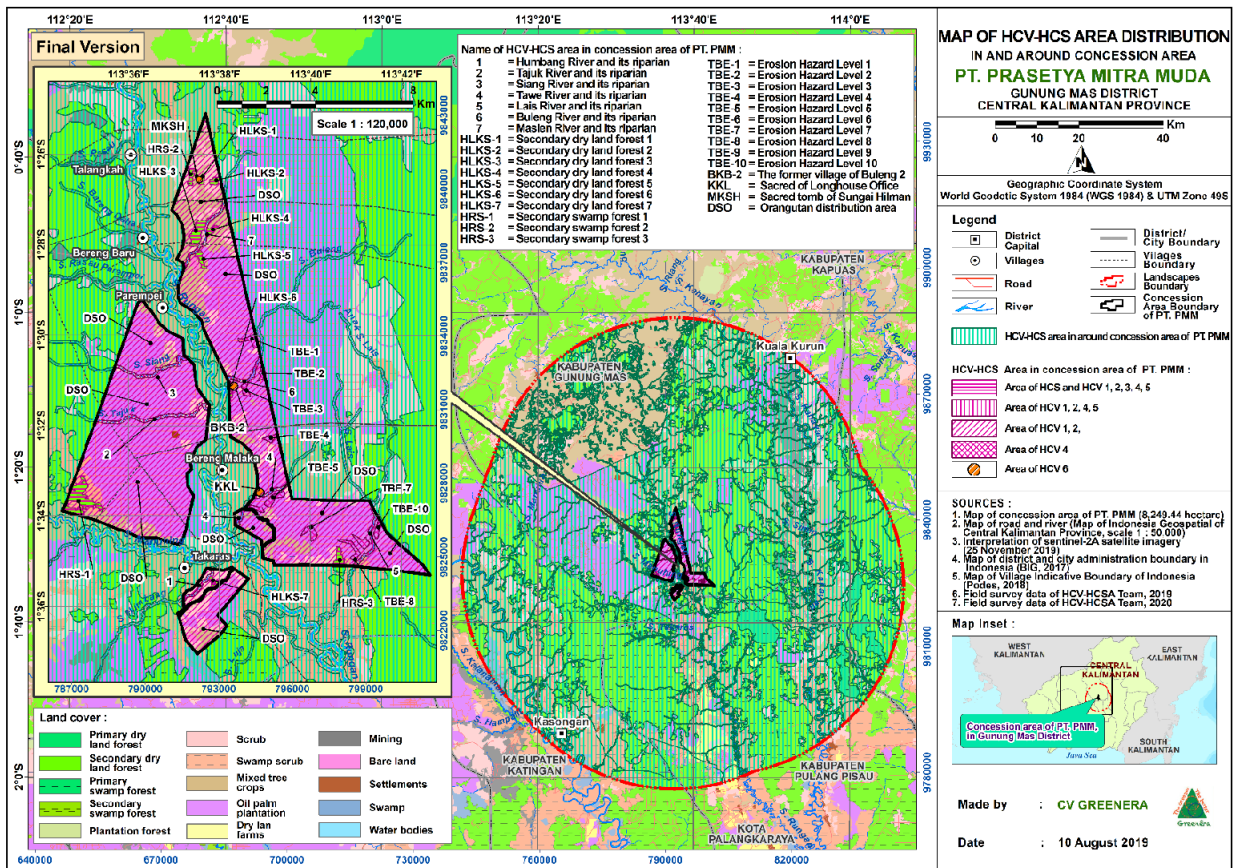
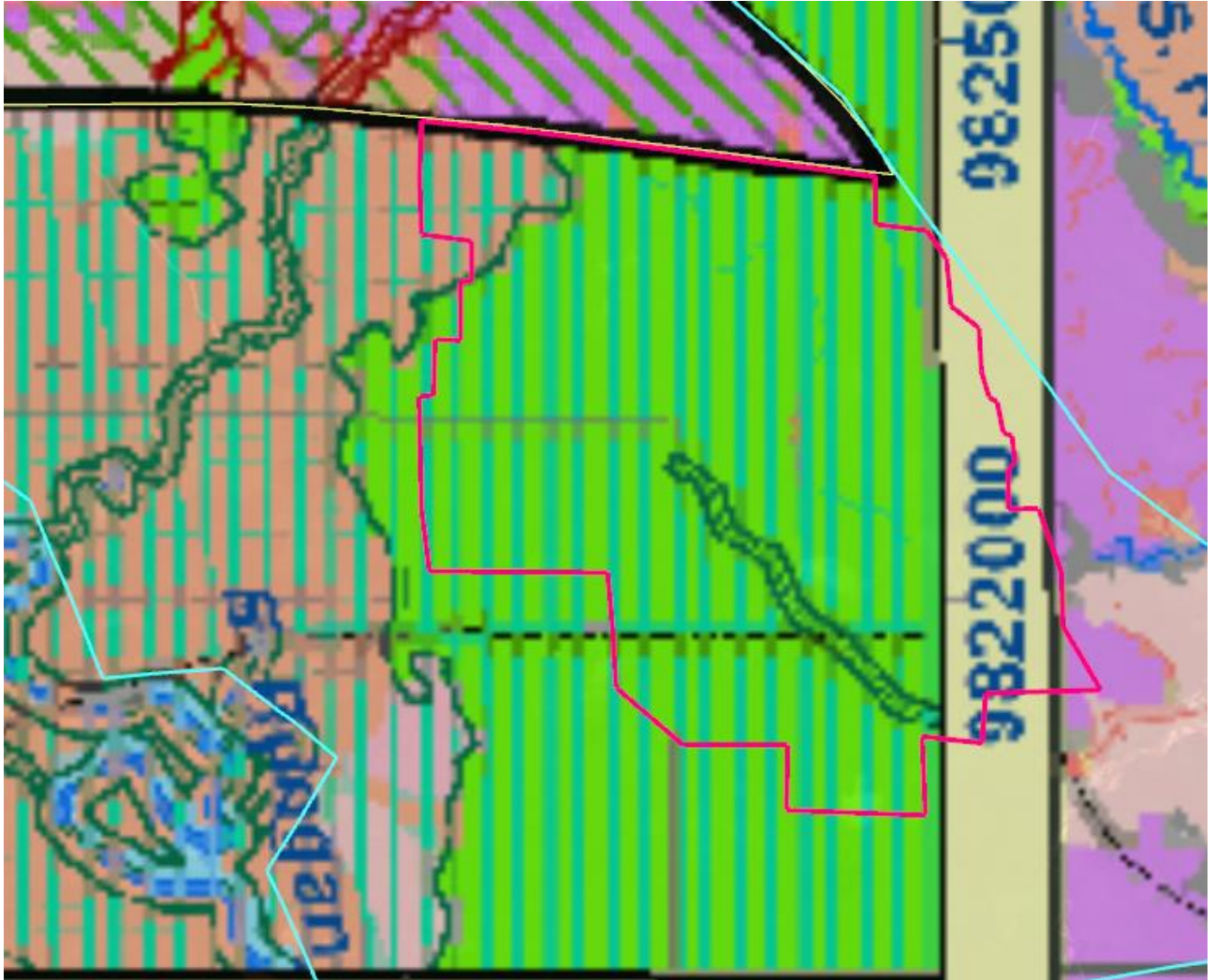


Figure 22. Map of HCV-HCS area distribution in and around concession area of PT. PMM



## Mapping analysis (cont.)

The map below shows the areas impacted between June 2023 and June 2024 (red line) overlaid with the relevant portion of HCV-HCS which shows that most of the impacted areas were 'secondary dry forests' at the time the integrated HCV-HCS assessment was conducted.



## Mapping analysis (cont.)

The high-resolution Bing image below shows the land cover of the impacted area (red outline) was closed canopy forest prior to the development following June 2023 .

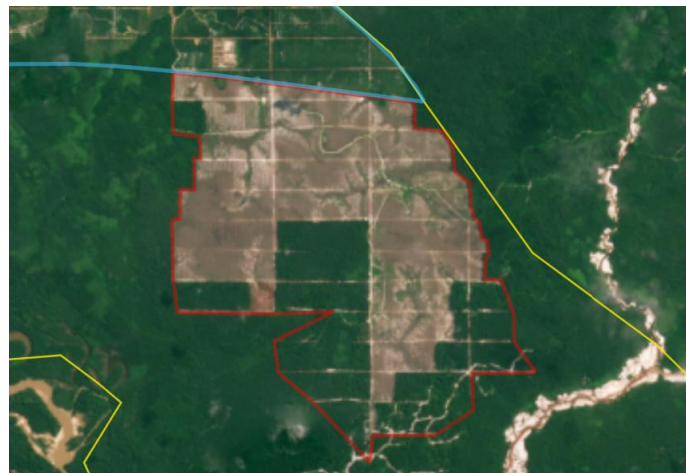
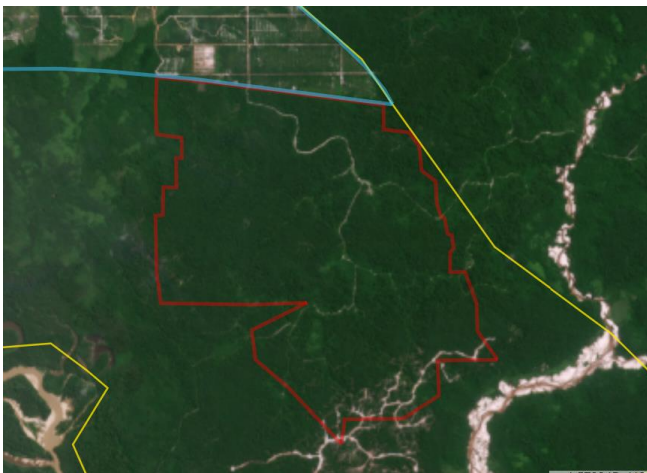


## Alert Imagery (before and after satellite images)

Clearance location (red outline): -1.608418, 113.718054

Date: June 2023  
(Planet imagery)

Date: June 2024  
(Planet imagery)





# New Case

## Group: Fangiono family

### PT Inti Kebun Sawit

Concession location: -1.366607, 131.159633

#### Deforestation and/or peat development

Report	Forest Loss/Clearance Preparation (ha)	Peat development inc forest areas (ha)	Peat forest development (ha)	Clearance prep/Stacking lines (ha)	Time period
Report 45	~2,380		-	-	January 2023 and June 2024

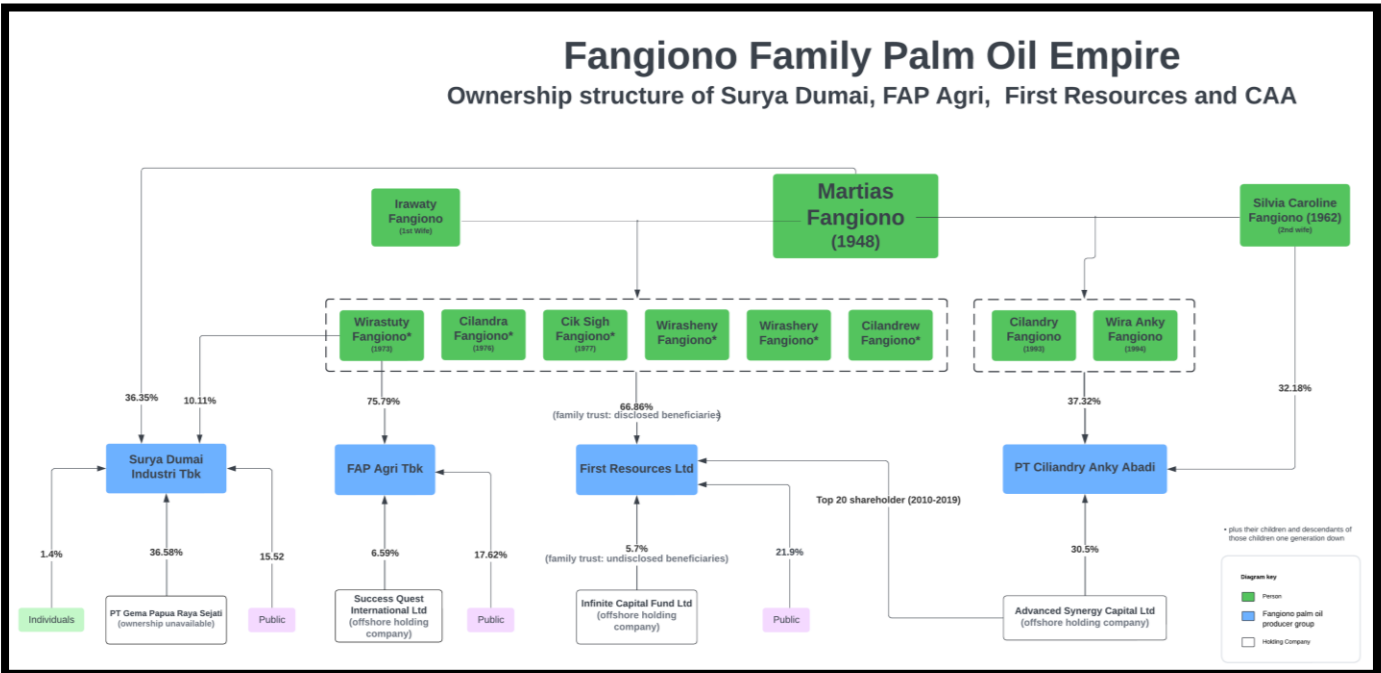
During the period between January 2023 and June 2024, there was ~2,380 ha of forest loss and clearance preparation in the PT Inti Kebun Sawit concession. Source: Planet Inc. 2023-2024

# Background information on ownership, the concession and other relevant issues

## The Fangiono family palm oil empire

Martias Fangiono (known only as 'Martias') was a major player in the Indonesia timber business during and after the Suharto era. Martias was the founder of the logging and palm oil company PT Surya Dumai Industri (Surya Dumai group).

Children from Martias' first and second marriages control a number of palm oil producer companies: This includes three publicly listed companies, Surya Dumai Industri Tbk<sup>1</sup>, FAP Agri Tbk and First Resources Ltd, and one privately held company, PT Ciliandry Anky Abadi (CAA). See diagram below.



Since June 2008 [Surya Dumai Industri Tbk](#) has only had one subsidiary, Surya Dumai Industri Finance Company BV (Netherlands).

Up until 2023, the company's reported net sales were zero 'due to all production activities stopped in 2007'. However, Martias remains active with Surya Dumai Industri and the palm oil business. For example, in 2017, he received a 'Fortune Times' Asia Entrepreneur Awards 2017 for Commodities', as the Chairman of the Surya Dumai Group.



## Background information on Ownership, the Concession and other relevant issues.

### PT Inti Kebun Sawit

PT Inti Kebun Sawit is 99.99% is currently owned by PT Ciliandry Anky Abadi and 0.01% by Silvia Caroline, the second wife of Martias.

### Fangiono family changing ownership of PT Ciliandry Anky Abadi

In 2004, Martias and Silvia Caroline established the palm oil holding company PT Ciliandry Anky Abadi (CAA), together owning 100% of the shares.

In 2007 Martias was convicted of corruption by the Corruption Court of Central Jakarta and sentenced to one-and-a half years in prison and required to pay a \$38 million fine. Following his imprisonment, Martias and his wife transferred the ownership of CAA to an offshore holding company registered in the British Virgin Islands, Sima Capital Ltd.

Sima Capital Ltd remained the main controlling shareholder of CAA up until December 2016. The ultimate Fangiono family beneficiaries of CAA during the period 2007 to 2016 remains publicly undisclosed.

In December 2016, Silvia Caroline, Ciliandry Fangiono and Wiras Anky Fangiono became the sole shareholders of CAA.

In March 2022, the ownership of CAA changed to:

- 32.18% of the shares are ultimately owned by Silvia Caroline. The shares are held via PT Sima Investasi Bersama;
- 37.32% of the shares are ultimately owned by Ciliandry Fangiono and Wiras Anky Fangiono. These shares are held through a series of holding companies, including PT Sima Investasi Bersama;
- 30.50% of the shares are held by an offshore holding company called Advance Synergy Capital Ltd.

The shareholder disclosures for CAA do not disclose the name of the country where Advance Synergy Capital Ltd is registered or the ultimate shareholders.

However, Advance Synergy Capital Ltd is not a new Fangiono related company. According to the data disclosed in First Resources [annual reports](#), Advance Synergy Capital Ltd was named as one of the company's 'Twenty Largest Shareholders' during the ten-year period 2010 to 2019.

## Supply Chain Information

Company/Group	Trader	Biofuel / other manufacturer	Consumer Brand
PT Inti Kabun Sawit	n/a	n/a	n/a
PT Ciliandry Anky Abadi (CAA)	Non identified	Non identified	Non identified
FAP Agri	AAK, Fuji Oil, Musim Mas, Itochu	Biesterfeld Spezialchemie, Oleon, Symrise	Barry Callebaut, Hershey, Meg Snow, Mondelēz, PZ Cussons, Unilever
First Resources	AAK, ADM, COFCO Int, Fuji Oil, Itochu, KLK, Musim Mas, Sime Darby	Biesterfeld Spezialchemie, BASF, Indorama, Innospec, Nisshin Oillio, OFI, Oleon, Stearinerie Dubois, Symrise, Zschimmer & Schwarz	Avon, Barry Callebaut, Colgate, Friesland Campina, General Mills, Hershey, Johnson & Johnson, Kellogg, Mondelēz, Pepsi, PZ Cussons

## Supply chain grievances on First Resources including suspensions

In November 2023, the 'Gecko Project' released its [investigation into First Resources](#), claiming that the company '*appears to have secretly controlled a network of companies that have been clearing rainforests in Indonesia for more than a decade.*'

In July 2024, Mighty Earth sent the table on the following page to traders in First Resources' supply chain, reminding them that by issuing a clear suspension instruction to their direct suppliers, companies can take a preventative stance. Removing First Resources palm oil from their supply chains will block potential points of leakage from companies that continue to source from First Resources.

The table on the following page shows::

- 10 companies have now suspended First Resources.
- 17 additional companies have filed grievances and are investigating or monitoring the case.
- 16 companies have not either not acted on this case or not filed a public grievance: If they have not already, companies in First Resources' supply chain should file grievances, investigate, and respond accordingly.

# First Resources Grievance Tracker

	Suspended	Active Grievance (engaging with suppliers or investigating)	Inactive Grievance (closed without action taken)	No known grievance filed
Traders	Fuji Oil Source: <a href="#">Communication with Mighty Earth</a>	AAK Source: <a href="#">The Gecko Project</a>	ADM Source: <a href="#">Company Grievance Log</a>	KLK
		Bunge Source: <a href="#">Company Grievance Log</a>		Musim Mas
		COFCO International Source: <a href="#">Communication with Mighty Earth. No public grievance log found.</a>		
		Cargill Source: <a href="#">Company Grievance Log</a>		
		GAR Source: <a href="#">Company Grievance Log</a>		
		Louis Dreyfus Source: <a href="#">Company Grievance Log</a>		
		Itochu Source: <a href="#">Company comms.</a>		

Biofuels & Other Manufacturers	BASF Source: <a href="#">The Gecko Project</a>	Oleon Source: <a href="#">The Gecko Project</a>		Avril
	Henkel Source: <a href="#">The Gecko Project</a>	Indorama Source: <a href="#">Company Grievance Log</a>		Biesterfeld
	Lipsa Source: <a href="#">The Gecko Project</a>			Innospec
				OFI (Olam Food Ingredients)
				Symrise
				Zschimmer & Schwarz

Consumer Brands	Danone Source: <a href="#">The Gecko Project</a>	Barry Callebaut Source: <a href="#">The Gecko Project</a>		Avon
	FrieslandCampina Source: <a href="#">The Gecko Project</a>	Colgate-Palmolive Source: <a href="#">The Gecko Project</a>		Johnson & Johnson
	Procter & Gamble Source: <a href="#">The Gecko Project</a>	General Mills Source: <a href="#">Company Grievance Log</a>		Kellogg
		Grupo Bimbo Source: <a href="#">Communication with Mighty Earth</a>		Mondelēz
	Vandemoortele Source: <a href="#">The Gecko Project</a>	Hershey Source: <a href="#">Company Grievance Log</a>		Stearinerie Dubois
		Nisshin Oillio Source: <a href="#">Communication with Mighty Earth</a>		
	Beiersdorf Source: <a href="#">The Gecko Project</a>	PepsiCo Source: <a href="#">The Gecko Project</a>		
	P&G Source: <a href="#">Grievance Log</a>	PZ Cussons Source: <a href="#">The Gecko Project</a>		
		Upfield Source: <a href="#">The Gecko Project</a>		

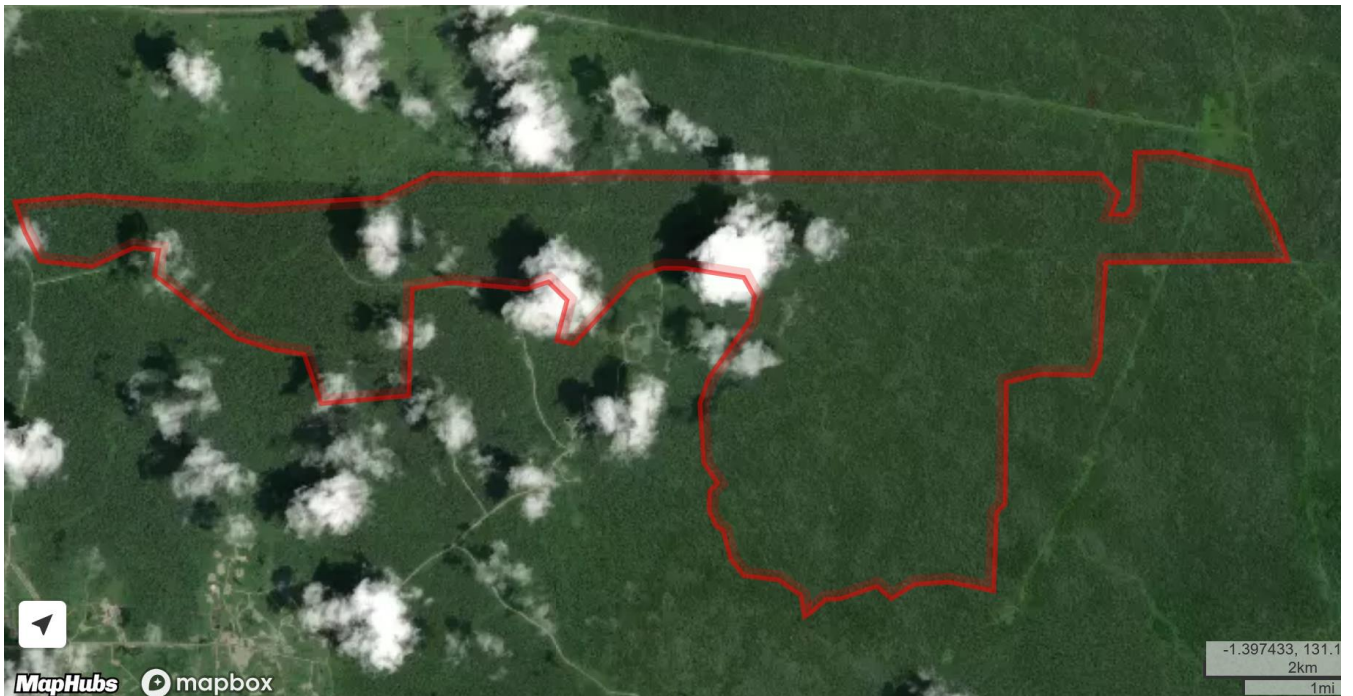




## Mapping analysis



The high-resolution Bing image below shows the land cover of the impacted area (red outline) was closed canopy forest prior to the development following January 2023.

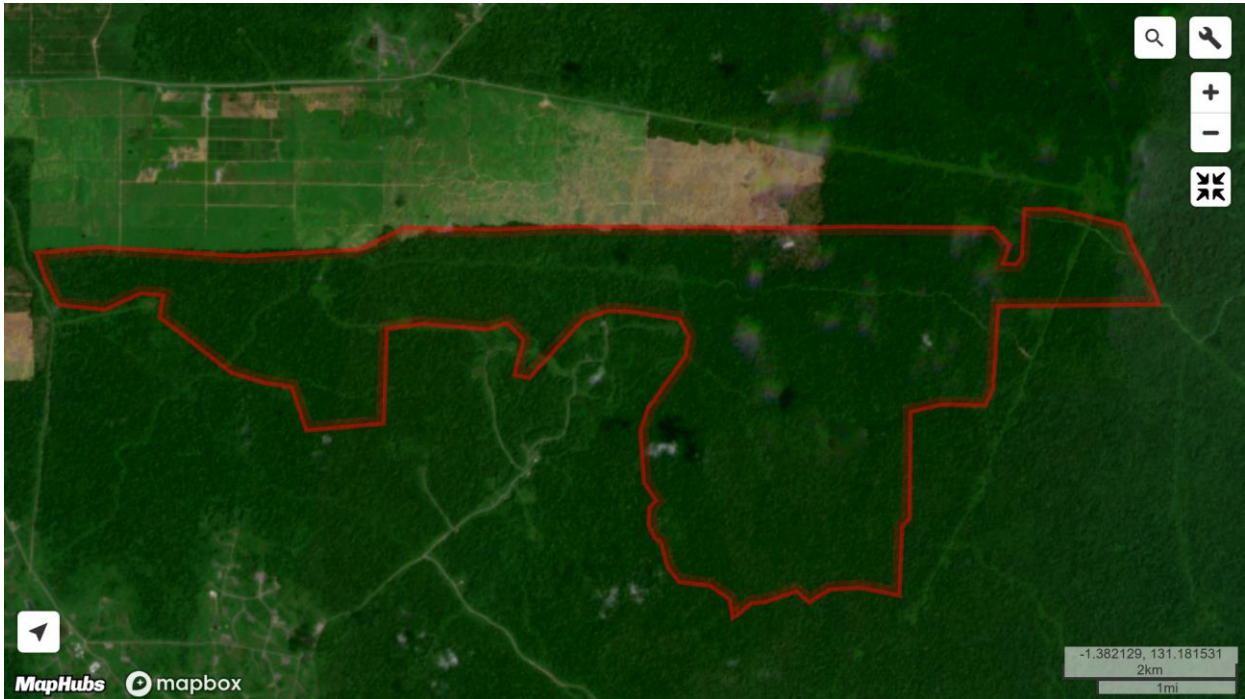


## Mapping analysis (cont.)

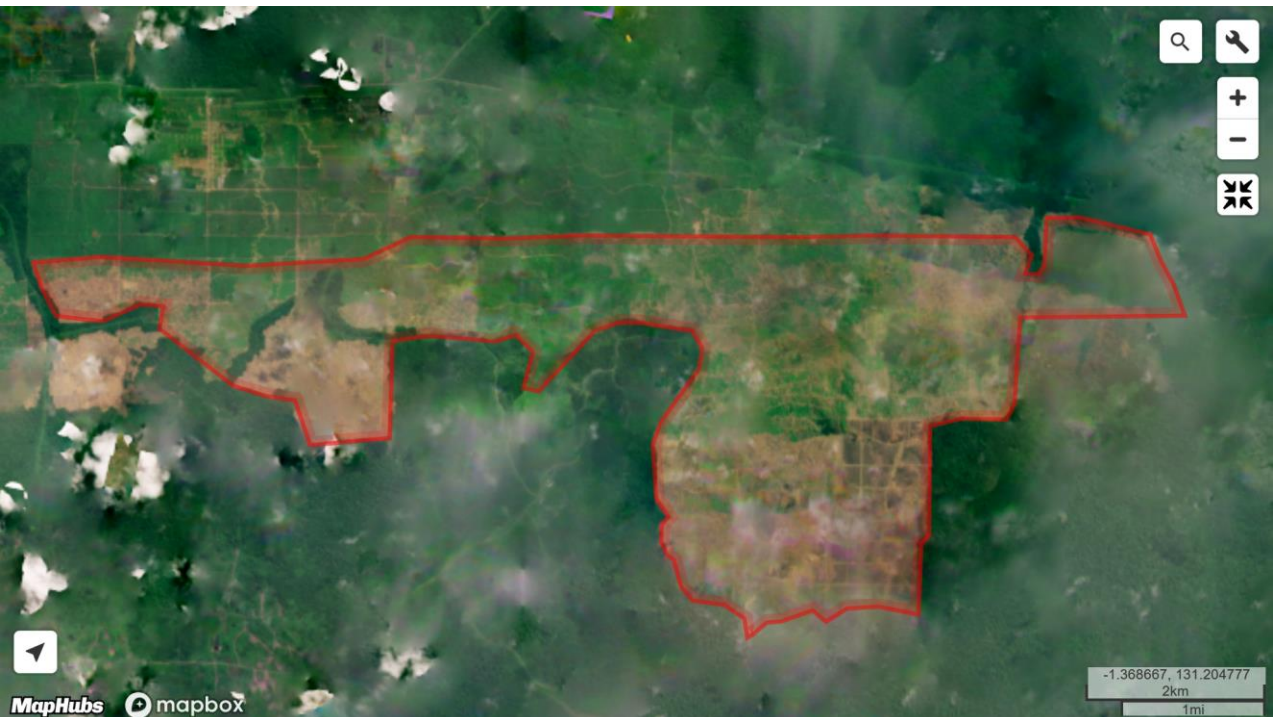
### Alert Imagery (before and after satellite images)

Clearance location (red outline): -1.366607, 131.159633

Date: Jan 2023  
(Planet imagery)



Date: June 2024  
(Planet imagery)



# New Case

## Group: Yayasan Sabah Group

Serijaya Industri Sdn Bhd

Concession location: 4.807691, 117.400921

### Deforestation and/or peat development

Report	Forest Loss/Clearance Preparation (ha)	Peat development inc forest areas (ha)	Peat forest development (ha)	Clearance prep/Stacking lines (ha)	Time period
Report 45	~32	-	-	-	June 2023 and March 2024

During the period between June 2023 and April 2024 there was ~32 ha of forest loss in the Serijaya Industri Sdn Bhd concession. Source: Planet Inc. 2023-2024

## Background information on Ownership, the Concession and other relevant issues.

Serijaya Industri Sdn Bhd is a wholly owned subsidiary of Innoprise Plantation Bhd - part of the [Yasasan Sabah Group](#).

Innoprise's [2023 Annual Report](#) states:

*'Serijaya Industri Sdn. Bhd., a wholly-owned subsidiary of wholly-owned subsidiary of the Company, entered into the Agreement for Oil Palm Plantation dated 18 November 2005 with Benta Wawasan Sdn. Bhd. (the licensee of the land) to develop a parcel of land measuring approximately 22,763 hectares situated in the locality of Gunung Rara/Kalabakan, Sabah. **Pursuant to the agreement, Serijaya Industri Sdn. Bhd. is granted the permission to develop the said land into an oil palm plantation for a period of 30 years.** On 29 August 2013, the tenure for the permission to develop the said land into oil palm plantation was extended to 60 years.'*

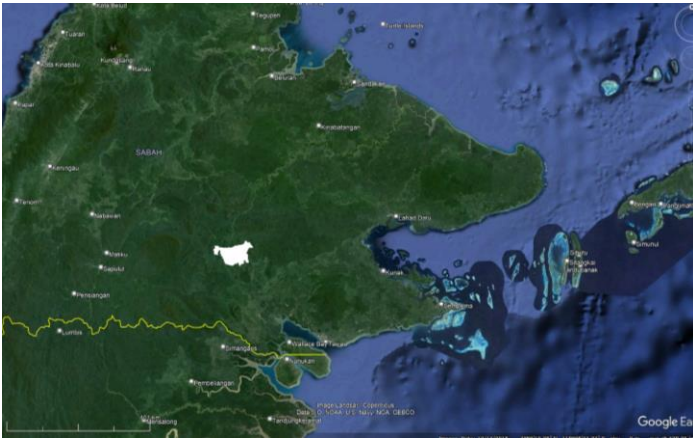
Innoprise's website or annual reports does not disclose that the group has an NDPE policy.

## Supply Chain Information

Company/Group	Trader	Biofuel / other manufacturer	Consumer Brand
Serijaya Industri Sdn Bhd	ADM, Cargill, Fuji Oil, KLK, LDC, Wilmar	Barry Callebaut, BASF, Biesterfeld, Indorama , Nikko Chemicals, OFI,Olean, Symrise, Zschimmer & Schwarz	Avon, Friesland Campina, Grupo Bimbo, Johnson & Johnson, Kellogg, Meg Snow, Mondelēz , Nestle, Pepsi, PZ Cussons , Reckitt, Unilever, Upfield
Innoprise Plantation Bhd	ADM, Fuji Oil, LDC, Nisshin Oillio, Wilmar	Avril, BASF, Biesterfeld Spezialchemie, Indorama, Nikko Chemicals, OFI, Stearinerie Dubois, Symrise, Zschimmer & Schwarz	Avon, Friesland Campina, Johnson & Johnson, Kellogg, Meg Snow, Mondelēz , Pepsi, PZ Cussons, Reckitt, Unilever



## Mapping analysis



The high-resolution Bing Maps image below shows the land cover of the impacted area (red outline) was closed canopy forest prior to development following June 2023.

The image also shows that the area directly to the west of the impacted area is planted with oil palm.





## Mapping analysis (cont.)

### Alert Imagery (before and after satellite images)

Clearance location (red outline): 4.807691, 117.400921

Date: June 2023  
(Planet imagery)



Date: March 2024  
(Planet imagery)



# New Case

## Group: Double Dynasty

### Mutiara Pelita Genaan Plantation Sdn Bhd

Concession location: 3.043122, 113.244240

#### Deforestation and/or peat development

Report	Forest Loss/Clearance Preparation (ha)	Peat development inc forest areas (ha)	Peat forest development (ha)	Clearance prep/Stacking lines (ha)	Time period
Report 22	~22	-		~9	February 25 - April 29, 2019
Report 45	~140		-	-	January 2023 and June 2024

During the period between January 2023 and June 2024, there was ~140 ha of forest loss and clearance preparation in the Mutiara Pelita Genaan Sdn Bhd concession. Sources: Planet Inc. 2023-2024

#### Background information on Ownership, the Concession and other relevant issues.

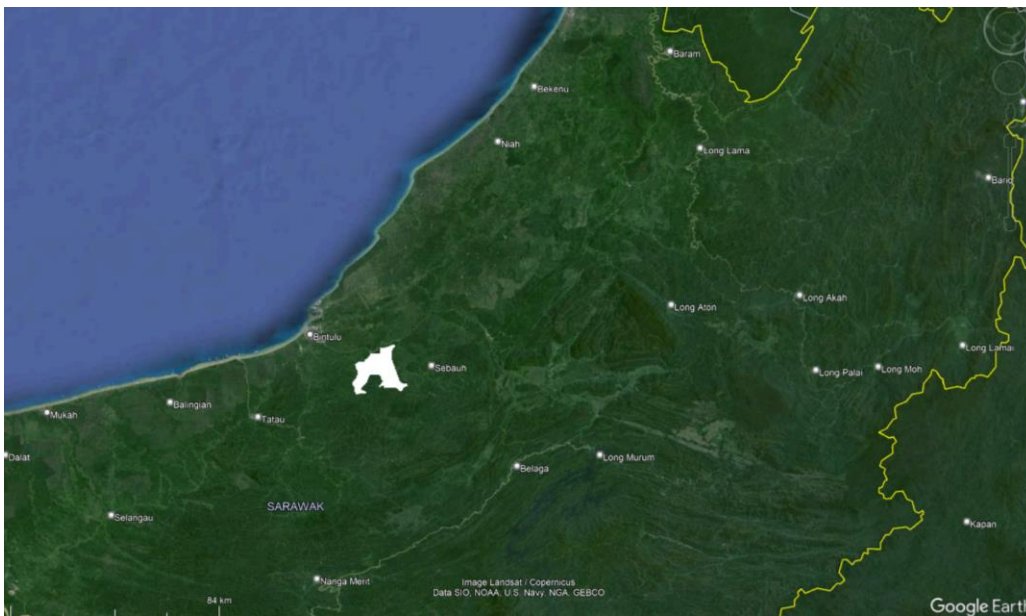
Mutiara Pelita Genaan Plantation Sdn Bhd is 61.1% owned by Mutiara Hartabumi Sdn Bhd, which is 100% owned by DD Plantations Sdn Bhd, which is 100% owned by Double Dynasty Sdn Bhd (Double Dynasty Group). Sources: [Company Commission Malaysia](#),

Mighty Earth could not establish whether Double Dynasty has adopted an NDPE policy.

## Supply Chain Information

Company/Group	Trader	Biofuel / other manufacturer	Consumer Brand
Mutiara Pelita Genaan Plantation Sdn Bhd	n/a	n/a	n/a
Double Dynasty Group	ADM, Cargill, Fuji Oil, KLK, LDC,, Olam, Sime Darby, SOPB, Wilmar	BASF, Biesterfeld, Grupo Bimbo, Indorama, Innospec, Nikko Chemicals, Nisshin Oillio, Oleon, OFI, Stearinerie Dubois, Symrise, Zschimmer & Schwarz	Avon, Barry Callebaut, Friesland Campina, Hershey, Johnson & Johnson, Kellogg, Meg Snow, Mondelēz, Nestle, Pepsi, PZ Cussons, Reckitt, Upfield , Vandemoortele

## Mapping analysis



The high-resolution Bing Maps image below shows the land cover of the impacted area (red outline) was closed canopy forest prior the development following January 2023 .

The image also shows that the developed areas above the impacted areas are planted with oil palm.





# Mapping analysis (cont.)

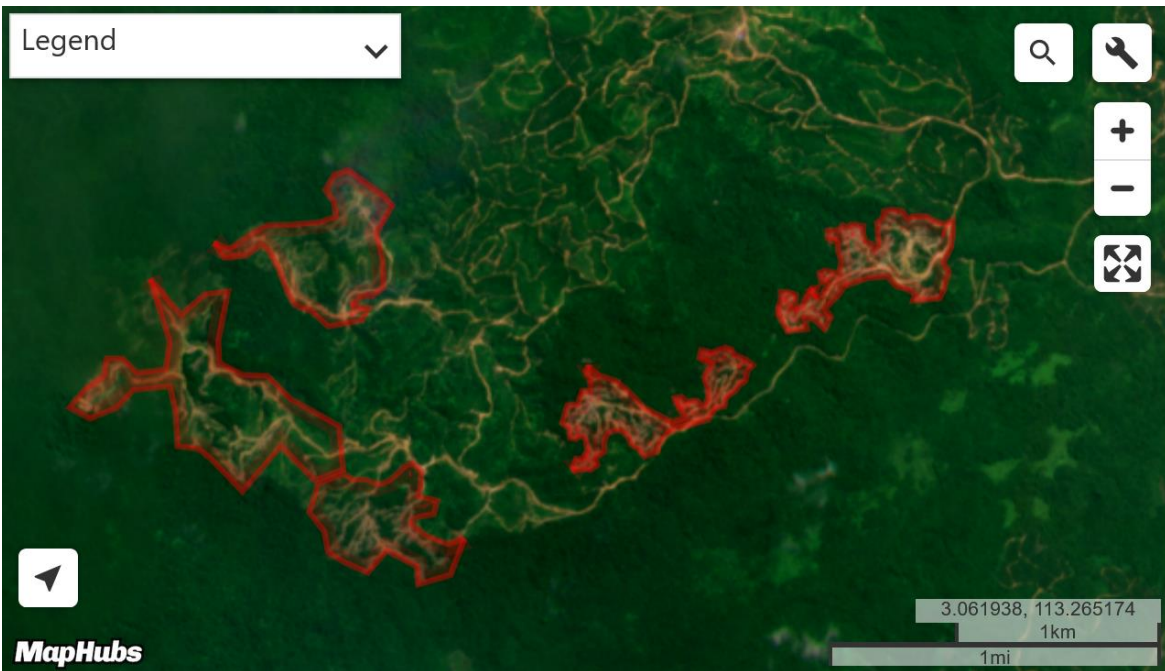
## Alert Imagery (before and after satellite images)

Clearance location (red outline): 3.043122, 113.244240

Date: Jan 2023  
(Planet imagery)



Date: June 2024  
(Planet imagery)





# New Case

## Group: Wong Kie Nai family

Medan Mestika Sdn Bhd

Concession location: 3.608013, 113.831910

### Deforestation and/or peat development

Report	Forest Loss/Clearance Preparation (ha)	Peat development inc forest areas (ha)	Peat forest development (ha)	Clearance prep/Stacking lines (ha)	Time period
Report 45	~171ha		-	-	Dec 2022 and July 21, 2024

During the period between Dec 2022 and July 21, 2024, there was up to around 171 ha of forest loss and clearance preparation in the Medan Meika Sdn Bhd concession. Sources: Planet Inc. 2022-2024

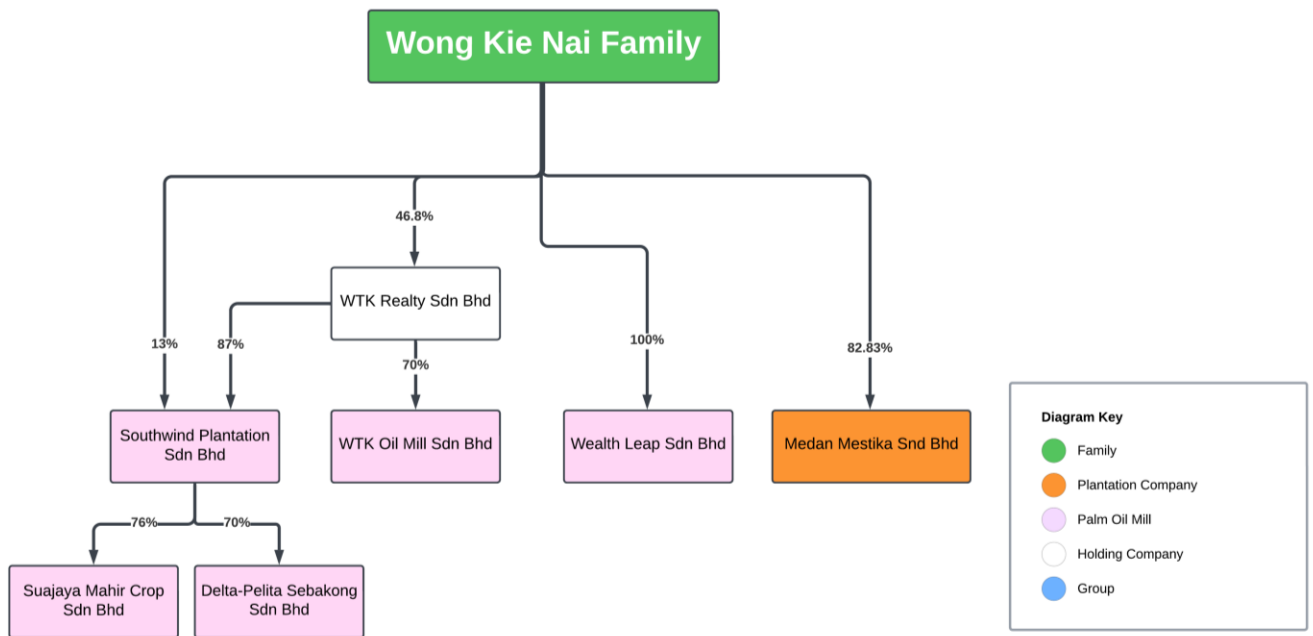
## Background information on Ownership, the Concession and other relevant issues.

Medan Mesika Sdn Bhd is 82.83 % owned by the Wong Kie Nai family (i.e. Datin Kathryn Ma Wa Fong – as Executor for the estate of Wong Kie Na, Neil Wong Hou-Liang and Mimi Wong Hou Wai).

Datin Kathryn Ma Wa Fong is the widow of the late Datuk Wong Kie Nai, the former CEO of WTK Holdings Sdn Bhd and second son of Wong Tuong Kwang (the founder of WTK). Neil Wong Hou-Liang and Mimi Wong Hou Wai are two children of Datuk Wong Kie Nai and Datin Kathryn Ma Wa Fong.

In addition to the Wong Kie Nai family's ownership of Medan Mestika Sdn Bhd, the family owns shares in several palm oil mills, including the five highlighted below. The same mills are listed in the supply-chain table on the following page, which show percentage shareholder control by the Wong Kie Nai family .

### Ownership Structure (partial): Wong Kie Nai Family

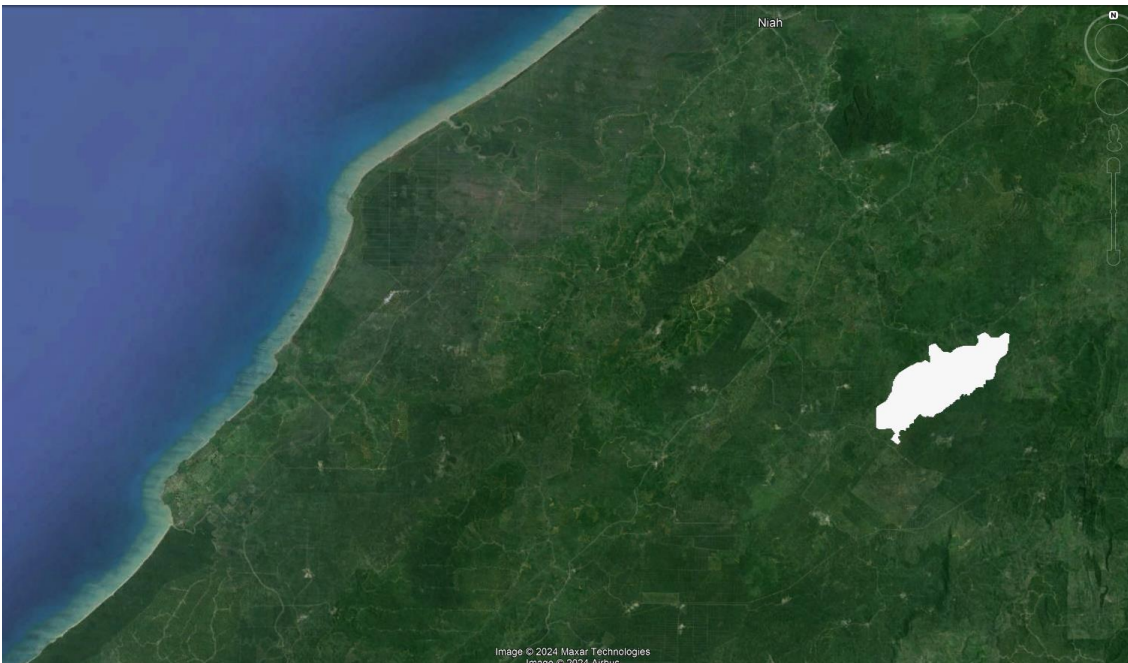


Ownership as of July 2024

## Supply Chain Information

Company/Group	Trader	Biofuel / other manufacturer	Consumer Brand
Medan Mestika Sdn Bhd	n/a	n/a	n/a
<b>Wong Kai Nai Family palm oil mill:</b>  <b>Wealth Leap Sdn Bhd (100% shares)</b>	ADM, Cargill, Fuji Oil, KLK, LDC, Sime Darby	BASF, Biesterfeld, Indorama, Innospec, Nikko Chemicals, Nisshin Oillio, OFI, Oleon, Stearinerie Dubois, Symrise, Zschimmer & Schwarz	Avon, Barry Callebaut, Friesland Campina, Grupo Bimbo, Johnson & Johnson, Kellogg, Meg Snow, Mondelēz, Nestle, Pepsi, PZ Cussons, Reckitt, Unilever, Upfield, Vandemoortele
<b>Wong Kai Nai Family palm oil mill:</b>  <b>Southwind Plantation Sdn Bhd (53.7% shares)</b>	AAK, Cargill, Fuji Oil, LDC	BASF, Indorama, Innospec, OFI, Symrise	Barry Callebaut, Friesland Campina, Grupo Bimbo, Hershey, Mondelēz, Nestle, Pepsi, PZ Cussons, Reckitt, Unilever, Upfield, Vandemoortele
<b>Wong Kai Nai Family palm oil mill:</b>  <b>Suajaya Mahir Crop Sdn Bhd (40.8% of shares)</b>	AAK, ADM, Cargill, Fuji Oil, KLK, LDC, Olam, Sime Darby, Wilmar	BASF, Biesterfeld, Indorama, Nikko Chemicals, OFI, Symrise, Zschimmer & Schwarz	Barry Callebaut, Friesland Campina, Grupo Bimbo, Hershey, Johnson and Johnson, Kellogg, Mondelēz, Nestle, Nisshin Oillio, P&G, Pepsi, PZ Cussons, Reckitt, Unilever, Upfield, Vandemoortele
<b>Wong Kai Nai Family palm oil mill:</b>  <b>Delta-Pelita Sebakong Sdn Bhd (37.6% of shares)</b>	AAK, ADM, Cargill, Fuji Oil, LDC, Sime Darby, Wilmar	BASF, Biesterfeld, Indorama, Innospec, Nikko Chemicals, Nisshin Oillio, OFI, Oleon, Stearinerie Dubois, Symrise, Zschimmer & Schwarz	Avon, Barry Callebaut, Friesland Campina, Grupo Bimbo, Hershey, Johnson & Johnson, Kellogg, Meg Snow, Mondelēz, Nestle, P&G, Pepsi, PZ Cussons, Reckitt, Unilever, Upfield, Vandemoortele
<b>Wong Kai Nai Family palm oil mill:</b>  <b>WTK Palm Oil Mill Sdn Bhd (32.76% of shares)</b>	AAK, ADM, Cargill, Fuji Oil, KLK, LDC, Olam, Sime Darby, Wilmar	BASF, Biesterfeld, Indorama, Innospec, Nikko Chemicals, Nisshin Oillio, OFI, Oleon, Symrise, Zschimmer & Schwarz	Avon, Barry Callebaut, Friesland Campina, Grupo Bimbo, Johnson & Johnson, Kellogg, Meg Snow, Mondelēz, Nestle, Pepsi, PZ Cussons, Reckitt, Unilever, Upfield, Vandemoortele

## Mapping analysis (cont.)



The high-resolution @CNES/ Airbus 2024 image below shows the land cover of the impacted area (red outline) was closed canopy forest prior to development after December 2022 .

The image also shows that the areas surrounding the impacted areas are planted with oil palm.

The inset (outlined in green) is a 50cm resolution SkySat Collect Planet image from October 2, 2023. This high resolution also shows that the area was closed canopy forest prior to development after December 2022 .



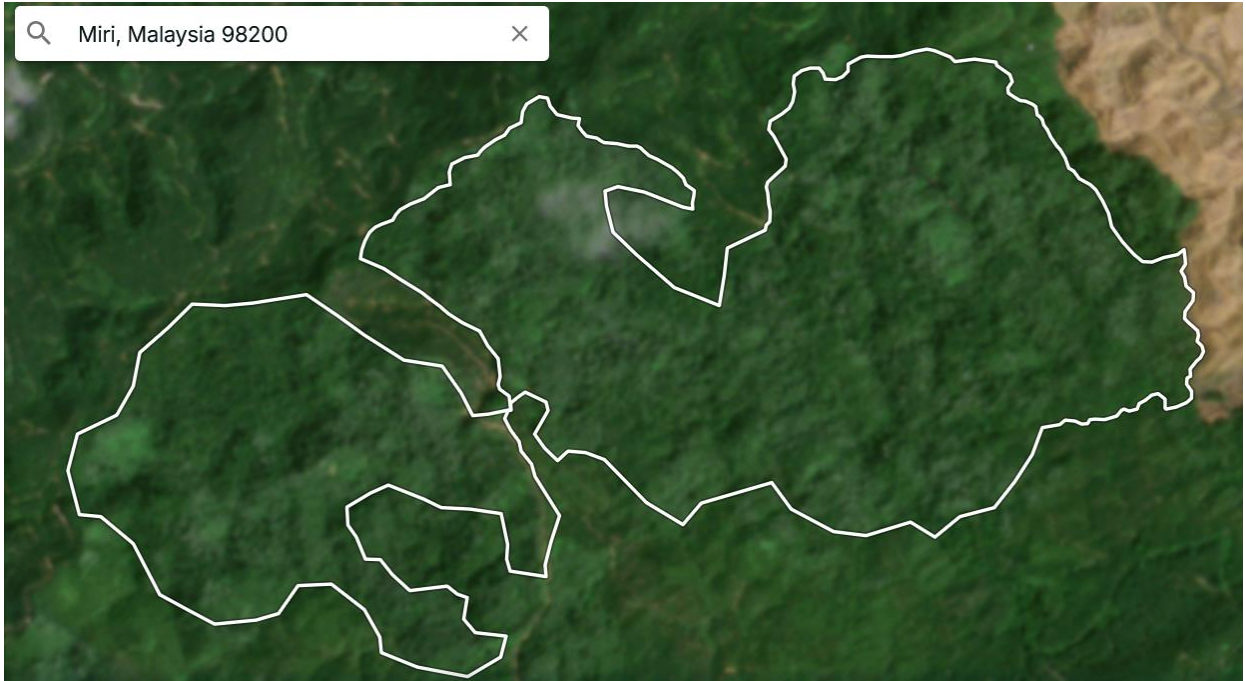


## Mapping analysis (cont.)

### Alert Imagery (before and after satellite images)

Clearance location (red outline): 3.608013, 113.831910

Date: Dec 2022  
(Planet imagery)



Date: Aug 10, 2024  
(Planet imagery)





## Mapping analysis (cont.)

Mighty Earth tasked a Planet SkySat satellite to take 50cm resolution image of the area of interest for this case.

The high-resolution image below, taken on August 26, 2004, is the area inside the red outline. The image shows industrial level land-terracing, common in the establishing of oil palm plantations including those surrounding the area of focus for this report,

