





SUSTAINABILITY REPORT 2024



Positive Environmental Impacts

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As one of the largest players in the palm oil industry, we believe that the best strategy to ensure our continued success is to be the leading sustainable and responsible company.



#### Vision

We strive to be the world's preferred supply chain partner for palm oil and its derivatives.

#### Mission

Driven by a passion for excellence and commitment to continuous improvement, we strive to be the leader in the palm oil industry, producing all our products in an economically viable, socially responsible and environmentally appropriate manner in full compliance with all relevant legal requirements.

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## The Musim Mas Sustainability Pillars

Sustainability at Musim Mas means providing high quality and innovative palm oil products and derivatives in a responsible way.

#### PILLAR 1

Improve the Lives of Smallholders, Workers, and Communities



### PILLAR 2

Deliver Positive Environmental Impacts



### PILLAR 3

Maintain Responsible and Enduring Relationships with Suppliers, Customers, and Stakeholders



### PILLAR 4

Drive Innovation in Sustainable Practices



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## **About This Report**

[GRI 2-2, 2-3, 2-5]

Welcome to the eighth Musim Mas Group ('Musim Mas' or the 'Group') Group's updating the report, sustainability performance for the 2024 calendar year. It has been prepared in accordance with the **Global Reporting Initiative (GRI)** Standards, including the GRI 13 Sector Standard for Agriculture, Aquaculture, and Fishing, as well as the Sustainability Accounting Standards Board (SASB) Standards. SASB disclosures are and included throughout the report referenced under headings or sub-headings as GRI XXX-XX, GRI 13.X.X, and FB-AG-XXx.x. This document also includes reporting against the Taskforce on Climaterelated Financial Disclosures (TCFD) recommendations following a 2024 assessment. The report is designed to be read in tandem with the sustainability disclosures on our website.





## **Report Scope and Boundaries**

This report presents our sustainability performance data from January 1 to December 31, 2024, covering all Musim Mas Group upstream operations. It also includes data from midstream and downstream operations, as well as historical data prior to 2024, where relevant and available. Given the timing of its publication, this report also includes significant 2025 developments to date. This year marks the first time we have integrated reporting on our landscape strategies, which were previously presented in standalone reports published using different timeframes. Moving forward, landscape data will be covered in our annual sustainability reports and will align with the financial year reporting period used throughout the document.

See also: 2020–2024 Sustainability Performance Data

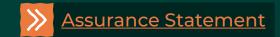
## Stakeholder Inclusiveness and Review

To ensure this report is responsive to themes and topics important to all our partners, we consulted three smallholder program partners (including two commercial buyers), a supplier, a rating agency, and a representative from an industry advisory committee.

We are guided by international and sector-wide platforms of which we are members, including the Roundtable on Sustainable Palm Oil (RSPO) and its technical working groups, as well as the Palm Oil Collaboration Group (POCG). We also refer to leading benchmarks, such as the Zoological Society of London's Sustainability Policy Transparency Toolkit (ZSL SPOTT), the CDP (formerly known as Carbon Disclosure Project), EcoVadis, the Global Child Forum Benchmark, the World Benchmarking Alliance (WBA) assessments for Food and Agriculture, and Nature. For the first time, the report also references the WBA Gender and Climate and Energy benchmarks.

## **Verification and Assurance**

The information and data in this report have been audited by the certification bodies of the respective sustainability schemes. Additionally, we contracted Ernst & Young LLP (EY) to provide limited independent assurance on selected disclosures contained herein, specifically covering our third-party-led pilot climate risk assessment. EY also independently assured data on smallholder training and independent smallholder certification.





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## **2024 Summary Progress**

## **Key Highlights**



Governance, Recognition, and Assessments

#### **Policies, Commitments, and Strategies**

- Musim Mas net-zero targets validated by Science Based Targets initiative
- Revised and updated Code of Conduct

## Membership, Recognition, and Assessments

- Achieved double A rating for two consecutive years (Forests and Water Security)
  Maintained B rating for Climate Change
- 2024 Global Child Forum
   Benchmark: Achieved score of 9.3/10
   ranked in the top 5 companies
- Received Green PROPER ratings for 14 mills, and Blue PROPER ratints for 3 mills and 7 plantations
- 2024 ZSL SPOTT assessment:
  Ranked 10<sup>th</sup> out of 100 companies (90.9% score)



### **Certification Progress**

- ↑ 100% of mills integrated with plantations certified to RSPO P&C
- 100% upstream entities (PTs) certified to ISPO
- 100% of midstream and downstream palm processing facilities RSPO SCCS certified
- Malaysian refinery MSPO SCCS certified
- 19 business units covering 12 mills,
   2 plantations, and 5 scheme
   smallholders are ISCC-certified
- Recognized among the top 20 taxpayers in Indonesia, supporting national development
- Hosted Minister of Environment visit in support of the national GHG emissions reduction roadmap
- Fourth academic awarded Musim Mas-sponsored Professorship in Sustainability at National University of Singapore



## **Employees and Communities**

#### **Employees**

- 100% of employees in Indonesia covered by collective bargaining agreements
- > 77% reduction in accident rates since 2020
- Operating 47 childcare centers,11 kindergartens, and 14 schools
- 98% of workers' school-age children enrolled in schools
- 98 scholarships awarded to deserving students
- 25 clinics and > 2,700 first-aid kits available for employees and communities

#### **Communities**

Contributed > USD 8.6 million to CSR and charitable causes



#### **Smallholders**

#### **Scheme Smallholders**

- 100% of scheme smallholders covered by Musim Mas programs
- IDR 341.8 billion (~USD 20.8 million) income generated from FFB sales
- Conducted 241 scheme smallholder training sessions
- > 77% of scheme smallholder land is RSPO certified

#### **Independent Smallholders**

- **☼** Trained 485 Village Extension Officers (VEOs)
- 9,479\* smallholders received training from VEOs
- Supported 4,654# and 2,961 smallholders with RSPO and ISPO certification, respectively
- Smallholders have collectively earned ~USD3.9 million in RSPO credits to date

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### **Climate Action and Operational Footprint**

- > 94% of upstream energy consumption from renewable sources
- 33.8 GWh of electricity exported to the national grid
- Avoided 490,885 MT CO<sub>2</sub>e through methane capture
- Began developing net-zero roadmap
- Installed solar panels at one facility, generating 1.1 MWp of power
- Launched Musim Mas GS Series - 4 new high-yielding oil palm varieties producing fruit within 25 months and yielding over 10 MT CPO/ha



### Conservation, Restoration, and Managing Fires

- Managing 29,189 ha of conservation area; 14% of our titled land
- Established new biodiversity park -Taman Kehati
- **Continued collaboration with Tesso Nilo National Park Foundation** to support elephant protection programs
- **Covered 76 villages under the Fire-Free Village Program** (>498,000 ha) Rewarded 33 villages for remaining fire-free



#### **Supplier Progress** on NDPE

#### **Supplier NDPE progress and engagement**

- **♦ 89.9**% of suppliers have NDPE commitments (including 100% of new suppliers)
- **♦** Achieved 98%\* traceability to plantation
- **77.6%** of suppliers have completed the Musim Mas Self-Assessment Tool (SAT)
- **98.80**%\* of supplier volumes are 'Delivering' on No Deforestation commitments, 98.60%\* of supplier volumes are 'Delivering' on No Peat development commitments
- Updated SAT and workshops to incorporate elements of HRDD, including labour and land rights provisions
- **☆** Conducted 6 in-person and online workshops to train suppliers on NDPE and new digital traceability system
- 379 mills in priority landscapes have taken part in workshops



#### Notes:

- # EY has performed limited assurance procedures on this figure.
- \* Figures independently verified by Control Union (Malaysia) Sdn. Bhd. See the verification statement for IRF and TTP.



#### Landscapes and Partnerships

- New partnership with Temasek **Foundation and Abler Foundation** to support smallholders by financing sustainable palm replanting to raise incomes while preventing deforestation
- New partnership with the Danish Government, Preferred by Nature, Ferrero, Sustainable Agriculture **Network (SAN), and Agriterra** to support smallholders through training, market access, and regenerative agriculture
- Renewed partnerships with AAK and Nestlé to address deforestation outside concession areas through Smallholders Hub in Subulussalem
- Renewed partnership with General Mills to integrate smallholders into the sustainable palm oil supply chain through Smallholders Hub in Aceh Singkil
- **Continued partnership with Bunge** to train independent smallholders through Smallholders Hub in Sambas
- **Continued Biodiverse & Inclusive** Palm Oil Supply Chain (BIPOSC) partnership with L3F, SNV, ICRAF, Danone, L'Oréal, and Mars Incorporated to advance regenerative agriculture for independent smallholders in Labuhanbatu
- **Continued ETH Zurich and Cambridge University research** program on how Smallholders Hubs can drive and deliver on sustainability goals
- Re-engaged Dignity in Work for All (DIWA) to strengthen gender-related practices through assessments, awareness-raising, and program development across our operations

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## **Targets and Progress**

This section outlines Musim Mas' progress against our sustainability targets. It covers a consolidated set of targets from our 2022 No Deforestation, No Peat, and No Exploitation (NDPE) roadmap and other sources, including our children's and human rights programs, biodiversity and climate action plans, and multi-stakeholder sectoral decarbonization commitments. For the first time, we are reporting on specific targets for our landscape initiatives. These fall under Pillar 4: Drive innovation in sustainable practices, and are detailed in the Transforming <u>Landscapes</u> section of this report.

While our target reporting aligns with the four main pillars of our Sustainability Policy, some targets may cut across multiple pillars and are reflected accordingly. Our pillars and targets also align with the United Nations Sustainable Development Goals. (For a comprehensive overview, see Musim Mas's Contributions to the SDGs).

## PILLAR 1

## Improve the Lives of Smallholders, Workers, and Communities



Target	Year	Progress in 2024, unless otherwise stated	Status
Musim Mas Operations			
Develop Human Rights Due Diligence (HRDD) strategy for Musim Mas operations	2025	Progressed on HRDD programs, and on track to launch dedicated strategy.	2 On track
Certify 100% of scheme smallholders	20251	86.4% of scheme smallholders RSPO certified.	<b>On track</b>
Zero fatalities	Year-on- year	We regret to report one fatality at our upstream operations.	X Not achieved
Independent Smallholders			
Initiate at least two pilot projects to trial regenerative agriculture	2025	Two projects initiated with key partners:  1. BIPOSC program – in Labuhanbatu in North Sumatra (since 2021)  2. Rokan Hulu Landscape & Livelihoods Initiative (ROHULLI)– in Rokan Hulu, Riau (2025 kick off)	Progress made
Continue to improve independent smallholder livelihoods through Smallholders Hubs (Training for Trainers)	Ongoing	Trained 485 VEOs, who have gone on to train 9,479# smallholders	Progress made
Increase number of NDPE-compliant smallholders through certification training	Ongoing	Supported 4,654 <sup>#</sup> smallholders in obtaining RSPO certification, and 2,961 smallholders in obtaining ISPO certification to date.	Progress made

<sup>&</sup>lt;sup>1</sup> This target year is for existing scheme smallholders. Target is subject to change with the inclusion of new scheme smallholders in future.

<sup>#</sup> EY has performed limited assurance procedures on this figure.

Impacts



## **Deliver Positive Environmental Impacts**

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Target Target	Year	Progress in 2024, unless otherwise stated	Status
Develop Group-level emission reduction targets in line with the Science-Based Targets initiative (SBTi)	2024	SBTi validated Musim Mas' near- and long-term targets in October 2024. We will report our emission reduction progress against our new targets moving forward.	Achieved
Develop a climate resiliency and mitigation strategy for our upstream operations based on our 2023 climate risk assessment	2024	In development based on our 2023 internal climate risk assessment. Third-party verification in progress.	Progress made  Target revised  to 2026
Reduce GHG emission intensity at RSPO-certified upstream operations by 55% against 2006 baseline	2025	Exceeded target two years ahead of schedule, reaching 2.66 MT CO <sub>2</sub> e/MT CPO in 2023.	Achieved and exceeded.  Moving forward, our Group-level SBTi-approved targets will supersede this target.
<b>New:</b> Reduce absolute Scope 1, 2, and 3 non-FLAG <sup>2</sup> GHG emissions by 42% (SBTi near-term target)	2030	11.24% reduction in Scope 1, 2, and 3 non-FLAG emissions against 2021 baseline.	2 On track
<b>New:</b> Reduce absolute Scope 1 and 3 FLAG GHG emissions by 30.3% (SBTi near-term target)	2030	15.01% reduction in Scope 1 and 3 FLAG GHG emissions against 2021 baseline.	2 On track
Maintain mill water usage intensity below 1.2 m3/MT FFB processed	Ongoing	Average mill water usage intensity was 1.13 <sup>#</sup> m <sup>3</sup> /MT FFB.	Achieved
Ensure 100% of Musim Mas refineries have completed NDPE IRF profiles		See Pillar 3 targets	
Supply chain traceability and deforestation-free targets		See Pillar 3 targets	

<sup>#</sup> EY has performed limited assurance procedures on this figure.

2 Forest, Land, and Agriculture (FLAG) emissions encompass emissions and removals directly related to land use, land management, and land-use change per the Science-Based Targets Initiative

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## Maintain Responsible and Enduring Relationships with Suppliers, Customer, and Stakeholders



Target Target	Year	Progress in 2024, unless otherwise stated	Status
Achieve 100% overall traceability to plantation <sup>3</sup>	2025	Maintained 98%* traceability to plantation.	2 On track
Ensure 100% deforestation-free supply chain	2025	Achieved 99.47%* deforestation-free supply chain.	<b>On track</b>
Ensure 100% of Musim Mas refineries complete NDPE IRF profiles	Year-on- year	100% of refineries have completed NDPE IRF profiles ( <u>see_website</u> )	Achieved
Ensure 100% of supplier volumes are 'Delivering' on NDP commitments based on the	2025	98.80%* of supplier volumes are 'Delivering' on No Deforestation commitments, up from 95.00% in 2023.	2 On track
NDPE IRF framework		98.60%* of all supplying volumes are 'Delivering' on No Peat commitments, up from 95.69% in 2023.	
Ensure suppliers progress towards implementing NDPE best practices	2025	89.9%# of suppliers have NDPE commitments (including 100% of new suppliers);	<b>On track</b>
Ensure suppliers progress towards implementing NDPL best practices	2023	85.3% of suppliers attended NDPE workshops; 77.6% of suppliers completed the Musim Mas Self-Assessment Tool (SAT).	
Develop and implement Human Rights Due Diligence (HRDD) strategy for third-party suppliers	2025	Incorporated HRDD aspects into Musim Mas Self-Assessment Tool (SAT) and workshops for third-party suppliers.	<b>On track</b>

<sup>&</sup>lt;sup>3</sup> Traceability to plantation refers to traceability to the place of production, e.g., a company's concession, a farm, or a village, in the case of FFB dealers and/or smallholders.

# EY has performed limited assurance procedures on this figure.

\* Figures independently verified by Control Union (Malaysia) Sdn. Bhd. See the verification statement for IRF and ITP.

Progress

Improve the Lives of

and Communities

## **Drive Innovation in Sustainable Practices**



Target	Year	Progress in 2024, unless otherwise stated	Status
Roll-out landscape strategies for key landscapes: Aceh, Siak Pelalawan, South Sumatra, and West Kalimantan	2025	Published <u>comprehensive strategy</u> to cover all priority landscapes, and two additional landscapes. Aceh, Riau, North Sumatra, South Sumatra, Central Kalimantan, and West Kalimantan	Achieved ahead of schedule in October 2024
		See <u>Transforming Landscapes</u> for specific targets and progress.	
		Entered two new partnerships:	
		<ul> <li>Temasek Foundation and Abler Nordic in Sumatra,</li> <li>Danish Government, Preferred by Nature, Ferrero, Sustainable Agriculture Network (SAN), and Agriterra in Rokan Hulu, Riau.</li> </ul>	
Increase support for independent smallholders through multi-stakeholder collaborations	Ongoing	Continued/renewed partnerships with:	Progress made
		<ul> <li>L3F, SNV, ICRAF, Danone, L'Oréal and Mars Incorporated on the BIPOSC program in Labuhanbatu</li> <li>General Mills in Aceh Singkil</li> <li>AAK and Nestlé in Subulussalam</li> <li>Bunge in Sambas</li> </ul>	

#### Legend:

Ongoing	Target with no specific end date but important for ongoing programs	
Year-on-year	Target requiring annual reporting	
Achieved	Target achieved by the target year	
X Not achieved	Target not achieved by the target year, or for the reporting year, if a year-on-year target	
<b>On track</b>	Progress made on a target against a specific target date (year-end)	
Progress made	Progress made on a target without a specific target date (against ongoing targets)	

## **Chairman Statement**

#### Dear Stakeholders,

I am pleased to present our 2024 Sustainability Report, which reflects the progress we made last year and the future we are shaping. 2024 was marked by increasing geopolitical instability and economic uncertainty. As an international business, such developments will inevitably test our business resilience. We must be nimble to adapt while making no compromise on sustainable business growth, climate action, and innovation. In this report, we share how we have navigated emerging regulatory demands, deepened our commitment to address climate change and upheld strong labour and human rights standards across the palm oil sector.



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## Staying Ahead of Regulatory Requirements, Building Trust

As one of the leading global palm oil supply chain partners with a strong footprint in developed markets, regulatory compliance is not just about following the rules - it is about building trust and safeguarding business resilience. We have strengthened our ability to anticipate and respond to emerging requirements at local and global levels. Comprehensive effort has been taken to ensure European Union Deforestation Regulation (EUDR) readiness when it comes into effect in December 2025. We also continue to advance our Human Rights Due Diligence (HRDD) strategy, which will position us for compliance with the emerging regulatory developments in the European Union and beyond.

Equally important, we conducted a Taskforce on Climate-related Financial Disclosures (TCFD) pilot assessment to align our reporting with the TCFD framework. This allows us to disclose climate-related risks more clearly and in line with International Sustainability Standards Board (ISSB) standards and Singapore's mandatory climate disclosure, preparing us for the adoption

of ISSB International Financial Reporting Standards (IFRS) Sustainability Disclosure Standards in 2027 when it comes into scope for us.

This forward-looking mindset is central to Musim Mas. By adopting higher standards before they become mandatory, we strengthen our leadership and prepare our business—and our stakeholders—for a sustainable future.

# Leading on Climate Change and Conservation

Global warming and increasingly frequent extreme weather events create widespread uncertainty, increasing pressure on markets, producers, and communities worldwide for a collective and science-based action.

In 2024, we officially adopted an ambitious target for net-zero emissions by 2050, aligned with a science-based approach to reduce greenhouse gas (GHG) emissions consistent with the Paris Agreement's 1.5°C goal. I am proud that we were among the first companies in the agricultural sector to have these targets validated by the Science-Based Targets Initiative (SBTi). An

internal Net Zero Taskforce was set up to identify emissions reduction interventions and oversee the implementation of our SBTi validated targets. Our net-zero roadmap, covering Scope 1, Scope 2, and Scope 3 emissions across both FLAG (Forest, Land, and Agriculture) and non-FLAG sources, is being finalized and will provide a comprehensive blueprint for action.

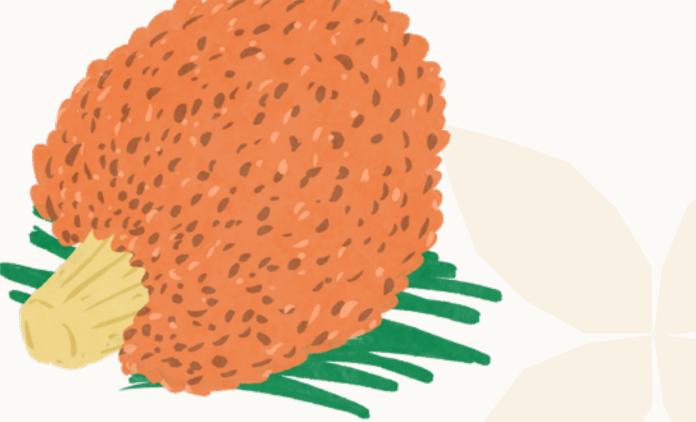
Closer to home, our pioneering leadership in methane capture has also been recognised at the highest level. We were honoured to have the Indonesian Minister of Environment visit one of our mills in Riau, with the Minister commending the technology and noting how such measures support and guide Indonesia's greenhouse gas reduction roadmap.

Beyond emissions reduction, we continue to conserve nearly 14% of our titled land, underscoring our commitment to responsible land management.

# Collaborating for Responsible Supply Chains

Sustainability does not apply only to our own operations. It extends across the supply chain, relying on strong partnerships with our suppliers. I am proud that we have achieved 98% traceability to plantation in 2024. Separately, under our Verified Deforestation-Free (VDF) approach, which combines traceability with risk assessment, we confirmed that 99.47% of our supply chain was deforestation-free in 2024. To ensure the credibility of our results, they have also been verified by an independent third party.

But our journey does not stop here. The knowledge we have gained will shape our refreshed Sustainability Policy for 2026-2030, setting new benchmarks for accountability and impact.



## Protecting Landscapes and Empowering Independent Smallholders

Musim Mas firmly believes in addressing key issues with close collaboration at the landscape level. In September 2024, launched our expanded Priority Strategy covering Landscapes provinces across Sumatra and Kalimantan. This strategy is a cohesive approach sustainable and responsible palm oil production across our key sourcing regions. Aligning targets, interventions, and monitoring frameworks ensures 'No Deforestation, No Peat and No Exploitation' (NDPE) compliance throughout our supply base. It builds on the lessons learnt from our long-standing Aceh programs and streamlines Group-level targets.

As part of this strategy, we launched additional Smallholders Hubs in Aceh, Riau, and West Kalimantan. The Smallholders Hub initiative, first introduced in 2020, marked a pivotal shift in our approach to smallholder engagement. Building on our early training programs that began in 2015 with the International Finance Corporation (IFC), a member of the World Bank, our

Smallholders Hubs represent a scalable, district-level model that empowers local agricultural officers to deliver sustainable practices directly to independent smallholders. This not only enhances NDPE compliance but also increases the scale of our engagement efforts, strengthens community resilience, improves livelihoods, and fosters long-term transformation at the landscape level.

About

Musim Mas

Musim Mas runs Indonesia's most independent smallholder extensive training program. To date, we have trained 46,915 smallholders in sustainable including 9,479 through practices. Smallholders Hubs. In 2024 alone, we have supported 4,654 independent smallholders in achieving or maintaining Roundtable Sustainable Palm Oil (RSPO) certification and 2,961 for Indonesia Sustainable Palm Oil (ISPO) certification.

As an extension of our smallholder engagement efforts, we have actively expanded our Women Smallholders Program (WSP) to various parts of Aceh and West Kalimantan provinces. Initiated in 2023 in collaboration with academic

experts from *Universitas Sumatera Utara* (USU), the program reflects our commitment to inclusive development by directly supporting women in rural communities. Recognizing their vital roles as caregivers, financial stewards, and nutrition gatekeepers, we are equipping them with the knowledge and tools to enhance household resilience, improve agricultural practices, and contribute meaningfully to community well-being. By placing women at the heart of our sustainability efforts, we aim to drive long-term, positive change across generations.

We continue to leverage on partnerships address regenerative agriculture, verified sourcing, landscape-level social forestry, community mapping, farming, and sustainability certification. Our partners have been invaluable for their contributions in helping us scale our impact. These partners including Bunge, the Danish Government, Preferred by Nature, Ferrero, L3F, SNV, ICRAF, Danone, L'Oréal, Mars, L'Occitane, General Mills, AAK, and Nestlé. We believe that sectoral collaboration is the best approach to protect fragile ecosystems and build sustainable and equitable supply chains that create positive regional and industry-wide change. We also work with academic institutions, such as ETH Zürich, Cambridge University, IPB (Bogor Agricultural Institute), and USU (North Sumatra University), to assess and improve our programs.



## Driving Innovation and Sustainable Growth

Innovation underpins our long-term sustainability. In development for over a decade at our Genetic and Agriculture Research Center in Riau, our Musim Mas GS series of high-yield oil palms can potentially double our crude palm oil yield. This significantly exceeds the 3.16 mt per hectare which is the global industry average, putting us in the forefront of the palm oil industry.

We are also strengthening our downstream portfolio. In May 2025, we acquired a manufacturing facility from Stepan Philippines Quaternaries, Inc. (SPQI), expanding our portfolio of surfactants for health, beauty, home care, and industrial applications. This strategic investment reinforces our integrated model and allows us to better serve our customers as the preferred sustainable supply chain partner to global brands.

## Building a Resilient Future Together

Collaboration lies at the heart of our work, enabling us to engage effectively within our internal teams and forge impactful partnerships with all stakeholders. Through collective efforts, we will continue to achieve our sustainability objectives and build a responsible value chain that safeguards human rights, protects and uplifts smallholders and communities, preserves landscapes, and furthers our netzero and climate targets. We will continue to build on these achievements and do our part to fulfil the United Nations Sustainable Development Goals (SDGs).

Thank you to all our stakeholders and our people for your continued support and contributions to our sustainability journey.

**Executive Chairman and CEO**Musim Mas Group



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## **About Musim Mas**

[GRI 2-1, 2-6, 3-3, 201-1] [SASB FB-AG-000.A

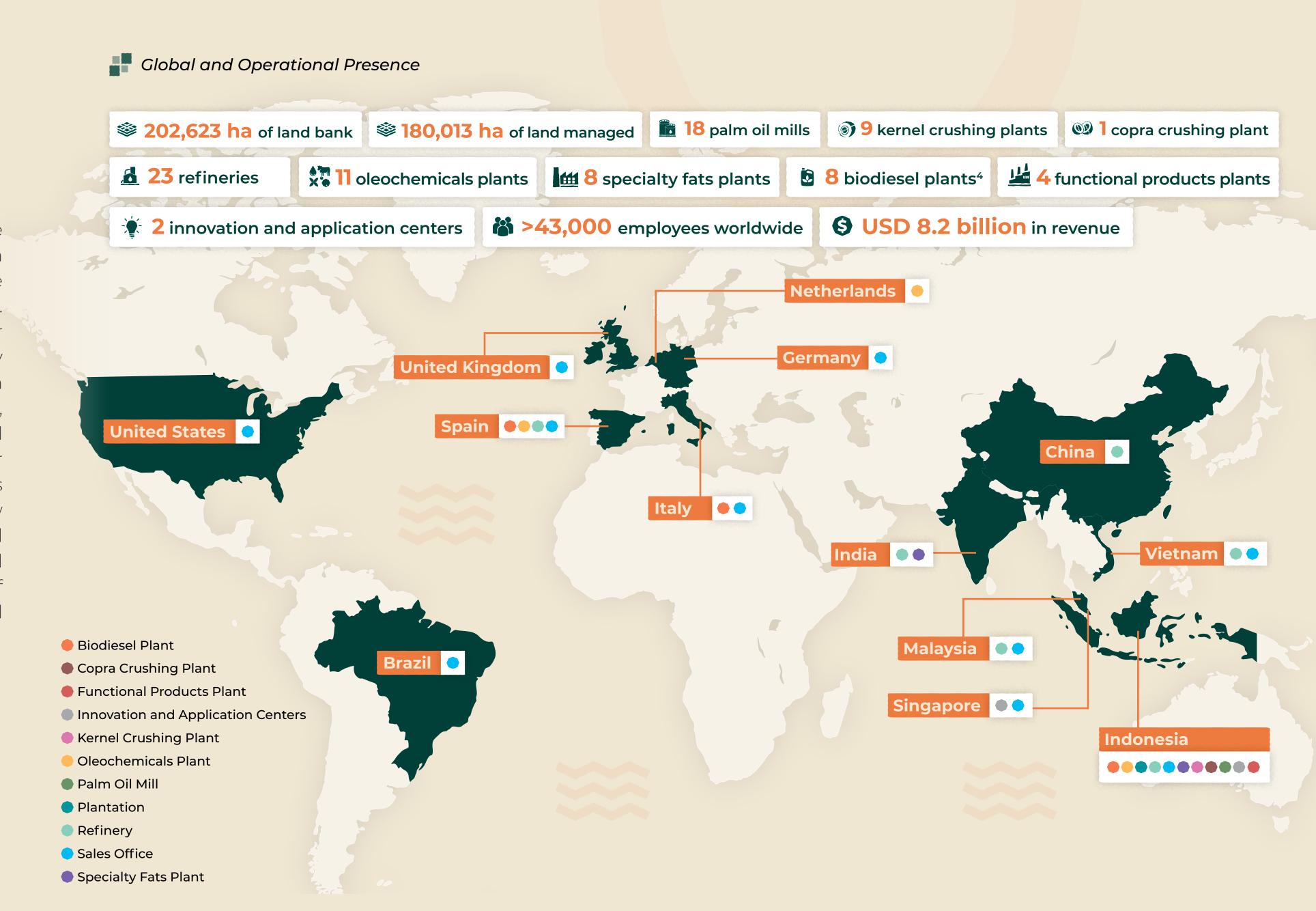
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#### **Our Business in Brief**

Musim Mas Group ('Musim Mas' or the 'Group') is a private limited company with corporate headquarters in Singapore and primary operations in Indonesia. With a presence in 13 countries, our activities span the entire palm oil supply chain, from upstream to downstream operations, including plantations, mills, refineries, manufacturing plants, and commercial and consumer sales. Our integrated business model enables us to produce a broad range of raw and processed palm-based industrial and consumer products for the global market. Additionally, a small portion of our volume comprises coconut oil and its products.

Musim Mas Integrated Business

**Global Presence** 



<sup>&</sup>lt;sup>4</sup> This figure has been restated from our 2022 Sustainability Report. Musim Mas currently has eight operational biodiesel plants across our operations.

and Communities

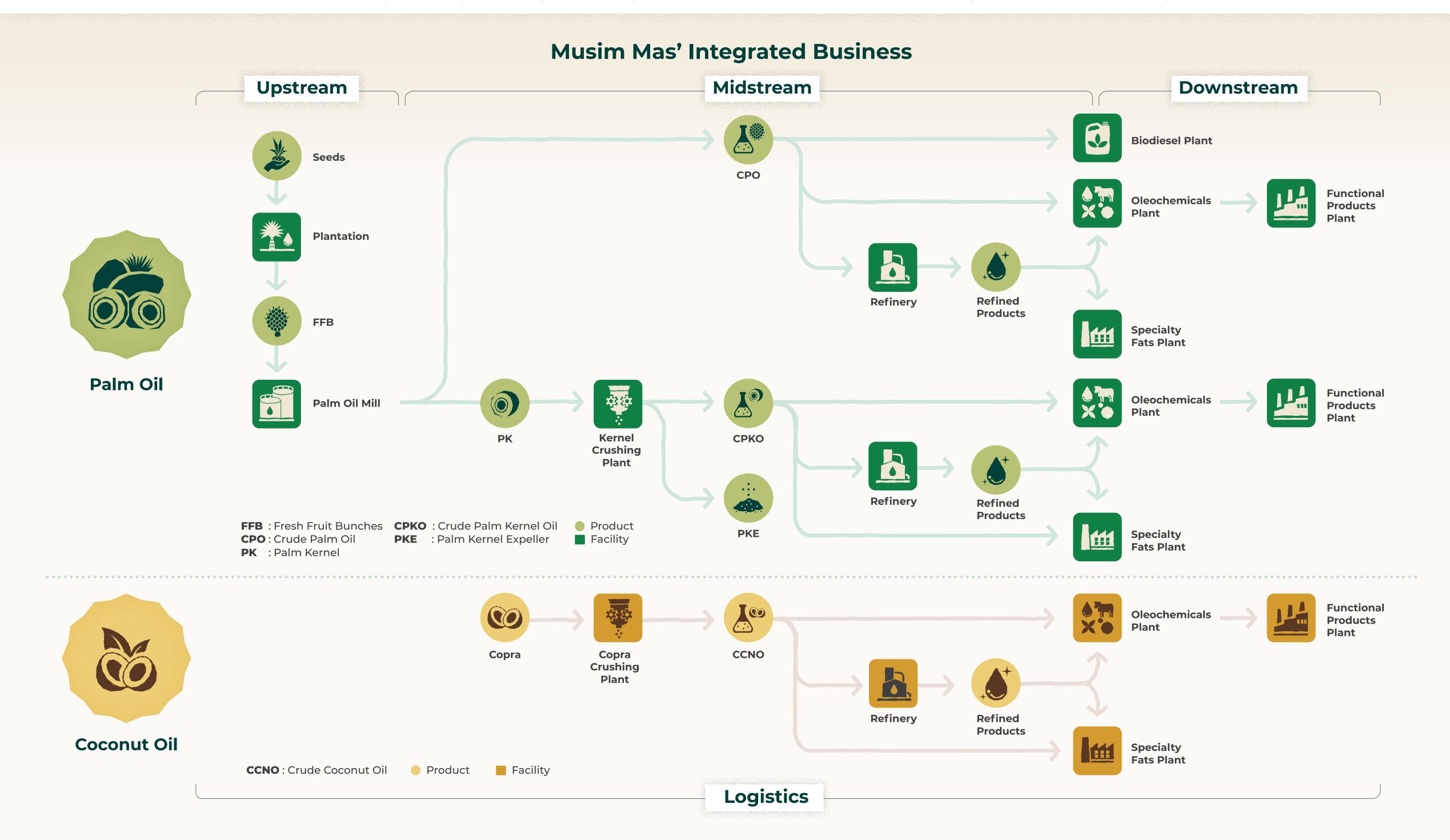
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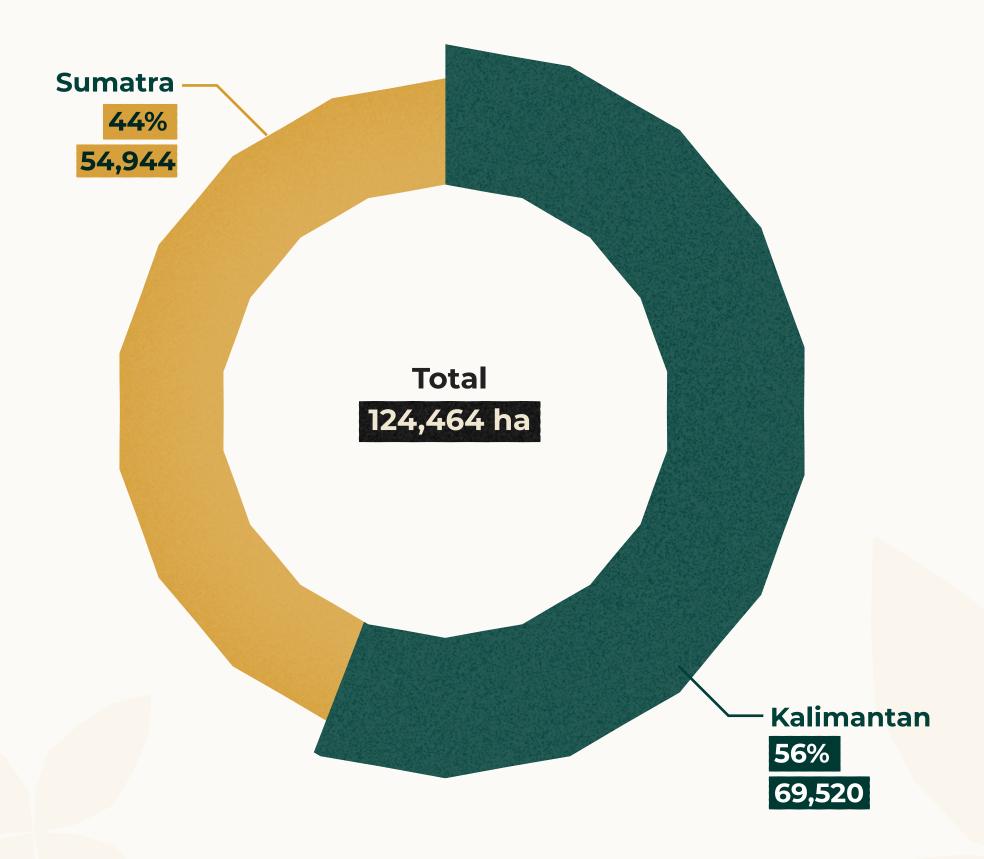


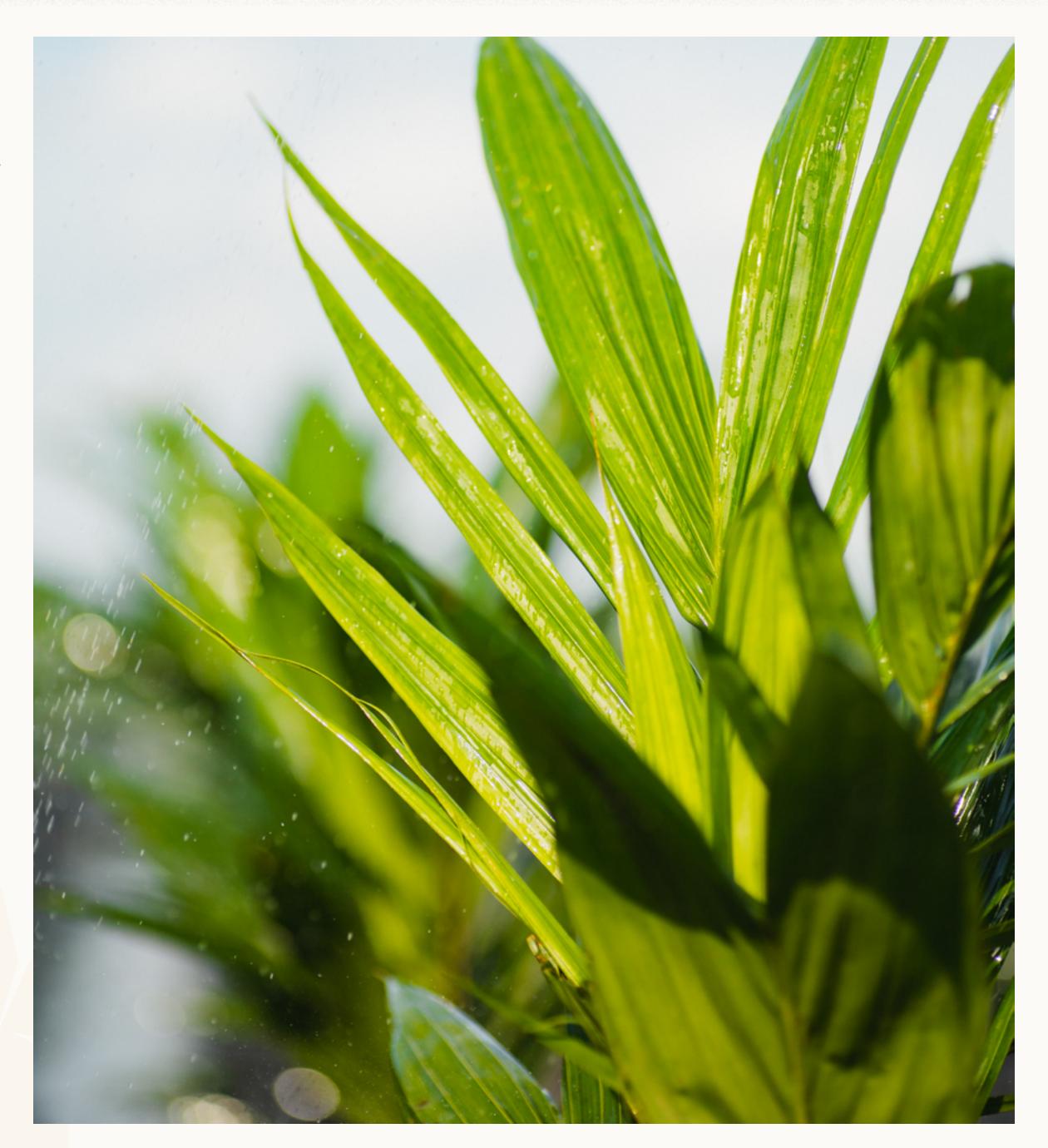
## **Operational Overview**

## Upstream Operations

Musim Mas manages a land bank of 202,623 hectares across Sumatra and Kalimantan, including 124,464 hectares of planted area.

Musim Mas Planted Area by Region 2024 (%, ha)





Summary Progress

Chairman Statement

About **Musim Mas**  Approach to Improve the Lives of Sustainability Smallholders, Workers, and Communities

**Deliver Positive** 

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Maintain Responsible and Enduring Relationships with Suppliers, Customers, and Stakeholders

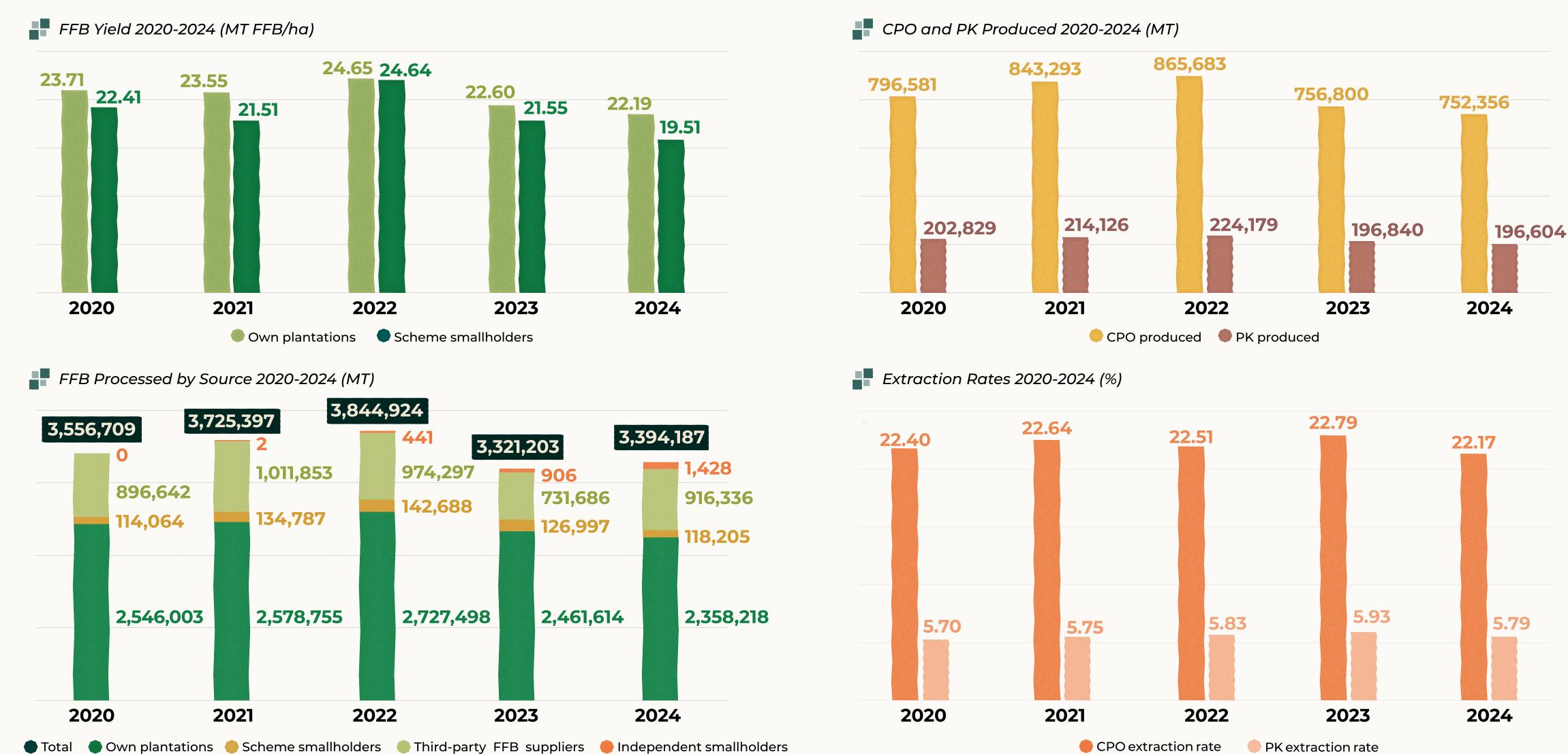
CPO extraction rate

PK extraction rate

**Drive Innovation** in Sustainable Practices

Statement

In 2024, fresh fruit bunch (FFB) yields and the production of crude palm oil (CPO) and palm kernel (PK) declined, largely due the El Niño event, bringing volumes to their lowest levels since 2020. Our total FFB processed rose slightly to 3.39 million MT in 2024, though still below the 2020-2022 peak. The decline since 2022 was mainly driven by the impact of the El Niño, alongside lower harvests at Musim Mas operations following our replanting activities, which is why more third-party FFB was sourced in 2024. Extraction rates have remained relatively stable, with a slight decrease in 2024 compared to the previous year.



#### Note:

- 1. 2022 data on FFB from own plantations has been restated.
- 2. We began reporting FFB directly sourced from independent smallholders in 2021. Previously, these volumes were reported as part of the total volumes sourced from all third-party FFB suppliers.

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## **\*** Midstream Operations

Our midstream operations comprise nine kernel crushing plants (KCP) in Sumatra, Kalimantan, and Sulawesi that process palm kernel (PK) into crude palm kernel oil (CPKO). We sell the by-product of our KCP operations, palm kernel expeller, to third parties for various applications, including animal feed. In addition, we also manage 23 refineries worldwide that process vegetable oils into a variety of value-added products.



In addition to our midstream palm oil facilities, we operate a copra crushing plant in Madidir, Bitung, in the North Sulawesi region. It produces crude coconut oil using copra sourced from independent smallholders, which is sent to our KIM II complex in North Sumatra for further refining. In addition to our production, the refinery also sources a small quantity from third-party copra crushing plants.

### **\*** Downstream Operations

Our downstream operations comprise specialty fats facilities, 11 eight oleochemicals facilities, and four functional products plants worldwide, which produce high-quality palm oil-based, palm kernel oil-based, and coconut oil-based product ingredients. These ingredients are used in diverse downstream consumer and industrial applications, including food and beverages, personal care and cosmetics, pharmaceuticals, animal nutrition, and plastics applications. polymers and Additionally, we produce packaged consumer goods for our house brands and private-label products. We also operate eight biodiesel plants that cater to the global demand for sustainable (transportation) fuel.

#### Musim Mas Brands and Products

Musim Mas operates an extensive and efficient logistics network to sell and distribute our products. We use tankers, tugboats, and other vessels to support our Singapore-based global marketing division, Inter-Continental Oils and Fats (ICOF), and its satellite offices in Asia, Europe, the United States, and South America.

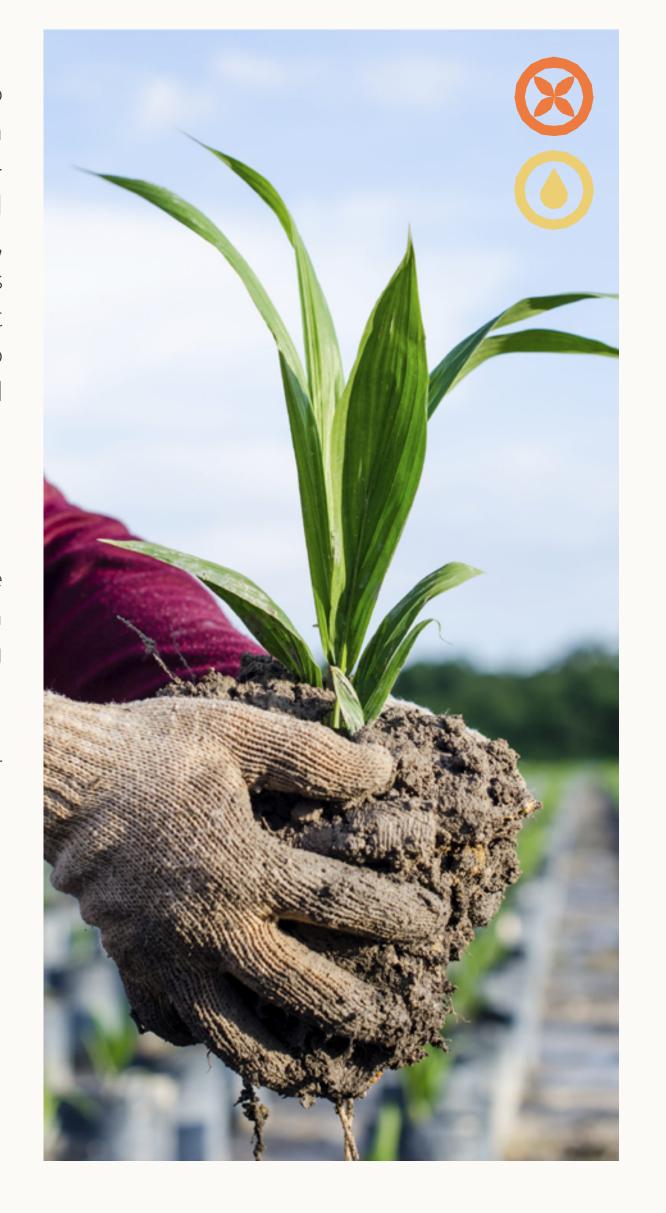
## \* R&D

Musim Mas owns and operates two innovation and application centers in Singapore and Indonesia. These stateof-the-art facilities leverage advanced technologies and cutting-edge innovations, allowing us to analyze customer preferences and requirements and stay ahead of market and product trends. Our R&D centers also provide application expertise and technical support to our global customers.

#### Musim Mas R&D

We operate a Genetic and Agriculture Research Center in Riau, focusing on innovative agronomic practices, including enhancing crop protection, improving peat management at our plantations, and developing oil palm varieties with superior genetic characteristics.

Musim Mas GS series seeds



## Approach to Sustainability

[GRI 2-23, 2-24]

Musim Mas is guided by our 2020 Sustainability Policy, which outlines our No Deforestation, No Peat, and No Exploitation (NDPE) commitments and measures. This policy applies to all Musim Mas operations and third parties we work with, including suppliers and contractors. Since 2022, we have adapted our palm oil commitments to our coconut oil business, drawing on best practices and lessons learned from our palm oil implementation program. Specific coconut-related targets are outlined in our **Sustainable Coconut** Sourcing Strategy.

Given the scale and scope of our operations, we consider ourselves to be pushing the envelope in meeting these commitments. We regularly review and update our policies to maintain their relevance and efficacy. At the time of this publication, we are undertaking a second review of our sustainability policy, with the aim of publishing a revised version in 2025. This revision will be accompanied by an action plan, which will cover new targets and any unmet or enhanced targets from existing strategies, such as our Biodiversity and Climate Resiliency Action Plan.





## **Contributing to the SDGs**

We actively contribute to the United Nations' Sustainable Development Goals (SDGs) and recognize the role businesses play in ensuring the success of the United Nations' sustainability agenda, as well as the importance of using a common language amongst SDG adopters to communicate our sustainability progress.

We define priority goals and targets we directly contribute to as "Primary SDGs." "Secondary SDGs" are subordinate goals and targets we contribute to directly or indirectly. Their corresponding icons are displayed throughout this report. For more information, see Musim Mas' Contributions to the SDGs.



Report

This

## Materiality

#### [GRI 2-14, 2-29, 3-1, 3-2]

the material report covers environmental, social, and governance (ESG)-related topics most relevant to our business and stakeholders. These topics are reviewed and updated annually to reflect Musim Mas' actual and potential impacts. They are also aligned with the four pillars of our Sustainability Policy, specific aspects of our NDPE roadmap, and the SDGs that we contribute to.

As part of this process, we take into account emerging issues and trends such as responsible marketing and the environmental and community impacts on children. Musim Mas takes children's rights seriously and is committed to safeguarding children's welfare and increasing our positive impacts in the communities where we operate.

## **\*** Materiality Process

#### **Topic Review and Identification**

 Updated material topics based on industry benchmarking and consultations with internal teams

 Reviewed focus areas of new benchmark assessments and updates to existing ones

#### **Prioritization**

Determined the importance of each topic with input from the Musim Mas sustainability team



#### **Stakeholder Consultation**

Tested and revised topic inclusion and prioritization after consulting six external stakeholders: three smallholder programme partners (including two commercial buyers), one supplier, one rating agency, and one industry advisory commmittee representative



#### **Validation and Approval**

Validated the final materiality topics with input from the Musim Mas sustainability team and senior management

## Changes to Material Topics

Although there were no new, updated, or revised topics, we have reclassified the importance of some issues following our materiality process.

#### **Changes in Importance**

- Smallholder engagement
- Human rights and labour rights
- Fire and haze prevention
- Governance and business ethics
- Stakeholder collaboration and reporting
- Product quality and safety
- Community rights and community relations
- Employee development and talent retention



Musim Mas Pillar 1: Improve the Lives of Smallholders, Workers, and Communities

Musim Mas Pillar 2: **Deliver Positive Environmental Impacts** 

> Musim Mas Pillar 3: Maintain Responsible and Enduring Relationships with Suppliers, Customers, and Stakeholders

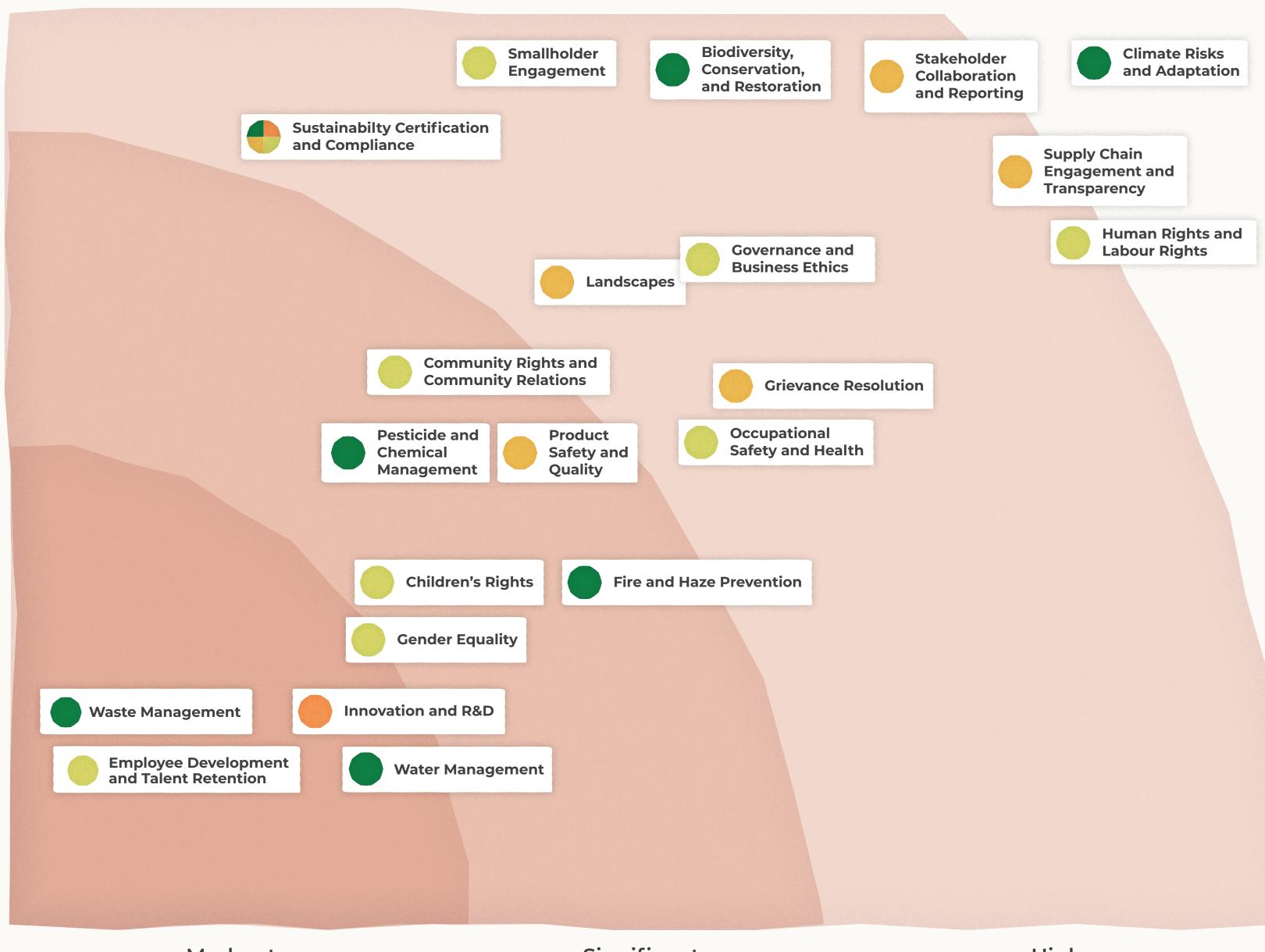
High

Significant

Moderate

Musim Mas Pillar 4: Drive Innovation in Sustainable Practices

**Cross-Cutting All Pillars** 



Impacts

Moderate Significant High

**Importance to Musim Mas** 

## **Corporate and Sustainability Governance**

[GRI 2-9, 2-11, 2-12, 2-13, 2-14, 2-16, 2-18, 2-19, 2-20, 2-24, 405-1]

Musim Mas embeds sustainability governance in our core corporate identity. Our Board of Directors is led by our Executive Chairman/Chief Executive Officer (CEO), and comprises three male members as of January 2025. The Board oversees critical sustainability and ESG issues, including climate-related risks and opportunities, human rights (including children's rights and welfare), NDPE strategies, and supply chain progress, ensuring these considerations are embedded into our overall business decision-making strategies and processes.

Musim Mas' Executive Management forms part of the broader board-level governance structure, particularly in the context of sustainability. While not members of the Board, key executives hold decision-making responsibilities and actively contribute to strategic discussions and oversight of sustainability execution across the Group.

As of January 2025, two Directors from the Group's Executive Management

lead Musim Mas' sustainability efforts: the Director of Communications and Sustainability, and the Director of Climate Action and Supply Chain Sustainability. The latter previously served Musim Mas in an advisory capacity and joined the Executive Management team's functions to meet the increasing need for Grouplevel climate oversight.

Our sustainability directors lead dedicated divisions responsible for implementing Musim Mas Group's sustainability policies and strategies, alongside action plans for conservation initiatives and climaterelated management programs. Our sustainability team of over 150 employees across Indonesia, Singapore, and Europe drives the day-to-day execution of sustainability initiatives, ensuring that our commitments are embedded across operations. The sustainability team's responsibilities include conducting on-the-ground training and outreach programs for suppliers and smallholders to ensure the dissemination of sustainable practices throughout our operations and supply chain.

The Board and Executive Management convene to discuss sustainability and ESG performance. These meetings, led by our Executive Chairman, ensure cross-functional alignment and strategic oversight. The Sustainability Executive Management then report progress on our sustainability initiatives to the Board. Between meetings, the Board regularly receives reports that highlight key issues, grievances, and any critical concerns stakeholders may have raised.

Sustainability Executive Management's remuneration is contingent on meeting sustainability-related key performance indicators (KPIs). Aligned with our decarbonization strategy and NDPE targets and commitments, these KPIs include:

- reducing greenhouse gas (GHG) emissions
- complying with sustainability regulations and standards
- engaging with customers and stakeholders
- · continuously improving the company's reputation as an industry leader.

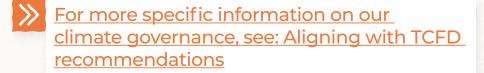
We have also established ESG-linked KPIs for relevant personnel at all levels of our organization. These include maintaining our Roundtable on Sustainable Palm Oil (RSPO) and International Sustainability and Carbon Certification (ISCC) certifications, as well as implementing our NDPE commitments.

The Executive Management reviews and approves the content of our annual sustainability reports and key stakeholder communications on behalf of the Board.

The Board oversees setting of objectives and underlying principles of tax strategy. Executive Management briefs the Board on tax implications surrounding corporate structures and business models prior to implementing any material changes.







[GRI 2-27, 3-3]

#### **X** Grievance Mechanisms

[GRI 2-25, 2-26]

All Musim Mas stakeholders have access a transparent and accountable grievance mechanism that protects the anonymity of whistleblowers and complainants. All employees can use our whistle-blowing procedures to file complaints without fear of reprisal or dismissal. Our grievance mechanism is also open to external stakeholders to file complaints against Musim Mas and our suppliers about potential breaches of our sustainability policy and certification commitments. In addition, we ensure any grievances against the Musim Mas Group raised through external platforms, such as the RSPO complaints process, are addressed and resolved promptly through established procedures.

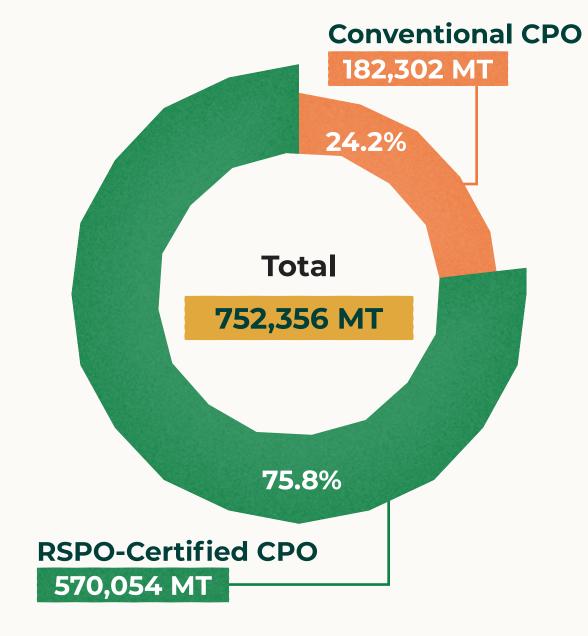
- **Grievance Mechanisms**
- Worker Access to Grievance Mechanisms
- Grievances

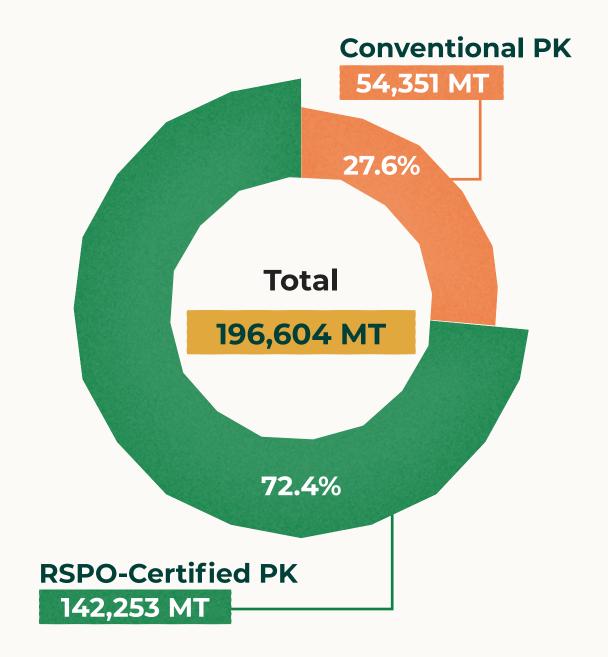
## Certification and Compliance



CPO Produced by Certification Status 2024 (%, MT)







Upstream Certification

#### **RSPO**

Musim Mas was one of the first Indonesian companies to join the RSPO when it was founded and remains an active member. All 15 Musim Mas mills integrated with plantations are fully certified against the RSPO Principles and Criteria (P&C).5 Approximately 85% of our total managed area, or about 153,086 hectares, is RSPO certified, including areas belonging to scheme smallholders.

Beyond complying with national, regional,

and local regulations in the countries

where we operate, Musim Mas subscribes

to voluntary industry-leading sustainability

certification and verification schemes.

In 2024, our mills produced a total of 712,307 tonnes of RSPO-certified product: RSPO-certified 570,054 tonnes sustainable crude palm oil (CSPO) (75.8% of total CPO) and 142,253 tonnes of RSPOcertified sustainable palm kernel (CSPK) (72.4% of total PK).

#### **ISPO**

We adhere to Indonesia's national Atotal of 19 business units, including all our certification scheme for sustainable palm mills, several supply bases, and numerous oil – the Indonesian Sustainable Palm Oil scheme smallholders, are certified against (ISPO) standard. Since August 2023, all 17 of the International Sustainability and Carbon our upstream entities (PTs) have achieved Certification (ISCC) standard. However, ISPO certification.

#### **ISCC**

the number of certified business units is driven by market demand for ISCC-certified products and can fluctuate over time.

<sup>&</sup>lt;sup>5</sup> Our three remaining company-owned mills are stand-alone mills that do not supply from directly owned or managed plantations or their associated smallholders.

## **\* Supply Chain Certification**

#### [GRI 13.23.3] [SASB FB-AG-430a.1]

Further down the value chain, our midstream and downstream palm processing facilities are certified against the RSPO SCCS (Supply Chain Certification System).6 These facilities include our refineries in Indonesia and our whollyowned refinery in Malaysia, the latter of which is also certified against the Malaysian Sustainable Palm Oil (MSPO) SCCS standard.

In 2024, 7.1% of the CPO and CPKO we sourced was RSPO Segregated (SG) and Identity Preserved (IP) certified. In addition, 13.4% was RSPO Mass Balance (MB) certified – up from 8.5% in 2023, to meet increased market demand.

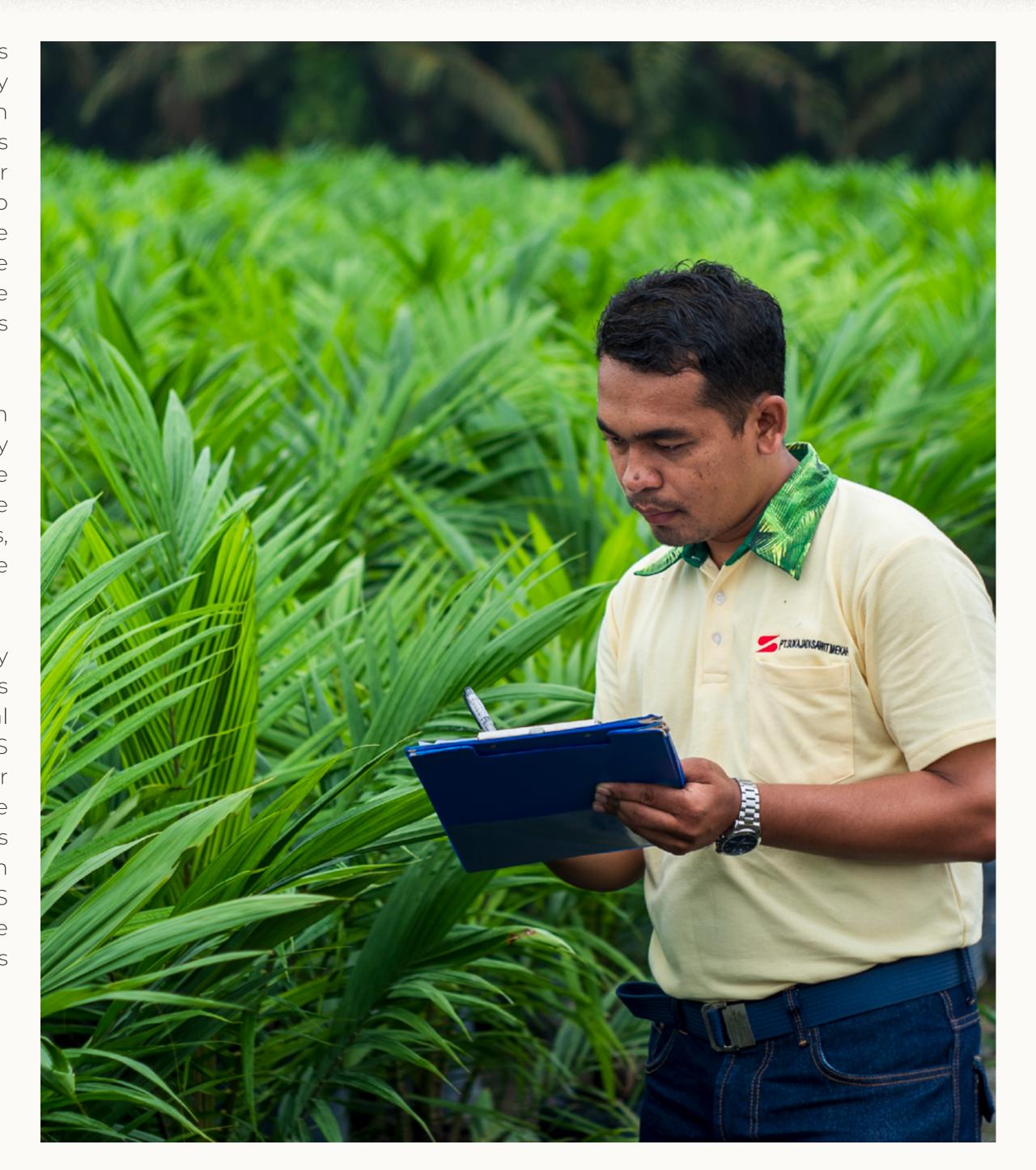
## \* Staying abreast of the changing regulatory landscape

Musim Mas is anticipating and preparing for key regulatory changes in the next few years, including multiple EU compliance frameworks that will impact Musim Mas' based entities. Where possible, we are taking proactive measures despite shifting implementation timelines. For example,

we adopted procedures and processes in 2024 that will enable us to supply compliant products when the European Deforestation Regulation (EUDR) enters into effect at the end of December 2025. At the same time, we continue to pursue and refine our human rights due diligence strategy to ensure compliance with the Corporate Sustainability Due Diligence Directive (CSDDD) when it is finalized.

We also await guidance from the European Union on how the Corporate Sustainability Reporting Directive (CSRD) and Corporate Sustainability Due Diligence Directive (CSDDD) will impact non-EU companies, which will apply to Musim Mas in the foreseeable future.

held privately company headquartered in Singapore, Musim Mas is required to adopt the International Sustainability Standards Board (ISSB) IFRS Sustainability Disclosure Standards by our 2027 financial year. Our 2024 Task Force on Climate-Related Financial Disclosures (TCFD) assessment sets the foundation exports and reporting on our Europe- for our future reporting against the IFRS S2 Standards and will better prepare us to disclose our climate-related risks effectively.



<sup>&</sup>lt;sup>6</sup> 'Palm processing facilities' refers to all our plants that process CPO, PK, CPKO, and their derivatives.

**Appendices** 





# PILLAR 1

Improve the Lives of Smallholders, Workers, and Communities

#### [GRI 2-24, 3-3]

In our efforts to create a lasting and positive legacy, we strive to uphold and respect human, labour, and land rights. The well-being and livelihoods of our workers, communities, and smallholders remain a top priority as we pursue our strategic and business objectives.



### Musim Mas Earns Top 5 Spot in 2024 Global Child Forum Rankings

Musim Mas recently achieved a significant milestone, scoring 9.3 out of 10 in the Global Child Forum's State of Children's Rights and Business 2024 Benchmark, thus improving our 2023 score of 8.7, and finishing fourth out of 1,802 companies. We were evaluated on four impact areas and achieved a perfect score (10.0) in the workplace and governance category, as well as collaboration. This achievement reflects our commitment to supporting children's rights through our robust family-friendly work environment policies, strong governance practices, strategic partnerships, and adherence to child rights frameworks.



Musim Mas Achieves a Top 5 Rank in the Global Child Forum Benchmark 2024



Report

## **Progressing on HRDD**

Human rights and labour rights have been among our key priorities since we joined the Roundtable on Sustainable Palm Oil (RSPO) in 2004. As a result, we continuously review and refine our due diligence systems to identify, address, track, and communicate human rights issues. Additionally, we align our approaches with national business and human rights strategies like the Presidential Regulation No. 60/2023, as well as global frameworks such as the United Nations Guiding Principles (UNGP), Organisation for Economic Co-operation and Development (OECD) Guidelines, and International Labour Organisation ILO Conventions. Our dedication to continuous improvement strengthens our ability to meet our commitments as a member of the United Nations Global Compact (UNGC) and the RSPO Human Rights Working Group (RSPO HRWG).

To complement these efforts, we periodically seek external expert opinions to assess our programs and improvement plans. One example is Dignity in Work for All (DIWA, formerly Verité Southeast Asia), an expert organization that has come on board to help identify gaps at our Indonesian operations and in our supply chain. The first two assessments with DIWA were conducted in 2016 and 2022. We underwent our third, and most recent, evaluation in 2024.

Musim Mas is in the process of formalizing our Human Rights Due Diligence (HRDD) strategy and expects to roll it out in 2025. DIWA was also engaged to review some of our current practices and identify areas for improvement as part of our wider HRDD action plan. Select recommendations from these studies have been used to improve existing human rights and labour relations measures (see Workforce Diversity).

#### **HRDD Process:**

## Identify

## Identify actual and potential human rights impacts

Example: The 2024 DIWA assessment determined that Gender Committees can play a greater role as 'change agents,' addressing barriers to women's participation in the workforce by improving health and safety procedures (HIRA) and greenlighting safe jobs for pregnant and breastfeeding women.

## **Integrate and Address**

## Address identified impacts by integrating them into existing processes

Example: Expanded the role of Gender Committees in developing HIRA policies and reviewing office jobs for pregnant and breastfeeding women in response to DIWA findings. Revised standard operating procedures in February 2024 and communicated the changes to the relevant departments.

Communicate the type and effect of actions being taken to address human rights risks and impacts

**Example: Communicated efforts to** employees at our sites through existing training programs and activities such as morning musters at plantations.

Communicate

Track the effectiveness of actions taken to determine whether they address human rights impacts

**Example: Established monthly and** quarterly reporting of job assignment results to our head offices.

Track



See Addressing No Exploitation in supply chains for how our HRDD approach applies to suppliers

Approach to

Sustainability

Our Workforce Sustainability With Smallholders Community Development and Empowerment Business Ethics



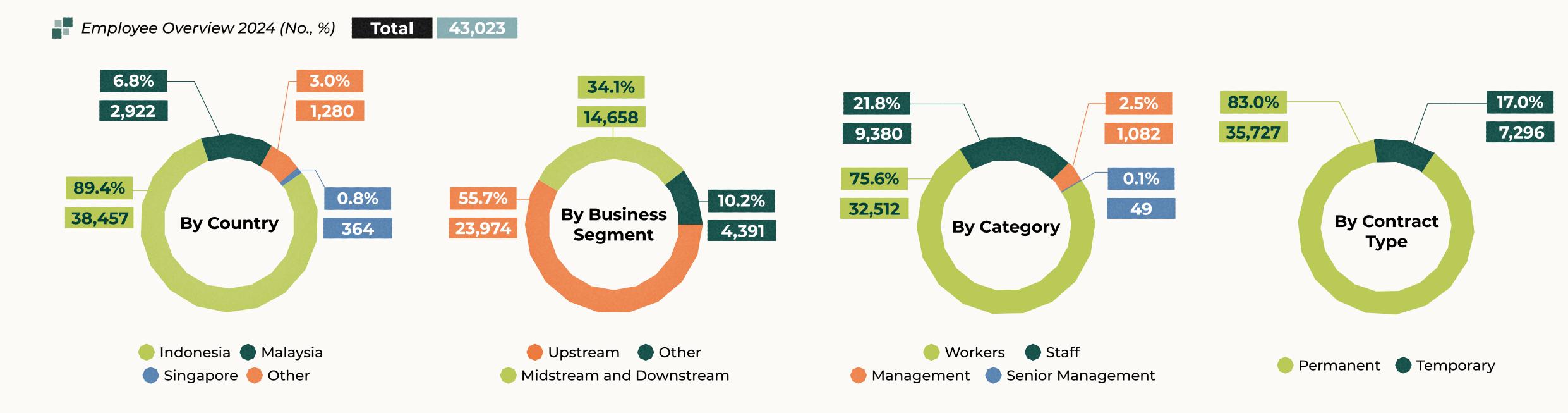
## **Employee Overview**

[GRI 2-7, 2-8]

The strength of our workforce is the backbone of our business. Musim Mas employs 43,023 people worldwide, with 89.4% working at our Indonesian operations. Of the entire workforce, 55.7% are employed at our upstream operations in Sumatra and Kalimantan, while 34.1% work at our midstream and downstream facilities in Indonesia, Malaysia, and elsewhere. The remaining 10.2% work at our international sales and satellite offices.

Workers at our upstream, midstream, and downstream operations make up 75.6% of our employees, while the remainder are office and administrative staff, management, and senior management.

Although most of our workers occupy permanent, full-time positions, we also employ temporary, short-term contract workers to support operational activities across our upstream, midstream, and downstream businesses during peak periods. In 2024, we employed 7,294 temporary workers, comprising 17.0% of our workforce.



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Approach to

Sustainability

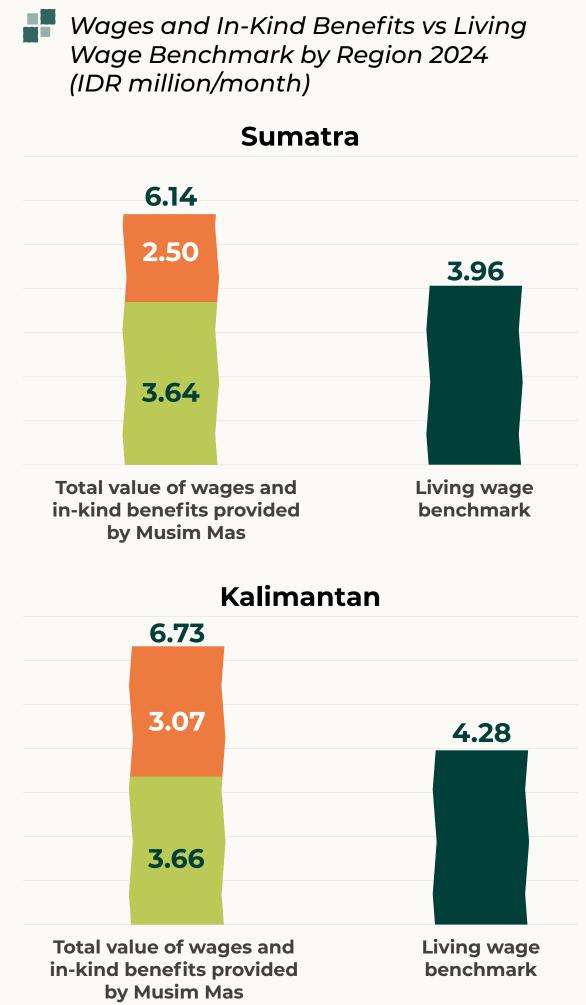
Our Workforce Sustainability With Smallholders Community Development and Empowerment Business Ethics

## **Wages and Working Conditions**

[GRI 202-1, 401-2, 405-2, 13.20.1 13.21.1, 13.21.3]

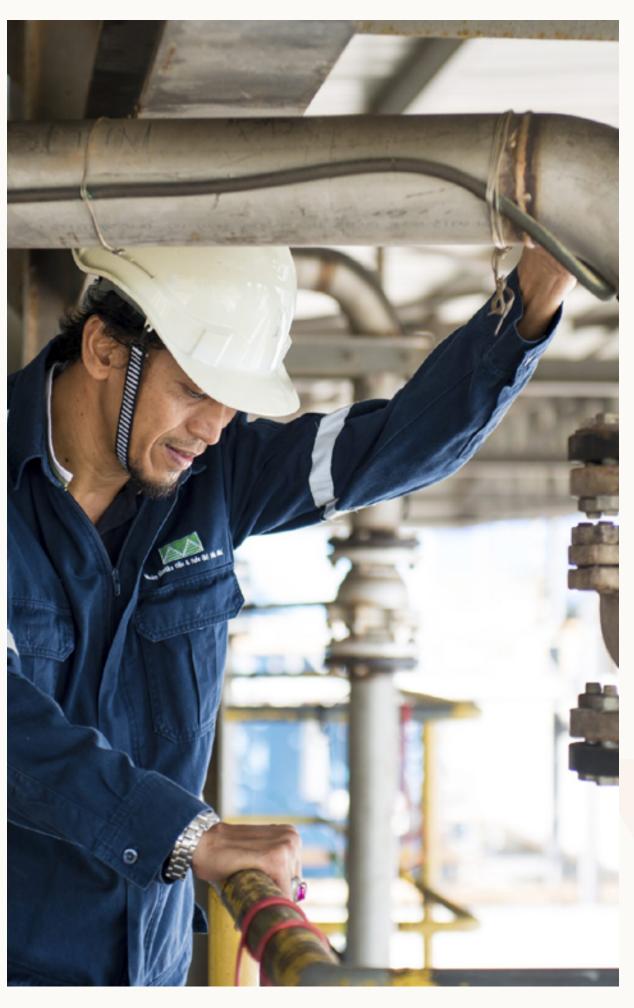
Musim Mas staff and workers, including temporary workers, are paid at least the minimum wage in their respective regions, and their employment conditions comply with all local and national labour legislation. Specifically in Indonesia, they earn equal entry-level wages (ranging from IDR 2.8 million to almost IDR 3.7 million monthly in 2024, depending on the operating region). Additionally, employees receive comprehensive in-kind benefits regardless of age, gender, or nationality.

We annually assess living wages and ensure that our workers' salaries and inkind benefits align with RSPO standards. Currently, the average total wages and in-kind benefits earned by upstream employees in Sumatra and Kalimantan are IDR 6.14 million and 6.73 million per month, respectively. These figures are roughly 1.55 times higher than the calculated living wage benchmarks of IDR 3.96 million in Sumatra and IDR 4.28 million in Kalimantan.



In-Kind Benefits

Wages



## **\* Employee Benefits**

Upstream employee benefits include free healthcare, housing with electricity and clean water, transportation, childcare, and on-site education for school-age children. In 2024, Musim Mas provided:



Housing for 13,969 employees



25 clinics and 2,743 first aid kit/posts



47 childcare centers 11 YAK kindergartens\*

11 YAK primary school\* 3 YAK secondary school\*

\*Note: These schools were established by the Anwar Karim Foundation (Yayasan Anwar Karim – YAK), Musim Mas' long-standing community outreach charity.

Midstream and downstream employees' in-kind benefits vary by region and comply with local and national laws.

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Our Workforce Sustainability With Smallholders Community Development and Empowerment Business Ethics

### \* A Focus on Education



We recognize the importance of education in improving livelihoods and preventing child labour, especially for the children of workers who live on our plantations. provide free transportation and encourage all parents to enroll their children in our YAK schools or schools in neighboring communities. As of 2024, we have built and funded 47 childcare centers. 11 kindergartens, 11 primary schools, and three secondary schools at our plantations.

Our most recent survey established that 12,223 workers' children who live in and surrounding our estates are of schoolgoing age. Of these, 97.9% attend our YAK schools or other nearby schools. In 2024, 31 children from surrounding communities attended YAK schools.

Our schools, kindergartens, and childcare centers benefit both our workers' children and children in surrounding communities. They offer high-quality education and care for preschoolers and school-age children, as well as employment opportunities for local teachers.

## School Attendance of Workers' Children 2024 (No., %)

Total 12,223

## **Children Attending YAK Schools**



#### **Children Attending Outside Schools**



### School-Age Children Not in School

254



## **\*** Family-Friendly Practices

In addition to providing on-site education, we have adopted several family-friendly practices at our plantations and mills to support working parents, especially expectant and new mothers. We provide maternity leave, healthcare education, prenatal and postnatal healthcare services, and dedicated breastfeeding stations at our facilities. Additionally, childcare facilities staffed by trained caretakers are available at plantations for working parents. To maximize the impact of these initiatives, we have also established specific employment policies for mothers returning from maternity and women with infants.



## **New Integrated Urban Complex**

Musim Mas recognizes the importance of providing facilities easily accessible for employees to fulfil their social needs and improve their work-life balance. In 2024, we completed the construction of Kompleks Terpadu – a 2.4 hectare integrated urban complex at PT Musim Mas at Sorek. Built to serve as a hub for recreation, sports, relaxation, shopping, and socializing, it offers employees a welcoming space to unwind and recharge after work.

The complex features a football field, volleyball and badminton courts, a jogging track, market stalls, a food court, bakery, drinking water depot, daycare center, and landscaped gardens.

Our Workforce Sustainability With Smallholders Community Development and Empowerment Business Ethics

## **Workforce Diversity**



[GRI 3-3, 405-1, 406-1

Musim Mas hires and promotes employees based on merit, providing equal pay and opportunities without discrimination. We train all employees on our no-discrimination policies and are proud that no instances of discrimination were reported at our upstream operations in 2024.

Across the Group, we employ 9,714 women, comprising 22.6% of our global workforce.

Specifically, women constitute 36.0% of management, 36.9% of staff, and 18.0% of workers at our operations worldwide. In addition, one woman holds a position in senior management.

Men and women receive equal pay across all employee categories irrespective of gender.

## Promoting Gender Equality at Plantations

**Deliver Positive** 

Environmental

**Impacts** 

We promote gender equality at our plantations, providing women employees with support services and facilities to help them balance their household responsibilities, childcare commitments, and family obligations with work. We promote awareness of gender-related issues by:



**Enacting and upholding no** discrimination and equal opportunity policies



**Providing adequate parental** and menstrual leave



**Ensuring each estate has a** dedicated gender committee



**Ensuring all workers have** access to a grievance mechanism



**Providing facilities such as** designated lactation areas, childcare centers, and schools

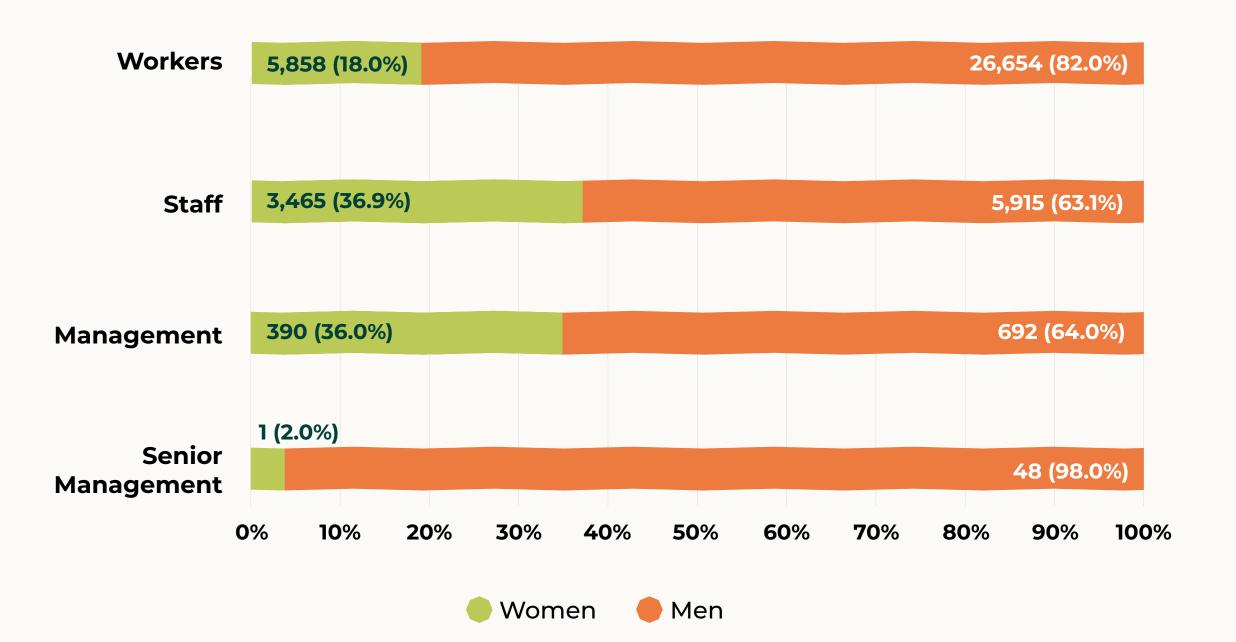


**Conducting workshops and** knowledge-sharing sessions on nutrition, bullying and sexual harrasment, in collaboration with experts



Implenting measures to prevent and address gender-based violence

## Gender Diversity by Employee Category 2024 (No., %)



Report

This

Approach to

Sustainability

Our Workforce Sustainability With Smallholders Community Development and Empowerment Business Ethics



## **Strengthening Gender Committees**

All Musim Mas estates operate dedicated gender committees, as per the RSPO Principles and Criteria. These were set up to promote equality across the workforce and to eliminate the risk of violence, harassment, and discrimination, which may systemically arise in predominantly male industry. These committees consist of employees and staff from each operational unit (70% female and 30% male) and are independent of head offices.

## **GENDER** COMMITTEE **PROGRAMS**

#### **Conducted by Gender Committees:**

- · Gender Committee home visit services
- · Engaging with women on gender-related conflict issues
- · Identifying new mothers' needs
- · Engaging with the company's child-care facilities
- · Talent and capability development
- Charity programs

#### Conducted by Gender Committees in collaboration with external parties:

- · Gender Committee capacity building
- · Education and raising awareness on:
  - Women's reproductive health
  - Bullying and sexual harassment
  - Nutrition
  - Substance abuse
- · Health service programs for mothers and children

Our Gender Committees support our gender equality goals. Over the years, Musim Mas has progressively broadened the scope of their activities to better serve plantation workers.

The 2024 DIWA assessment recommended several improvements, including inviting gender committees to review health and safety procedures for pregnant and breastfeeding women, implementing policies to protect whistleblowers' identities, engaging with gender experts to support training programs, and establishing processes to monitor the impact of gender committee programs. We updated the Gender Committee SOPs in February 2024 to reflect stronger measures and programs promoting equality and protecting women.

Additionally, we assess our suppliers' gender-related policies and systems, including no discrimination and equal opportunity measures, breastfeeding and childcare facilities, and workplace maternity and pregnancy benefits and leave.

## Freedom of Association

[GRI 2-30, 402-1, 407-1, 13.21.2]

Musim Mas workers are free to join a labour union of their choice and participate in union meetings and activities. We maintain mutually beneficial relationships between management and union representatives and hold regular meetings to discuss wages, benefits, leave, and other employment issues. In Indonesia, we solicit employee feedback and address employees' concerns through bipartite cooperation committees called Lembaga Kerja Sama (LKS) Bipartit, comprising company representatives and workers. A total of 31,629 Indonesian employees are members of labour unions, while another 44 employees across our global downstream operations are unionized.

As part of our labour relations approach, we respect the right of all employees to enter into collective bargaining agreements (CBAs) per government regulations. Across the Group, 39,010 employees in Indonesia, Italy, the Netherlands, and Vietnam are covered by CBAs.

Musim Mas employees in Indonesia are guaranteed access to their CBAs, which include transparent provisions, such as minimum notice periods for operational changes. We communicate CBA availability during union meetings and morning briefings, distribute CBAs to field supervisors, and make them available at estate, mill, and union offices, allowing workers to access and consult them at their convenience.

Our Workforce Sustainability With Smallholders Community Development and Empowerment Business Ethics

About

Musim Mas

## **Ensuring No Child or Forced Labour**



[GRI 3-3, 408-1, 409-1]

## **\*** Child Labour

Our zero-tolerance policy for child labour without worrying about their children's applies worldwide and is upheld through a multifaceted approach. Our recruitment policy prohibits the employment of any individual under the age of 18, which we communicate to stakeholders during annual site meetings. To effectively implement policy, we use comprehensive age-verification measures during our recruitment process, including rigorously screening all applications, interviewing all candidates, cross-referencing birth dates, and verifying family and identity cards through public-agency digital platforms like E-DABU.<sup>7</sup>

We also provide schools and daycare centers for children living in and around our plantations. These facilities minimize the risk of underage children engaging in casual labour alongside their parents in the field, and also allow parents to work—labour at our operations in 2024.

safety and education.

Musim Mas recognizes the need to prepare for all possible child labour scenarios. We have established dedicated procedures at our upstream operations, outlining our response if children are present at our worksites, and we include parents in the remediation process and recovery actions in these circumstances. To ensure compliance, we regularly communicate our policies and procedures to employees through different channels, including labour unions. Additionally, we employ qualified experts to conduct physical and mental health examinations to evaluate the wellbeing of the affected children.

There were no reported incidents of child

## Forced Labour

Musim Mas prohibits forced or trafficked labour and ensures that our workers are free to move in and out of our estates. Our recruitment, selection, and hiring policies and procedures meet strict legal standards, including stringent controls to prevent forced labour, debt bondage, and discrimination.

The risk of forced labour in the palm oil industry is considered high due to the employment of migrant workers at plantations in some producing countries. However, Musim Mas does not employ any foreign workers at our Indonesian estates. Additionally, we do not retain identification and travel documents when we employ workers from other provinces.



<sup>&</sup>lt;sup>7</sup> E-DABU (Elektronik Data Badan Usaha) is an online platform used by BPJS Kesehatan to manage company and employee data as well as employment and social security information.

Report

Summary Progress

Statement

Musim Mas

Improve the Lives of Approach to Smallholders, Workers, Sustainability and Communities

**Impacts** 

**Deliver Positive** 

Environmental

Maintain Responsible and Enduring Relationships with Suppliers, Customers, and Stakeholders

**Drive Innovation** in Sustainable **Practices** 

Assurance Statement

**Appendices** 

Our Workforce Sustainability With Smallholders Community Development and Empowerment Business Ethics

## **Worker Access to Grievance Mechanism**

[GRI 2-25, 2-26]

All of our workers have access to our transparent and accountable grievance mechanism without fear of reprisal or dismissal. We communicate available grievance channels to all employees, train them on our internal grievance procedures, and post notices about these channels on bulletin boards at all our sites. Workers can raise complaints via suggestion boxes at and around our operations, as well as grievance logbooks at our administrative office. Alternatively, they can contact our Corporate Affairs Department (Hubungan Masyarakat) by telephone. Additionally, employees can file grievances through their labour union.



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# **Safety and Health**



[GRI 3-3, 403-7, 403-8, 403-9] [SASB FB-AG-320a.1]

Musim Mas prioritizes employee safety health. Our Occupational Safety Health (OSH) policy and OSH management system cover all permanent and temporary employees. To ensure their protection, we provide all workers at our plantations, mills, and factories with the necessary personal protective equipment (PPE) and health and safety training relevant to their roles.

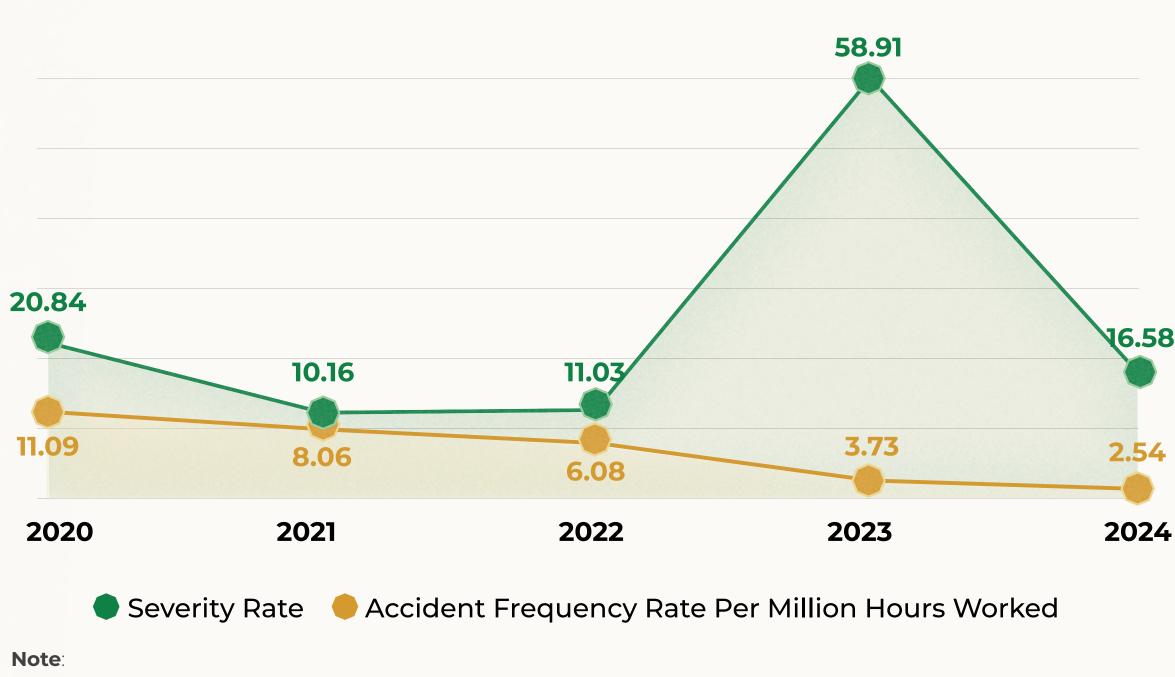
# **X** Upstream Accidents

We are vigilant and enact strict health and safety measures to minimize accident rates at our upstream operations. Although most work-related injuries are minor, such as cuts from handling oil palm fronds and thorns, severe injuries can arise typically resulting from mishandling work tools and equipment. Another frequent cause of severe incidents is motorcycle accidents involving commuting workers.

Our accident frequency rate has steadily declined, dropping more than 77% from 11.09 in 2020 to 2.54 in 2024. Compared to 2023, the Group's severity rate significantly improved – from 58.91 days lost per accident in 2020 to 16.58 in 2024. This reduction signals fewer serious accidents in the reporting year.

### Accident Frequency and Severity Rates 2020-2024 · Upstream Operations



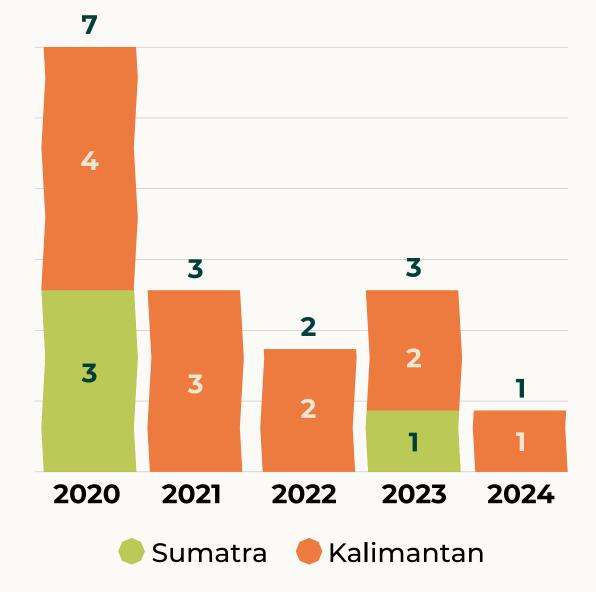


- 1. The accident frequency rate measures lost productivity due to accidents. It is calculated as the number of accidents divided by the hours worked multiplied by one million.
- 2. The severity rate is the number of days lost divided by the number of accidents.

## Group Fatalities

Despite our stringent health and safety measures, we deeply regret to report one fatality at our upstream operations in 2024. Upon further investigation, the death was caused by a fall from a collapsed harvest bridge in the field. We take every fatality seriously, investigate the cause of each incident, and report our findings to the appropriate regional Manpower Office (Dinas Tenaga Kerja). Furthermore, we have taken corrective actions to minimize the risk of such accidents recurring, including improving routine inspections of field infrastructure.

### Fatalities by Region 2020-2024 (No.) • **Upstream Operations**



There were no fatalities across our mid and downstream facilities.

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About Musim Mas Approach to Sustainability

Improve the Lives of Smallholders, Workers, and Communities

**Deliver Positive** Environmental **Impacts** 

Maintain Responsible and Enduring Relationships with Suppliers, Customers, and Stakeholders

**Drive Innovation** in Sustainable Practices

**Assurance** Statement **Appendices** 

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### **\*** Health and Safety Improvement Measures

To reduce our accident, severity, and fatality rates, we monitor how we implement OSH measures at our work sites and execute OSH training and other safety awareness programs.



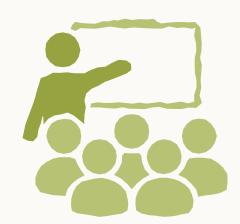
Report work accidents to the Workers Social Security Agency (BPJS Ketenagakerjaan)



Conduct a Hazard Identification and Risk Assessment (HIRA) review



Provide education to all staff and employees on understanding work hazards and risks and the proper use of PPE



Provide training on the dangers and risks of maintenance work, conveyed by external technicians



Conduct HIRA and OSH training for all staff and employees on safe driving, including defensive driving, speed limits, and the proper use of helmets when riding motorcycles

# **Employee Development and Talent Retention**

[GRI 2-8, 3-3, 404-2]

We provide regular, pertinent training to prepare workers and employees for their assigned roles across all our operations. Additionally, we invest in capacity building and technical skills programs and offer professional development opportunities that allow employees to pursue their career goals while contributing to our company's overall progress. We also regularly meet with plantation workers to set their harvesting targets, which we then incorporate into their performance assessments.

We also promote talent development at our regional offices. In 2024, Musim Mas hosted three interns at our Singapore headquarters, who supported our communications, finance, and treasury departments. Our European offices also regularly employ interns and apprentices.



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# **Sustainability With Smallholders**

[GRI 3-3, 203-1, 203-2, 413-1, 13.22.1, 13.23.4]

Smallholders, or individuals with farms smaller than 20 hectares, play a crucial role in the Indonesian palm oil sector. However, they often face complex and interlinked barriers around yields, agricultural practices, land ownership, financing, market access, and economies of scale.

To overcome these challenges, we have made tremendous efforts to support smallholders within our supply chain. Our initiatives have taken on additional importance in light of the upcoming European Union Deforestation Regulation (EUDR), which requires deforestation-free palm oil supply chains for companies selling to EU markets. We run several programs for scheme smallholders (whose community plantations are supported by our 'nucleus' estates) and independent smallholders (who are self or independently financed, managed, and equipped).



### Scheme Smallholders

Musim Mas operates two scheme smallholder programs: the Kredit Koperasi Primer Anggota (KKPA) – for individual family units – and the Kebun Kas Desa or Village Development Program (VDP) – a community-based approach for villagers who collectively manage plantations. These programs comprise 44 local initiatives and cover 100% of our scheme smallholders, who manage a combined 7,989 hectares of planted area.

Kredit Koperasi Primer Anggota (KKPA) Combined hectarage 7,989 ha

Village Development Program (VDP)/Kebun Kas Desa

A Musim Mas program for scheme

smallholders tailored to villages where

plantations are community-managed

rather than individually owned

A smallholder primary cooperative credit scheme voluntarily initiated by Musim Mas in the 1990s. It provides smallholders with practical support to acquire the skills and technology needed to undertake palm oil cultivation

Operating since 1996

programs: 11#

Number of

Number of smallholders: **4,159**#9 Unchanged

Total scheme smallholder hectarage 7,736 ha **9** 78 ha in 2024 Operating since 2000

Number of programs: 33# 1 in 2024

Number of villages: **32**<sup>#</sup> Unchanged

Total scheme smallholder hectarage: 254 ha

12 ha in 2024

<sup>#</sup> EY has performed limited assurance procedures on these figures.

<sup>&</sup>lt;sup>8</sup> The total area was lower compared to 2023 due to the revision of area in agreement between Musim Mas and KKPA.

<sup>&</sup>lt;sup>9</sup> The 4,159 smallholders are from 10 KKPA programs. In 2023, we added a new program, bringing the total to 11. This has not yet increased the number of smallholders as the program is still in its early stages.

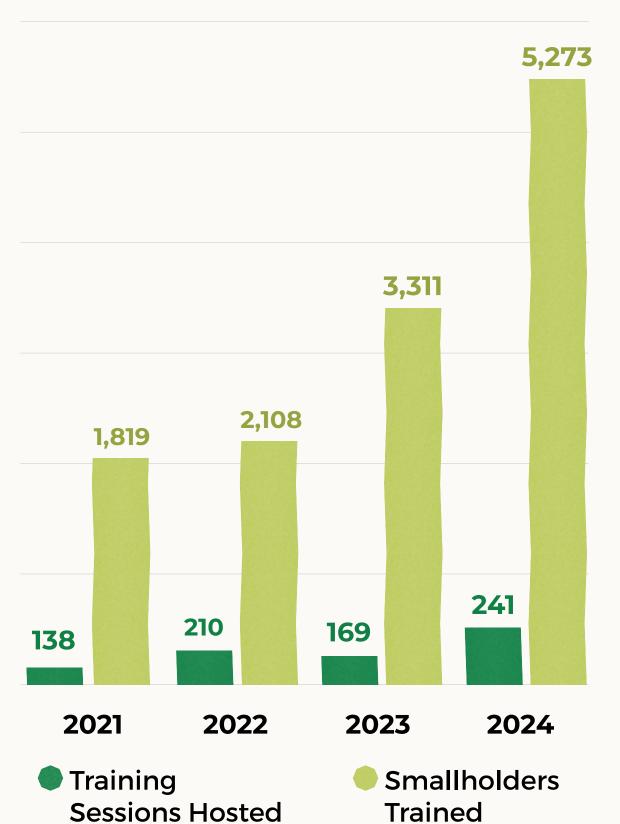
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### **\* Smallholder Training**

We provide ongoing training programs for scheme smallholders on good agricultural practices (GAP), fire management, sustainability standards and certifications, safety and health, and other topics. In 2024, we hosted 241 training sessions for KKPA and VDP smallholders, attended by 5,273 farmers.

Scheme Smallholder Training 2021-2024 (No.)



### Production and Income

In 2024, our scheme smallholders produced 118,205 tonnes of fresh fruit bunches (FFB), sold for a combined gross income of IDR 341 billion (~USD 20.7 million). Production in 2024 was less than the previous two years due to the revised landbank area under the KKPA. Additionally, many planted oil palms in scheme smallholder areas are now past their peak productive years resulting in lower yield.



### **\*** Certified Smallholders

We work with our scheme smallholders to help them obtain the sustainability certifications needed to access international markets and improve their livelihoods. As of December 2024, 77.14% of scheme smallholder-managed land, 10 representing hectares, was RSPO-certified, 6,163 maintaining the same certification coverage as in 2023. While there were no new certifications in 2024, we are on track to support certification for all scheme smallholders by 2026. Our certified scheme smallholders supplied Musim Mas mills with 107,297 tonnes of certified FFB, representing approximately 91% of all FFB sourced from scheme smallholders.



<sup>#</sup> EY has performed limited assurance procedures on these figures.

<sup>&</sup>lt;sup>10</sup> The percentage is based on our RSPO Annual Communication of Progress (ACOP) submissions.

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# Independent Smallholders

Since 2015, Musim Mas has developed and implemented various programs to integrate independent smallholders into the palm oil supply chain. We engage and assist them in adopting the same efficient farming standards as industrial plantations by providing training modules covering good agricultural practices (GAP) and No Deforestation, No Peat, and No Exploitation (NDPE) commitments tailored independent smallholders' capacity resources. Our programs utilize a landscape-level approach, establishing and running initiatives in collaboration with local stakeholders. We have found this to be the most effective approach smallholder addressing barriers stemming from geographic and social conditions.

Over the years, we have refined our engagement strategies and consolidated them into two main avenues aimed at enhancing the livelihoods of independent smallholders:

- 1. Training for smallholders: directly training smallholders in the communities surrounding Musim Mas and third-party mills, including one-off collaborations. As of December 2024, 37,436# independent smallholders have been trained through our Training for Smallholders program.
- 2. Training for Trainers through Smallholders Hubs: indirectly providing extended coaching to independent smallholders by training local government agricultural officials (Village Extension Officers or VEOs) to scale up and extend the reach of various programs. Each Smallholders Hub partners with other stakeholders in the local landscape to collectively address farmers' barriers.

In total, 46,915# independent smallholders have been trained through the two avenues as of December 2024.

We also operate a range of smallholder programs that span across different landscapes, as outlined below.

# GAP, Environmental Protection, and NDPE

We support smallholders with training in efficient farming standards. Our instructional modules cover GAP and NDPE commitments. Our landscape approach is based on local conditions, and our initiatives specifically address regional challenges.

Training modules cover GAP, environmental protection, and NDPE basics, with content adapted to local conditions and our history with participating farmers. The curriculum evolves introduction of regenerative agriculture.

### Delivered in all Musim Mas landscapes.

### **\*** Women Smallholder Program

We recognize women in rural communities as powerful agents of change, whose roles as caregivers, financial stewards, and nutrition gatekeepers are central to family and community resilience. Empowering them is key to inclusive development, creating lasting benefits for future generations. To assist them, we launched the Women Smallholders Program (WSP)

in 2023 in collaboration with academic experts from *Universitas Sumatra Utara* (USU). It focuses on health and nutrition, strengthening women's knowledge and empowering them to make informed decisions for their own and their families' well-being.

### Kickoff in Riau

The program initially targeted three regencies in Riau, engaging women smallholders and the wives of smallholders. To date, 1,892 participants – 1,400 women and 492 men – have attended training sessions.

We encourage women who benefited from this training to share their learning and help improve its implementation. We also seek men's participation to promote shared responsibility and allyship. Several men in the impacted regencies have expressed interest in joining the gender-specific training. Their willingness to take part in these programs reflects an increasing awareness and openness to women's issues and gender equality, representing a welcome and positive development in a patriarchal society.

<sup>#</sup> EY has performed limited assurance procedures on these figures.

<sup>&</sup>lt;sup>11</sup> Data for a <sup>2021</sup> one-off collaboration with UNDP in Pelalawan was revised.

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Due to the positive uptake, we extended the program in 2024 by introducing a Training of Trainers (ToT) module for 30 selected women who have become peer educators within their communities, who have demonstrated an ability to deliver health and nutrition material to others. These educators – known as cadres - went on to train 643 women in the same year. We also expanded the program to include financial literacy and entrepreneurship training for home-based businesses to further scale our impact.

### **Expansion to Aceh Singkil and** Subulussalam

In September 2024, we developed ToT for health workers, including local doctors and midwives in Aceh Singkil and Subulussalam. The training was led by Dr. Putri C. Eyanoer, M.Epi., Ph. D, from the USU School of Medicine. Similar to our work in Riau, the training focused on nutrition and balanced diet education.

From October to December 2024, we trained 231 women smallholders and the wives of male smallholders from six villages in Aceh Singkil and Subulussalam. A unique approach of this program was implementing a prototype of "Isi Piringku", a Ministry of Health guideline that promotes food consumption aligned with balanced nutritional standards. We also offered medical check-ups to draw more community members to the program.

### **Expansion to Sambas**

In 2024, we expanded the WSP to additional landscapes, including Sambas, building on our foundational work in Riau. Partnering with Bunge through their Smallholders Hub, the Sambas initiative focused on tailored community-based interventions. Training was delivered by local experts from Universitas Tanjungpura (UNTAN), covering maternal and child nutrition, balanced diets, and personal health.

To reinforce training materials, we engaged village midwives to conduct follow-up health checks and support, helping embed healthy practices within communities. We also adopted a small-group learning format, including focus-group discussions, to encourage interaction and enhance knowledge retention.

Delivered in the Aceh (Aceh Singkil and Subulussalam), Riau, and Sambas landscapes.

### Financial Literacy and **Entrepreneurship**

Our financial literacy and entrepreneurship program leverages multiple methodologies and platforms, including ToT through Smallholders Hubs and WSP. We deliver this program in collaboration with local financial institutions, including MUFG Bank and PT Bank Danamon Indonesia Tbk (Danamon), using the AgriON digital finance and financial learning platform to train women in money management. This program equips smallholders with essential financial skills and knowledge to support self-sufficiency - particularly during the financially challenging replanting period, which can last three years.

### Delivered in the Riau (Pelalawan, Rokan Hilir, Rokan Hulu) landscapes.

### \* Youth Engagement and Outreach

To address growing concerns over future food insecurity due to the declining interest among the youth in agriculture that could lead to a shortage of farmers, we continue to engage young people through targeted outreach programs, youth groups, and forums designed to inspire the next generation of farmers.

Recognizing that many youths are children of current smallholders, we aim to ensure the continuity of sustainable palm oil cultivation by introducing them to modern agricultural methods, technologies, and NDPE standards. We encourage young people, regardless of gender, to participate in Smallholders Hubs and farmer associations within our supply chain. To make agriculture more appealing and accessible to them, these platforms offer practical training on topics that include soft skills development and drone-based landuse, ecosystem, and agricultural production (LEAP) analyses.<sup>12</sup>

Our youth engagement efforts extend to our programs targeting agricultural students from vocational schools. Through career talks, lectures, and interactive sessions to help them explore the palm oil industry, understand its sustainability challenges, and recognize its contribution to the global economy. Looking ahead, Musim Mas plans to further support youth engagement by establishing knowledgesharing and capacity-building platforms that inculcate the value of responsible farming in future generations.

Delivered in the Riau (Pelalawan, Rokan Hilir, Rokan Hulu) landscapes.

<sup>12</sup> A spatial and data-driven approach that assesses the environmental and social dynamics within a landscape, particularly in palm oil-producing regions. It helps map land use, evaluate ecosystem services, identify high conservation value areas, and assess agricultural productivity and risks.

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Total Independent Smallholders Engaged in Programs: • 46,915#

**Training Programs** 

# otal independent Smallholders Engaged in Programs: • 4



**Training for Smallholders** 

**37,436**#

Training for Trainers: Smallholders Hubs

9,479\*485

### Others

Our WSP programs outside Smallholders Hubs are implemented at Musim Mas mills in:

- Rokan Hillir
- Rokan Hulu
- Pelalawan

### **ACEH TIMUR**

Total ISHs trained

Total VEOs trained

Established
Smallholders Hub in
partnership with IDH,
Unilever, and
Pepsico in 2023.

### **ACEH SELATAN**

Collaborated with Earthqualizer to establish Smallholders Hub.

### **ACEH TAMIANG**

Collaborated with IDH, Government of Aceh Tamiang, Forum Konservasi Leuser (FKL), Pusat Unggulan Perkebunan Lestari (PUPL), downstream actors, local civil society organizations, and suppliers in 2020: The first Smallholders Hub was established in Aceh as part of the VSA (Verified Sourcing Area) initiative led by IDH.

### **ACEH SINGKIL**

Partnered with General Mills since 2021, targeting independent smallholders from villages surrounding the Leuser Ecosystem. Working together, the two parties aim to integrate smallholders into the sustainable palm oil supply chain, reducing deforestation. General Mills initially pledged to fund the first three years of the program. In 2024, the partnership was renewed for another year.

WSP implemented here

### **DAYUN (RIAU-SIAK)**

Siak-Pelalawan collaboration: Small-scale hub established in 2021 as part of our commitment to the wider Riau District, and having the same goals as the Siak-Pelalawan Landscape Programme established by the Proforest-Daemeter Partnership.

Financial literacy implemented here

### SUBULUSSALAM

Extended our 2021
partnership with AAK
and Nestlé for another
year, increasing
its scope beyond
deforestation to cover
economic and
social aspects.

WSP implemented here

Financial literacy implemented here

### **SUNGAI LINAU**

Extended our 2022

partnership with Proforest-Daemeter, Nestlé, PepsiCo, IFF, APP, Lactalis, and Yayasan Mitra Insan until 2027 under the **Sungai** <u>Linau Landscape</u> Conservation and Livelihoods Program (SLP). This initiative supports community-based land-use development, improves villagers' livelihoods, protects HCV and HCS forest areas, and reduces greenhouse gas emissions through forest and peat management and protection.

### SAMBAS

Partnered with EQ since 2022 to support liaising with local stakeholders.

Partnered with
Bunge since 2023
to train more than
1,000 independent
smallholders in
sustainable palm
oil production
by 2025, per the
COP27 Agriculture
Sector Roadmap. As of
2024, we trained 913
smallholders and are
on track to reach our
2025 target.

WSP implemented here

<sup>#</sup> EY has performed limited assurance procedures on these figures.

**Drive Innovation** Practices

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### **\*** Increasing Training for Independent Smallholders **Through Smallholders Hubs**

We continue to expand our programs to reach more smallholder farmers and improve our Training for Trainers initiatives through Smallholders Hubs. The number of VEOs on the ground across all hubs rose from 460 in 2023 to 485 in 2024, while the number of smallholders trained by VEOs increased by 41% from 6,723 in 2023 to 9,479# in 2024.





			VEOs			Independent Smallholders				
Area	2021	2022	2023	2024	2025 target	2021	2022	2023	2024	2025 target
Aceh Tamiang	73	73	73	73	40	495	2,489	2,495	2,495	1,500
Aceh Singkil	75	<b>7</b> 5	75	75	60	400	892	2,105	2,620	1,750*
Riau-Siak, Dayun	1	7	24	24	20	156	269	270	270	Target Achieved in 2024
Subulussalam	28	117	117	117	60	-	476	1,138	1,581	1,750*
Sungai Linau	-	-	32	32	20	-	367	457	460	Target Achieved in 2024
Sambas	-	81	139	139	30*	-	36	258	913	1,000*
Aceh Selatan	-	-	-	-	20	-	-	-	222	250
Aceh Timur	-	-	_	25	100	-	-	-	918	1,000
Total	177	347	460	485	-	1,051	4,529	6,723	9,479#	-

### Notes:

- 1. VEO data in orange is the maximum number of trained VEOs in the area. We continue to increase the number of smallholders who engage with trained VEOs.
- 2. Targets marked with \* have been adjusted to account for previous COVID-19 movement restrictions and/or to align with contracts.
- # EY has performed limited assurance procedures on these figures.

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# 



Our Smallholders Hubs leverage collaborative partnerships to work towards shared objectives and maximize our collective impact. We continue to seek new opportunities for collaboration while nurturing existing partnerships to ensure long-term progress. Our programs aim to support smallholders on the ground:



### **Biodiverse & Inclusive Palm** Oil Supply Chain (BIPOSC)

Musim Mas collaborates with the Livelihoods Funds for Family Farming (L3F), SNV, World Agroforestry (ICRAF), Danone, L'Oréal, and Mars Incorporated on a joint initiative to promote regenerative agriculture among independent palm oil smallholders in Labuhanbatu, near our PT Siringo-Ringo mill in North Sumatra.

### **Project overview**

Launched in 2021, the BIPOSC Project is a ten-year initiative helping 2,500 smallholders supply 100% deforestation-free FFB, including members of cooperatives, farmer groups, and associations. The project began with baseline studies and initial training in regenerative agriculture practices.

### Training and capacity building

The project offers group training and individual coaching sessions on regenerative agricultural techniques, including soil improvement, erosion control, emissions reduction, biodiversity support, and crop diversification. In 2024, 1,075 farmers were trained in agroforestry and institutional business development, up from 662 in 2023; this number had risen to 1,076 by February 2025.

The project had successfully enrolled 1,181 farmers, with 932 receiving RSPO certification and earning RSPO premiums in 2024. An impressive 80% of prescribed project practices are being adopted by smallholders, including cover cropping, mulching, organic fertilization, and integrated pest and disease management.

### Infrastructure and demonstration sites

Since inception, the project has established demonstration plots serve as learning sites for smallholders to observe and understand regenerative practices firsthand. Specifically, this includes:

- · Seven demonstration plots for oil palm regenerative agriculture
- · 20 hectares of demonstration plots for agroforestry
- · Seven nurseries enabling crop diversification
- · 134 hectares of smallholder palm farms have adopted mixed agroforestry management systems

### Agricultural impact and coverage

The project covers 2,140 hectares of smallholder farms, with 2,031 hectares successfully transitioned to regenerative agriculture practices. Preliminary results (January 2022 to July 2024) from the demonstrations plots showed positive outcomes:

- · Soil pH improved from 4.29 to 5.55
- Organic carbon rose from 1.23% to 2.27%

· Notable nutrient enhancements of magnesium levels by 275% and phosphorus levels by 70% content in soil

These results demonstrate the effectiveness of regenerative agriculture practices in improving soil health and productivity.

### Conservation and environmental impact

Landscape conservation efforts have significantly expanded, with communitybased conservation initiatives now covering approximately 8,000 hectares of forestland, demonstrating the project's broader environmental impact beyond individual farms.

### Cooperative development and economic support

A cooperative was also established to strengthen smallholder businesses and increase income opportunities. This has enabled the cooperative to:

- · Operate a sustainable composting unit, producing 100–150 tonnes of affordable organic fertilizer from mill byproducts monthly, available to farmers at 40% cheaper than market price
- · Provide financial support for alternative income-generating activities during palm replanting phases
- · Serve seven villages, providing accessible fertilizer and loans for fertilizer purchases to independent smallholders, while helping farmers obtain RSPO and ISPO certifications.

Enabling Regenerative Agriculture for Independent Smallholders in Indonesia: The BIPOSC Project, in Collaboration with Musim Mas, L3F, SNV Indonesia, and ICRAF



### **Collaborative Research** for Smallholder Inclusion in Sustainable Palm Oil

We continued to partner with Eidgenössische Technische Hochschule Zurich (ETH Zurich), the University of Cambridge, and Indonesia's Institut Pertanian Bogor (IPB University) at our Smallholders Hub in Aceh Singkil since 2023. This joint research project investigates ways supply chain sustainability initiatives can reduce deforestation in the Indonesian palm oil sector while including producers.

Employing a norm-based intervention approach, the research project supported by the local government and Earthqualizer, trains and empowers smallholders on sustainable practices. Selected villages have received training on GAP, NDPE principles, and financial literacy.

Participating villages are randomly assigned to one of two groups during a controlled trial, with only one receiving NDPE training. Villages in the NDPEtrained group go on to compete against each other to assess and promote the adoption of these principles over time. The project will run until June 2028 and will conclude with an impact report evaluating how the training has influenced farmer behaviour.

See also page 6 of our Projects in the Aceh Landscape Report 2022/23

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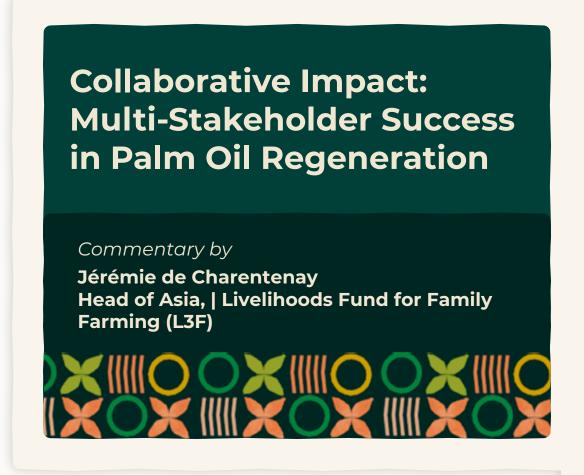


### **Sharing Expertise**

The United States Agency for International Development (USAID) has also acknowledged our commitment and expertise in advancing sustainable agriculture. From September 2023 to April 2024, we conducted training sessions for 235 smallholders in the Aceh Utara District through USAID's Sustainable Environmental Governance Across Regions (SEGAR) program. Training topics included Internal Control Systems (ICS) capacity building, GAP, and financial literacy.

Although this informal collaboration did not involve our direct supply chain, it supported Musim Mas' commitment to sustainable palm oil. We concluded the program following USAID's disbandment.

See also page 5 of our Projects in the Aceh Landscape Report 2022/23





### **Sustainable Replanting Partnership With Temasek Foundation and Abler Nordic**

In March 2025, we launched the Sustainable Oil Palm Replanting in Indonesia (SOPRI) project in collaboration with Abler Nordic and the Temasek Foundation. This initiative helps smallholders secure financing for sustainable palm replanting, increasing their income while preventing deforestation.

The project is financed by Abler Nordic's Climate Smart Fund, which was initially funded by Norway's Ministry of Climate and Environment, but now combines public, philanthropic, and private capital. The Temasek Foundation provides catalytic capital to guarantee loans, reducing smallholders' financing costs and de-risking private investment.

Phase one will support 400 smallholders across 400 hectares in Sumatra with replanting loans, financial literacy training, certification support, land titling assistance, and village planning. Participants commit to zero forest encroachment, verified through satellite monitoring and field checks.

Abler Nordic, Livelihoods Funds, Musim Mas, and Temasek Foundation Launch Blended Finance Initiative on Sustainable Oil Palm to Combat Deforestation and Aim to Support at least 400 Smallholders



### **Danida Green Business Partnership** (DGBP): Rokan Hulu Landscape and **Livelihoods Initiative (ROHULLI)**

In 2024, we entered into a public-private partnership with the Danish Government, Preferred by Nature, Ferrero, Sustainable Agriculture Network (SAN), and Agriterra. The partnership kicked off in May 2025 and aims to build the capacity of independent smallholders by strengthening farmer groups, improving access to sustainable markets, and supporting the adoption of NDPE-compliant practices through targeted training, coaching, and collaboration with local cooperatives to boost yields responsibly while preserving forests. One of the key focus areas is to support income diversification opportunities for 2,000 community members - 60% of whom are women.

Danish government in collaboration with Preferred by Nature, Ferrero, SAN, Agriterra, and Musim Mas for Sustainable Palm Oil Production in Indonesia

The BIPOSC project's success hinges on our long-term collaboration with key partners, including Mars, Danone, L'Oréal, and L'Occitane en Provence. Now at its midpoint, the initiative has achieved impressive adoption rates (60–80%) for regenerative practices like composting and mulching, driven by farmers recognizing their tangible benefits. Establishing local compost production units has been particularly effective, providing affordable inputs that accelerate adoption.

Transparent stakeholder engagement has been crucial, ensuring equitable distribution of crude palm oil (CPO) and palm kernel (PK) among off-takers to prevent competition and mitigate conflicts. The partnership comprises eight organizations with clearly defined roles and responsibilities, enabling effective scaling. For example, L3F provides financial support, while Musim Mas contributes valuable field expertise as one of the partners fulfilling its designated function.

Our initial challenges included building farmer trust in regenerative agricultural practices and developing community leaders. These obstacles were overcome in close collaboration with SNV, identifying and empowering farmers who could occupy leadership roles and drive change in their respective communities.

Jérémie heads the Asia team of L3F, a public-private initiative that supports sustainable agriculture and rural development, particularly for smallholder farmers in developing countries.

**Appendices** 

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### Supporting Independent **Smallholder Certification**

We collaborate with industry and civil society partners to support independent smallholders in achieving RSPO and ISPO certification.

### **RSPO**

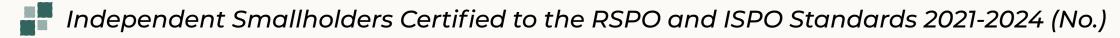
As of 2024, we have supported 4,654# smallholder farmers in achieving RSPO certification, including 3,907 who supply directly to Musim Mas. These certified smallholders collectively manage 11,173 hectares of plantations.

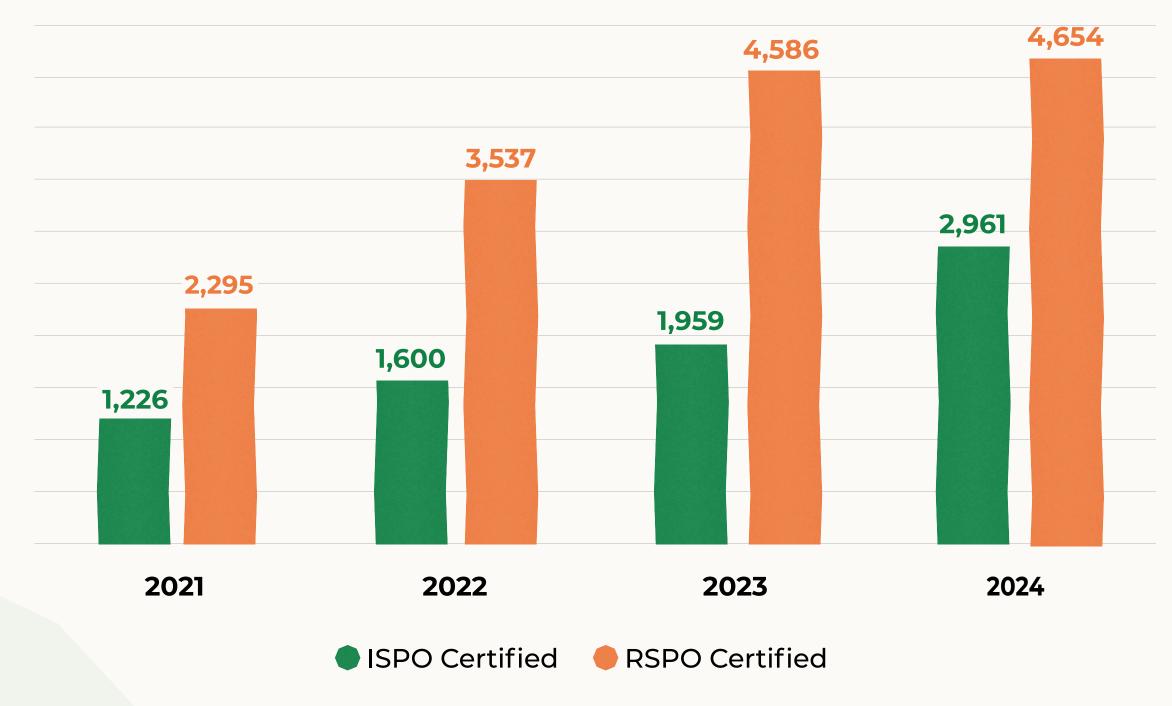
The success of our independent smallholder certification program has given farmer associations direct access to the sustainable palm oil market. As a result, they have sold **RSPO Independent Smallholder Credits to** leading consumer goods companies such as Unilever, PepsiCo, ACT Commodities, Waitrose Ltd., and Nestlé, earning nearly USD 3,933,498 in premiums to date.

### ISPO

Our certification support programs have also helped 2,961 independent smallholders who manage a combined 7,247 hectares of plantations obtain the mandatory Indonesian Sustainable Palm Oil (ISPO) certification.

The substantial increase in the number of ISPO-certified smallholders in 2024 is largely attributable to 1,015 PT BANI farmers who successfully obtained a Plantation Cultivation Registration Letter (STDB) issued by the Food Security and Agriculture Department in Rokan Hilir after a five-year effort.





### **\*** Addressing Challenges

Although we have made substantial progress, we continue to face challenges in supporting independent smallholders preparing for certification. One issue is the need for long-term mentoring and supervision to ensure compliance with certification standards, alongside inconsistent application of GAP, adherence to particularly standard operating procedures (SOPs) and the 4R principles for pesticide and fertilizer use.<sup>13</sup> Other obstacles include financial and technological constraints, a lack of training on certification processes, and unclear land legality. These barriers are compounded by a limited understanding of the long-term benefits of sustainable practices.

To address these issues, our outreach efforts include routine field monitoring and regular on-site training on GAP and certification requirements. We also provide access to appropriate technology, assistance with certification-related processes, and collaborate with farmer associations to build capacity and assist smallholders in securing legal land documentation, including STDBs (Plantation Cultivation Registration Letter) and SHMs (Certificates of Land Ownership).





<sup>#</sup> EY has performed limited assurance procedures on these figures.

<sup>&</sup>lt;sup>13</sup> The right source, the right rate, the right time, and the right place for pesticide and fertilizer use.

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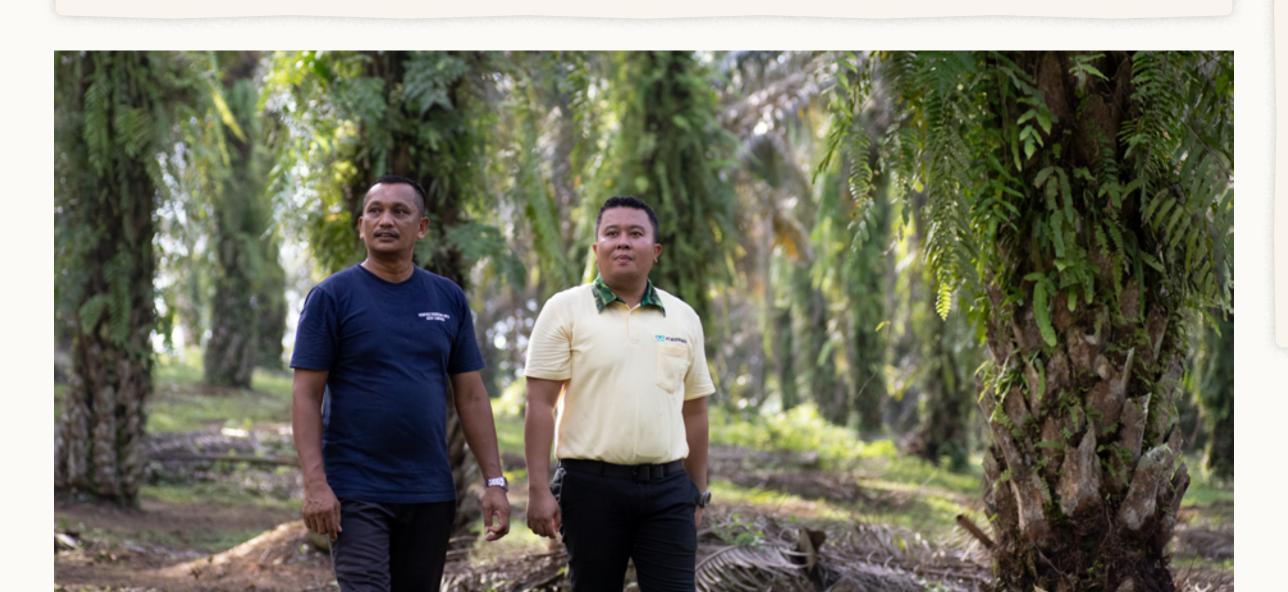
Strengthening smallholders through knowledge and support

In August 2024, Pak Irfan—a new smallholder with just one year of planting experience—participated in a training program introduced by Musim Mas and later coordinated with the village head of Tambatan in the Sambas landscape, to extend the opportunity to other smallholders. Previously relying on YouTube for guidance, he noted

significant improvements in his knowledge and practices after receiving structured theoretical training followed by multiple inperson field visits.

Through the program, Pak Irfan – and his fellow smallholders – had access to a deeper understanding of proper fertilization use, the benefits of specific fertilizers like single nutrients and dolomite, and improved pruning techniques. Field visits also enabled them to identify crop diseases and apply appropriate treatments. While the high cost of inputs remains a key challenge, Pak expressed hope for continued support from the private sector, district authorities, and enabling policies to sustain knowledgesharing efforts and strengthen smallholder livelihoods.

PakIrfanisasmallholderparticipating in the Smallholders Hub program in the Sambas landscape. He shared his insights in an interview with a Musim Mas employee.



# Strengthening sustainable palm oil practices in Sambas Commentary by Chin Kaixiang Sustainability Manager | Bunge Limited

In alignment with the Agriculture Sector Roadmap to 1.5°C announced at COP27, we partnered with Musim Mas on a two-year initiative to establish a Smallholders Hub in the Sambas landscape. Sambas was a strategic choice due to fewer prior interventions compared to regions like Aceh and North Sumatra. Traditionally a subsistence farming area cultivating paddy, rubber, and tangerines, Sambas faced development gaps. This partnership addresses these gaps by equipping local communities with the tools and knowledge to transition toward sustainable palm oil production.

The project is anchored on three key objectives:

- 1. Achieve 100% sourcing compliance at Musim Mas' Sambas mill for direct operations and third-party suppliers, thus establishing a fully deforestation-free supply chain across the landscape.
- 2. **Train 30 additional VEOs** to expand the technical guidance network from 81 to 111 VEOs supporting palm oil smallholders.
- 3. Provide sustainable agricultural training to 1,000 independent smallholders focused on NDP principles, GAP, and financial literacy to improve their business management skills and resilience, increasing their access to markets and financing.

The project faces challenges with accessing remote farm areas and ensuring farmers retain and apply what they have learned. Despite this, progress continues steadily. More farmers are now adopting the practices from our training sessions, focusing on practical use, rather than just meeting reporting requirements.

Kaixiang oversees Bunge's sustainable supply chains for tropical oils in Asia, managing impact projects and supplier relationships with companies like Musim Mas. Approach to

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# **Community Development and Empowerment**

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[GRI 3-3, 203-1, 203-2, 413-1, 413-2, 13.14.1, 13.14.4]

Musim Mas supports the welfare and livelihoods of rural communities, providing jobs, basic amenities, medical services, and education. We work to address critical issues impacting communities in the areas where we operate through long-term partnerships with communities and civil society organizations. Our programs are also designed to support wider national goals. In 2024, our contributions to national development were recognized, as Musim Mas was <u>listed as one of the top 20</u> taxpayers in Indonesia.

# **Upholding Land and Community Rights**

We respect and uphold the human rights of all community members and obtain Free, Prior and Informed Consent (FPIC) before any development or expansion of our operations on community lands. We rigorously review all new developments to ensure they comply with the RSPO New Planting Procedure and its requirements. Our dedicated teams take a comprehensive consultative approach

guided by FPIC principles, engaging local communities through participatory mapping exercises that include ongoing direct dialogue, active community participation, and focus group discussions, helping us map village boundaries, including customary communal and private land and infrastructure.

This approach helps us understand the concerns, needs, and aspirations of the communities we work with. It also provides insights into sociocultural, traditional, and religious values, land use, and how community members earn their livelihoods. The information we gather helps us formulate our land use, development, monitoring, and management plans. Any lost benefits and the relinquishment of rights are negotiated voluntarily and in agreement with any affected communities.

Our most recent FPIC exercise was in 2023, as part of a HCV-HCS Assessment in PT Mentari Pratama, inviting potentially affected communities to join a

participatory mapping process and seeking their approval for our proposed work plan and its activities. This assessment was deemed satisfactory by the HCV Network (HCVN) in 2024.<sup>14</sup>

Notably, there were no raised grievances related to land and community rights in 2024.

@ Grievance mechanism: dispute flowchart

# **Corporate Social** Responsibility



Our commitment to responsible growth is rooted in the first pillar of our Sustainability Policy: to improve the Lives of our Workers, Local Communities, and Smallholders. Over the years, we have supported a wide range of social initiatives across Indonesia and Singapore to assist the communities where we operate in. These initiatives span across five main pillars: education, healthcare, children and youth, sports, and community development.



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### Singapore

Since 2019, the Group has donated a total of SGD 16 million (~USD 11.8 million) to selected charities in Singapore to help communities in need, of which SGD 5 million (~USD 3.7 million) was donated in 2024 alone.

Palm Oil Giant Musim Mas Pledges Third Tranche of S\$5 Million in Boost to Local Charities



Palm Oil Giant Musim Mas Pledges Third Tranche of S\$5 Million in Boost to Local Charities

### **Supporting Education in Singapore**

We support education through scholarships, bursaries, and youth program funding. As part of our support for the government's Forward Singapore vision, we contributed to the launch of a bursary initiative at a preschool in Singapore, allows children from underprivileged families to access preschool education.

### Supporting Youth and Children

Our donations support programs that promote mental well-being by supporting research, intervention including counselling, educational programs, and public awareness through the <u>Majurity Trust'</u> Musim Mas Blue Star Fund. The fund supports 10 non-profits and charities that provide mental health support for youth and children.

In parallel, we also champion youth development by contributing to broader community funds that channel resources to various programs for underprivileged and at-risk children and youth. These initiatives include providing access to education, counseling, sports, and community support, creating safe and inclusive spaces for young people to grow and thrive.

### **NUS Partnership Advancing Sustainability Research**

Since 2010, Musim Mas has sponsored a Professorship in Sustainability at the National University of Singapore (NUS). Through this program, we aim to foster collaboration between academia and industry to develop actionable solutions for sustainability challenges. Since the launch of the program, four academics have accepted the professorship, with the latest being Professor Tong Yen Wah of NUS. Our contribution supports his research in areas such as bioenergy, waste management, and sustainable practices within the oil palm industry.



Professor Tong Yen Wah accorded the Musim Mas professorship in sustainability

### **Supporting Healthcare**

Musim Mas also provides aid to organizations advancing medical research, mental health, and care for individuals with disabilities. Our contributions help strengthen healthcare capabilities across the ASEAN region through research, training, and integrated clinical services.

These efforts include supporting mental healthinnovationandregionalcollaboration, enhancing neuroscience education, empowering individuals with intellectual disabilities through vocational training, and funding initiatives for children with cancer. Together, these programs promote inclusive, accessible healthcare and longterm well-being across communities.

### Indonesia

In previous years, our reporting focused primarily on the corporate social responsibility (CSR) initiatives of our upstream subsidiaries in Indonesia. For the first time, we have expanded the reporting scope to include the CSR contributions across our entire group of operations in Indonesia, including our midstream and downstream operations in Indonesia, providing a complete picture of the Group's CSR efforts in our primary operating region. In 2024, our contributions in Indonesia amounted to IDR 81.2 billion (~USD 4.9 million).

### A Focus on Education

We have long supported education as a cornerstone of community development through the Anwar Karim Foundation. Our efforts focus on providing equal and free access to quality schooling for children living in and around our plantations and operations across Indonesia.

Beyond academic learning, our schools offer holistic development through extracurricular activities, health and nutrition support, and access to scholarships. We also invest in teacher development and create meaningful employment opportunities for local educators, ensuring long-term, sustainable impact in the communities we serve. In 2024, we continued to provide support to local schools in Kalimantan in the form of school supplies, such as school uniforms, shoes, and formula milk.



>> Providing Quality Education in Plantations: Perspectives from Anwar Karim Foundation School Teachers

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### **Upgrading and Redesigning of Educational Facilities**

Musim Mas Group reaffirmed its commitment to advancing education in Indonesia by upgrading key academic facilities at IPB University's Faculty of Agriculture. These upgraded spaces are crucial for academic events and daily use. The initiative is part of a long-standing collaboration with IPB, which also includes hiring graduates for roles such as R&D. Musim Mas emphasized that supporting education is a shared responsibility among companies, universities, and the broader community, and aims for its contributions to enhance the learning experience for students and educators alike.

Supporting the Advancement of Education Quality in Indonesia, Musim Mas Group Improves Infrastructure and Strengthens **Recruitment Collaboration with IPB** 

# **Community Welfare**



We regularly engage with community members and local representatives, including village heads, to communicate planned operational and infrastructure developments that may affect them. Through ongoing dialogue and consultations, we ensure that communities' specific needs and priorities are considered in our planning.

Every year, we invite neighbouring villages adjacent to our operations to submit proposals on the most appropriate use of our CSR budget. Based on their input, we have supported projects that improve access to essential services such as clean

water and sanitation, as well as public facilities, including places of worship and libraries. We have also supported surrounding villages with food-related assistance, providing vegetable seeds, fish fingerlings, and livestock, to strengthen livelihoods and promote residents' longterm well-being.

Our other contributions to community development and welfare have included home renovation support for the underprivileged, festive care packages, aid for small businesses, community support grants, environmental clean-up programs, and equipment donations.

### **Healthcare Initiatives**

Since 2016, we have been organizing healthcare initiatives, such as blood donation drives at our offices in Medan, in collaboration with the Indonesia Red Cross. These drives are held three times a year and are complemented by free health check-ups for local communities. We collect approximately 360 bags of blood annually. In addition, our established clinics continue to provide free healthcare for our surrounding communities, ensuring ongoing support beyond these events.



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# **Business Ethics**

[GRI 3-3, 205-2, 205-3]

Musim Mas is committed to conducting business fairly and ethically, prohibiting corruption or bribery. In 2024, more than 29,000 employees in Indonesia, including all plantation and mill workers, received training on our Code of Business Conduct, alongside our anti-corruption policies and procedures. We harmonized the Code of Business Conduct in 2024, with plans for roll out starting 2025. Employee training will be carried out on the revised Code of Business Conduct alongside our internal Anti-corruption Policy, which remains unchanged.

### **\*** Update on Legal Proceedings **Linked to DMO**

February 2022, the Indonesian government implemented a domestic market obligation policy (DMO) to address the disruption of cooking oil supply in Indonesia. In June 2023, the Attorney General's Office of Indonesia (AGO) announced that they were looking into alleged irregularities in the issuance of export permits during the initial fiveweek DMO period by entities related to Musim Mas. In March 2025, the Court ruled that no criminal offence had been committed by Musim Mas. This ruling is currently under appeal process by the AGO. We will continue to cooperate with the government including the AGO on this ongoing process.

Musim Mas has always supported and complied with the DMO policy to the best of its ability. Our compliance with the DMO requirements has been fully substantiated by documentary evidence submitted to the relevant authorities. Musim Mas maintains a strict zero-tolerance policy against corruption.

### Update on the Landfill Issue at Batam

In 2024, Musim Masfaced legal proceedings regarding soil contamination at a Batam landfill, as a result of improper disposal of spent bleaching earth, a scheduled waste of our refinery. Upon further investigation, we acknowledge that the situation arose due to administrative errors outside of our direct control. However, we take this matter seriously, especially given the

importance we place on legal compliance and responsible waste management practices. Musim Mas since paid the imposed penalties and rectified the issue with the contracted third party managing our waste disposal. As always, we remain fully committed to strengthening our internal procedures to ensure we comply with all relevant environmental laws and regulations.



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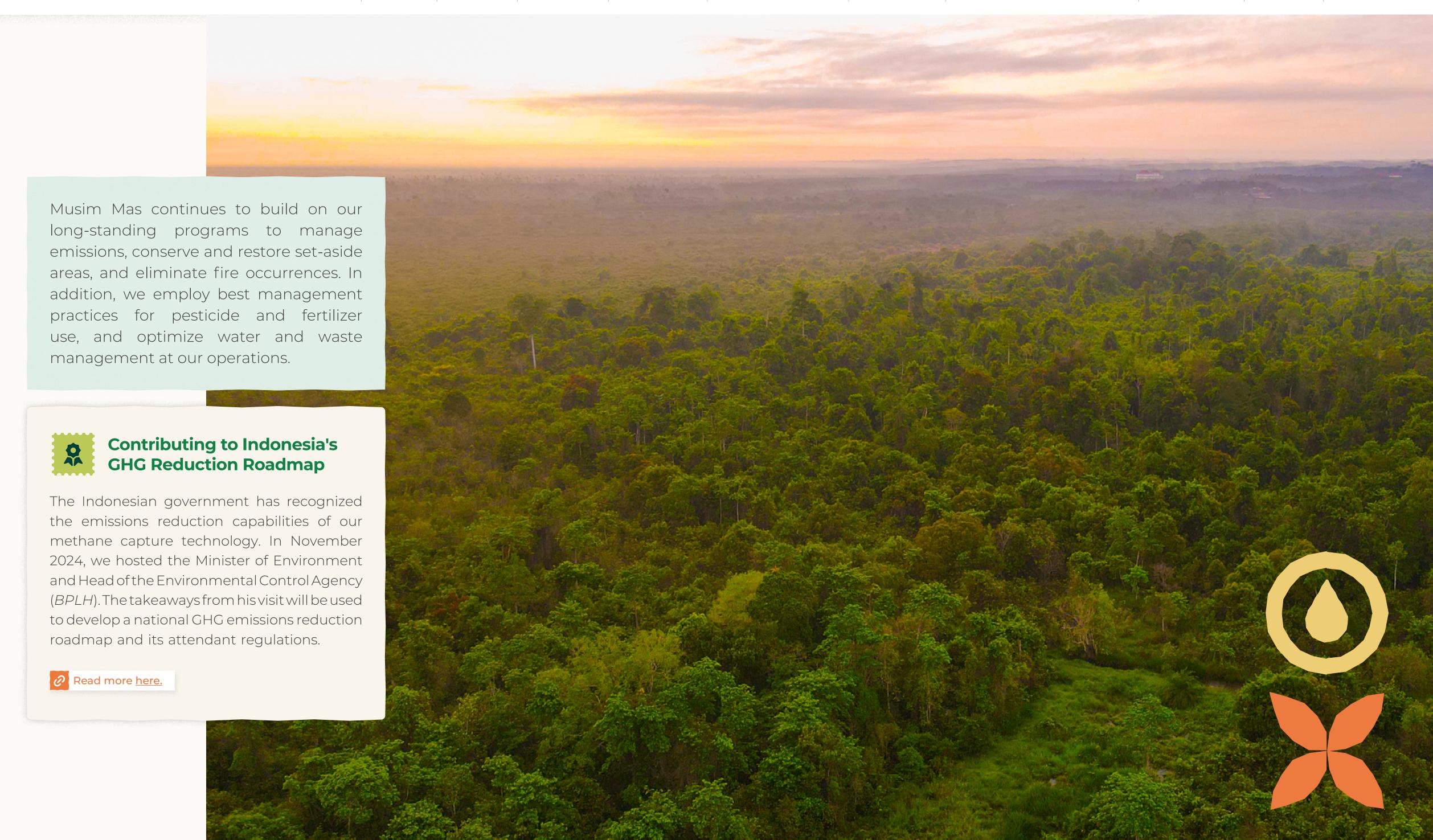
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# **Climate Action**

### [GRI 2-23, 2-24, 3-3]

We firmly believe that transitioning to a low-carbon future generates new business opportunities, such as meeting the growing demand for low-carbon products and developing climateresilient palm variants. For this reason, we continue to invest in decarbonization initiatives, including the installation of methane capture technology that began in 2010. Additionally, we have embraced renewable energy sources, notably by recycling palm kernel shells and installing solar photovoltaic panels. We continue to advance our restoration and rehabilitation projects at our conservation areas and have optimized our day-to-day practices to uphold our no deforestation and no peat planting commitments.

Furthermore, we engage with suppliers on our No Deforestation, No Peat, and greenhouse gas (GHG) inventory initiatives initiative (SBTi) standards. to minimize carbon emissions in our

supply chain. The resulting targets are outlined in our <u>Biodiversity and Climate</u> Resiliency Action Plan. They are part of our commitment to sector-level value chain action under the COP27<sup>15</sup> Agriculture Sector Roadmap to 1.5°C.

Over the years, we have tracked and reported on the GHG emission intensity at our upstream operations. Our initial goal was to achieve a 55% reduction by 2025 against our 2006 baseline. We are pleased to report that we have achieved this target two years ahead of schedule. Our initial target exceeded palm oil industry standards at the time, and we are raising the bar again by adopting more stringent science-backed Grouplevel emissions and targets in line with global low-carbon emission goals and international frameworks, such as the No Exploitation (NDPE) policies and our GHG Protocol and Science Based Targets

### **Committed to SBTi**

Most recently, we adopted a science-based approach to our GHG emissions targets goal of limiting global warming to 1.5°C above pre-industrial levels. Following extensive preparatory work, we have set our net-zero emissions targets and are proud to have had our ambitious

near- and long-term reduction targets validated by the SBTi in October 2024. As in alignment with the Paris Agreement's a result, our targets comply with the SBTi Corporate Net-Zero Standard and the SBTi Forest, Land, and Agriculture Guidance (FLAG). Using 2021 as the Group's baseline year, Musim Mas has committed to the following:

Category	Near-Term 2030 Targets	Net-Zero 2050 Targets
Non-FLAG (Energy and Industry)	Reduce absolute Scope 1, 2, and 3 GHG emissions by 42% by 2030	Reduce absolute Scope 1, 2, and 3 GHG emissions by 90% by 2050
FLAG	Reduce absolute Scope 1 and 3 FLAG GHG emissions by 30.3% by 2030	Reduce absolute Scope 1 and 3 FLAG GHG emissions by 72% by 2050

- · Energy and industry target boundaries include land-related emissions and removals from bioenergy feedstock.
- · FLAG targets include emissions and removals.

Our SBTi-validated targets apply to the Group's operations including upstream, midstream, and downstream operations. Additionally, the new SBTi targets will supersede our previous 55% GHG emission intensity upstream target.

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# **GHG Emissions Overview**



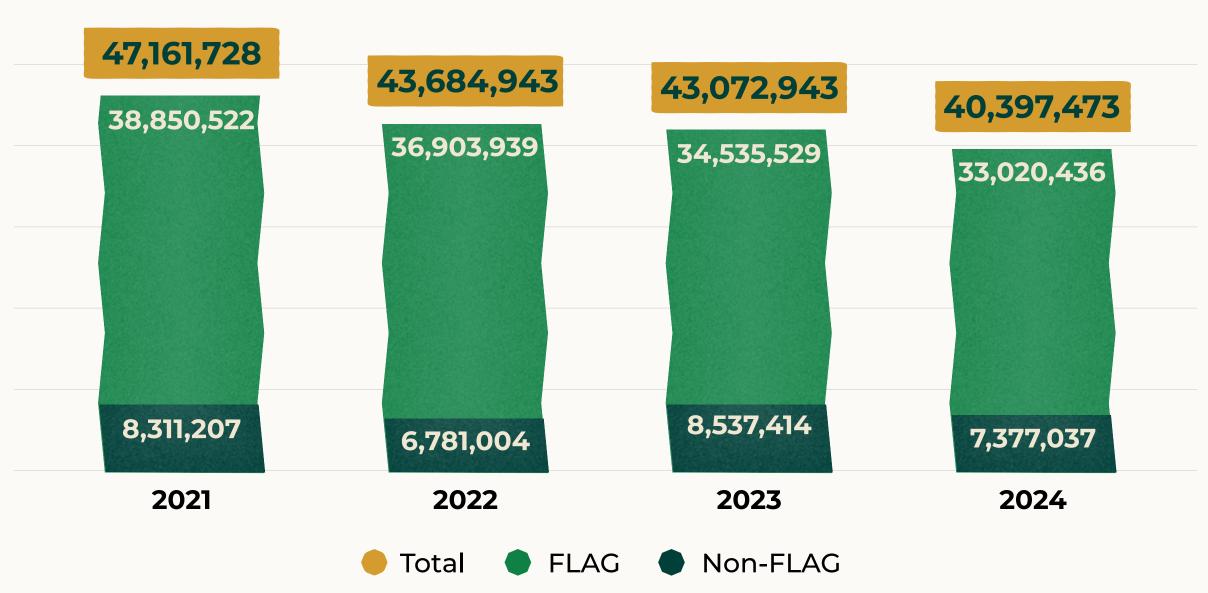
[GRI 305-1, 305-2, 305-3, 305-5, 13.1.2, 13.1.4] [SASB FB-AG-110a.1]

# **Group Absolute Emissions**

We adopt the GHG Protocol to report our Scope 1, Scope 2, and Scope 3 emissions, and use the draft Land Sector and Removals Guidance until it is finalized in 2025. We also categorize our emissions as Forest, Land and Agriculture (FLAG) and non-FLAG sector emissions per the SBTi's FLAG Guidance. In 2024, our total

absolute emissions were 40,397,473 tonnes of carbon dioxide equivalent (mtCO<sub>2</sub>e). Of these, 81.7% comprised FLAG emissions while 18.3% were made up of non-FLAG emissions. Our total emissions have decreased over time, mainly due to a fluctuation in purchased raw materials from our suppliers.





### **Emission sources**

Of our total emissions, 10.1% are Scope 1, or direct emissions, caused by activities under our control. In comparison, 1.1% are Scope 2, or indirect emissions, generated by electricity and steam purchased from third parties, among others. The remaining 88.8% are Scope 3 emissions, stemming from activities in our value chain.

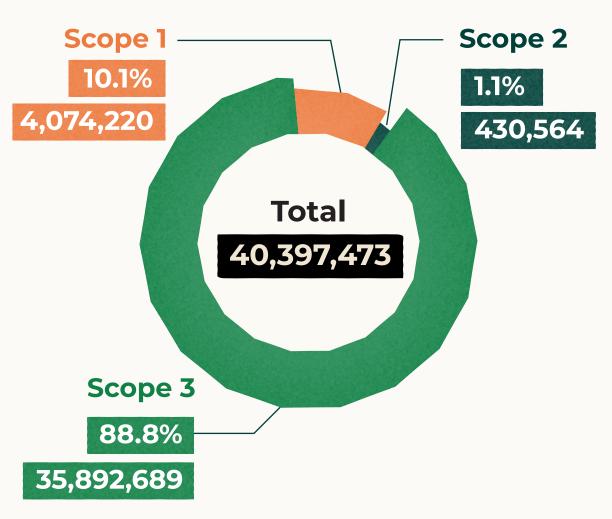
Due to the energy-intensive nature of our processing facilities, our midstream and downstream operations are the most significant contributors to the Group's Scope 1 and Scope 2 emissions, amounting to 60.4%. Our upstream operations contribute a further 37.1%, with other noncore business operations generating the remaining 2.5%.

Land-use change (land conversion and peat oxidation) is the largest contributor to emissions in both our upstream operations and supply chain. In 2024, land-use change generated 1,517,625 MT CO<sub>2</sub>e of emissions at our operations and 28,463,855 MT CO<sub>2</sub>e at our suppliers' operations. We follow international GHG accounting guidelines such as the Intergovernmental Panel for Climate Change (IPCC), GHG Protocol (i.e. Land Sector and Removals Guidance (LSRG)) to calculate land-use emissions.

The biggest contributor to our value chain emissions is third-party purchased goods and services. Accounting for 92.9% of our total Scope 3 emissions, it is the primary focus of our supply chain decarbonization efforts.

We separately calculate biogenic emissions - emissions from natural biological sources - as part of our GHG inventory, following the GHG Protocol Agricultural Guidance.

### 2024 Group Absolute Emissions by Scope (MT CO<sub>2</sub>e)



### **Notes:**

Scope 1, Scope 2, and Scope 3 emissions are defined according to the GHG Protocol.

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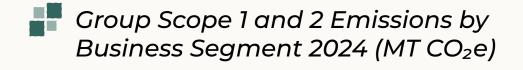
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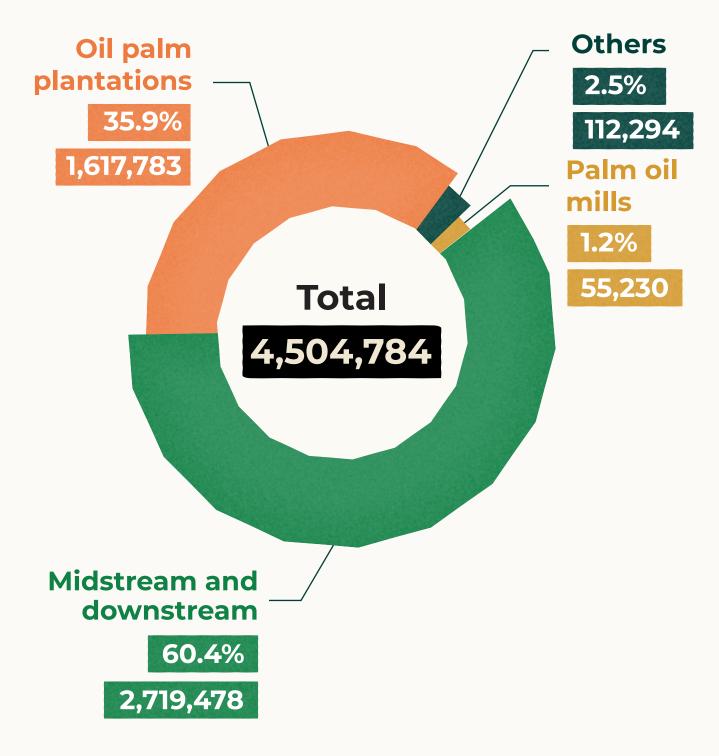
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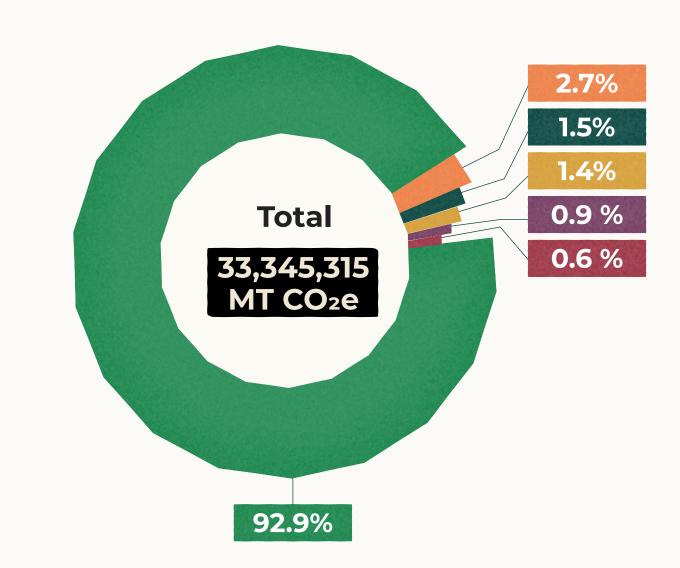




### **Notes:**

- 1. 'Others' includes warehouses, logistics, and offices.
- 2. Scope 1 and Scope 2 emissions are defined according to the <a href="GHG Protocol">GHG Protocol</a>.



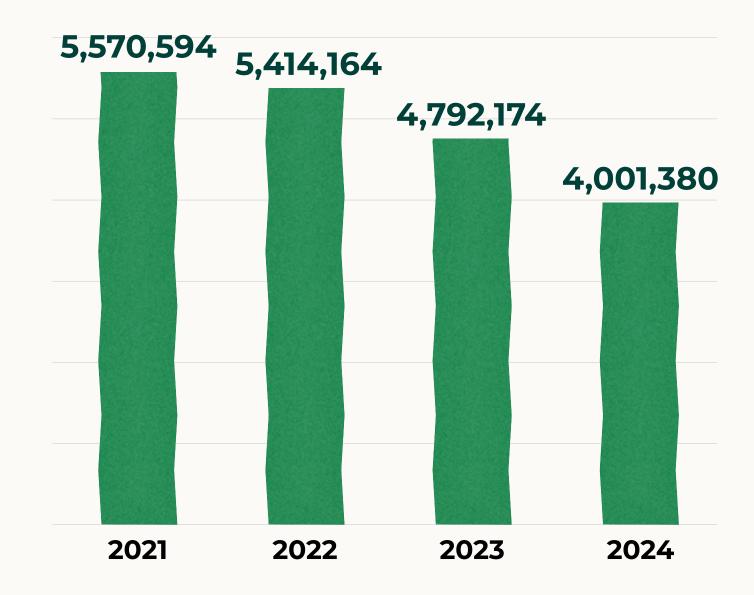


- Cat 01. Purchased goods & services
- Cat 10. Processing of sold products
- Cat 03. Fuel-and-energy-related activities
- Cat 04. Upstream transportation and distribution
- Cat 09. Downstream transportation and distribution
- Cat 05. Waste generated in operations

### **Notes:**

- 1. Scope 3 emissions are defined according to the GHG Protocol.
- 2. Reported data is based on our <u>CDP Climate Change 2024 submission</u>, which covers our previous reporting cycle (FY 2023).





**Note:** We calculate biogenic emissions using the GHG Protocol Agricultural Guidance.

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# **Setting the Foundation for Net-Zero Reporting**

This report is the first time we are reporting on our SBTi non-FLAG (Energy and Industry) and FLAG targets. We are pleased to see that our 2024 emissions were 11% lower than our 2021 baseline, and that overall Group FLAG emissions have steadily decreased over the years. We recognize our targets are ambitious and are currently developing detailed strategies to realize our goals.

# **Emissions Reduction Initiatives**

### **\* Methane Captures**

One of our significant sources of upstream emissions is the methane generated from the treatment of palm oil mill effluent (POME). Methane capture facilities, therefore, remain a key approach to reducing our upstream emissions. Besides lowering our Scope 1 emissions by capturing methane, our biogas plants have reduced our consumption of purchased electricity from the grid. As a result, our 17 methane capture facilities avoided 490,885 MT CO<sub>2</sub>e of emissions in 2024.

### **Developing Our Net-Zero** Roadmap

At the time of this report's publication, we are finalizing our net-zero roadmap.16 This blueprint will comprise the following scopespecific actions across our value chain:

FLAG emissions: Forest and peatland rehabilitation, good agricultural practices, peatland management, NDPE compliance, and the adoption of high-yield seed varieties.

Non-FLAG emissions: Methane capture and use of biomass for energy, solar photovoltaic panels, and purchase of renewable energy certificates (RECs).

A dedicated Net-Zero Task Force has been established to lead the Group's climate action programs. Its roles and responsibilities include identifying emissions reduction levers and overseeing their implementation to achieve our Net-Zero SBTi targets.

We will provide more information about emissions reduction interventions and levers, alongside our finalized roadmap, in our next sustainability report.



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### 🜟 Value Chain Engagement and **Partnerships**

Because most of our raw materials. As the global push towards decarbonization are purchased from third parties, we are making substantial investments in supply chain engagement. These investments are also central to meeting our SBTi-validated targets. In 2024, we added GHG-related data collection to the Musim Mas supplier Self-Assessment Tool (SAT) and have engaged a thirdparty consultant to develop a supplier engagement strategy and roadmap addressing Scope 3 emissions. We also hosted six supplier workshops on emissions management: three for Indonesian suppliers and three for suppliers from other sourcing regions.

Musim Mas has also shared our GHG emissions calculation results with relevant internal and external stakeholders through initiatives like an annual town hall attended by Musim Mas customers and banks.

### Life Cycle Assessment and **Product Carbon Footprint**

gains momentum, customers are understand and mitigate indirect (Scope the ISO 14040:2006 and ISO 14044:2006 frameworks for our downstream products. These comprehensive cradle-to-gate assessments covered our entire production cycle, from cultivating FFB at our plantations to manufacturing of the final product.

Our LCA assessments complement our PCF calculations, allowing us to uphold our sustainability commitments while meeting the increasingly stringent requirements of our customers for a wide range of palm-oil derivative products. To ensure compliance to the highest standards, we have two inhouse GHG specialists who received BNSP (Badan Nasional Sertifikasi Profesi) LCA certification.

### **\*** Meeting New Standards

We are cognizant of evolving climate reporting requirements. As a large private company in Singapore, we will adopt ISSB increasingly requiring life cycle climate-related disclosure standards (IFRS assessments (LCAs) and product carbon Sustainability Standards S2 on climate footprint (PCF) evaluations to better and climate-related IFRS S1 standards) as our reporting framework starting in 3) emissions in their supply chains. Musim FY 2027. To complement the adoption Mas has completed LCAs adhering to of these new standards, we will continue to build on our current disclosure methodology, which is aligned with the TCFD recommendations.

> For a comprehensive overview of our climaterelated governance, risk management approach, and strategies, including metrics and targets, see: Supporting Climate Disclosure

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# Climate Resilience and Mitigation

### [GRI 201-2, 13.2.2] [SASB FB-AG-110a.2, FB-AG-440a.1

In anticipation of future reporting needs and in preparation for climate resiliency and mitigation strategies at our upstream operations, Musim Mas began assessing climate-related financial risks and their impact on our business.

We conducted a preliminary study in 2023 to identify potential climate-related impacts and mitigation measures at our operations. (See <u>Appendix</u> for our Taskforce on Climate-related Financial Disclosure (TCFD) based on this assessment).

We then conducted a climate risk scenario analysis assessment in 2024–2025 with the assistance of an independent consultant. This exercise helped identify priorities and focus areas for developing our wider climate resiliency and mitigation strategy, which we expect to complete by 2026. It was a critical first step towards mapping our climate risk impact pathways and aligning our approach with the growing industry demand for climate reporting.

# 2024-2025 Climate Scenario Analysis

Our climate risk scenario analysis evaluated the medium-term (2030) and long-term (2050) impacts of global temperature increases on our business, including:

- Climate-related physical risks which can adversely impact our crop yields and disrupt our operations, leading to higher costs and reduced revenues
- Transitional risks which may lead to higher operational costs and increased demand for sustainable practices.

This pilot analysis evaluated our upstream and downstream activities in Sumatra, including a selection of our plantations and mills. Its scope also included a complex comprising a refinery, an oleochemicals plant, and a specialty fats plant. We chose this approach and these facilities because they represent a cross-section of our operations.

The consultant used 2023 as a baseline to assess our climate impacts against three Paris-aligned scenarios. The first scenario projects a global temperature increase of up to 1.5°C due to concerted international efforts. The second and third are business-as-usual (BAU) scenarios that project an increase of over 3°C.<sup>17</sup>

# **X** Qualitative Assessment

We conducted a qualitative assessment to identify relevant risks and assess their significance based on their severity and likelihood, alongside our operations' exposure and vulnerability to them.

We began by interviewing key internal stakeholders in collaboration with our consultant. We then analyzed market research, internal studies, and academic publications from credible third-party sources such as the Intergovernmental Panel on Climate Change (IPCC). The tables below summarize our findings and the potential outcomes.

Paris-aligned scenarios are projections that are consistent with the Paris Agreement's goals, which aim to restrict global warming to well below 2°C through efforts to limit it to 1.5°C above pre-industrial levels. Our analysis used the following Paris-aligned scenarios: the International Energy Agency's (IEA) Net Zero Emissions by 2050 scenario and the Representative Concentration Pathway (RCP) 2.6. The BAU scenarios used were the International Energy Agency's (IEA) Stated Policies Scenario (STEPS) and RCP 8.5.

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### Climate-Related Physical Risks

Physical Risks	Risk Description	Risk Category	Implications for Musim Mas	Time Horizons	Mitigation Measures
Pest and Diseases	Temperature and precipitation changes may affect the spread of fungal diseases (e.g., basal stem rot) that may impact oil palm yields.	Chronic	<ul> <li>Increased pest management costs</li> <li>Fungal diseases decrease overall yields, resulting in lost profits</li> </ul>	Long Term	Musim Mas plantations has been implementing early detection, regular monitoring, and prompt treatments that effectively detect potential pest and diseases outbreaks.  For more information, see <a href="Reducing Pesticide Use">Reducing Pesticide Use</a> .
Storms	Climate change may increase the severity and frequency of extreme tropical cyclones, creating strong winds and heavy rainfall inland.	Acute	<ul> <li>Tropical cyclones can cause floods that disrupt operations and increase costs (e.g., by disrupting the fertilizer application schedule)</li> <li>Increased disruption of operations and potential loss of revenue</li> <li>Increased worker safety risks</li> </ul>	Long Term	Musim Mas has already implemented forecasting measures to monitor tropical storms and monsoons impacting our plantation operations and the shipment of goods. At the same time, we constructed gray infrastructure, including embankments, to help mitigate damage from cyclones.  Musim Mas has formed an Emergency Response Team to mitigate and minimize worker safety risks. Musim Mas conducts annual trainings on Best Management Practices and Safety for all workers to raise awareness of potential risks.
Floods	Heavy rains may lead to rivers overflowing and flash flooding that disrupt fresh fruit bunches (FFB) collection and damage infrastructure.	Acute	<ul> <li>Increased repair and maintenance costs</li> <li>Capital costs from flood mitigation and adaptation efforts (e.g., floods may disrupt FFB transportation routes)</li> <li>Increased climate-related insurance costs</li> </ul>	Medium to Long Term	Musim Mas has implemented flood mitigation and adaptation measures, including building bund embankments with flap-gates along riparian zones and installing water pumps.
Fires	Rising average temperatures and longer drought seasons increase the risk of fires that may damage oil palm plantations.	Acute	<ul> <li>Loss of revenue from the destruction of oil palms and increased replanting costs</li> <li>Lower yields</li> <li>Increased worker health and safety risks.</li> <li>Negative health impacts on surrounding communities</li> </ul>	Medium to Long Term	Musim Mas has implemented community engagement programs (e.g., the Fire Free Village Program) and mitigation measures (e.g., building water ponds and fire breaks, monitoring satellite data, and installing fire watch towers) to prevent wildfires in concession areas.  For more information, see Monitoring and Managing Fires.

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Physical Risks	Risk Description	Risk Category	Implications for Musim Mas	Time Horizons	Mitigation Measures
Droughts	Droughts are expected to increase in frequency and intensity, including droughts caused by El Niño events, impacting FFB yields.	Acute	<ul> <li>Decrease in revenues due to lower production capacity caused by water scarcity</li> <li>Decrease in revenues from lower FFB yields</li> </ul>	Medium to Long Term	We have adopted comprehensive measures to preserve surface water and groundwater quality. We monitor water-related risks through the World Resources Institute's Aqueduct tool and are mindful to not locate our upstream operations in water-stressed areas.
Rising temperatures & heatwaves	Projected rises in average temperatures and heatwave frequency can pose health risks to plantation workers, reducing labour efficiency and increasing the risk of heat-related illnesses.	Chronic	Increased operating costs (energy and labour)	Long Term	We have implemented a range of OSH measures to protect workers from heat-related illness and injuries by mandating breaks during periods of high temperatures.

### **Climate-Related Transition Risks**

Transition Risks	Risk Description	Risk Category	Potential Impacts	Time Horizons	Mitigation Measures
Climate or Forestry Regulation	Climate-related regulations such as the EU Deforestation Regulation (EUDR) will require palm oil companies to supply deforestation-free products and ensure supply chain traceability.  Specifically, the EUDR requires companies to comply with local environmental, human rights, land use, and labour laws. Sanctions include fines and the confiscation of products found to have breached EUDR requirements.		<ul> <li>Increased compliance and legal costs</li> <li>Potential revenue loss from instances of non-compliance</li> </ul>	Medium Term	We have implemented our Sustainability Policy since 2014 (and revised it in 2020), and have launched EUDR compliance initiatives. For example, our NDPE and sustainability policies include commitments to No Deforestation and traceability to plantation, among others. We have achieved 98% traceability to plantation, as independently verified by Control Union. We have developed and independently verified a procedure to ensure compliance with EUDR requirements.  For more information, see <u>Staying abreast of the changing regulatory landscape</u> .
Co <sub>2</sub> S S S Carbon Pricing Mechanisms	Countries where we operate already have or are planning to implement carbon pricing mechanisms. These include Indonesia's recently introduced carbon offsetting and cap and trade measures.	Regulatory	<ul> <li>Increased operating and procurement costsas a result of national regulation on carbon pricing mechanisms</li> </ul>	Medium to Long Term	We are committed to reducing our GHG emissions by setting ambitious targets aligned with the SBTi. We have installed methane capture facilities for the treatment of palm oil mill effluent, significantly reducing our dependence on external electricity at our upstream operations. We are exploring renewable energy alternatives for our midstream and downstream operations.  For more information, see <a href="mailto:Croup Absolute Emissions">Croup Absolute Emissions</a> .

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Transition Risks	Risk Description	Risk Category	Potential Impacts	Time Horizons	Mitigation Measures
Shift in Customer Preferences Towards Palm Alternatives	Consumer scrutiny of the potentially negative impacts of palm oil cultivation may lead to a shift towards palm oil substitutes and alternatives.	Market	<ul> <li>Reduced revenues from traditional palm oil products</li> </ul>		While the risk of palm oil alternatives to our business remains low, we recognize the increasing consumer preference for sustainable palm oil. As a result, Musim Mas was the first Indonesian company to join the Roundtable on Sustainable Palm Oil (RSPO) when it was established.
Development of Lab-Grown Palm Alternatives	Development of lab-grown palm oil alternatives, including through precision fermentation, may create an alternative to traditional palm oil. However, developments are still limited.	Technology	Decreased operating revenue due to loss in market share	Long Term	As of December 2023, more than 85% of our total managed area is RSPO-certified, and all our upstream entities have achieved Indonesian Sustainable Palm Oil (ISPO) certification since August 2023.  For more information, see Certification and Compliance.  Musim Mas is monitoring various research efforts on labgrown palm oil alternatives and how they can potentially affect or support the business.
Long-Term Peatland Use	Increasing stakeholder pressure to rehabilitate used peatlands may result in additional costs.	Policy	· Increased compliance and rehabilitation costs	Medium Term	Musim Mas employs best practices that align with RSPO guidelines and local regulations for managing peatlands and fragile soils.  For more information, see Conservation and Restoration.

### **Climate-Related Transition Opportunities**

Transition Opportunities	Opportunity Description	Opportunity Category	Potential Impacts	Time Horizons
Increased Use of Precision Agriculture	Precision agriculture can reduce excess waste and fuel use while maximizing crop yields.	Technology	<ul> <li>Increased revenues and material output due to improved agricultural productivity</li> <li>Reduced soil degradation</li> </ul>	Medium to Long Term
Increased Use of Renewable Energy	Using renewable energy sources, including on-site solar and biomass, as well as renewable energy certificates (RECs), as fossil fuel substitutes.	Technology	Decreased carbon-related costs when regulatory pricing is in place	Long Term

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### **Climate-Related Transition Opportunities**

Transition Opportunities	Opportunity Description	Opportunity Category	Potential Impacts	Time Horizons	
Use of Technology- Assisted Production Tools	Increased use of automation and technology-assisted tools, including AI, to help improve agricultural productivity and efficiency.	Technology	<ul> <li>Increased revenues and material output from higher agricultural productivity and efficiency</li> </ul>	Medium to Long Term	
(**)	The recent release of the Musim Mas GS Series oil palm seed varieties highlights the potential for higher FFB yields against the	Technology	<ul> <li>Reduced environmental impacts of climate-related events on plantations</li> </ul>	Medium	
Development of Climate-Resilient Palm Variants	backdrop of rising temperatures and harsher growing conditions.		· Increased revenues from higher FFB yields	Term	
			<ul> <li>New revenue streams from the sale of climate- resilient variants</li> </ul>		

### **X** Quantitative Assessment

analysis, Musim Mas also undertook a quantification assessment to analyze the potential financial impacts of the landscapes. Additionally, the results of efforts. identified risks and opportunities on our the quantification analysis will inform business operations, examining risks for which sufficient and reasonably accurate data projections were available. The and droughts.

### Next Steps

our actions as we gradually adopt IFRS reporting.

process enabled us to identify the most While the identified risks and opportunities urgent risks and prioritize our strategic are a fair reflection of our business model, efforts. Our top identified risks were floods their impacts are not forecasts but possible changes to industry climate action is still evolving and cannot account for regulations. all uncertainties and assumptions, such as future technological and regulatory

Building on our qualitative scenario. We hope to expand the scope of our developments. Consequently, we are analyses beyond Sumatra to explore unable to accurately establish the full effective mitigation efforts in other extent of our current and future mitigation

> Despite these uncertainties, we are committed to our net-zero goals. We will tackle the challenges ahead by anticipating advances in climate science, evolving partnership opportunities, outcomes. Our climate scenario analysis platforms, and developments in carbon

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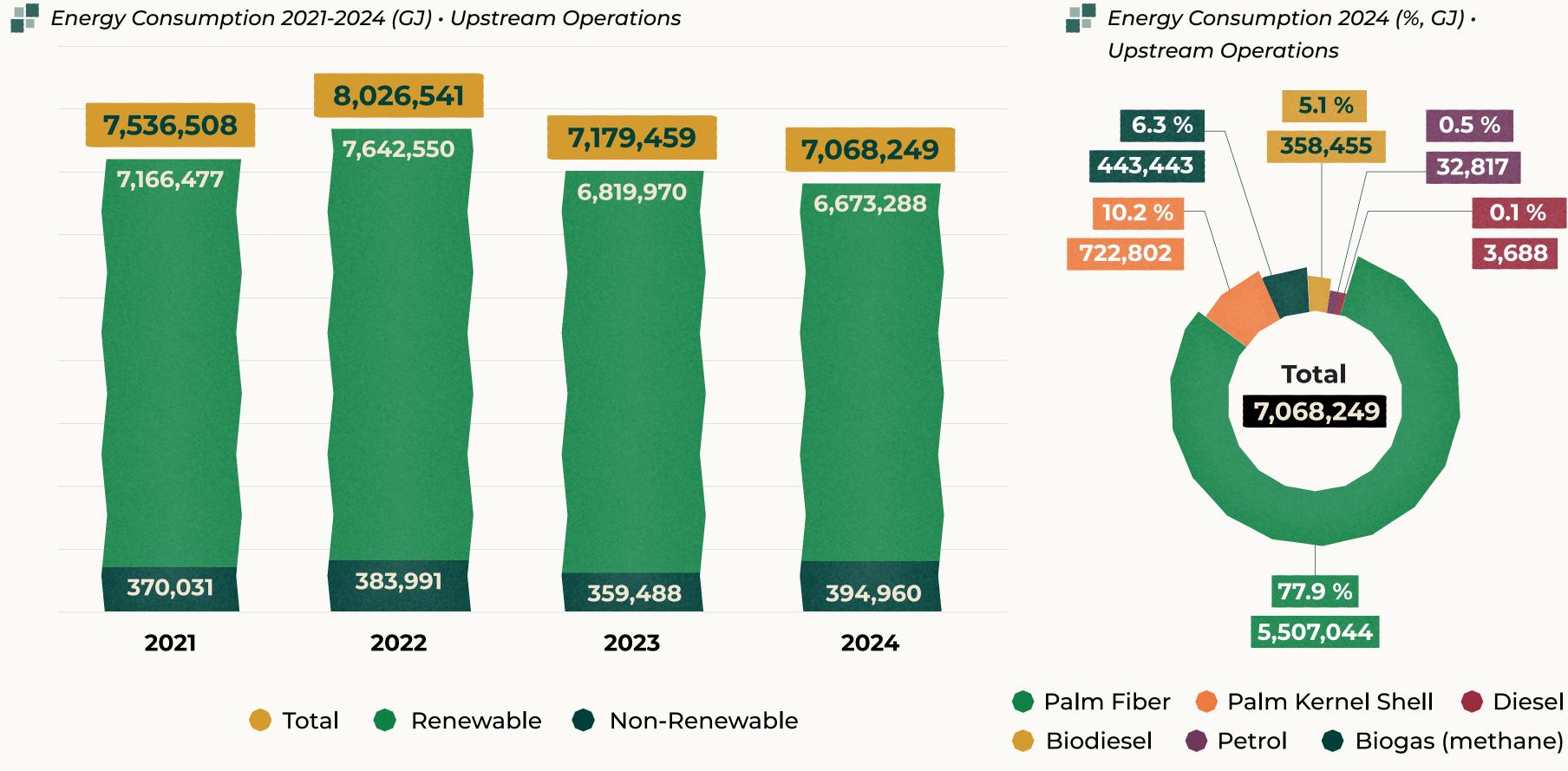
# **Energy Management**

[GRI 3-3, 302-1, 302-3] [SASB FB-AG-130a.1]

use of renewable energy and improve efficiencies across our upstream operations to minimize our overall energy consumption. More than 94% of our upstream energy is derived from renewable sources, primarily milling process byproducts such as palm fiber (from empty fruit bunches and fruitlet fibers) and palm kernel shell used as boiler fuel at our mills. Additionally, our methane capture facilities convert methane gas from POME into electricity. Biodiesel makes up 5.1% of our total energy usage, while other non-renewable sources, such as diesel and petrol, contribute around 0.5%. In 2024, we transitioned from B30 biodiesel, which we categorize as nonrenewable, to B35 biodiesel.

Musim Mas continues to promote the In 2024, our upstream energy consumption was approximately 7.07 million GJ, similar to 2023 levels. Our energy intensity decreased from 7.53 GJ per tonne of CPO/PK produced in 2023 to 7.45, due to the increased volume of FFB processed.

At the same time, we export surplus renewable electricity generated by our methane capture facilities to the national grid, totaling 33.8 million kilowatt hours (kWh) in 2024.



Note: 2021, 2022, and 2023 energy consumption data have been restated due to a change in the reporting approach for biogas energy.

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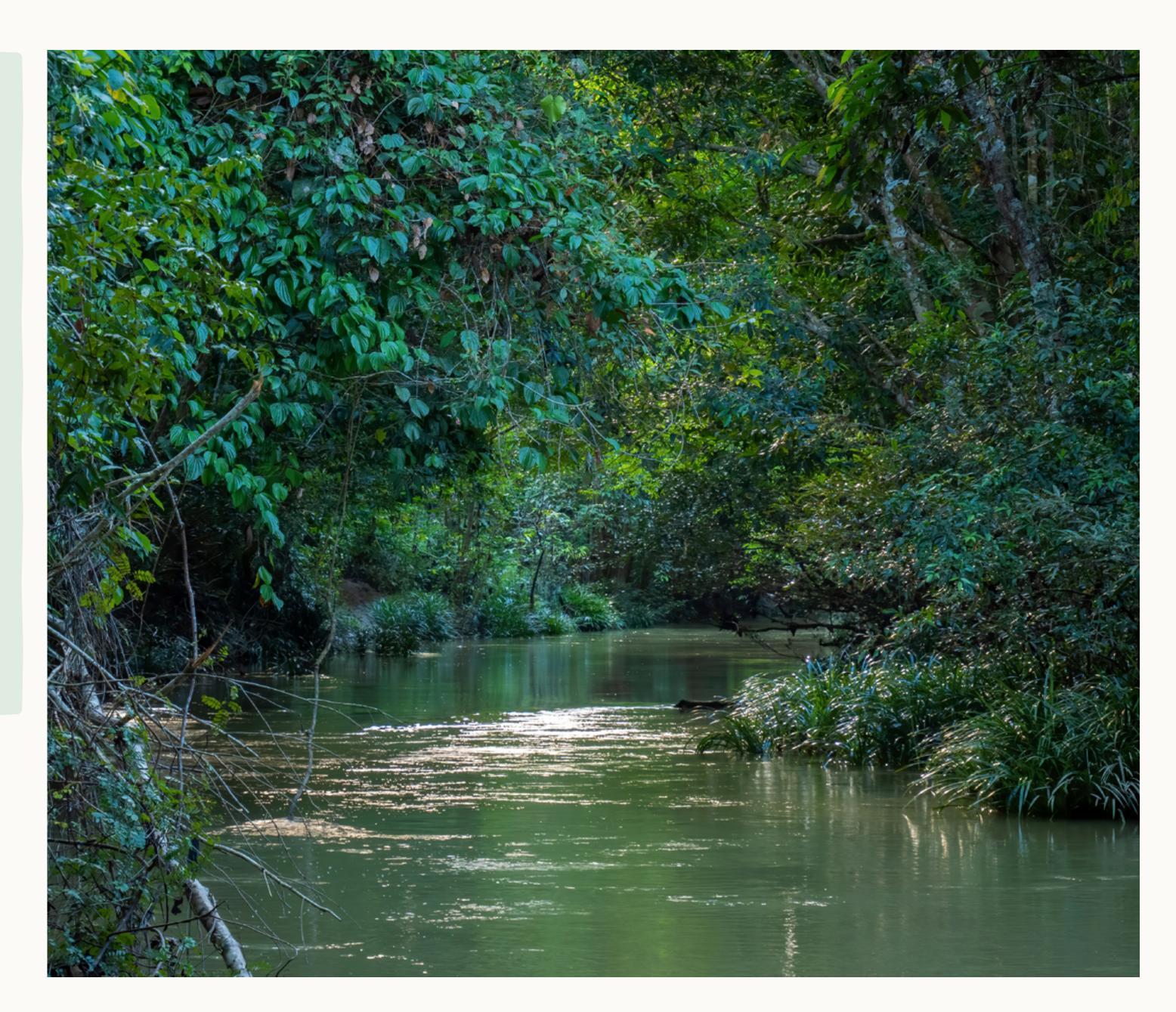
### **Using Solar Energy to Power Our Operations**

As part of our commitment to reducing carbon emissions and transitioning to net-zero, Musim Mas is trialing a rooftop solar photovoltaic (PV) panel system at one of our facilities. This initiative aligns with our broader strategy to explore alternative green energy sources and support environmental protection efforts.

We installed the first phase of our solar facilities in December 2023. Phases 2 and 3 were completed simultaneously in August 2024, creating a total installed capacity of 1.1 megawatt-peak (MwP) at the site. The rooftop solar PVs are connected to an on-grid system that is integrated with the local power network, supplying stable and reliable electricity.

Generating around 4% of the site's electricity needs, our solar panels are a tangible step forward in our journey toward Net Zero. This initiative underscores our commitment to sustainable energy and marks the start of broader efforts in our decarbonization journey. We estimate that the system reduces carbon emissions by approximately 1,191 tonnes of CO<sub>2</sub> equivalent per year.

In light of these and other successes, Musim Mas continues to explore opportunities to scale up renewable energy usage across our operations.



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# **Positive Environmental Impacts**



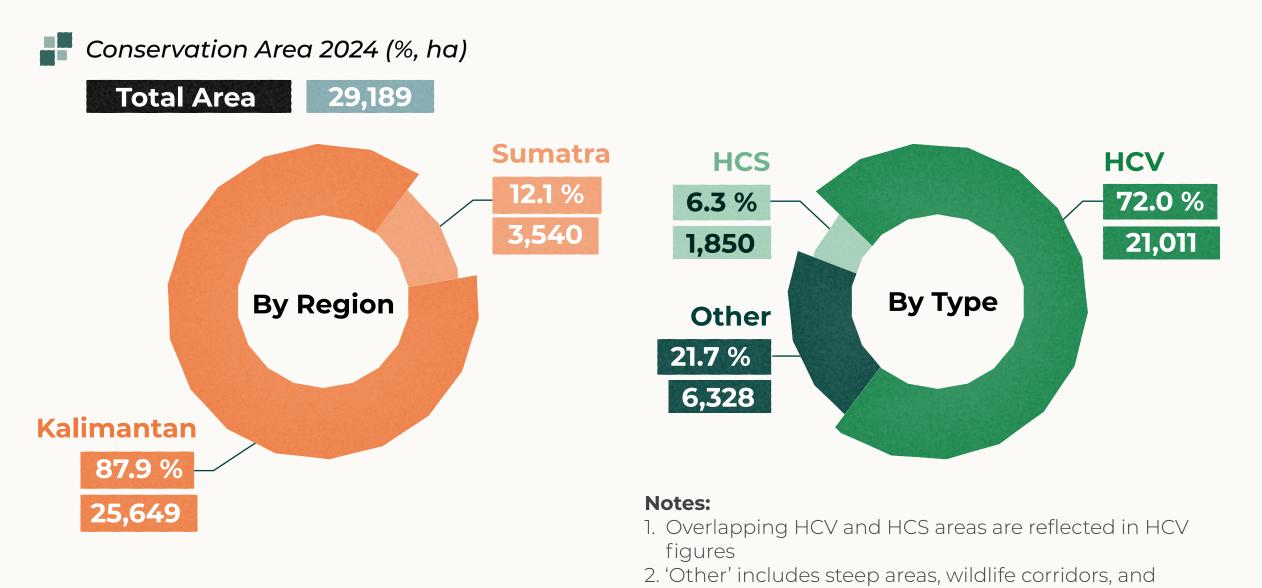
riparian buffer zones not identified by HCV and HCSA

[GRI 3-3, 101-1, 101-2, 304-3]

### **Conservation and Restoration**

Musim Mas complies with all relevant national and international standards and requirements on new development and the expansion of plantation areas. We are guided by our NDPE Roadmap and Biodiversity and Climate Resiliency Action Plan 2022. Additionally, we are committed to zero conversion of natural ecosystems within our operations, particularly in high conservation value (HCV) and high carbon stock (HCS) areas, and peatlands.

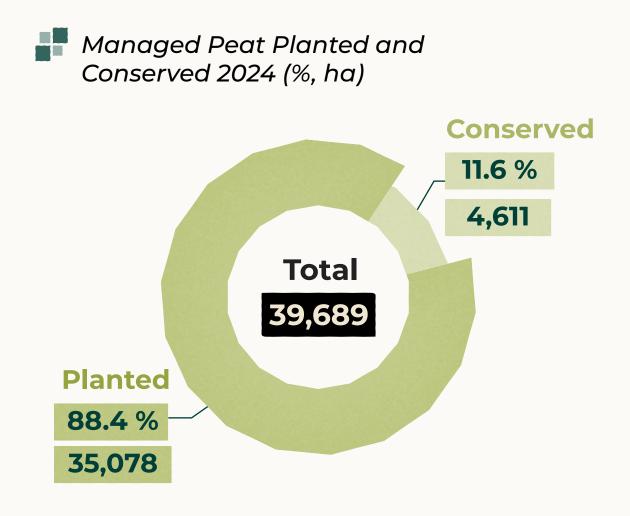
As of December 2024, we manage 29,189 hectares of conservation area, representing more than 14% of our titled land, including 4,611 hectares of conserved peat. Approximately 88% of our total conservation area is in Kalimantan, with the remaining 12% in Sumatra.



assessments.

Musim Mas has implemented dedicated strategies to manage, protect, and monitor conservation areas in our plantations and HCV/HCS areas in surrounding landscapes, as appropriate. Our conservation plans include regular ground controls to discourage hunting, and satellite monitoring to detect encroachment, fires, and land clearing. Additionally, we are endeavouring to restore natural ecosystems<sup>18</sup> in our management areas affected by fire, deforestation, conversion, and non-compliance, per our NDPE cut-off date.

We continue to optimize our HCV/HCS monitoring methods and employ best practices aligned with RSPO and legal requirements to manage peatlands and fragile soils, seeking expert advice as needed.



<sup>&</sup>lt;sup>18</sup> Natural ecosystems may include HCV/HCS areas.

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# **Protecting Biodiversity**

Through our Biodiversity and Climate Resiliency Action Plan, we are ramping up efforts to protect biodiversity, particularly rare, threatened, and endangered (RTE) species within our concession areas and the broader landscape. Our activities include restoring and rehabilitating riparian areas along nearby rivers and water bodies. Additionally, we have co-managed HCV areas beyond our immediate management and control in collaboration with local rights owners since 2008. These areas serve as important wildlife corridors that enhance connectivity for biodiversity.



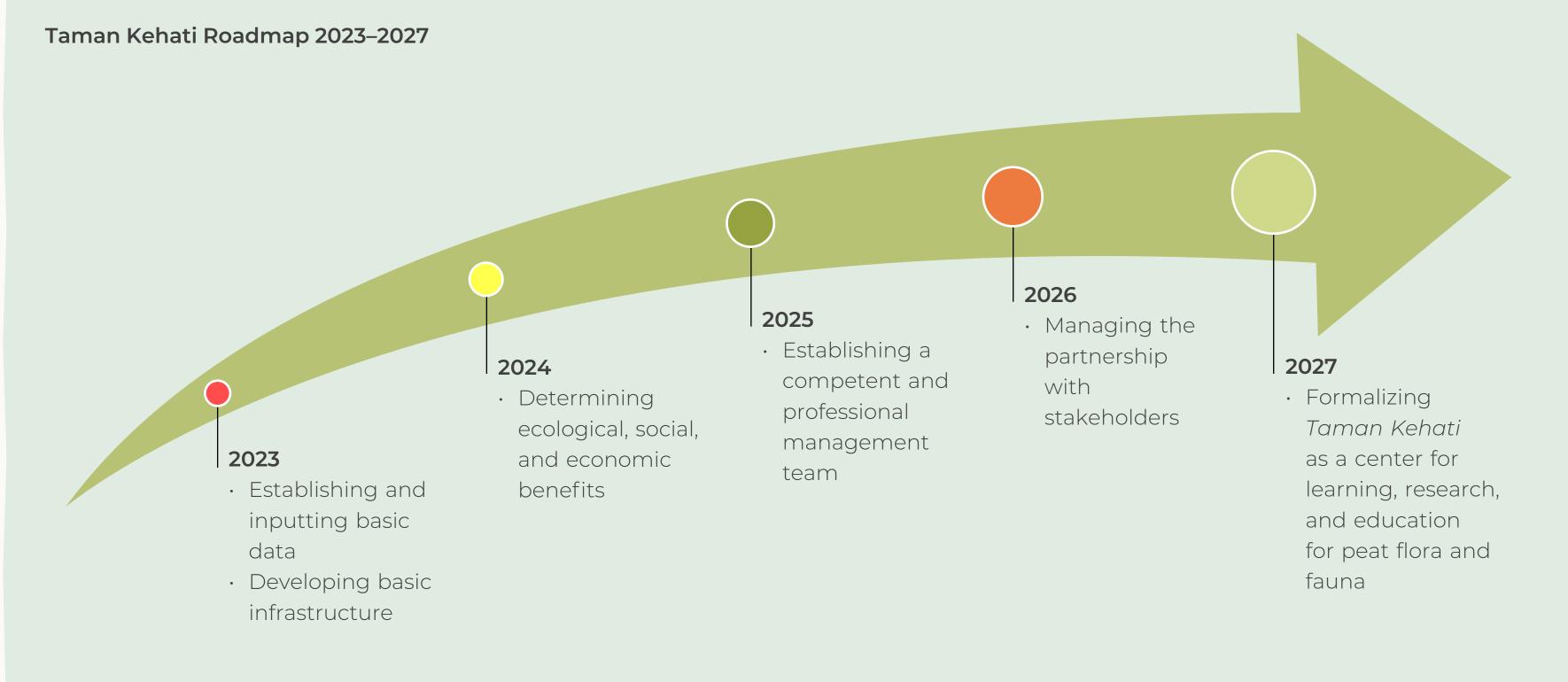
### **Taman Kehati**

In accordance with a 2022 government decree, Musim Mas has allocated 14.9 hectares at our Pelalawan estate to a Taman Kehati, a biodiversity park granted legal protection against encroachment.

Unlike most conservation set-asides, this initiative employs a sciencebased approach to developing a biodiversity management model and plan specific to oil palm landscapes, including site-specific conservation, preservation, and usage guidelines under a biodiversity park management plan.

Musim Mas will operate and maintain the park while the decree is in effect and has established a comprehensive roadmap outlining our plans until 2027. Our blueprint includes identifying and deploying the necessary resources to institute a learning and research center dedicated to studying and conserving the region's flora and fauna.

In 2023, we partnered with the University of Riau to develop a management plan for the area and to determine the technical aspects of rehabilitating local vegetation. This partnership concludes in June 2025. If successful, it will serve as a model for similar plans in other conservation areas.



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# **Elephant Flying Squad** at Tesso Nilo

Since 2006, Musim Mas has collaborated with the Tesso Nilo National Park Foundation (YTNTN), the Riau government, the Indonesian Nature Conservation Agency (Balai Konservasi Sumber Daya Alam, or BKSDA), and local communities to address human-elephant conflicts and support elephant conservation efforts in the local landscape. One of our core programs is the *Elephant Flying Squad*, where a group of elephant handlers use noise, lights, trained elephants, and other interventions to prevent wild elephants from crossing into agricultural and community plantation areas, and to safely herd them back to their habitat without causing injury. The Squad also conducts patrols and develops programs that reduce the risk of human-wildlife conflict and elephant fatalities.

YTNTN uses several human-wildlife conflict management best practices. Its main goal is to prevent aggressive confrontations between wild elephants and farmers, and to foster peaceful cohabitation. The team also grows natural foods that elephants prefer over human crops and patrols the area with specially-trained teams to mitigate humananimal conflicts. Additionally, the team cares for three tame elephants that can be mobilized as a last resort when human-wildlife conflicts occur.

In 2024, the Elephant Flying Squad successfully mitigated 58 human-elephant conflicts in the region.



How Human-Elephant Conflict Mitigation Empowers Women and Farmers for Sustainable Livelihoods



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# **Deforestation-Free Operations**



[GRI 101-2, 101-6, 13.4.1, 13.4.2, 13.4.4]

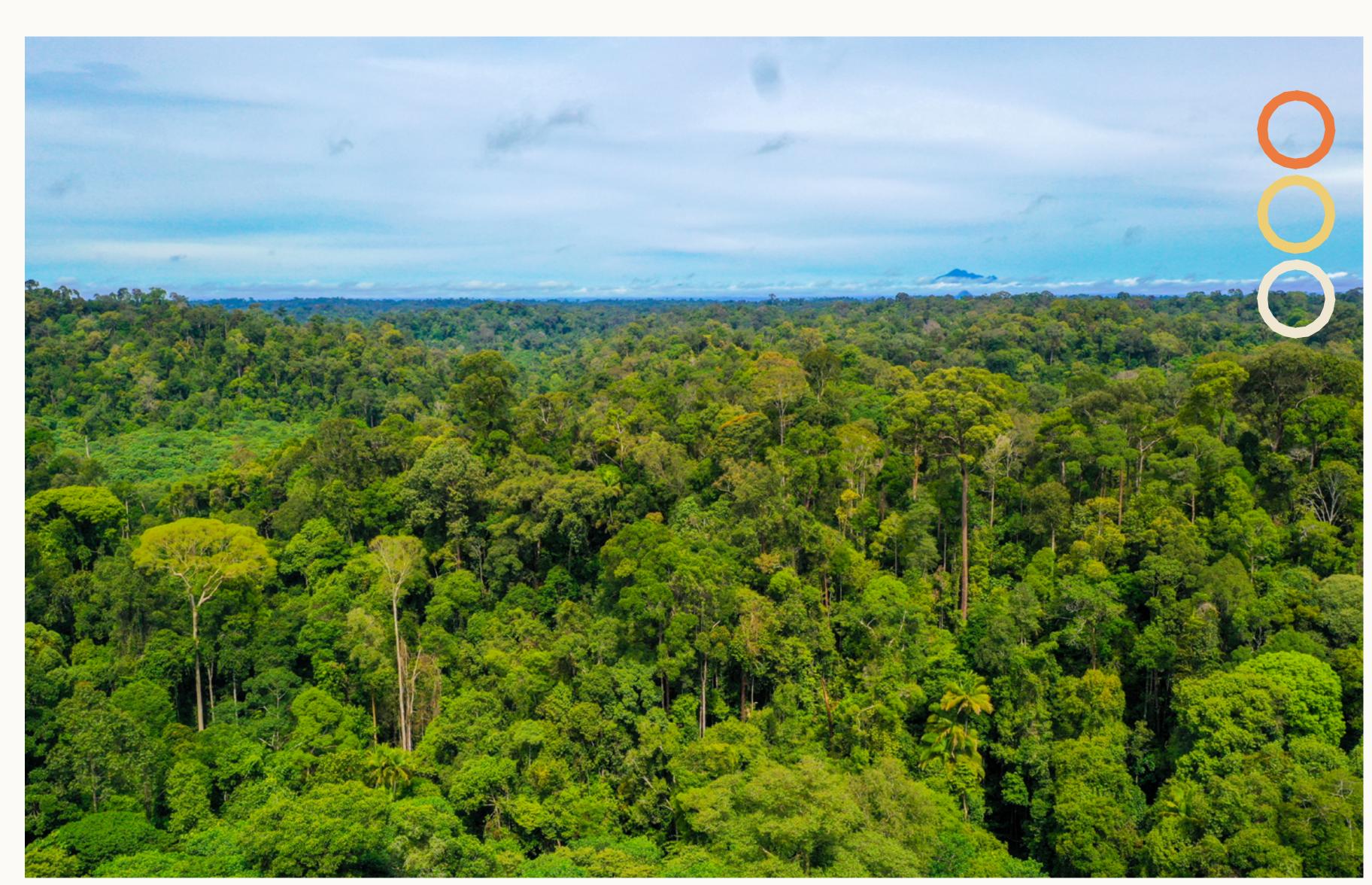
Musim Mas operations have remained 100% free of deforestation and ecosystem conversion since the cut-off date of 31 December 2015. All conservation areas are protected and monitored using methods that include on-the-ground patrols and satellite surveillance to detect encroachment and promptly intervene should it occur.

To ensure that our supply chain remains deforestation-free, we track and trace all sourced FFB to plantation and engage with our suppliers to ensure compliance with our No Deforestation and No Peat commitments. As an additional safeguard, we employ third-party monitoring services in forest areas within or near our suppliers' concessions.

Musim Mas is also committed to sourcing coconut from deforestation-free areas, as outlined in our <u>Sustainable Coconut</u> Sourcing Strategy.







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# **Monitoring and Managing Fires**

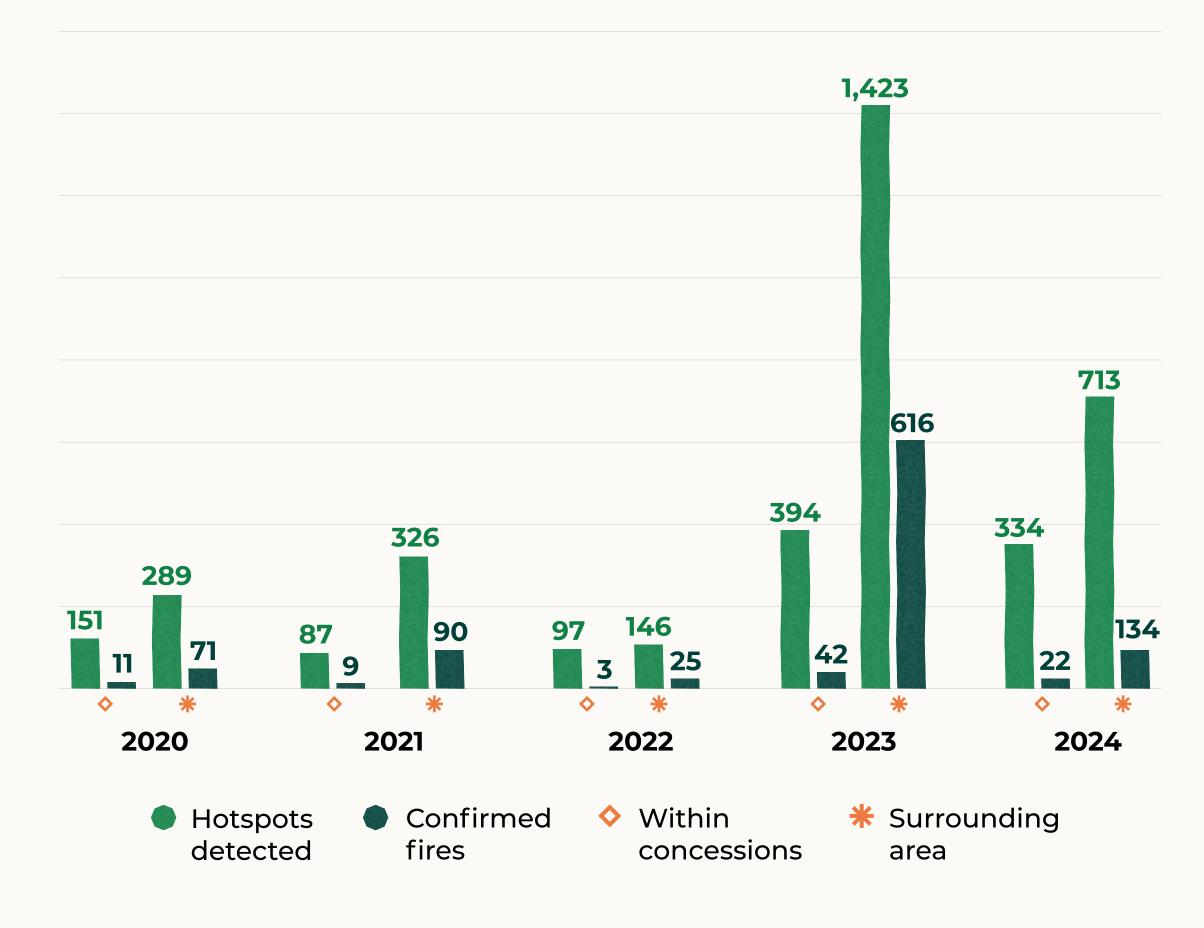
[GRI 2-23, 2-24, 3-3]

Musim Mas has enacted a strict no-burning policy, prohibiting fire use within the boundaries of our operations and those of our suppliers. We conduct regular forest checks using fire-monitoring towers and satellite surveillance to prevent and detect fires in our concessions and surrounding areas. Our proactive approach includes assessing weather forecasts, educating employees, workers, and local communities, constructing water ponds and firebreaks as containment measures, and maintaining rapid response teams to deal with hotspots in and around our operations.

In 2024, we identified 334 hotspots within our concessions. Of these, 22 were confirmed to be fires, resulting in 14.28 hectares of unplanted area in Kalimantan burning. We detected a further 713 hotspots in the areas surrounding our estates, of which 134 were confirmed fires, affecting approximately 300 hectares of land. There were substantially fewer fires in 2024 compared to 2023 – 20 fewer inside our operational boundaries and 482 fewer in surrounding areas. It should be noted







that 2023 saw higher global average temperatures and increased fire risks due to an El Niño weather event. This trend continued into 2024, and the number of fires was significantly higher than in the years 2020–2022.

Musim Mas extends aid beyond our concession borders to support broader community fire prevention and control efforts. Our Fire-Free Village Program or FFVP (Masyarakat Bebas Api – MBA) raises awareness about fire risks and encourages communities to adopt alternative, firefree land-clearing techniques. Through this initiative, we also provide educational resources, agricultural equipment, and incentives to communities that adopt firefree practices, including enhancements to infrastructure and services. Since its inception, we have launched the program in 76 villages, spanning over 498,500 hectares of land. In 2024, we conducted 140 training sessions and rewarded 33 villages for remaining fire-free.

See our video: Our Fire Prevention and Management
Efforts: Small Actions, Big Impact

Fire Prevention in the Era of "Global Boiling"

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### **Pesticides and Fertilizers**



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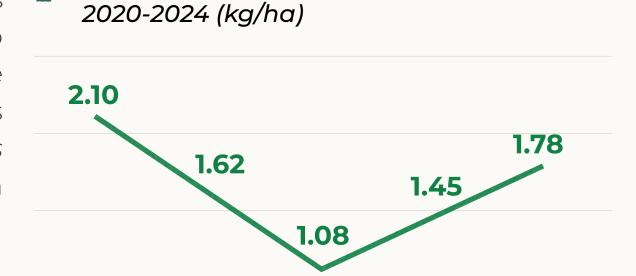
[GRI 3-3, 13.6.1]

### **\* Reducing Pesticide Use**

Management (IPM) best practices at our plantations, supported by our extensive long-term research and development (R&D) efforts to manage pest populations. IPM involves a combination of cultural, physical, mechanical, biological, and chemical methods. These include practices such as cultivating beneficial plants to combat leaf-eating caterpillars and attracting more barn owls to naturally control the rat populations in the plantations. We have also adopted microbial controls that use microorganisms – such as the fungus Metarhizium majus and the virus Oryctes rhinoceros nudivirus – to tackle pests such as rhinoceros beetles.

We only use highly hazardous or extremely hazardous pesticides at our operations in emergencies and under exceptional circumstances when other methods are not viable. 19 Musim Mas developed and implemented a pesticide phase-out plan, reporting our progress to the Palm Oil

We have implemented Integrated Pest Innovation Group (POIG) while that group was still active. We have successfully phased out most of the pesticides in that agreement and continue to pursue the phase-out plan even though we are under no obligation to do so. We remain committed to implementing IPM best practices at our upstream operations, using pesticides judiciously and not indiscriminately.



Active Ingredient Per Hectare

2023 2021 2022 2024 2020

**Note:** These figures include herbicides, fungicides, insecticides, and other pesticide categories.

### Herbicides

Herbicides are commonly used at our plantations to manage weeds that compete with oil palms for nutrients, moisture, and sunlight. They also facilitate fertilizer application and are used to clear weeding circles around individual palms and access paths for harvesters. To reduce our reliance on these chemicals, we are optimizing their use and exploring alternatives, even though none of the herbicides we use are currently on any banned pesticide lists. Furthermore, we refrain from using herbicides classified as highly hazardous or extremely hazardous at our operations.<sup>20</sup> We also monitor the toxicity level of all herbicides used at our estates to ensure they align with palm oil industry best practices.

There are currently no accessible, costeffective alternatives to GBH in Indonesia. In addition, clearing weeding circles and harvesting paths mechanically at our Sumatra and Kalimantan plantations is not feasible, as the process is better suited for flat and non-peat areas.

We are therefore focused on the responsible application of GBH. These ongoing efforts contribute to meeting the objectives of our Biodiversity and Climate Resiliency Action Plan.

### **\*** Fertilizers

In 2024, we used 1.44 and 2.43 tonnes of organic and inorganic fertilizer per mature hectare (MT/ha) in Sumatra and Kalimantan, respectively<sup>21</sup>. The inorganic fertilizers used at our operations include ammonium sulfate, borate, dolomite, kieserite, muriate of potash, rock phosphate, urea, and zinc sulfate.

Musim Mas employs agronomic best practices for fertilizer application, including soil and leaf analyses to maximize utility and minimize leaching and loss. Where feasible, we use dried decanter solids instead of potassium on sandy soil to increase moisture retention and enhance its physical and chemical properties. Additionally, we use operational waste, such as boiler ash from our mills, as fertilizer to maintain pH levels in selected areas.



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# **Water Management**



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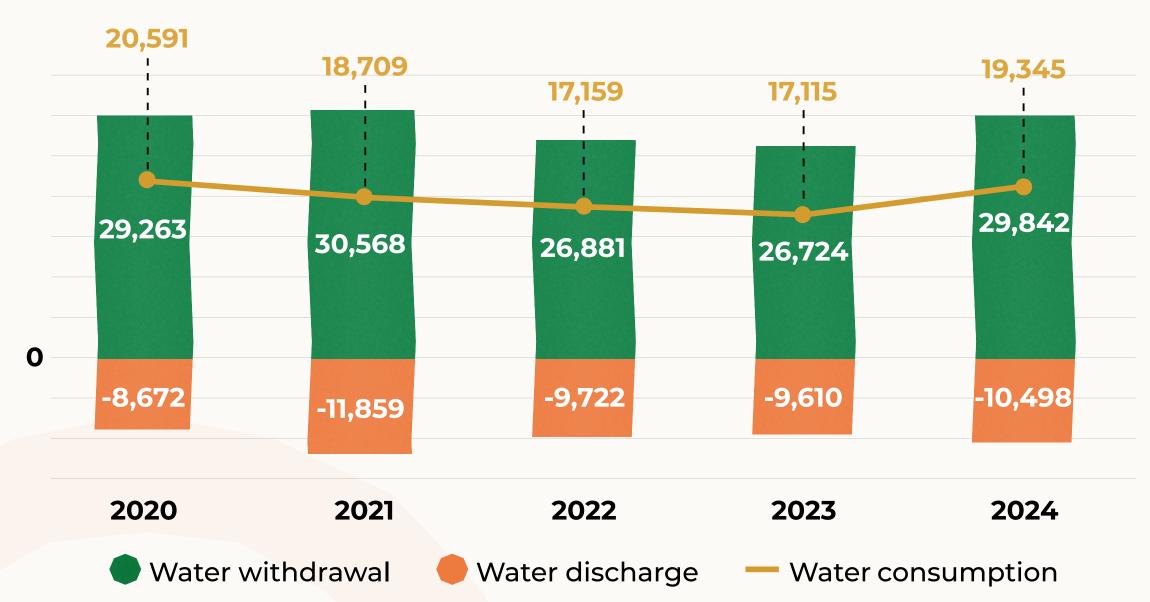
[GRI 3-3, 101-6, 303-1, 303-2, 303-3, 303-4, 303-5] [SASB FB-AG-140a.1, FB-AG-140a.2, FB-AG-140a.3]

Musim Mas has adopted comprehensive measures to preserve the quality and availability of surface water and groundwater for our business and surrounding communities.

### **\*** Group Water Consumption

We monitor water consumption Group-wide at our upstream, midstream, and downstream operations, and report our usage levels and water management approaches to the CDP Water Security questionnaire. In 2024, the Group consumed 19,345 megaliters (ML) of water. Our Group-level water usage intensity was 1.17 m<sup>3</sup> per tonne of product produced  $(m^3/MT).^{22}$ 

### Group Water Withdrawal and Discharge 2020-2024 (ML)

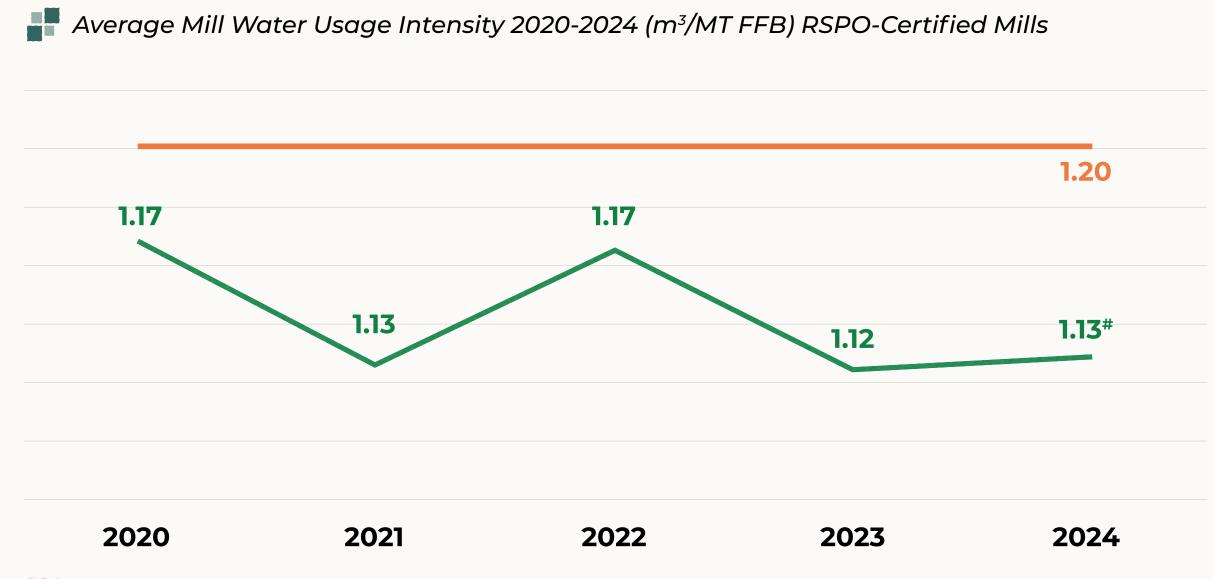


**Note:** Data reporting periods have been restated to align with financial years. Previously, financial year reporting covered the preceding year's performance to align with CDP submission cycles

### Upstream Water Usage

Musim Mas draws surface water and groundwater for our upstream operational processes, including steam generation, pesticide mixing, seedling and irrigation. We also employ these water sources for domestic applications, like cleaning and cooking. Although our upstream operations are not in water-stressed areas,23 we strive to optimize our water usage, recognizing it as a finite resource and vital for surrounding communities.

Our 2024 water usage intensity at our RSPO-certified mills was 1.13# cubic meters per tonne of FFB processed (m³/MT FFB), matching 2021 levels and meeting our annual target of keeping water usage intensity at or below 1.20 m<sup>3</sup>/MT FFB.



For more information, see our 2024 CDP Water Security Assessment

<sup>#</sup> EY has performed limited assurance procedures on these figures.

<sup>&</sup>lt;sup>22</sup> Group-level water data presented in this report is preliminary, as we are still fine-tuning our data collection and methodology. Water consumed is calculated by subtracting the water discharged from the water withdrawn.

<sup>&</sup>lt;sup>23</sup> Assessed using the World Resources Institute's Aqueduct tool.

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### **\*** Maintaining Water Quality

To avoid impacting groundwater and nearby water sources, we treat POME and palm oil refinery effluent (PORE) before discharge. We monitor phosphorus and nitrogen levels at inlet and outlet points upstream and downstream of rivers that cross our concessions. We also monitor and strictly manage biological oxygen demand (BOD) and chemical oxygen demand (COD) levels to ensure they remain below national regulatory thresholds year-on-year.<sup>24</sup>

See SR2024 Sustainability Performance Data for BOD and COD levels

In 2024, we externally verified the COD levels of treated PORE discharged to sea by our PT Musim Mas Belawan refinery. The average COD levels were 99.38# mg/L and 50.91# mg/L at the two discharge points, both below the regulatory threshold of 145 mg/L. There were no instances of non-compliance recorded during the year.

Treatment of PORE



# **Waste Management**

[GRI 3-3, 101-6, 306-1, 306-2, 306-4]

All non-hazardous waste produced by our upstream processes is recycled or reused. At our plantations, we leave oil palm trunks and fronds that remain after replanting and pruning in the soil, repurposing them as organic fertilizer. We also reuse waste from our mills – including palm kernel shells (PKS), palm fiber, and empty fruit bunches (EFB) – to fuel our boilers. Decanter solids and boiler ash are recycled as organic fertilizer at our plantations. Finally, we direct POME from our mills to our methane capture facilities to generate electricity before channeling it to our treatment ponds and processing it into treated wastewater for irrigation.

In 2024, a total of 94,306 tonnes of organic waste was re-used, including EFB, decanter solids, and boiler ash, in addition to more than 2.5 million m<sup>3</sup> of POME.

To minimize the pollution risks associated with hazardous waste at our upstream operations, we have established waste management protocols for the proper handling and disposal of different types of waste, including used lubricants, batteries, containers, and drums. All hazardous waste is disposed of by government-licensed vendors. To further reduce the associated risks, we provide regular education and training to our workers, thus ensuring they properly handle and segregate waste.

<sup>#</sup> EY has performed limited assurance procedures on these figures.

<sup>&</sup>lt;sup>24</sup> The regulatory threshold for land applications is 5,000 parts per million (ppm) for BOD. In waterways, the thresholds are 100 ppm for BOD and 350 ppm for COD.

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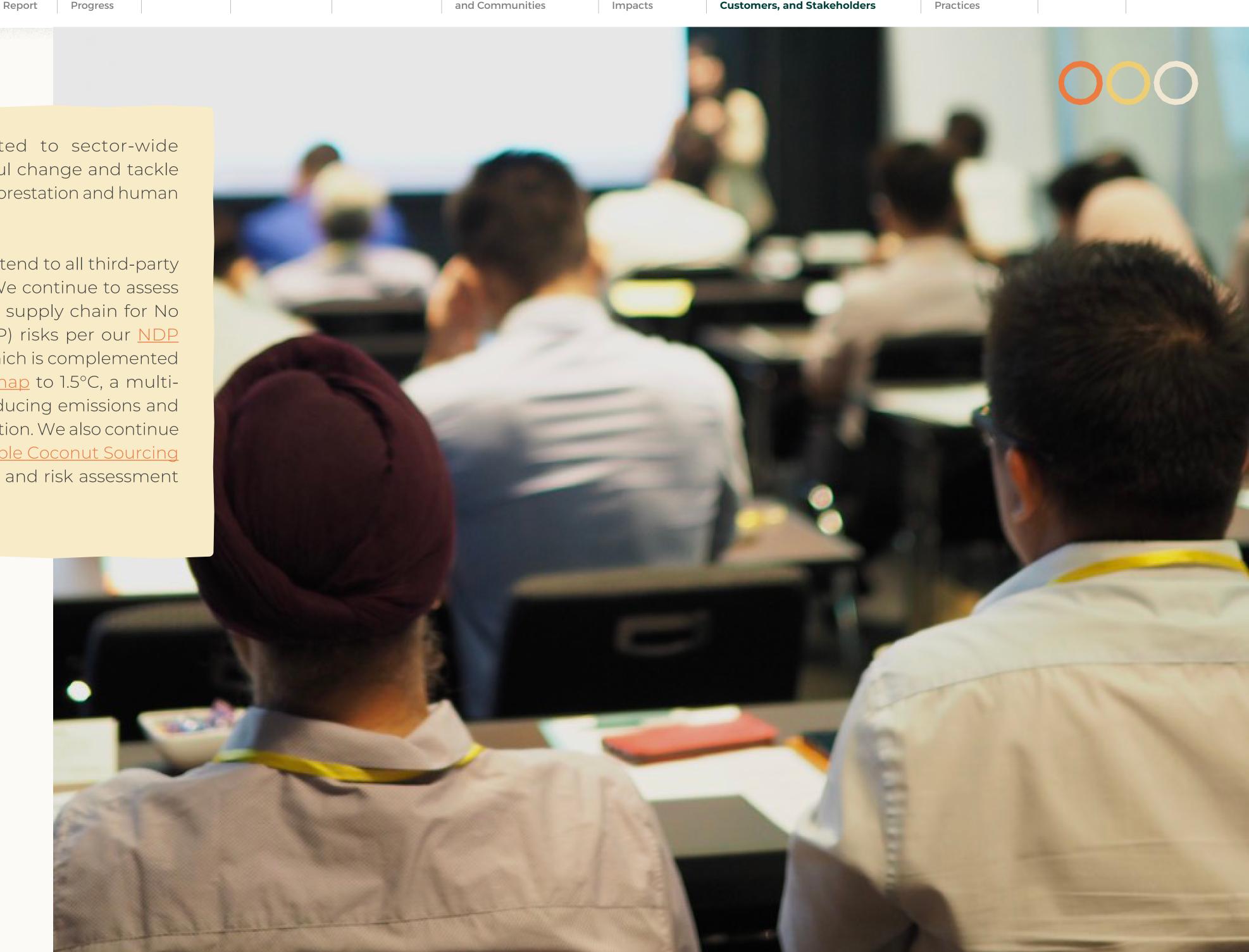
PILLAR 3

Maintain Responsible and Enduring Relationships with Suppliers, Customers, and Stakeholders

Musim Mas remains committed to sector-wide collaboration to effect meaningful change and tackle common challenges, including deforestation and human rights issues.

Our policies and commitments extend to all third-party suppliers across our operations. We continue to assess and monitor our operations and supply chain for No Deforestation and No Peat (NDP) risks per our NDP Risk Management Framework, which is complemented by the Agriculture Sector Roadmap to 1.5°C, a multistakeholder initiative aimed at reducing emissions and effecting a sector-wide transformation. We also continue to make progress on our Sustainable Coconut Sourcing Strategy and relevant traceability and risk assessment 2025 targets.





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**Product Quality and Safety** 

# The Musim Mas Supply Chain



[GRI 2-6, 2-23, 2-24, 3-3, 204-1]

### **Overview**

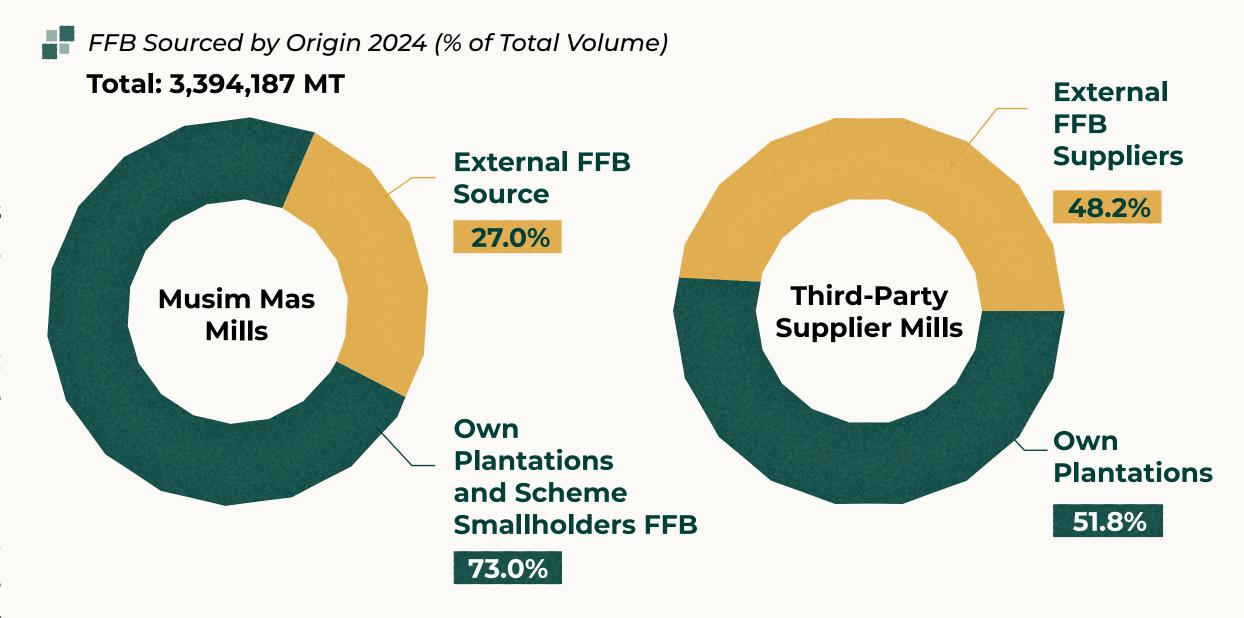
### **\*** Palm Oil Supply Chain

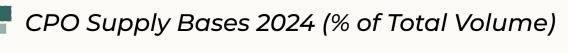
Our palm oil operations comprise a complex supply chain with multiple players contributing large- and small-scale volumes.

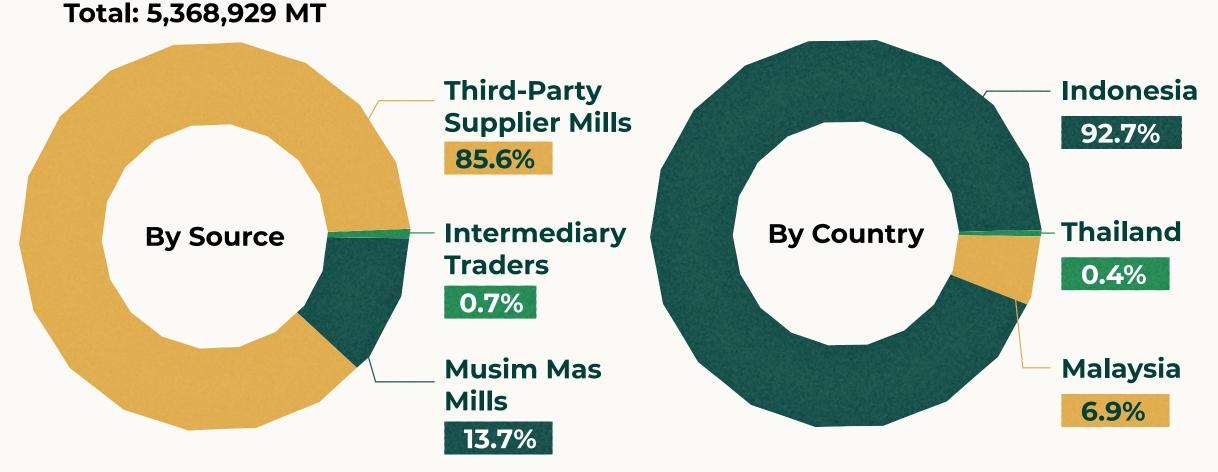
At the mill level, we exclusively source fresh fruit bunches (FFB) locally in Indonesia: 73% from our plantations and scheme smallholders and 27% from FFB dealers and independent smallholders.

At the refinery level, only 13.7% of crude palm oil is sourced from our own mills. The remaining 85.6% comes from third-party supplier mills, while 0.7% is sourced from third-party intermediary traders. We engage with many of these third-party mills through our landscape initiatives.

Our primary CPO source is Indonesia (92.7%), followed by Malaysia (6.9%), and Thailand (0.4%).<sup>25</sup>







# FFB Supply to Musim Mas and Third-Party Supplier Mills by Origin 2024 (No.)

FFB Origin	No.
Musim Mas Mills	18
Musim Mas plantations and scheme smallholders	10
Musim Mas plantations and external sources	5
External sources only	3
Third-Party Supplier Mills	650
Suppliers' own plantations only	62
Suppliers' own plantations and external sources	455
External sources only	133

### Coconut Supply Chain



in Indonesia through a network of copra dealers. Our refinery also sources a small amount of coconut oil from third-party producers. In 2024, a total of 142,201 MT of coconut oil was sourced from two suppliers – both of which have been assessed for their deforestation risk.

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### **Traceability**

[GRI 3-3, 13.23.1, 13.23.2]

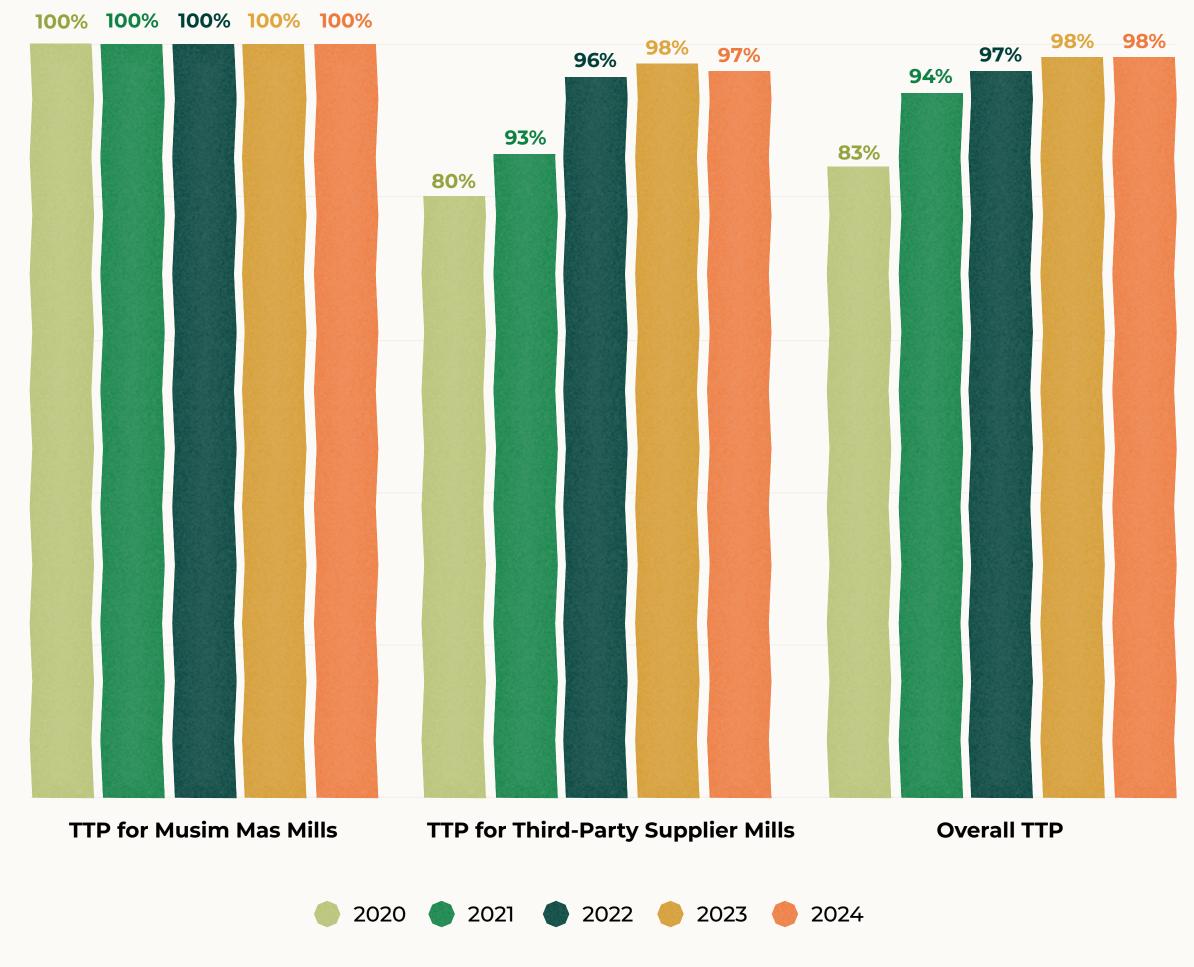
### Palm Oil Traceability

Effectively managing and addressing potential deforestation and peat development risks requires knowing the source of FFB in our supply chain, down to the supply shed level. Since 2015, we have achieved 100%\* overall traceability to mill (TTM). We have also achieved 100% traceability to plantation (TTP)<sup>26</sup> for Musim Mas-owned mills' FFB supply base since 2020.

We can easily trace CPO and PK sourced from Roundtable on Sustainable Palm Oil (RSPO)-certified supply chains to plantation. However, collecting and validating traceability data from non-certified suppliers remains challenging due to changing market conditions and the dynamic nature of FFB supplied by dealers and independent smallholders. Although our goal is to achieve 100% traceability to plantation by 2025 across our entire supply chain, we recognize that changing supply bases from year to year may be a barrier to full traceability. Despite these challenges, we achieved 97%\* TTP for third-party supplier mills and 98%\* overall TTP in 2024.



# Traceability to Plantation 2020-2024 (%)

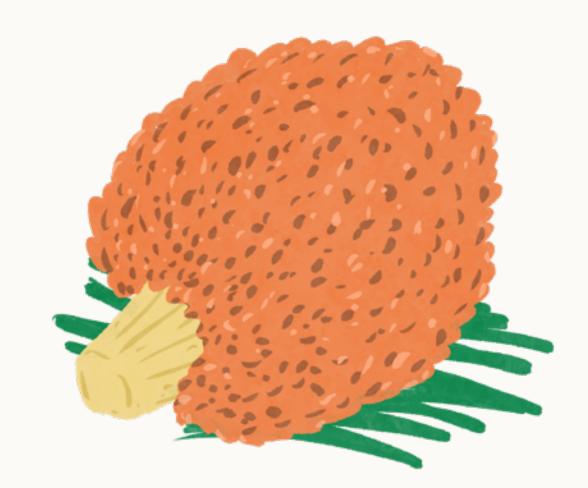


**Note**: Traceability data covers our Indonesian and Malaysian supply bases, and was extended to include Thailand supply in 2021.





We apply the same rigorous standards to sourcing coconut as we do to palm oil. By adapting our existing TTP method, we have achieved 100% traceability to plantation for coconut oil sourced in 2024. This achievement is the result of applying our robust supplier engagement system to our supply base.



Traceability to plantation (TTP) refers to traceability to the place of production, i.e., a company's concession, a farm, or a village for certain FFB dealers and/or smallholders.

<sup>\*</sup> Control Union (Malaysia) Sdn Bhd. Independently verified these figures, which cover 14 refineries and nine kernel crushing plants, but exclude five refineries that do not process palm-based products. Four refineries that only source from the 14 verified refineries were also excluded to avoid repetition. For more information, please see the TTM and TTP verification statements.

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# **Supplier NDPE Engagement**

[GRI 101-4, 414-1, 414-2, 13.4.3, 13.13.1] [SASB FB-AG-430a.3]

The success of our supply chain is directly tied to how well our suppliers perform. To ensure their compliance, we actively collaborate with them through calls, webinars, and face-to-face meetings. We also require them to participate in workshops and formalize their NDPE commitments, as outlined in our policies.

Additionally, we require our suppliers to complete the Musim Mas Self-Assessment Tool (SAT), a platform that enables them to specify their NDPE commitments and how they implement them. By using the SAT, we can pinpoint areas needing improvement and create custom roadmaps and firm action plans. Additionally, we can track their progress towards compliance while simultaneously helping them meet our standards.

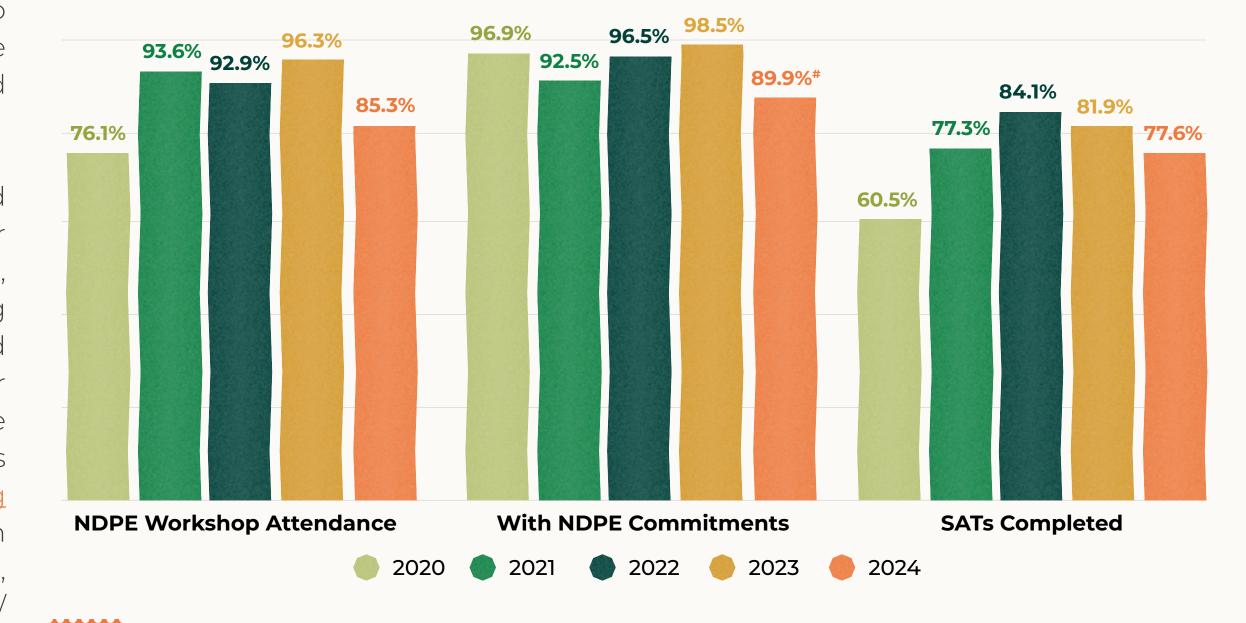
our human rights due diligence (HRDD) process, including labour and land rights provisions. The HRDD provisions extend beyond human rights questions related to policy-level commitments and require suppliers to implement human rights commitments within their organizations. These requirements also apply to our

suppliers' suppliers. Consequently, we have updated our supplier workshops to include an HRDD component alongside SAT training to help them better understand and meet our requirements.

In 2024, we conducted six in-person and online NDPE workshops, three each for Indonesian and international suppliers, with 85.31% of our supply base attending a session. These workshops covered topics including carbon emissions, water management, and HRDD. In addition, we host workshops for old and new suppliers in priority landscapes (see <u>Transforming</u> Landscapes) and standalone training on specific topics requested by suppliers, including high conservation value / high carbon stock (HCV/HCS), grievance mechanisms, and TTP.

In 2024, we completed the process of Due to a significant number of new indirect updating our SAT, integrating elements of supplying mills, the percentage of suppliers that have signed NDPE commitments, completed SATs, and attended workshops has fallen. Despite the limited CPO volumes supplied by these indirect mills to our refineries or traders, we are diligently engaging our direct suppliers to extend our reach to them.

### Supplier Engagement on NDPE Commitments 2020-2024 (%)





Musim Mas continues to engage with our copra and coconut oil suppliers to update TTP data and maintain full traceability.

### \* Training Independent **Smallholders in Our Supply Base**

Our ongoing training programs help independent smallholders inside and outside our supply base improve their understanding of NDPE principles, while supporting their certification efforts. In 2024, 16,035# independent smallholders were part of the Musim Mas supply base, and 4,084 (25.47%)# participated in our training programs.

<sup>#</sup> EY has performed limited assurance procedures on these figures.

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# **Preventing Deforestation in Supply Chains**

[GRI 3-3, 101-4, 308-1, 308-2] [SASB FB-AG-430a.2]

### **\*** Assessing Risk

In addition to supplier engagement, we invest in tools to minimize the risk of deforestation and development on peat in our supply chains. To this end, we use our NDP Risk Management Framework (RMF) to identify, assess, and mitigate deforestation risks at different points in our supply chain, from our direct suppliers to independent smallholders.

Our annual assessments overlay TTP data on supply shed maps that include conservation and peat areas. They allow us to categorize new and existing suppliers as low-, medium-, or high-risk. In 2024, we identified two high-risk supplier mills and 37 medium-risk mills. In contrast, 94.4%# of the 701 CPO and PK suppliers we assessed were identified as low risk.

As of the report date, we have engaged one of the high-risk mills through priority landscape workshops.# We will continue to engage with the other high-risk mill throughout 2025. These engagements fall under the scope of our integrated landscape strategy and include NDPEthemed workshops on TTP, human rights due diligence, and our grievance procedure. As they complete the engagement process, we will continue to monitor their activity using our satellite surveillance and grievance tracking systems.

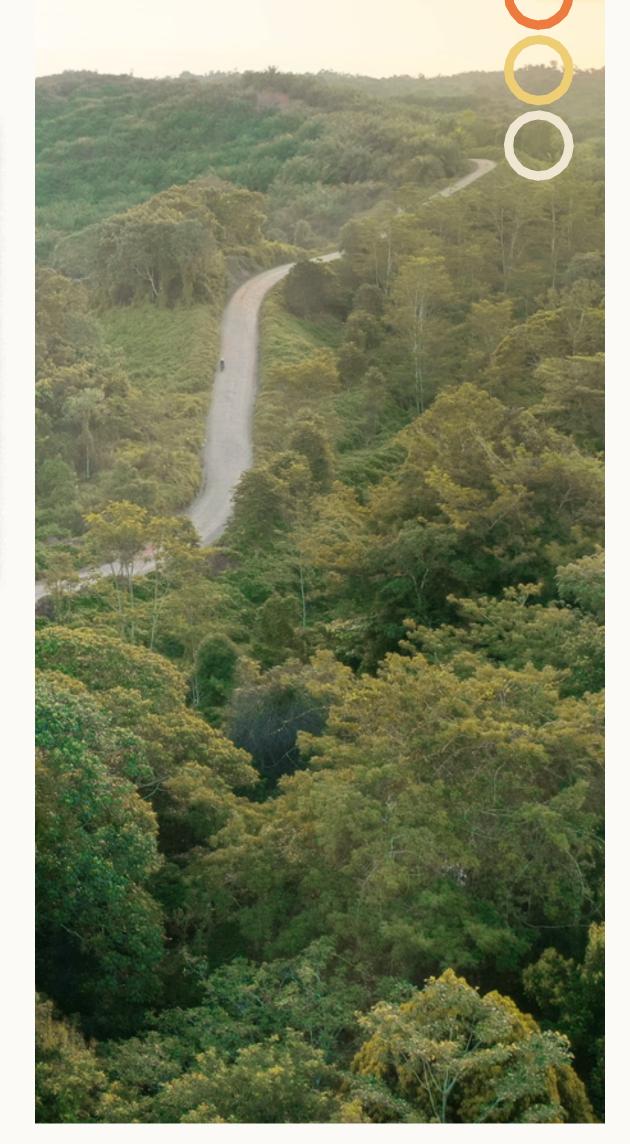


In addition, we annually assess our copra and coconut sourcing area using our NDP RMF and have determined that our supply bases are generally of a low deforestation risk.

See: <u>Transforming Landscapes</u>



		2021 2022		2023		2024			
Risk Level	Criteria	No.	%	No.	%	No.	%	No.	%
!!! High	Overlaps with > 10% of risk indicators	1	0.2%	0	0%	1	0.2%	2	0.3%#
‼ Medium	Overlaps with 2-10% of risk indicators	15	2.6%	16	2.7%	36	6.0%	37	5.3%#
! Low	Overlaps with < 2% of risk indicators/RSPO Identity Preserved certified	560	97.2%	586	97.3%	564	93.8%	662	94.4%#



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### Deforestation Monitoring

Our Geographic Information System (GIS) team proactively monitors landscapes in Indonesia, Malaysia, and Thailand for No Deforestation and No Peat (NDP) and fire risks. From January to December 2024, Earthqualizer remotely monitored more than 10.78# million hectares of our suppliers' group-level concessions in Indonesia, Malaysia, and Thailand for deforestation.<sup>27</sup>

In addition to TTP data and supply shed maps, we support and use publicly available data, industry reference tools, and monitoring systems operated by environmental NGOs and other entities, including Earthqualizer and Global Forest Watch (GFW). These tools supply landscapelevel spatial development data to guide future expansion and development in line with regulations. We augment them with our outreach programs and landscape initiatives.





### **Earthqualizer Platform**

Industry reference B2B monitoring platform



### **Public Sources**

We collect, update, and cross-check information using public sources, such as GeoRSPO, Greenpeace, *Kepo Hutan*, and Global Forest Watch (GFW)



### **Internal Monitoring**

To establish TTP, our suppliers share maps and information about their supply base



# **GFW Integrated Deforestation Alerts**

A joint initiative of GFW and supporting agencies and universities, this innovative platform issues GLAD, GLAD-S2, and RADD deforestation alerts using multiple satellite imaging systems and analytics tools to detect changes in primary forests, younger forests, and plantations



<sup>#</sup> EY has performed limited assurance procedures on these figures.

<sup>&</sup>lt;sup>27</sup> This area covers suppliers' group-level concessions in Indonesia, Malaysia, and Thailand.

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# Supplier Performance on NDP Commitments

[GRI 101-4, 13.4.3] [SASB FB-AG-430a.1]

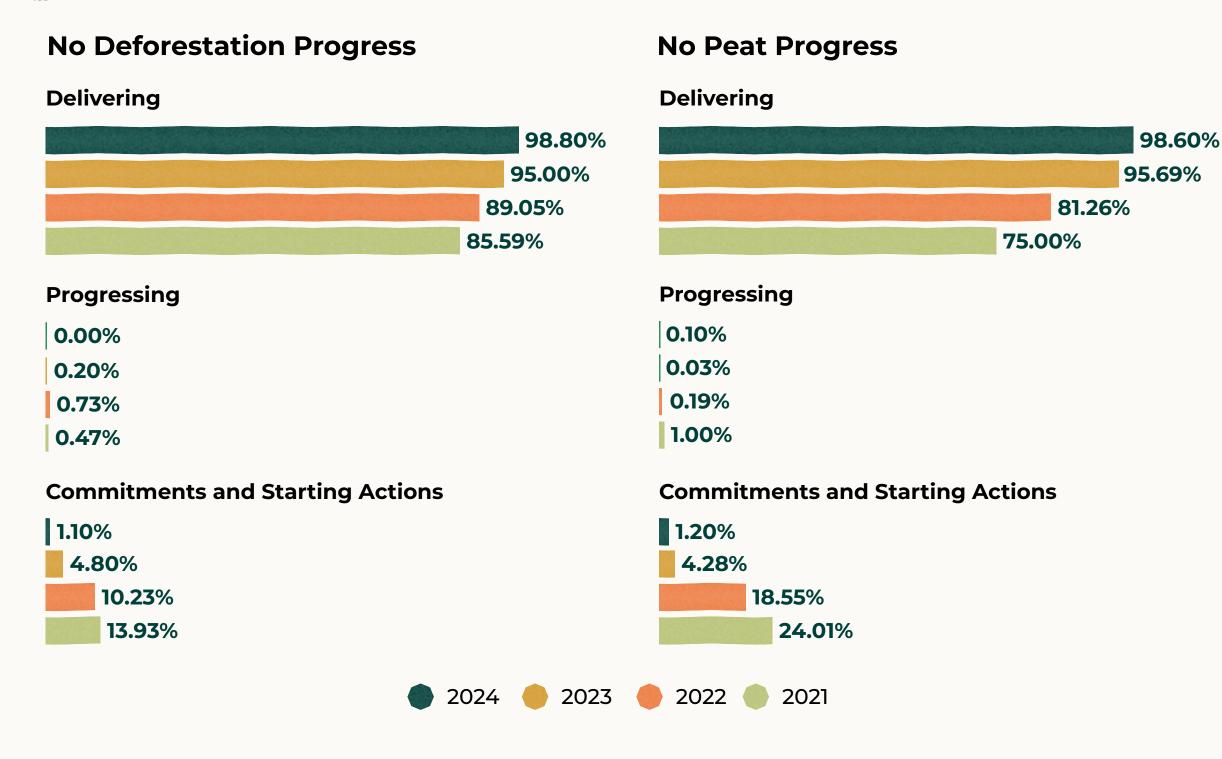
# Suppliers 'Delivering' on Their NDP Commitments

As a signatory to the Agriculture Sector Roadmap to 1.5°C, Musim Mas is committed to 100% of our palm oil volumes 'Delivering' on our No Deforestation and No Peat commitments by 2025, per the NDPE Implementation Reporting Framework (IRF) v5.8.

Supplier volumes in the 'Delivering' category continue to grow, with 98.80%\* delivering on their No Deforestation commitments (an increase from 85.59% in 2021) and 98.60%\* delivering on their No Peat pledges (an increase from 75.00% in 2021). Many of these suppliers moved from the 'Commitments and starting action' category in 2021 to 'Delivering' in 2024, demonstrating their dedication to meeting their NDP targets. We continue to collaborate closely with them to reach 100% 'Delivering'.

Musim Mas will adopt <u>IRF version 6.0</u> in 2026. Although we recognize this transition may negatively impact our scores, we support the adoption of stricter standards. The updated version will increase the granularity of smallholder and independent plantation data, which will help us better steer our interventions. Additionally, we remain an active member of the technical working group focused on strengthening the IRF methodology to benefit the industry.

### Supplier Progress According to NDPE IRF Categories 2021–2024 (% Volume)



#### **Verified Deforestation-Free**

Given the complexity of supply chains and the need for accurate data and traceability, calculating and reporting our Verified Deforestation-Free (VDF) status is challenging for Musim Mas and the industry. However, by building on our existing frameworks, we have confirmed and reported suppliers' VDF volumes since 2023 and are among the few companies in the sector to have done so.

The following process allows us to report deforestation-free data by volume systematically:

- Calculating TTP percentages for internally and externally sourced FFB
- Calculating our risk percentage using the NDP Risk Management Framework
- Determining the percentage of deforestation-free supply from each mill using its identified risk percentage.

In 2024, our supply chain was determined to be 99.47%\* deforestation-free, and we remain on track to ensure it is 100% deforestation-free by 2025.

<sup>\*</sup> Data has been independently verified by Control Union (Malaysia) Sdn. Bhd. See the IRF verification statement here and the VDF verification statement here.

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### **X** Addressing No Exploitation in Supply Chains

[GRI 2-24, 414-1, 414-2] [SASB FB-AG-430a.3]

Musim Mas has long recognized labour and human rights as material issues in our supply chain, and has been actively working to strengthen our practices in these areas. We are developing a formal Human Rights Due Diligence (HRDD) strategy. Additionally, we are drafting an HRDD framework for our suppliers that mirrors the internal approach for our operations:

### **Step 1: Identify**

### Identify actual and potential human rights impacts

- · Musim Mas uses the Supplier Assessment Tool (SAT) to identify potential risks in our supply chain. The SAT enables suppliers to self-declare their practices, allowing us to identify gaps and prioritize areas for further interventions on human rights-related issues.
- · To build on our current efforts, Musim Mas conducts joint social assessments across selected supply bases with our technical consultant, DIWA (formerly Verité Southeast Asia). These exercises identify best practices, implementation gaps, and opportunities, while measuring compliance with the labour provisions of the RSPO Principles and Criteria (P&C) and other international standards on workers' protection.

### **Step 2: Integrate and Address**

### Address identified impacts by integrating them into existing processes

- · Our independent human rights assessments identify areas for improvement, including ways that suppliers can operationalize labour rights policies. Past findings include improving awareness of human rights issues, and better communicating available grievance channels.
- · In response to the findings, we strengthened our SAT by adding targeted HRDD content, specifically on labour and land rights. For example, we now require suppliers to specify whether they communicate NDPE-related human rights commitments to employees and apply them to their upstream supply chains.
- To support this new approach, we conducted a series of HRDD workshops across our supply base, training suppliers on our practical expectations, improving their understanding of the revised SAT, and encouraging proactive alignment with our NDPE commitments. In 2024, we conducted two HRDD workshops in Indonesia and two more overseas.

### **Step 3: Track**

### Track the effectiveness of actions taken to determine whether they address human rights impacts

· We monitor supplier progress through responses received via the SAT. In 2025, we will begin analyzing the completed SAT submissions and develop strategy to address any identified risks.

### **Step 4: Communicate**

### Communicate the type and effect of actions being taken to address human rights risks and impacts

· Musim Mas is committed to transparency. We regularly communicate our HRDD initiatives and their outcomes through our sustainability reaports, website disclosures, and stakeholder engagement activities, including in-person and online meetings, and involvement in multi-stakeholder platforms on human rights risks framework discussions.

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### **\*** Monitoring Suppliers' Certification Status

Aside from internal assessments, we monitor our suppliers to ensure their continued adherence to local and internationally recognized sustainability certification schemes and standards, including the RSPO, Indonesian Sustainable Palm Oil (ISPO), Malaysian Sustainable Palm Oil (MSPO), and the International Sustainability and Carbon Certification (ISCC) standards. In this way, we can assure that their sustainability performance has been independently audited and verified by recognized bodies. Furthermore, many of our suppliers adhere to more than one certification scheme or standard, with 75% certified against at least one.

### Certification Status of Supplier Mills by Country 2024 (% certified)

Country	Certification	% of total suppliers
	RSPO-certified suppliers	30.2%
Indonesia	ISPO-certified suppliers	59.3%
	ISCC-certified suppliers	14.6%
	RSPO-certified suppliers	25.1%
Malaysia	MSPO-certified suppliers	78.3%
	ISCC-certified suppliers	26.9%
Thailand	RSPO-certified suppliers	53.8%



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[GRI 2-25, 2-26, 3-3, 308-2, 414-2, 13.4.5] [SASB FB-AG-430a.2]

### **Update on a Musim Mas Grievance on RSPO Portal**

In October 2024, a grievance was filed against a Musim Mas subsidiary via the RPSO complaints portal. It was alleged that our corporate social responsibility (CSR) program failed to address the needs of the surrounding community. Upon internal investigation, these allegations were shown to be unfounded. Nevertheless, Musim Mas agreed to resolve the matter through a bilateral engagement process in partnership with the affected community. Regrettably, this attempt at remediation failed due to a lack of participation from community representatives. At the time of this report's publication, the case is still under review by the RSPO complaints panel. We invite interested stakeholders to monitor progress on the RSPO case tracker.

# **Supplier Grievances**

Confirmed cases of deforestation or peatland development by existing suppliers after the cut-off date of December 31, 2015 trigger our grievance mechanism and attempts at remediation under our Controlled Purchase Protocol.

Musim Mas teams review and monitor all active grievances to resolve them and achieve compliance. In 2024, four new grievances against our suppliers were filed – three concerning illegal FFB from deforested land or protected areas and one related to social conflict. All of these cases had been resolved at the time of this report's publication. Six further grievances from previous years were also resolved

during the reporting period. However, we are still engaging with affected suppliers and stakeholders to resolve 15 remaining active cases.

Since 2019, we have recorded 7,959 hectares of non-compliant deforestation in supplier concessions. Musim Mas recognizes that resolving these cases and satisfying industry requirements for a fully NDPEcompliant supply chain can take years. As a consequence, our commitment to remediation extends beyond procedural formalities. We therefore require suppliers to demonstrate progress to meaningful change in resolving grievances.

Third-party supplier grievances raised and closed since 2019

	Raised	Closed	Active
2024 cases	4	4	0
Cumulative cases 2019-2024	74	59	15

#### **X** Controlled Purchase Protocol

Grievances filed on or after January 2020 are subject to our **Controlled Purchase** Protocol (CPP), a complaints resolution process that allows us to maintain business relationships with suppliers who demonstrate progress towards resolving their cases. The protocol is based on three principles: suppliers' willingness to engage, their willingness to act, and proof of progress against agreed-upon milestones and criteria.

Musim Mas will cease business with suppliers unwilling to engage with us or who repeatedly fail to meet agreedupon milestones in cases involving critical grievances, including breaches of ND or NP commitments, regulatory violations, and withdrawal from the RSPO. In 2024, two suppliers were reinstated into our supply chain following the resolution of open cases from previous years. However, an unresolved grievance filed in 2024 resulted in the termination of a supplier sourcing illegally harvested FFB.

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# **Stakeholder Collaboration**



[GRI 2-28, 2-29, 3-3]

Musim Mas remains at the forefront of sustainability conversations, engaging directly with stakeholder groups that either impact or are impacted by our operations and the broader issues linked to our sector. These groups include academic institutions, certification bodies, communities and their representatives, customers and partners, employees, financial institutions and investors, government and regulatory bodies, NGOs, smallholders, and suppliers.

We also contribute to multi-stakeholder industry, landscape, and issue-focused partnerships that address emerging challenges, risks and opportunities. These partnerships' interests and concerns influence and support the success of our initiatives, including how we develop and update our strategies, management decisions, and operational procedures.

We regularly publish and update our sustainability policies and reporting, inviting stakeholder input at every opportunity and engaging with selected stakeholders for our annual materiality updates and sustainability reports. For an overview of our stakeholder engagement approaches and objectives, see Musim Mas' stakeholder table.



One of the core focus areas of our Sustainable Coconut Sourcing Strategy is collective action. We engage with partners, suppliers, customers', and stakeholders who share common objectives and will continue to work closely with them on our sustainable coconut sourcing initiatives.

### Notable Partnerships in 2024



### **Environmental Programs**

- Ongoing partnership with YTNTN to reduce human-elephant conflicts in Tesso Nilo through community-based conservation programs and the Elephant Flying Squad
- Ongoing collaboration with a local university on the *Taman Kehati* project to develop a biodiversity park and wildlife conservation efforts within one of our estates' conservation areas



### **Supply Chain Programs**

- Participated in the NDPE IRF Working Group tasked with updating Deforestation and Peat (D&P) IRF requirements and developing the Land and Labour (L&L) IRF template
- Participated in the RSPO Jurisdictional Working Group, whose findings led to the RSPO creating a new membership category for Jurisdictional Entities, recognizing the importance of governments and local stakeholders in enabling sustainable landscape management
- Our Partnerships
- Stakeholder List
- Materiality Process



### **Human Rights Programs**

Partnered with DIWA to strengthen human rights grievance mechanisms, women's empowerment initiatives, and gender committee effectiveness



### **Smallholder Programs**

- Ongoing partnership with Bunge to promote sustainable practices among smallholder farmers in Sambas
- Ongoing Biodiverse & Inclusive Palm Oil Supply Chain (BIPOSC) partnership with Livelihood Funds (L3F), SNV, ICRAF, Danone, L'Oréal, and Mars Incorporated
- Renewed partnership with Nestlé and AAK in Subulusalam
- Ongoing ETH Zurich research program to better understand the conditions under which supply chain sustainability initiatives can lead to reduced deforestation
- Renewed partnership with General Mills in Aceh Singkil
- Partnered with Temasek Foundation and Abler Nordic to support smallholders in financing sustainable palm replanting
- Partnered with the Danish Government, Preferred by Nature, Ferrero, the Sustainable Agriculture Network (SAN), and Agriterra to support smallholders through training, market access, and sustainable practices.

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### Transparency, Reporting, and Evaluation

Musim Mas maintains an open dialogue with our stakeholders. We welcome their constructive feedback and strive to remain transparent by keeping them well-informed on Group-wide matters. In addition to regular reports and communications on our website, we actively participate in various voluntary and mandatory benchmarking and public verification programs to assess our sustainability commitments and track our progress. Rating platforms include EcoVadis, CDP (formerly known as Carbon Disclosure Project), PROPER, the Zoological Society of London's Sustainability Policy Transparency Toolkit (ZSL SPOTT), and the biannual World Benchmarking Alliance (WBA) Food and Agriculture Benchmark and its Nature Benchmark. In 2024, we took part in the WBA Gender and Climate and Energy Benchmarks for the first time.

### Notable Achievements in 2024



Ranked 10th out of 100 companies (90.9% score)

Increased number of Green PROPER award-winning mills and plantations

from 11 to 14
10 mills and plantations received
Blue PROPER awards

**Note:** The Indonesian government's PROPER awards recognize environmental efforts that exceed mere compliance. Performance is classified using a colour-coded rating system (black, red, green, blue, and gold).



Maintained Double A status for a second year in a row:

- Water Security (A)
- Forests (A)
- Climate Change (B)

Earned top 5 ranking in the Global Child Forum Benchmark 2024

# **Sustainable Financing**

In 2024, Musim Mas celebrated two sustainability-related financing milestones. The first was qualifying for Standard Chartered's industry-leading Sustainable Account with Liquidity Management Structure. This financial framework optimizes the Group's cash flow and working capital across our entities by incorporating ESG considerations.



The palm oil industry has long faced reputational challenges, particularly in Brussels. However, based on our assessments, the sector has made significant progress in addressing these reputational challenges by adopting and enforcing stringent sustainability policies, and improving transparency. Emerging regulatory frameworks, like the EUDR, have also helped the industry improve its standing.

But there is more work to be done. The industry cannot rest on its laurels and

must sustain the pace of innovation, even if regulatory pressure decreases. This means demonstrating visible and transparent progress to counter outdated perceptions about the industry that persist among policymakers and stakeholders. It is also essential for palm oil companies to collaborate with industry peers, engage with regulators on emerging standards, and perform sector-specific due diligence.

Musim Mas has proactively embraced new regulations, setting it apart from industry peers. The company is also cognizant of communicating its progress by submitting to credible assessments, like our WBA benchmarks where they have made tremendous strides, rising from 91st place in our 2022 Food & Agriculture benchmark to 61st a year later.

Registered in the Netherlands, WBA is a nonprofit with a globally distributed team. The organization has developed seven transformative benchmarks, engaging companies in methodology development, ranking their performance, and providing feedback through scorecard rankings.

The second was our inaugural Sustainability-Linked Revolving Credit Facility with Rabobank and HSBC Bank in August 2024. This EUR 150 million credit facility was converted into a loan tied to sustainability KPIs. The KPIs assessed will include RSPO certification of independent smallholders, training of independent smallholders, and maintaining a deforestation-free palm oil supply chain.

- Standard Chartered implements industry-leading Sustainable Account with Liquidity Management Structure for Musim Mas
- Musim Mas Signs its first Sustainability-Linked Loan with Rabobank and HSBC Bank

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# **Product Quality and Safety**



[GRI 3-3, 13.10.4, 13.10.5] [SASB FB-AG-430b.1]

Musim Mas customizes our products to meet our customers' needs and applications. Our strict policies and practices uphold the highest product safety and quality standards for all consumers, including children, extending to responsible marketing and labelling. Significantly, our oil palms are non-genetically modified (non-GMO), further enhancing the safety and quality of our products.

Our products and facilities are regularly inspected and audited. They are certified against various domestic and international standards recognized by the Global Food Safety Initiative (GFSI), including:

- FSSC 22000 (Food Safety System Certification) based on the International Organization for Standardization's ISO 22000 standard
- Codex Alimentarius Commission/ Recommended Code of Practice (CAC/ RCP) 1:2011
- Hazard Analysis and Critical Control Point (HACCP) Management System (MS 1480)
- SNI (Standar Nasional Indonesia) CXC 1-1969 Indonesian National Standard HACCP.

Additionally, we comply with international quality and dietary standards, including Good Manufacturing Practices (GMP), Halal, and Kosher certifications. We also offer certified sustainable products adhering to RSPO, ISCC, and ISPO standards.

We strive to minimize contamination risks and adhere to applicable EU regulations on contaminant thresholds for vegetable oils and fats. We screen possible entry routes for contaminants like mineral oils, glycerol-based contaminants like 3-monochloropropane diol (3-MCPD), and glycidyl esters (GE) in our processing chains, using various methods to effectively remove these contaminants and their precursors per the Codex Alimentarius International Food Standards. To further minimize the presence of contaminants, we use only food-grade lubricants, incorporate double refining and post-stripping technology in our processes, and continuously explore innovative technologies across our integrated operations to mitigate potential contaminants.

Musim Mas follows industry best practices and prepares for product recalls in the unlikely event that they occur.

Our efforts also extend to supporting our suppliers, further ensuring that they meet our customers' stringent requirements and the highest product quality and safety standards.

Mineral oil in food: understanding these contaminants



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Drive Innovation in Sustainable Practices

Musim Mas strives to meet the increasing demand from civil society, customers, and consumers for sustainable palm oil while navigating an ever-changing global market and adapting to dynamic regulatory frameworks. We adopt innovative solutions to expand the scope and reach of our sustainability commitments, ensuring their effective and meaningful implementation internally and in the landscapes we operate in.

### Notable Innovations in 2024





Released new seedling varieties that boost agricultural productivity and ensure consistent quality without requiring additional cultivated land.





**Expanded Women Smallholder Program to other landscapes** 





Entered into additional stakeholder partnerships to improve smallholder livelihoods, reduce deforestation, and advance regenerative agriculture





Engaged with youth from smallholder families through practical training and outreach programs to foster interest in sustainable agriculture practices





**Deliver Positive** 

Environmental

**Impacts** 

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Improving Yields

**R&D** on New Food Products and Applications

# Transforming Landscapes





[GRI 3-3]

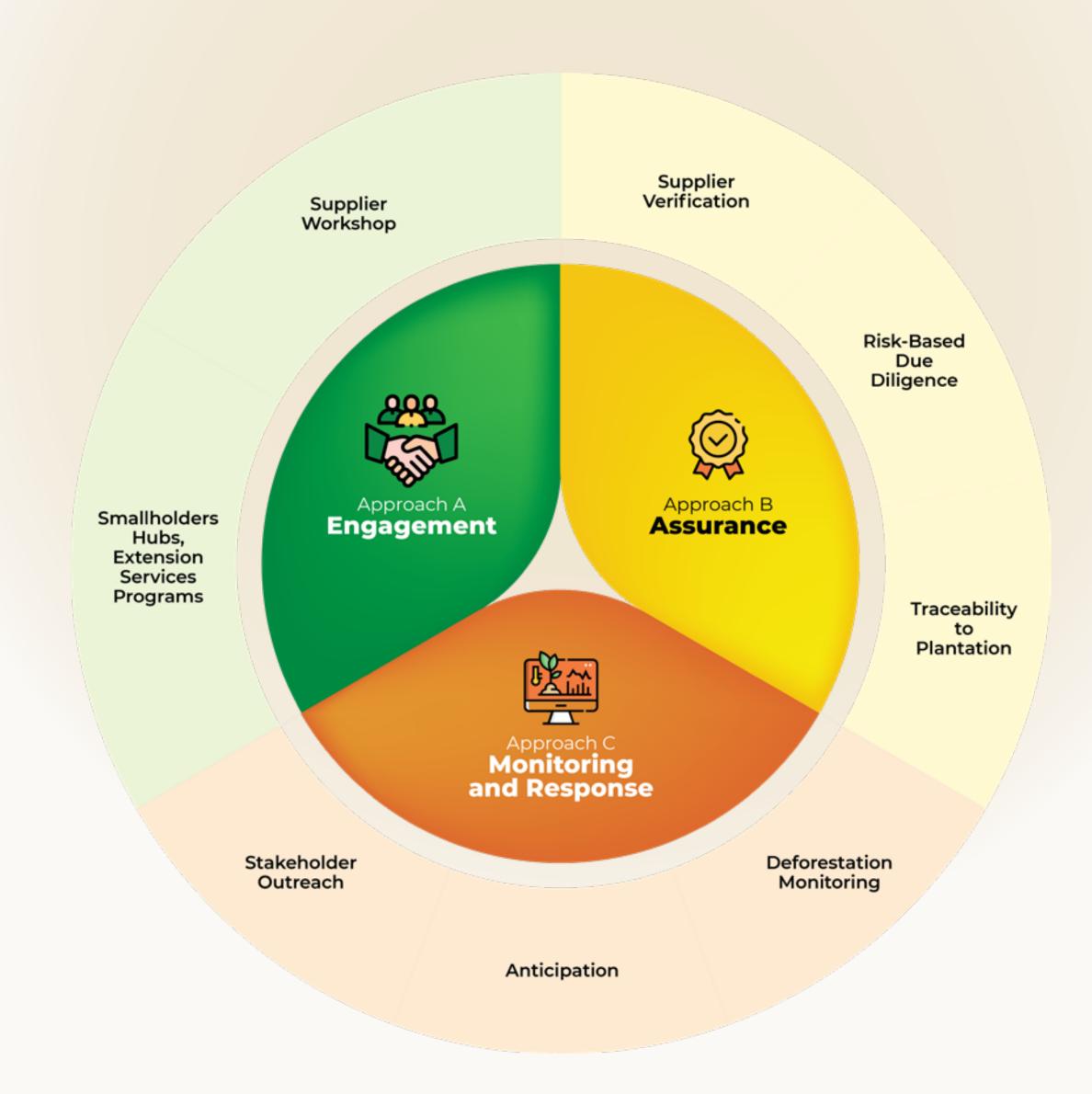
We believe in a multifaceted collaborative approach involving all stakeholders to address the dynamic nature of industry supply bases, particularly those involving independent smallholders. Our landscape approach goes beyond engaging stakeholders directly in our supply base. Nor is it limited to those with whom we have commercial relationships. Instead, it extends to smallholders, local communities, third-party suppliers, civil society organizations, local governments, industry peers, and various program implementation partners. These many collaborators help us achieve tangible and long-term impacts.

have had longstanding While we landscape-level programs, we first developed a comprehensive strategy for Aceh, one of our most important sourcing in 2020. We applied the lessons from Aceh and our experience from existing p<mark>rograms in priority landscapes to a</mark> comprehensive re-assessment of all our initiatives, resulting in a revised approach

across all geographic regions. These efforts culminated in the publication of Musim Mas' Priority Landscapes Strategy 2024 in September 2024. It is our first integrated landscape strategy report and covers six priority landscapes: Aceh, North Sumatra, Riau, South Sumatra, West Kalimantan, and Central Kalimantan.

Our new strategy consolidates all landscape programs and streamlines Group-level targets for 2025 based on three key approaches: Engagement, Assurance, and Monitoring and Response. The framework is aligned to Musim Mas' NDPE commitments and COP27 Agricultural Sector Roadmap to 1.5°C goals.

To accompany the rollout of this expanded landscape strategy, we published the Consolidated Landscapes Progress regions with a critical conservation value, Report 2024 in December 2024, covering data from January to June 2024. Moving forward, reporting on landscapes will align with Musim Mas' financial year and be a permanent component of our sustainability reporting processes.



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# Landscape Program Overview



### 1 Aceh

- 5 Smallholders Hubs (Aceh Tamiang, Aceh Singkil. Aceh Timur, Aceh Selatan, and Subulussalam)
- Verified Sourcing Area (VSA) program
- RADD pilot in Aceh Tamiang (now under IDA)
- Supporting landscape-level HCV-HCS mapping
- ETHZ research
- Areas for Priority Transformation (APT)
- Land Legalisation Program (Aceh Singkil)
- Leuser Ecosystem

# 2 North Sumatra

 Biodiverse & Inclusive Palm Oil Supply Chain (BIPOSC) regenerative agriculture project (Labuhanbatu)

### 3 Riau

 Founding member of Siak-Pelalawan Landscape Program

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- 2 Smallholders Hubs (Dayun, Siak, and Sungai Linau)
- Tesso Nilo Flying Squad
- Landscape-level mapping of HCV and HCS areas
- Tesso Nilo National Park
- Giak Siak Kecil-Bukit Batu Bioreserve

### 4 South Sumatra

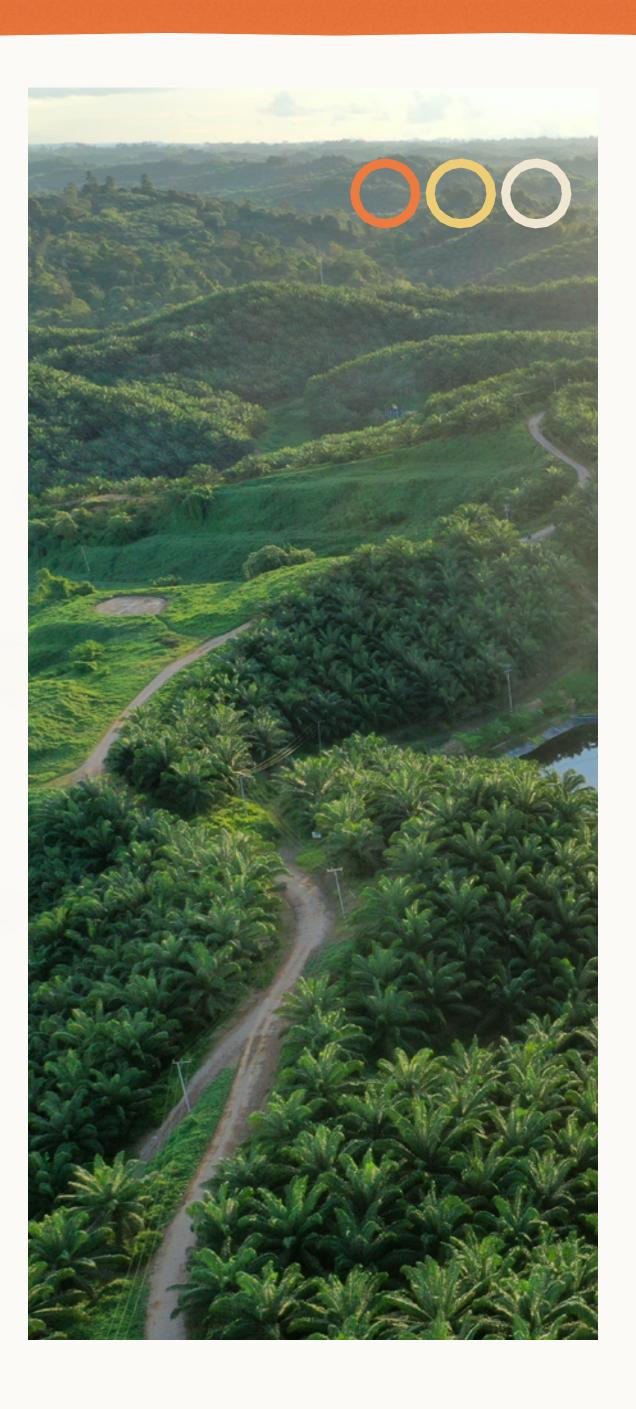
Train the Smallholders program

### 5 West Kalimantan

- 1 Smallholders Hub (Sambas)
- Social Forestry Program

### 6 Central Kalimantan

 HCSA community land-use planning pilot project with Forest Peoples Programme



**Practices** 

#### Notes:

- 1. This map shows an overview of our existing programs.
- 2. **Green areas** are protected areas adjacent to our operations.

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### **\*** Progressing on Our Landscape Initiatives

Our Group-level targets guide our efforts in three key focus areas (Engagement, Assurance, and Monitoring and Response). Although these targets set Musim Mas' overarching goals, we adapt our landscape-level programs to the unique ecological,

social, and cultural context of each priority area, ensuring that our strategies are relevant and effective at the local level.



### Landscape-specific targets – to achieve by end 2025

Key Focus Area	Target	2024 Progress		
	All supplying mills have signed a written agreement that they, as well as their supply base, are committed to Musim Mas' NDPE requirements, or have adopted equivalent NDPE policies and/or public commitments	403 supplying mills have committed to NDPE  See: Supplier NDPE Engagement		
	Relevant staff from all supplying mills and their primary FFB suppliers must participate in a supplier workshop organized by Musim Mas	379 mills have taken part, representing 89% of our supply base in priority landscapes  See: Supplier NDPE Engagement		
Engagement	Musim Mas to explore joint workshops with other CPO/PK/palm product buyers to engage mills and outgrowers developing new plantations in high-risk areas	In May 2024, Musim Mas co-organized a supplier workshop in Aceh with Wilmar and Golden Agri Resources (GAR) to engage suppliers and promote deforestation-free palm oil production		
	Approximately 1,500 independent smallholders in Riau and West Kalimantan, in addition to Aceh, trained on best management practices (BMP) and NDPE requirements through Musim Mas' Smallholders Hubs	9,479# independent smallholders trained through Musim Mas' Smallholders Hubs, since 2020  See: Independent Smallholders		
	Support 7,000 independent smallholders in achieving RSPO certification and 5,000 independent smallholders in obtaining ISPO certification	4,654 <sup>#</sup> ISH achieved RSPO and 2,961 ISH achieved ISPO certifications  See: Independent Smallholders		

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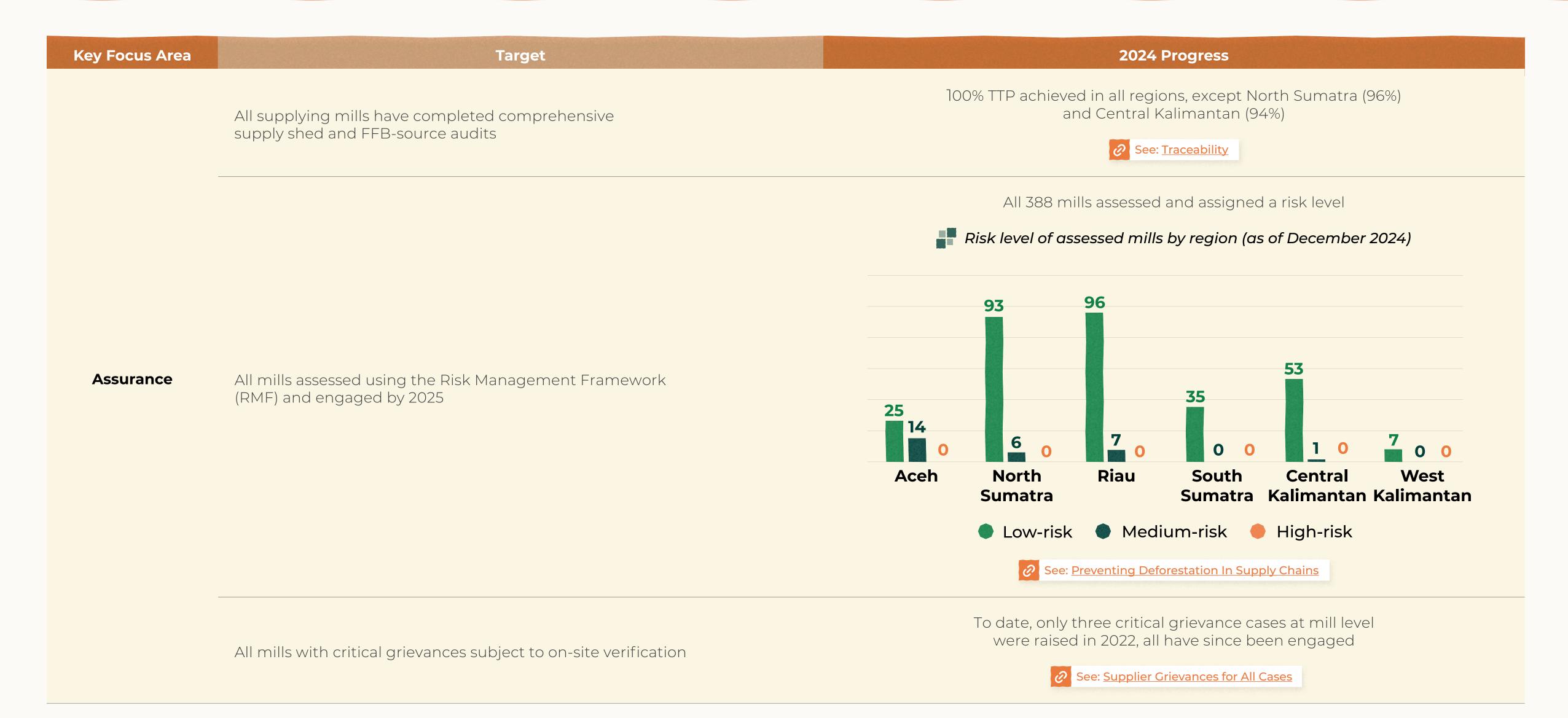
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# **Improving Yields**





Musim Mas believes in growing sustainable palm oil production through enhanced productivity rather than land expansion. We are pursuing this objective by engineering higher-yielding oil palm varieties and exploring innovation. In our quest for sustainable growth, we actively invest in research and development (R&D) to maximize yields, improve land efficiency and productivity, reduce greenhouse gas emissions, and lower our impact on forests and biodiversity. Investing in innovation today will help us meet the growing demand for palm oil over the next three decades.

The Genetic and Agriculture Research Center at our Riau plantation is home to specialized facilities and teams that manage and optimize agronomy, crop protection, and peat management solutions to maintain consistent and high production. This cutting-edge facility researches and breeds superior oil palms with desirable genetic traits like enhanced disease resistance, faster growth, higher oil extraction rates, and increased adaptability to harsh environmental conditions.



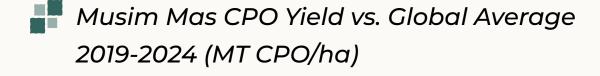
### **Musim Mas High-Yielding Seedlings**

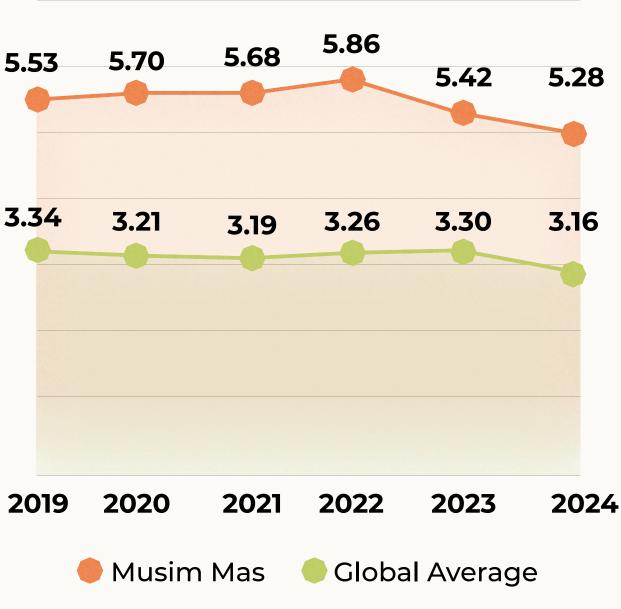
In 2023, we launched the Musim Mas GS Series, comprising four new oil palm varieties – GS1, GS2, GS3, and GS4 – all approved by Indonesia's plantation variety assessment body (TPV). These varieties feature a faster fruiting cycle, producing fruit bunches within 25 months instead of the industry average of 30 months. Their longer stalks enable easier harvesting, while larger fruitlets contribute to higher crude palm oil (CPO) extraction rates by up to 30%. With potential yields exceeding 10 tonnes (MT) of CPO per hectare, the GS series significantly outperforms the industry average of 3.25 MT per hectare.

Musim Mas Releases new oil palm seed varieties that yield nearly triple the industry average



While lower than 2023 due to the El Niño event, our industry-leading CPO yield was 5.28 tonnes per hectare in 2024 – 1.67 times higher than the global average.





#### Notes

- 1. Global average data source: Oil World Annual 2025.
- 2. 2022 and 2023 global average data have been restated.

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# R&D on New Food Products and Applications







[GRI 3-3]

Our customers, including food manufacturers, regularly request new and innovative products and ingredients. Our Novel IDEAS Center in Singapore is a state-of-the-art R&D facility that develops innovative palm oil products, like specialty fats for the food and beverage industry, including versatile blends of high-quality fats, emulsifiers, and stabilizers that can be used in gluten-free, sugar-free, frozen, and plant-based items, as well as livestock feed.

Together with our research facility in Indonesia, these innovations improve food and beverage quality, contributing to desirable textures and seasonal flavours that appeal to international and regional palates. We take pride in collaborating with our customers to fulfill their growing desire for new and exciting palm oil products that meet evolving consumer tastes.

- Functional Blends that Enable Food & Beverage Innovations
- Innovating in the Growing Frozen Breads Market
- The Right Fats for Healthy and Productive Livestock
- Enabling Food and Beverage Product Development



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# **Assurance Statement**

# **Independent Limited Assurance Report**

To the Management of Musim Mas Holdings Pte Ltd ("Musim Mas"),

### Scope

We have been engaged by Musim Mas to perform a 'limited assurance engagement', as defined by International Standards on Assurance Engagements, hereafter referred to as the engagement, to report on Musim Mas' sustainability performance metrics as set out in the Subject Matter Information section presented adjacent to this text (the "Subject Matter") contained in Musim Mas' sustainability report as of 16 September 2025 for the financial year ended 31 December 2024 ("the Report").

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

### Subject Matter Information

Our limited assurance engagement covers the following Subject Matter for the above-mentioned period:

. No.	Information for assurance	Scope for Palm Oil segment	Countries
1	Water use intensity (m3/MT FFB processed) in 2024	RSPO-certified mills only	Indonesia
2	BOD and COD quality (mg/l) for POME in 2024	RSPO-certified mills only	Indonesia
3	Scheme smallholders that Musim Mas supports under these programmes:  KKPA: Number of KKPA programs and number of smallholders  VDP: Number of villages	Mills and plantations	Indonesia
	Note: Musim Mas operates two scheme smallholder programs: 1. Kredit Koperasi Primer Anggota (KKPA) and 2. Village Development Program (VDP)		
4	<ol> <li>Number of independent smallholders involved in Musim Mas program that supplies to Musim Mas in 2024;</li> <li>Total number of independent smallholders supplying to Musim Mas in 2024</li> </ol>	Mills and plantations	Indonesia
5	Total hectares of suppliers' (group-level) concession monitored through a combination of methods as at 31 December 2024	Concession land owned by monitored suppliers (i.e. supplying mills integrated with plantations)	Indonesi Malaysia Thailand
6	Programs in place to support high-risk mills identified as at 31 December 2024	All supplying mills during the year	Indonesi Malaysia Thailand
7	Percentage of suppliers classified under low- to medium- to high-risk mills as of 31 December 2024	All supplying mills during the year	Indonesi Malaysia Thailand
8	Percentage of suppliers that have an NDPE policy or adopted Musim Mas Sustainability Policy as at 31 December 2024	All supplying mills during the year	Indonesia Malaysia Thailand
9	COD quality (mg/l) for PORE in 2024	One refinery	Indonesi
10	Pilot climate risk assessment conducted for Musim Mas based on the TCFD framework	PT Musim Mas – plantations, Batang Kulim POM, Pangkalan Lesung POM, KIM 2 complex (refinery, oleochemicals plant, specialty fats plant)	Indonesi
11	Number of individual smallholder farmers (within and outside of Musim Mas supply chain) trained and re-trained as at 31 December 2024	Mills and plantations	Indonesi
12	Number of independent smallholder farmers RSPO-certified in Indonesia, with support of Musim Mas as at 31 December 2024	Mills and plantations	Indonesi

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### \* Criteria Applied by Musim Mas

In preparing the report, Musim Mas applied the Global Reporting Initiative Sustainability Reporting Standards' ('GRI Standards'), TCFD Recommendations ('Criteria'), and specific criteria determined by Musim Mas as being relevant for its sustainability performance. Such Criteria were specifically designed for sustainability performance; as a result, the Subject Matter may not be suitable for another purpose.

### **\*\* Musim Mas' Responsibilities**

Musim Mas' management is responsible for selecting Criteria, and for presenting the Subject Matter in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

### **\*** EY's Responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we obtained.

We conducted our engagement in accordance with the *International Standard for Assurance Engagements* 

Other Than Audits or Reviews of Historical ('ISAE 3000 Information Financial (Revised)') and the terms of reference for this engagement as agreed with Musim Mas on 19 May 2025. Those standards require that we plan and perform our engagement to express a conclusion on whether we are aware of any material modifications that need to be made to the Subject Matter in order for it to be in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

### Our Independence and Quality Management

We have maintained our independence and confirm that we have met the requirements of the Accounting and Corporate Regulatory Authority ("ACRA") Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities ("ACRA Code"), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour.

EY also applies International Standard on Quality Control 1, Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

### Description of Procedures Performed

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.



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A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Subject Matter and related information, and applying analytical and other appropriate procedures.

- 1. Inquiries with Musim Mas' Sustainability team to:
  - a. Understand principal business operations,
  - **b.** Appreciate key sustainability issues and developments,
  - c. Map out information flow for sustainability reporting the and relevant controls, and
  - d. Identify data providers with their responsibilities
- 2. Virtual interviews with and sought clarifications employees from Singapore Management in Indonesia to understand key sustainability issues related to the selected indicators, data collection processes and accuracy of reporting.
- 3. Conduct walk-through of systems and reporting with relevant personnel to circumstances. understand the quality of checks and

- control mechanisms in relation to the Subject Matter in the Sustainability Report.
- 4. Performing of analytical reviews on data and inquire with relevant personnel when anomalies are observed.
- **5.** Obtaining documentation through sampling methods to check accuracy of the data in relation to the Subject Matter in the Sustainability Report.
- 6. Checking data and statements had correctly transcribed been from corporate systems and/or supporting evidence, in relation to the Subject Matter in the Sustainability Report.
- 7. Obtaining relevant certifications and reports in relation to the Subject Matter in the Sustainability Report.
- 8. Relying on Musim Mas' management representation letter on the Subject Matter in the Sustainability Report.

We also performed such other procedures processes for data aggregation and as we considered necessary in the

### **\*** Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to the Subject Matter as of 16 September 2025 for the year ended 31 December 2024, in order for it to be in accordance with the Criteria.

### **\*** Restricted Use

This report is intended solely for the information and use of Musim Mas and is not intended to be and should not be used by anyone other than those specified parties.

Ernst & young UP

### **Ernst & Young LLP**

16 September 2025 Singapore

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# **Aligning with TCFD** Reccomendations

[GRI 201-2, 13.2.2] [FB-AG-110a.2]

large non-listed company in Singapore, Musim Mas will adopt ISSB climate-related disclosure standards (IFRS Sustainability Standards S2 on climate and climate-related IFRS S1 standards) as our reporting framework starting with our 2027 financial year. For continuity, it will build on our existing disclosures aligned to the Taskforce on Climate-related Financial Disclosures (TCFD) recommendations, a framework that enables companies to effectively communicate our climaterelated impacts, risks, and opportunities to stakeholders. It also provides a structured approach to highlighting mitigation and adaption efforts in the global transition to a low-carbon economy.

### **\* Governance**

The Musim Mas Board, led by our Executive Chairman cum CEO, maintains oversight over the management of climate-related risks and opportunities. At the operational level, Musim Mas' Executive Management forms part of the wider board-level governance structure, with two Directors - the Director of Communications and

Sustainability and the Director of Climate Action and Supply Chain Sustainability the Group's climate and leading sustainability efforts.

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These Directors monitor and manage sustainability matters, including climaterelated initiatives and performance. As part of their role within the broader governance structure, they track progress against climate-related targets and report to the board. These directors are supported by senior management and relevant sustainability teams in implementing climate-related management programs and action plans across Musim Mas.

The Board and Executive Management, regularly assess and review key sustainability ESG and issues and trends. These include climate-related management, planning, action and alignment with our core objectives - such as reducing greenhouse gas upholding emissions and Peat, and Deforestation, No Exploitation (NDPE) commitments. For example, the budget to improve our environmental performance is an important part of our financial planning. It includes measures to reduce emissions (e.g., building methane capture facilities and adopting power cogeneration at our mills), promote smallholder collaboration in upholding our NDPE commitments, and engage with local communities to prevent and manage fires.

Musim Mas is fully committed to ensuring our relevant personnel and collaborators have the appropriate expertise to manage sustainability and climate-related issues. We also take steps to ensure that our senior management has a robust and diversified skillset to tackle sustainability matters, including climate-related trends and projects, with multiple members receiving training on SBTi target setting, decarbonization, and best management practices on peat. We assign dedicated personnel in the relevant departments to inform our teams about climaterelated issues by continuously monitoring regulatory developments, changing weather patterns, soil quality, and water balance, among others, to assess our exposure to climate-related risks and opportunities. We have also established a carbon team with the expertise to assess and monitor our carbon emissions and their reduction.

>> See: Corporate and sustainability governance

### **Risk Management**

Musim Mas' Sustainability Policy has served as the principal framework for our sustainability commitments since 2014.

It includes climate-related topics that are integrated into our company-wide risk management process, as well as risks and opportunities to be discussed as part of the Board agenda. Recognizing the potentially significant impacts of climate-related risks on our business, Musim Mas utilises several risk processes to monitor, identify, assess, and manage climate-related risks. The size and scope of each risk is monitored by specific teams in the relevant departments through a climate risk assessment that considers factors such as business growth, existing and emerging climate-related regulatory requirements, environmental outlooks and potential worst-case scenarios in different timeframes (short-, medium-, and long-term). Based on the results, the teams can study the scale and financial impacts of the risks.

The Board reviews these risk areas, considering ESG factors and the necessary actions to achieve strategic objectives. After the Board's review, responsibilities and actions are shared and assigned to the relevant departments, which are then tasked with developing action plans and projects to address these risks. Implementation of action plans requires Board approval, and progress is typically reported to the Board to ensure their oversight of the risk management process.

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### Strategy

Musim Mas recognizes that adaptive strategies are necessary to maintain market competitiveness and business resilience to climate-related risks. Our inaugural climate risk scenario analysis, conducted in 2024–2025 in collaboration with external experts, identified the impacts of mediumand long-term climate-related risks and opportunities on our business. The identified risks and opportunities from this analysis will guide our business strategy and financial planning.

For instance, we invest heavily in monitoring weather events and building gray infrastructure to mitigate the impacts of extreme floods and storms. We also invest in methane capture facilities to reduce our carbon emissions and exposure to future carbon pricing and work closely with stakeholders to maintain compliance with climate-related regulations. The findings of our climate risk assessment will inform our upcoming roadmap and provide a comprehensive strategy for addressing climate-related risks.

See: 2024-2025 Climate Scenario Analysis

### **\* Metrics & Targets**

Recognizing the urgency of combating the climate crisis, we have set a range of ambitious targets to reduce our carbon emissions and their associated impacts on the environment. For instance, we were one

of the 13 signatories of the Agriculture Sector Roadmap to 1.5°C at the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27), which aims to halt commodity-linked deforestation consistent with a 1.5°C warming pathway.

We have also bolstered our long-term commitment to sustainability by reaching our target to reduce upstream GHG emission intensity by 55% from our 2006 baseline, two years ahead of schedule. Most recently, we adopted a sciencebased approach to our GHG emission targets, in greater alignment with the Paris Agreement. Following extensive groundwork, we have set ambitious netzero emission targets. We are proud to have had both our near- and long-term reduction targets validated by the Science Based Targets initiative (SBTi) in October 2024. This means compliance with the SBTi Corporate Net-Zero Standard and the SBTi Forest, Land, and Agriculture Guidance (FLAG).

We track various metrics to monitor our progress towards targets and measure our exposure to climate-related risks and opportunities, including Scope 1, Scope 2, and Scope 3 emissions, energy consumption, area conserved, hotspots and wildfires detected, and water use.

- For more information on these metrics, see: <u>Targets</u> and <u>progress</u>
- See also: Pillar 2: Deliver positive environmental impacts

### **TFCD Index**

The table below maps the sustainability disclosures in this report to four thematic areas in the TCFD recommendations: Governance, Strategy, Risk Management, and Metrics & Targets.

Pillar	TCFD Recommendations	Sections referenced in our 2023 Sustainability Report
Governance	Board oversight  Role of management	<ul> <li>Corporate and Sustainability Governance</li> <li>Aligning with TCFD Recommendations</li> </ul>
Strategy	Climate-related risks and opportunities over the short, medium, and long term  Impact on business, strategy, and financial planning  Resilience of strategy and scenario analysis	<ul> <li>Approach to Sustainability</li> <li>Climate Resilience and Mitigation</li> <li>Aligning with TCFD Recommendations</li> </ul>
Risk Management	Process for identifying and assessing climate-related risks  Processformanaging climate-related risks  Integrating processes into overall risk management framework	<ul> <li>Climate Resilience and Mitigation</li> <li>Aligning with TCFD Recommendations</li> </ul>
Metrics & Targets	Metrics used  Scope <sup>1</sup> , Scope <sup>2</sup> , and Scope <sup>3</sup> GHG emissions and related risks  Targets and performance	<ul> <li>Targets and Progress</li> <li>Climate Action</li> <li>Climate Resilience and Mitigation</li> <li>Aligning with TCFD Recommendations</li> </ul>

### Musim Mas' Contributions to the SDGs

As part of our 2024 materiality review, no changes were made to the alignment of our material topics, program objectives, and downstream risks and opportunities against the United Nations' Sustainable Development Goals (SDGs) and their targets, and our four Sustainability Policy Pillars, compared to our previous report. This is detailed below.

# **Our Sustainability Pillars**



PILLAR 1

Improve the Lives of Smallholders, Workers, and Communities



PILLAR 2

**Deliver Positive Environmental Impacts** 



PILLAR 3

**Impacts** 

**Maintain Responsible** and Enduring **Relationships with** Suppliers, Customers, and Stakeholders



PILLAR 4

**Drive Innovation in Sustainable Practices** 

### **Primary SDGs**

These are priority goals and targets that Musim Mas reports on and demonstrates contributions to. Corresponding SDG logos are displayed in the relevant sections of this report.

SDG	Relevant SDG Target	Material Topics and Contributions	Musim Mas Sustainability Policy Pillar
2 ZERO HUNGER	2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous people, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	Smallholder engagement: Including smallholders in our supply chain and implementing training and engagement programs to support them in addressing complex and interlinked barriers around yields, plantation management, land ownership, financial access and income, market access, replanting, economies of scale, and quality of life. Our programs cover scheme and independent smallholders in our operational landscapes. Beyond oil palm smallholders, we support women smallholders through a new dedicated program, and we are also working with coconut smallholders.	PILLAR 1
SDG 2: ZERO HUNGER	2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	Innovation and R&D: Investing in R&D to produce premium seedlings, increase yields, improve oil extraction rates, reduce reliance on chemicals, improve soil management, and focusing on sustainable and regenerative agriculture to improve the amount and quality of production and contribute to food security worldwide. We released four new oil palm seedlings (Musim Mas GS Series) with superior traits that result in greater yield, land-use efficiency, and productivity.	PILLAR 4

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Improve the Lives of

Smallholders, Workers,

**Deliver Positive** 

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Maintain Responsible and Enduring

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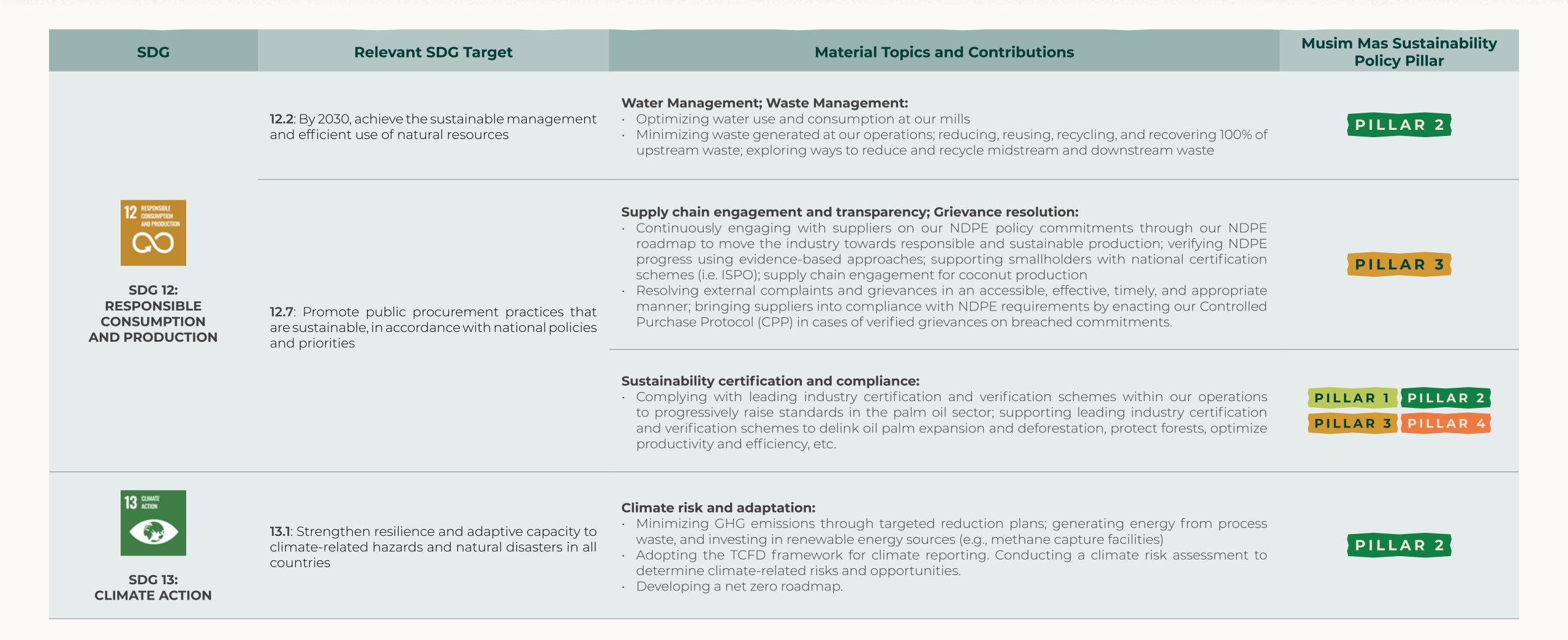
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SDG	Relevant SDG Target	Material Topics and Contributions	Musim Mas Sustainability Policy Pillar
15 LIFE ON LAND	<b>15.1</b> : By2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	<ul> <li>Conservation and management of HCV, HCS, and peat areas; Supply chain engagement and transparency; Pesticide and chemical management:</li> <li>Implementing our NDPE policy at Musim Mas operations; conserving, managing, and rehabilitating HCS forests and HCV areas, including riparian buffer zones; protecting waterways; assessing the impact of our operations on biodiversity, water, and ecosystems</li> <li>Implementing our NDPE policy to promote deforestation-free commodities throughout the supply chain; holding suppliers, including smallholders, accountable for deforestation activities</li> <li>Managing the use and handling of pesticides and chemicals; optimizing and reducing chemical fertilizer and pesticide use; adopting organic substitutes where possible.</li> </ul>	PILLAR 2
SDG 15: LIFE ON LAND	<b>15.2</b> : By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantiallyincreaseafforestationandreforestation globally	<ul> <li>Fire and haze prevention:</li> <li>Managing and monitoring fires; reforestation of burnt areas; applying best management practices to manage existing plantations on peat; protecting soil from degradation; handling waste and chemicals responsibly</li> <li>Implementing our NDPE policy to promote deforestation-free commodities throughout the supply chain; holding suppliers, including smallholders, accountable for deforestation activities</li> </ul>	PILLAR 2
		<ul> <li>Supply chain engagement and transparency:</li> <li>Working towards traceability to plantation and full supplier visibility to eliminate deforestation in supply chains</li> </ul>	PILLAR 3
17 PARTNERSHIPS FOR THE GOALS  SDG 17: PARTNERSHIPS	17.16: Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries	<ul> <li>Stakeholder collaboration and reporting; Landscapes; Product quality and safety:</li> <li>Working with a broad range of industry players, government bodies, and civil society organizations to address pressing issues; collaborating on transforming the industry; maintaining transparent and accountable partnerships; contributing expertise, resources, and innovation to partnerships; collective action for coconut supply chain sustainability</li> <li>Collaborating with private and public sector stakeholders in landscapes to transform the industry and support jurisdictional approaches</li> <li>Staying responsive to customer needs and legislation on contaminant levels requiring mitigation efforts during the production of edible oils to minimize contaminants; increasing consumer awareness of nutritional, dietary, and health benefits</li> </ul>	PILLAR 3
FOR THE GOALS		<ul> <li>Innovation and R&amp;D:</li> <li>Developing new solutions for using sustainable palm oil-based functional blends and specialty fats to address different industry needs</li> </ul>	PILLAR 3

# **Secondary SDGs**

These are goals and targets that Musim Mas directly or indirectly contributes to, with some level of reporting. Some of these goals and targets overlap with our primary SDGs.

	SDG	Relevant SDG Target	Musim Mas Sustainability Policy Pillar
1 POVERTY 「中華春春	SDG 1: NO POVERTY	<b>Target 1.4:</b> By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	PILLAR 1
2 TERO HUNGER	SDG 2: ZERO HUNGER	<b>Target 2.1:</b> By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round <b>Target 2.2:</b> By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	PILLAR 4
4 QUALITY EDUCATION	SDG 4: QUALITY EDUCATION	<b>Target 4.4:</b> Providing development opportunities by investing in capacity building, training, and technical skills programs to help employees achieve their career goals	PILLAR 1
5 GENDER EQUALITY	SDG 5: GENDER EDUCATION	<b>Target 5.1:</b> End all forms of discrimination against all women and girls everywhere <b>Target 5.6:</b> Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Program of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences	PILLAR 1
8 BECENT WORK AND ECONOMIC GROWTH	SDG 8: DECENT WORK AND ECONOMIC GROWTH	<b>Target 8.5:</b> By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	PILLAR 1
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	SDG 12: RESPONSIBLE CONSUMPTION AND PRODUCTION	<b>Target 12.2:</b> By 2030, achieve the sustainable management and efficient use of natural resources <b>Target 12.6:</b> Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle <b>Target 12.7:</b> Promote public procurement practices that are sustainable, in accordance with national policies and priorities	PILLAR 2 PILLAR 3
13 CLIMATE ACTION	SDG 13: CLIMATE ACTION	Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	PILLAR 2
15 UPE ON LAND	SDG 15: LIFE ON LAND	<b>Target 15.1:</b> By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	PILLAR 2
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	SDG 16: PEACE, JUSTICE AND STRONG INSTITUTIONS	Target 16.5: Substantially reduce corruption and bribery in all their forms	PILLAR 1

# Glossary

**Biodiversity** The number and variety of plant and animal species within a region.

Biological Oxygen Demand (BOD) The amount of oxygen used when microorganisms decompose organic matter. Testing for BOD assesses the amount of organic matter in water.

Carbon Dioxide Equivalents (CO2e) A universal measurement for the impact of releasing (or avoiding the release of) different greenhouse gases.

Chemical Oxygen Demand (COD) The amount of oxygen required to oxidize soluble and particulate organic matter in water. COD testing uses a strong chemical agent to oxidize organic material in a wastewater sample under controlled conditions.

Concession Musim Mas uses this term to specifically refer to the physical boundaries of an area within a plantation, for example, when monitoring suppliers' lands and operations by satellite.

**Copra** The dried meat or kernel of a coconut that is a crucial ingredient in the production of coconut oil.

**Cradle-To-Gate** A life cycle assessment model that assesses a product's environmental footprint from raw materials extraction ("cradle") until it leaves the factory ("gate").

**Effluent** Water from industrial activities, including mill processes, discharged into another body of water.

Fire-Free Village Programme (FFVP) A fire management pilot program which provides training, equipment and economic incentives to local communities to help prevent fire.

Fresh fruit bunches (FFB) The raw material harvested from an oil palm tree. This weighs 10 to 40 kg, depending on the size and age of the tree.

#### Free, Prior and Informed Consent (FPIC)

The principle that a community has the right to give or withhold its consent to proposed projects that may affect the lands they customarily own, occupy, or use.

Global Reporting Initiative (GRI) A multi-stakeholder sustainability reporting standard providing guidelines on report content and indicators.

#### Greenhouse Gas (GHG) **Emissions**

Atmospheric gases that absorb and emit radiation within the thermal infrared range. The primary greenhouse gases are water vapour, carbon dioxide, methane, nitrous oxide, and ozone. Scope 1 GHG emissions are emissions released into the atmosphere as a direct result of an activity or series of activities at the facility level. Scope 2 GHG emissions are released into the atmosphere from the indirect consumption of energy commodities.

High Carbon Stock Approach (HCSA) A global methodology used in agricultural land development planning and currently applied in fragmented tropical landscapes on mineral soils in the humid tropics. It distinguishes between HCS forest areas that require protection and degraded lands with low carbon and biodiversity values that may be considered for development.

High Conservation Value (HCV) Ecosystems of outstanding significance and critical importance due to their high biological, ecological, social, or cultural value. There are six types of HCVs, based on the social and environmental value of natural forests. These areas must be carefully managed and protected to maintain or enhance their value.

Identity Preserved (IP) RSPO supply-chain model separating sustainable palm oil from a single identifiable certified source from ordinary palm oil across every link in the supply chain.

Independent Mills Mills under Musim Mas control that source from third-party FFB suppliers instead of Musim Mas plantations.

Independent Smallholders Oil palm farmers who cultivate up to 20 hectares of land that are self-financed, managed, and equipped but not bound to any one mill.

Indonesian Sustainable Palm Oil (ISPO) Indonesia's mandatory national sustainable palm oil standard.

Integrated Pest Management (IPM) The careful consideration of all available

pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations.

International Sustainability and Carbon Certificate (ISCC) A global biomass and bioenergy certification scheme.

### Kredit Koperasi Primer Anggota (KKPA)

A smallholder primary cooperative credit scheme, voluntarily initiated by Musim Mas in 1996. It provides smallholders with practical support to acquire the skills and technology needed to undertake palm oil cultivation.

No Deforestation, No Peat, No Exploitation (NDPE) Policies and practices adopted by palm oil companies that prevent deforestation, development on peatlands, and the exploitation of workers, communities, and smallholders.

Report

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**Appendices** 

NDPE Implementation Reporting Framework (NDPE IRF) A reporting tool that helps companies understand and systematically track progress in delivering their NDPE commitments in their palm oil supply chains.

Palm Oil Collaboration Group (POCG) A multi-stakeholder initiative that brings together companies from every link in the palm oil supply chain to accelerate the effective implementation of NDPE commitments.

Palm Oil Innovation Group (POIG) A multistakeholder initiative that promotes the adoption of responsible palm oil production practices by key players in the supply chain by developing and sharing a credible and verifiable benchmark that builds upon the RSPO Principles and Criteria, creating and promoting innovation.

Palm Oil Mill Effluent (POME) A by-product of processed FFB.

Peat An accumulation of partially decayed vegetable matter that forms in wetlands or peatlands, variously called bogs, moors, muskegs, pocosins, mires, and peat swamp forests.

Plantation Specifically refers to the place of production, be it a large industrial plantation with concessions and mills, a large farm without a mill, or a smallholder farm.

**Disclosure** Program **Public** for **Environmental Compliance (PROPER)** Indonesia's national environmental reporting initiative. It uses a colour-coded rating scheme to grade factories' pollution control performance against regulatory standards.

# **Integrated Deforestation Alert (IDA)** A system by Global Forest Watch (GFW) that

integrates satellite imagery and/or radar data (i.e., Radar for Detecting Deforestation [RADD]) for monitoring and near real-time alerts of deforestation.

Roadmap This term has two distinct meanings in this report. Our Roadmap to Responsible Supply Base) is Musim Mas' communication piece on targets and plans to bring suppliers into compliance with our commitments. Musim Mas also compiles supplier roadmaps with timebound plans and clear implementation milestones to guide suppliers toward compliance with our NDPE commitments.

Roundtable on Sustainable Palm Oil (RSPO) A multi-stakeholder organization that has developed a certification scheme for sustainable palm oil. All RSPO members must comply with the RSPO Principles and Criteria (P&C), a set of stringent standards governing sustainable palm oil production.

Scheme Smallholders Farmers operating under a program initiated by the Indonesian government to encourage the development of smallholder plantations, where plantation companies (nucleus estates) assist and supportsurrounding community plantations.

Segregated (SG) A supply-chain model assuring that RSPO-certified palm oil and its derivatives delivered to the end-user originate only from RSPO-certified sources. It permits the mixing of RSPO-certified palm oil from a variety of sources.

**Supply Shed** A group of suppliers comprising mills and their associated the plantations independent and plantations and smallholders that supply them.

**Toxicity** The degree to which a substance is harmful to living organisms. Toxicity in agricultural chemicals is measured using the LD50 methodology, i.e., the number of toxicity units corresponding to a lethal dose for 50% of a rat population.

### Village Development Program (VDP)

A Musim Mas program for scheme smallholders tailored to villages where plantations are community-managed rather than individually owned.

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