# Charting a Resilient Future X

SUSTAINABILITY REPORT 2023





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About Musim Mas

Approach to Sustainability

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.

**Deliver** Positive Environmental Impacts

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

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# **The Musim Mas Sustainability Pillars**

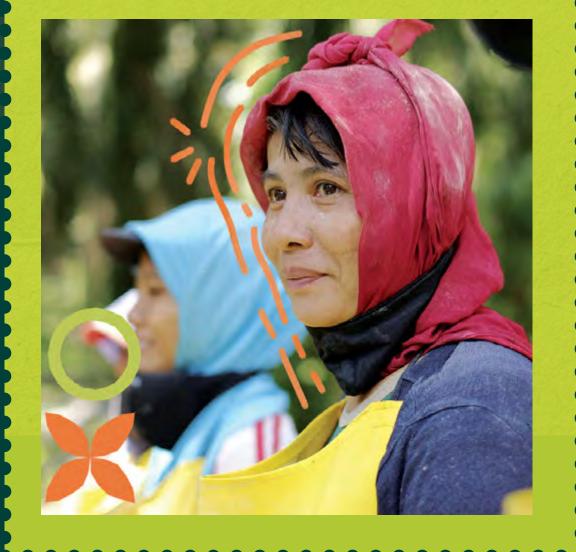
Sustainability at Musim Mas means providing high quality and innovative palm oil products and derivatives in a responsible way.

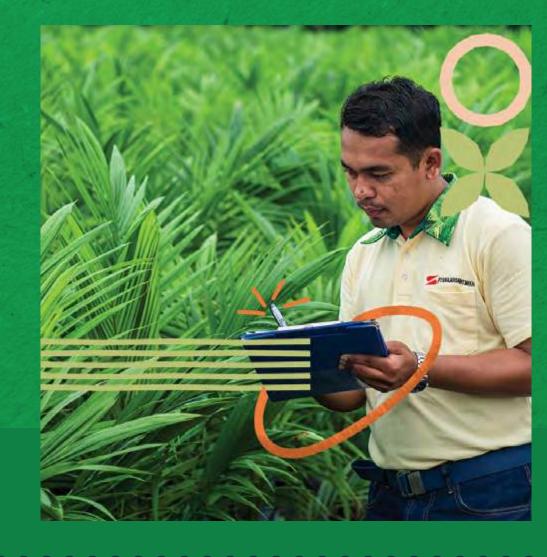
### PILLAR 1

Improve the Lives of Smallholders, Workers, and Communities



**Deliver Positive Environmental Impacts** 





Improve the Lives of Smallholders, Workers, and Communities

Deliver Positive Environmental Impacts

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

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### PILLAR 3

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







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# **About This Report**

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

Welcome to the seventh Musim Mas Group ('Musim Mas' or the 'Group') report, updating the Group's sustainability performance for the 2023 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, and the Sustainability Accounting Standards **Board (SASB) guidelines.** 

GRI and SASB disclosures are included throughout the report and referenced under headings or sub-headings as GRI XXX-XX, GRI 13.X.X, and FB-AG-XXx.x. It also marks the first time we are reporting against the Taskforce on Climate-related Financial Disclosures (TCFD) requirements. This report is designed to be read in tandem with the sustainability disclosures on our <u>website</u>.

R2023 GRI Content Index SR2023 SASB Index

# **Report Scope and Boundaries**

We are members of several international and sector-wide platforms and adhere to their guidelines and standards. These This report presents our sustainability include the Roundtable on Sustainable performance data for the period of January 1 Palm Oil (RSPO) and its technical working to December 31, 2023, covering all upstream groups, and the Palm Oil Collaboration operations of Musim Mas Group. Data for Group (POCG). our midstream and downstream operations, as well as historical data is also disclosed We also submit our sustainability data to where relevant and available. Given the leading benchmarks, such as the Zoological timing of its publication, this report also Society of London's Sustainability Policy includes significant 2024 achievements.

See also: 2019–2023 Sustainability Performance Data

### **Stakeholder Inclusiveness** and Review

and the Palm Oil Transparency Coalition's (POTC) Importer Assessment. To ensure that we are responsive to our stakeholders, we consulted our operations **Verification and Assurance** teams at the local and site levels, as well as representatives of two media outlets, a sector organization, a global public-private The information and data in this report partnership platform, a multi-stakeholder have been audited by the certification platform, and an academic institution. We bodies of the respective sustainability also engaged technical experts from the schemes. We also contracted Ernst & Proforest-Daemeter Partnership (formerly Young LLP (EY) to provide independent known as Consortium of Resource Experts limited assurance on selected disclosures - CORE) to review the independent in this report. smallholder and supply chain-related disclosures in this report.

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Transparency Toolkit (ZSL SPOTT), CDP (formerly known as the Carbon Disclosure Project), EcoVadis, the Global Child Forum Benchmark, the World Benchmarking Alliance (WBA) Food and Agriculture Benchmark, the WBA Nature Benchmark,



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# **2023 Summary Progress**

# **Key Highlights**

Governance, Recognition, and Assessments

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

- Published new addendum to Sustainability Policy on <u>Commitment to Children and</u> <u>Human Rights</u>
- Committed to achieving net-zero emissions by 2050 through Science Based Targets Initiative (SBTi)
- Signed first <u>Sustainability-linked</u> <u>Loan</u> with Rabobank and HSBC Bank in August 2024
- Launched a second landscape strategy in September 2024 to encompass all remaining key landscapes in our target (Riau, South Sumatra, and West Kalimantan), along with two additional landscapes (North Sumatra and Central Kalimantan)

### Membership, Recognition, and Assessments

- Inaugural <u>Double 'A'</u> achievement for CDP 2023 Ratings: Forests (A), Water Security (A), Climate Change (B)
- 2023 ZSL SPOTT assessment: Ranked 7th out of 100 companies (91.8% score)
- Content of the second secon
- Received <u>Green PROPER</u> ratings for 11 mills, and <u>Blue PROPER</u> ratings for two mills and seven plantations

### **Certification Progress**

- 100% of mills integrated with plantations certified to RSPO P&C
- 100% of midstream and downstream palm processing facilities certified to RSPO SCCS
- 100% upstream entities (PTs) certified to ISPO
- 25 units are certified to ISCC
- Our only refinery in Malaysia is certified to MSPO SCCS

- Received <u>RSPO Excellence Award</u> for Smallholder Impact with GAPSIMA
- Received Sawit Indonesia Award for "Most Reputable Palm Oil Company in Empowering Independent Smallholders"
- Together with Standard Chartered Bank (SCB), we won the Best Liquidity and Investments Solution at <u>The Asset Triple</u> <u>A Treasurise Award 2024</u>

Improve the Lives of Smallholders, Workers, and Communities Deliver Positive Environmental Impacts

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### **Employees and Communities**

### **Employees**

- 100% employees in Indonesia covered by collective bargaining agreements
- >58% reduction in accident rates since 2019
- 98% of workers' school-age children enrolled in schools
- Operating 47 childcare centers,
   11 kindergartens, and 14 schools
- 93 scholarships awarded to deserving students
- Providing 26 clinics and
   >2,600 first-aid kits

### Communities

- Contributed >IDR 32.9 billion (~USD 2.1 million) to CSR
- Pledged <u>SGD 5 million</u> (~USD 3.7 million) in donations to charitable causes

### **Smallholders**

### **Scheme Smallholders**

- 100% of scheme smallholders covered by Musim Mas programs
- IDR 300 billion (~USD 19.5 million) income generated from FFB sales
- Conducted 169 training sessions for scheme smallholders
- >77% of scheme smallholder land is RSPO-certified

### **Independent Smallholders**

- 43,474 independent smallholders covered by Musim Mas programs
- Trained 460 Village Extensions Officers (VEOs)
- 6,723 smallholders received training from VEOs
- 4,586 smallholders RSPO certified and 1,959 ISPO certified with Musim Mas support to date
- Smallholders have collectively earned ~USD 2.6 million in RSPO credits to date



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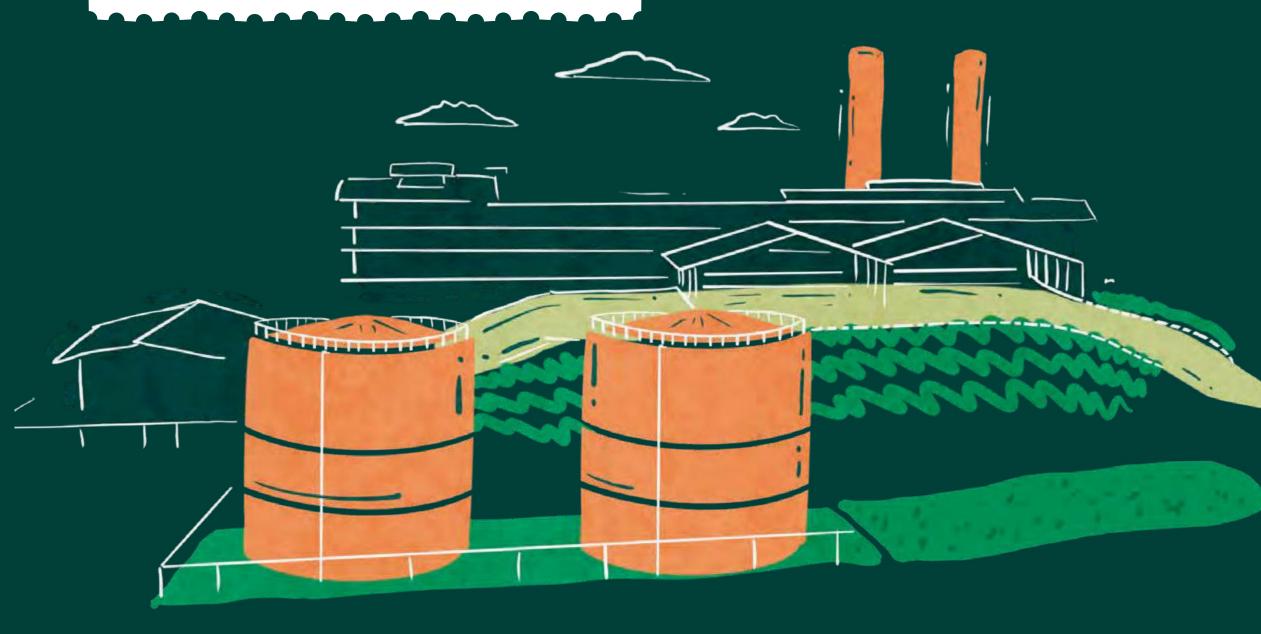
Approach to Sustainability

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

- Reported against the voluntary TCFD recommendations for the first time
- Began reporting on Scope 3 emissions
- Completed LCA for selected downstream products, with the scope of cradle to gate, following the ISO 14040 and ISO 14044 frameworks
- Exceeded our target of reducing upstream GHG emission intensity by 55% against 2006 baseline, two years ahead of schedule
- ♦ >95% of upstream energy consumption from renewable sources
- >25 million kWh of electricity exported to the national grid

### **Conservation, Restoration,** and Managing Fires

- Musim Mas operations continue to be 100% deforestation-free
- Shared findings and insights from the South East Asia Rainforest **Research Partnership (SEARRP)'s** independent biodiversity assessment of our operations with the RSPO
- Managing 28,513 ha of conservation
- Covered 75 villages under the Fire-Free Village Program (>457,000 ha)
- **Rewarded 35 villages for remaining** fire-free



<sup>1</sup> Traceability to plantation (TTP) refers to traceability to place of production, i.e., a company's concession, a farm, or a village for certain FFB dealers and/or smallholders. # EY has performed limited assurance procedures on this figure.

\* These figures have been independently verified by Control Union (Malaysia) Sdn. Bhd. See the verification statements for IRF and TTP.

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### **Supplier Progress** on NDPE

### **Suppliers NDPE Progress and Engagement**

- **98.50%**<sup>#</sup> of suppliers have NDPE commitments (including 100% of new suppliers)
- **96.34% of suppliers** have attended NDPE workshops
- **81.86% of suppliers** completed the Musim Mas Self-Assessment Tool
- **95.00%\*** of supplier volumes are 'Delivering' on No Deforestation commitments, 85.69%\* of supplier volumes are 'Delivering' on No Peat development commitments
- **Conducted one TTP training** workshop for FFB dealers in Muar, Malaysia with Proforest as part of a joint program with Proforest-**Daemeter Partnership and industry** peers
- Conducted six in-person and online workshops to train suppliers on NDPE and new digital traceability system

### Traceability

- Achieved 100% TTM since 2015
- Achieved 98%\* overall TTP<sup>1</sup> in 2023

Coconut Supply Base

Achieved 99% TTP for coconut oil

Completed one NDPE workshops for coconut suppliers

### Landscapes and Partnerships

- **Established new 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 research** program on how Musim Mas' Smallholders Hubs programs can drive and deliver on sustainability goals
- Renewed partnerships with AAK, and Nestlé to address deforestation outside concession areas through Smallholders Hub in Subulussalam
- **Renewed partnership with General** Mills to integrate smallholders into the sustainable palm oil supply chain through Smallholders Hub in Aceh Singkil





About Musim Mas Approach to Sustainability

### **Targets and Progress**

This section outlines our progress against Musim Mas sustainability targets, which includes targets from our 2022 <u>No Deforestation, No Peat,</u> and No Exploitation (NDPE) roadmap, and our <u>Commitment to Children and</u> <u>Human Rights</u>. Newly adopted targets from the Tropical Forest Alliance's (TFA) <u>Agriculture Sector Roadmap to 1.5°C</u> as well as our 2022 <u>Biodiversity and Climate</u> <u>Resiliency Action Plan</u> are consolidated in the following tables. Targets from the TFA roadmap are marked with the icon **v**.

While our target reporting aligns with the four main pillars of our <u>Sustainability</u> <u>Policy</u>, 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 more comprehensive overview, see <u>Musim Mas' Contributions to the SDGs</u>).

### PILLAR 1 Improve the Lives of Smallholders, Workers, and Communities

### Target

### Musim Mas Operations

Update sustainability commitments on protecting children's rights

Develop and implement Human Rights Due Diligence (HRDD) strategy for Musim Mas operations

Certify 100% of scheme smallholders

### Zero fatalities

### Independent Smallholders

Initiate at least two pilot projects to trial regenerative agriculture

Continue to improve independent smallholder livelihoods through Smallholders Hubs - Training for Trainers

Increase number of smallholders complying with NDPE requirements through RSPO and ISPO certification Improve the Lives of Smallholders, Workers, and Communities Deliver Positive Environmental Impacts

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### **Progress in 2023, unless otherwise stated** Year Status Strengthened commitments to protecting children's rights in line with the UN Convention on the Rights of the Child through 2023 $\checkmark$ Achieved an addendum to our Sustainability Policy in July 2023. We continue to manage human rights risks through past and ongoing programs and efforts. We are on track to launch our 2025 Progress mad HRDD strategy by 2025. RSPO-certifed scheme smallholder area increased from 6,039 ha to 6,163 ha; >77% of scheme smallholder areas are RSPO-Progress mad 2025<sup>2</sup> certified. We regret to report three fatalities, two at our upstream Not achieved Ongoing operations in Kalimantan, and one in Sumatra. Partnered with L3F, SNV, ICRAF, Danone, L'Oréal and Mars Incorporated for the BIPOSC program since 2021 to promote 2025 **Progress mad** regenerative agriculture practices among independent smallholders in Labuhanbatu, North Sumatra. Trained 460 VEOs, who have in turn, trained 6,723 smallholders. **Progress mad** Ongoing Supported 4,586 smallholders in obtaining RSPO certification, Progress mad Ongoing and 1,959 smallholders in obtaining ISPO certification to date.

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### PILLAR 2 Deliver Positive Environmental Impacts

| Target                                                                                                                                    | Ye  |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Develop Group-level emissions reduction targets in line with the Science Based<br>Targets initiative (SBTi)                               | 20  |
| Report own and supply chain emissions from land use change                                                                                | 20  |
| Develop a climate resiliency and mitigation strategy for our upstream operations,<br>based on a climate risk assessment completed by 2023 | 20  |
| Reduce GHG emission intensity by 55% against 2006 baseline at RSPO-certified upstream operations                                          | 20  |
| Maintain mill water usage intensity below 1.2 m³/MT FFB processed                                                                         | Ong |
| Ensure 100% of Musim Mas refineries have completed NDPE IRF profiles                                                                      |     |
| Supply chain traceability and deforestation-free targets                                                                                  |     |

# EY has performed limited as<mark>surance p</mark>rocedures on these figures.

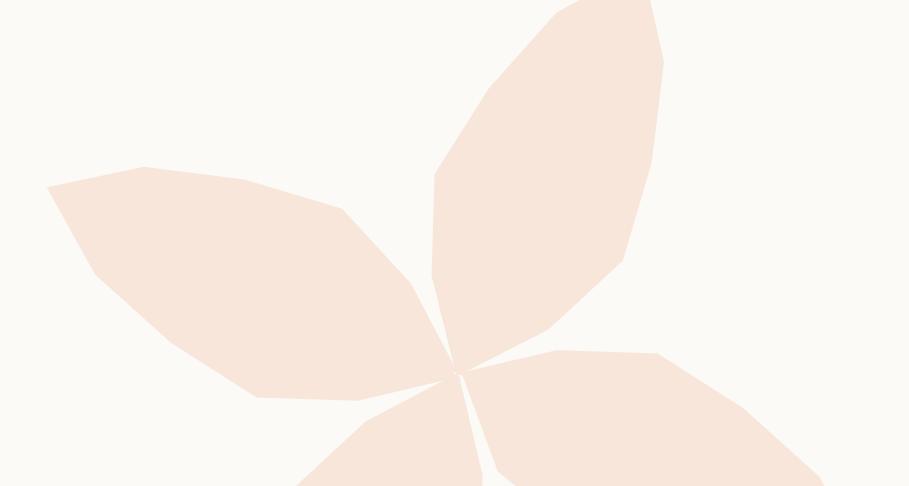
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| 'ear  | Progress in 2023, unless otherwise stated                                                                                                                     | Status        |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
|       | Committed to achieving net-zero emissions by 2050 through SBTi.                                                                                               |               |
| 024   | We have developed near-and long-term emissions reduction targets following the SBTi framework and are undergoing validation by SBTi.                          | Progress made |
| 024   | Our Scope 1 and 3 emissions disclosures include land-use change emissions from our own operations and supply chain.                                           | Achieved      |
| 024   | Completed climate risk assessment and scenario analysis, the findings of which will inform the development of our climate resiliency and mitigation strategy. | Progress made |
| 025   | We exceeded our target two years ahead of schedule, reaching 2.66 <sup>#</sup> MT CO <sub>2</sub> e/MT CPO.                                                   | Achieved      |
| going | Our average mill water usage intensity was 1.12 <sup>#</sup> m³/MT FFB.                                                                                       | Achieved      |
|       | See Pillar 3 targets                                                                                                                                          |               |
|       | See Pillar 3 targets                                                                                                                                          |               |
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About Musim Mas Approach to Sustainability

### Maintain Responsible and Enduring Relationships with Suppliers, Customers, and Stakeholders PILLAR 3

| Target                                                                           | Year             | Progress in 2023, unless otherwise stated                                                                                                                                               | Status        |
|----------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Achieve 100% overall traceability to plantation <sup>3</sup>                     | 2025             | Achieved 98%* traceability to plantation, up from 97% in 2022.                                                                                                                          | Progress made |
| Ensure 100% of supply chain is deforestation-free                                | 2025             | Developed a methodology to track and report deforestation-free<br>supply based on our traceability and risk management frameworks.<br>Achieved 99.41%* deforestation-free supply chain. | Progress made |
| Maintain 100% completion of NDPE IRF profiles for Musim Mas refineries           | Year-on-<br>year | Maintained 100% completion of NDPE IRF for all refineries (see <u>Musim Mas website</u> ).                                                                                              | Achieved      |
| Ensure 100% of supplier volumes are 'Delivering' on No Deforestation and No Peat | 2025             | 95.00%* of supplier volumes are 'Delivering' on No Deforestation commitments, up from 89.05% in 2022.                                                                                   | Progress made |
| (NDP) commitments, based on the NDPE IRF framework                               |                  | 95.69%* of all supplying volumes are 'Delivering' on No Peat<br>commitments, up from 81.26% in 2022.                                                                                    | •••           |
|                                                                                  |                  | 98.50% <sup>#</sup> of suppliers have NDPE commitments (including 100% of new suppliers);                                                                                               |               |
| Ensure suppliers progress towards implementing NDPE best practices               | 2025             | 96.34% of suppliers have attended NDPE workshops;                                                                                                                                       | Progress made |
|                                                                                  |                  | 81.86% of suppliers have completed the Musim Mas Self-Assessment<br>Tool (SAT).                                                                                                         |               |
| Develop and implement HRDD strategy for third-party suppliers                    | 2025             | Piloted the draft NDPE IRF for land and labour rights, and integrated key criteria including HRDD elements into the Musim Mas SAT.                                                      | Progress made |

<sup>3</sup> 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. # EY has performed limited assurance procedures on these figures. \* These figures have been independently verified by Control Union (Malaysia) Sdn. Bhd. See the verification statements for <u>TTP</u>, <u>deforestation-free</u>, and <u>IRF</u>.

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| PARTNERSHIPS<br>For the goals | 3 |
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About Musim Mas Approach to Sustainability

### **PILLAR 4 Drive Innovation in Sustainable Practices**

| Target                                                                                              | Year    | Progress in 2023, unless otherwise stated                                                                                                                                                                                                                                                                                                  | Status        |
|-----------------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Roll-out landscape strategies for key landscapes: Aceh, Riau, South Sumatra, and<br>West Kalimantan | 2025    | We launched our <u>first landscape strategy</u> focusing on Aceh in 2020.<br>In September 2024, we launched a <u>second comprehensive strategy</u><br>to cover all remaining key landscapes in our target (Riau, South<br>Sumatra, and West Kalimantan), with two additional landscapes<br>covered (North Sumatra and Central Kalimantan). | Achieved      |
| Increase support for independent smallholders through multi-stakeholder collaborations              | Ongoing | <ul> <li>We began a new partnership with Bunge in Sambas, West<br/>Kalimantan, and continued/renewed our partnerships with:</li> <li>L3F, SNV, ICRAF, Danone, L'Oréal and Mars Incorporated for the<br/>BIPOSC program in Labuhanbatu.</li> <li>General Mills in Aceh Singkil.</li> <li>AAK and Nestlé in Subulussalam.</li> </ul>         | Progress made |

### CROSS-CUTTING ALL PILLARS

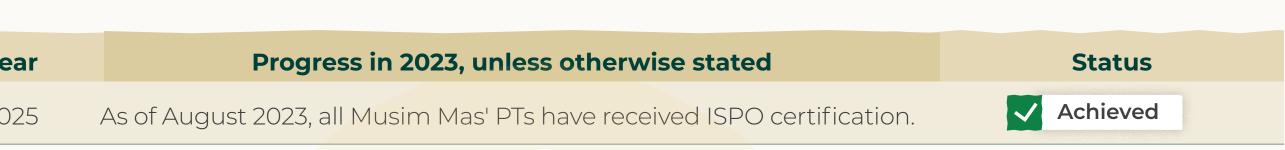
### Sustainability Certification

| Target                                                                 | Yea |
|------------------------------------------------------------------------|-----|
| 100% of Musim Mas' upstream entities (PTs) in Indonesia ISPO certified | 202 |

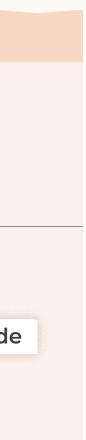
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| PARTNERSHIPS<br>FOR THE GOALS | 1 |
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# Chairman Statement

### [GRI 2-22]

### Dear Stakeholders,

As we present our Sustainability Report 2023, we are faced with three significant and converging long-term developments that are critical to our industry: climate change, regulatory intensification and the viability of independent smallholders. In this Chairman's Statement, I share our reflections, plans and actions taken as we navigate this complex and rapidly evolving landscape.

Naturally, climate change demands our immediate attention. Its impacts are farreaching, affecting the environment, economic stability, and supply chain resilience. The escalating climate crisis has also spurred an uncertain regulatory environment. Businesses must therefore be able to continuously adapt to regulatory changes and the broader landscape of risks and possibilities. Smallholders too need to be equipped to keep up with these changes.



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About Musim Mas Approach to Sustainability

### **\*** Readiness on Climate Action

Musim Mas is making great strides in taking climate action. We have established ambitious targets to reduce our carbon footprint and mitigate environmental impacts across our supply chain. Our steady work and proactive approach over the past decades have enabled us to meet our ambitious target of reducing upstream greenhouse gas (GHG) emissions by 55% against a 2006 baseline, two years ahead of our 2025 target; in part by equipping 17 of our mills with methane capture facilities.

The European market is vital for Musim Furthermore, we are now committed to net-zero by 2050 and have submitted Mas. It is an advanced market where product quality and sustainability are targets for validation by the Science Based Targets initiative (SBTi) covering equally valued. 2023 saw the introduction Scopes 1, 2, and 3 emissions. This is a of the European Union Deforestation significant commitment, underscoring our Regulation (EUDR) mandating that from confidence and track record in meeting 30 December 2024, seven commodities, our environmental targets. In addition, including palm oil and any derivative true to our long-term commitment products, must be free of deforestation to collaboration, we joined 13 other and legally produced to be placed on companies as signatories of the Agriculture the EU market. However, demonstrating Sector Roadmap, announced at COP27. compliance throughout a supply chain is The Roadmap aims to halt commodityno simple task. This can only be achieved linked deforestation in line with the 1.5°C through effective traceability and due warming pathway. diligence to ensure that all supply chain actors, including smallholders and third-Last but not least, I am delighted to party suppliers, are compliant with the EUDR. announce that this year, we achieved

Last but not least, I am delighted to announce that this year, we achieved a double 'A' score on the CDP Forests and Water Security categories, making us the only palm oil company on the CDP 'double A' list. This recognition, awarded to only a select few of the 21,000 companies assessed, signifies our exceptional performance in addressing climate change and deforestation, as well as our commitment to transparency and environmental stewardship. 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

### \* Readiness to Respond to Evolving Regulatory Requirements

ing In fact, the EUDR has dovetailed with our own robust preparations to ensure 100% of our supply chain is deforestation-free by 2025, as detailed in our 'No Deforestation, our No Peat, and No Exploitation' (NDPE) Roadmap. This includes adapting our comprehensive risk assessment measures and establishing specific supply and processing chains. As a result, we are ready to supply our EU customers from 30 December 2024 in compliance with the EUDR and our dedicated due diligence and segregation procedures have already been established and undergone independent verification. We have also started preparing for other forthcoming EU regulations, such as the Corporate Sustainability Reporting Directive (CSRD) and the Corporate Sustainability Due Diligence Directive (CSDDD).

As a large private company, we are taking steps to adopt strict disclosure requirements to the level required of a public company. This year, we have aligned our reporting process with the Taskforce on Climate-related Financial Disclosures (TCFD) framework to more effectively disclose climate related risks, in line with International Sustainability Standards Board (ISSB) standards and Singapore's mandatory climate disclosures that come into force from 2025.



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

### Readiness to Future-Proof Our Supply Base: Smallholders and High-Yielding Seedlings

Smallholders are integral to the future of the palm oil industry and we are proud of our longstanding mission to protect their livelihoods, improve their lives and support their communities. We continue to empower smallholders through capacity-building programs, including practical programs on financial literacy and skills development. With EUDR on the horizon, the certification of smallholders has become imperative not only to our business, but to the longterm viability of smallholders as well. Our efforts include training over 43,000 independent smallholders and facilitating the Roundtable on Sustainable Palm Oil (RSPO) certification of 4,586 smallholders and the Indonesian Sustainable Palm Oil (ISPO) certification of an additional 1,959 smallholders. We have also trained 460 Village Extension Officers to extend our outreach in smallholder communities. This year, we also launched the Women Smallholders Program to empower women in these communities further, entrenching our commitment to inclusivity. Our smallholders' initiatives have earned

numerous accolades, including the RSPO On that note, we are already looking Excellence Award for Smallholders Impact towards our next sustainability milestone. and the Majalah Sawit Indonesia Award forthcoming revision The of our for the 'Most Reputable Palm Oil Company Sustainability Policy in 2025 will further Empowering Independent Smallholders' in crystallize stakeholder expectations, climate goals, net zero commitments, 2023. sustainability ratings, and human Concurrently, we continue to advance rights due diligence. We will also be our productivity through cutting-edge streamlining the policy for greater clarity research and development. In 2023, after and reiterating our support for landscapes more than a decade of R&D, we launched and smallholders, building on our existing the Musim Mas GS Series of oil palm programs.

Concurrently, we continue to advance our productivity through cutting-edge research and development. In 2023, after more than a decade of R&D, we launched the Musim Mas GS Series of oil palm planting material. The new varieties are designed to enhance productivity, improve land-use efficiency and achieve high yields. This achievement is a testament to the strength and value of our R&D efforts and reminds us of the need to constantly grow and improve as a leader in seed-to-shelf agribusiness.

### \* Looking Ahead

Musim Mas remains steadfast in our belief that a sustainable palm oil industry is crucial to the environmental, social and economic future of our region. We will continue to lead by example, fulfilling our unwavering commitment to sustainability and ensuring our stakeholders remain a cornerstone of our business. Deliver Positive Environmental Impacts Maintain Responsible and Enduring Relationships with Suppliers, Customers, and Stakeholders Drive Innovation in Sustainable Practices Assurance Statement

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Sustainability is the key to the longevity
of our industry upon which millions of
livelihoods depend. We will not shirk from
our obligations toward our lands, our
communities and our stakeholders. Musim
Mas is ready to do its part and more.



**Executive Chairman and CEO** Musim Mas Group



Chairman

Approach to

# About Musim Mas

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

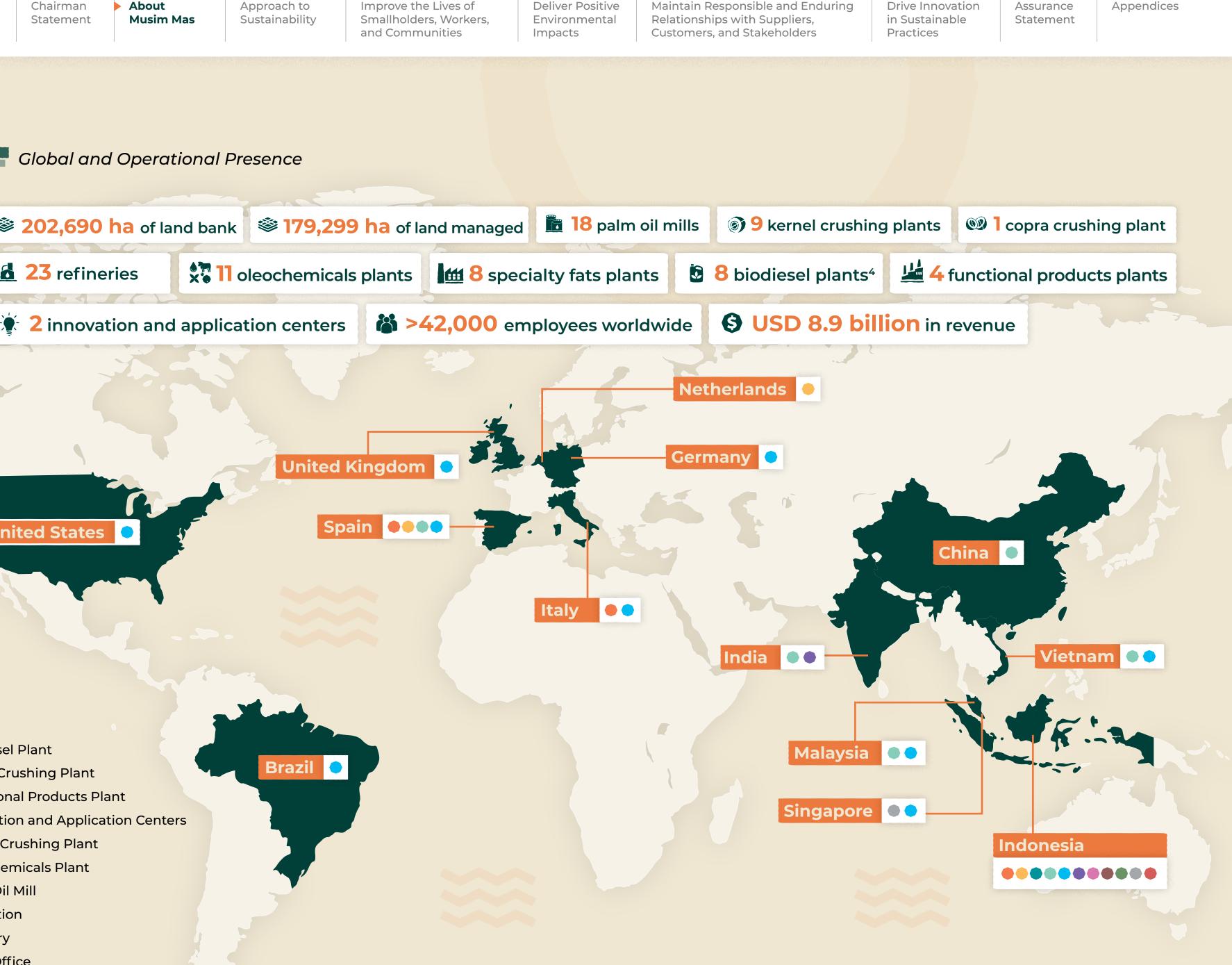
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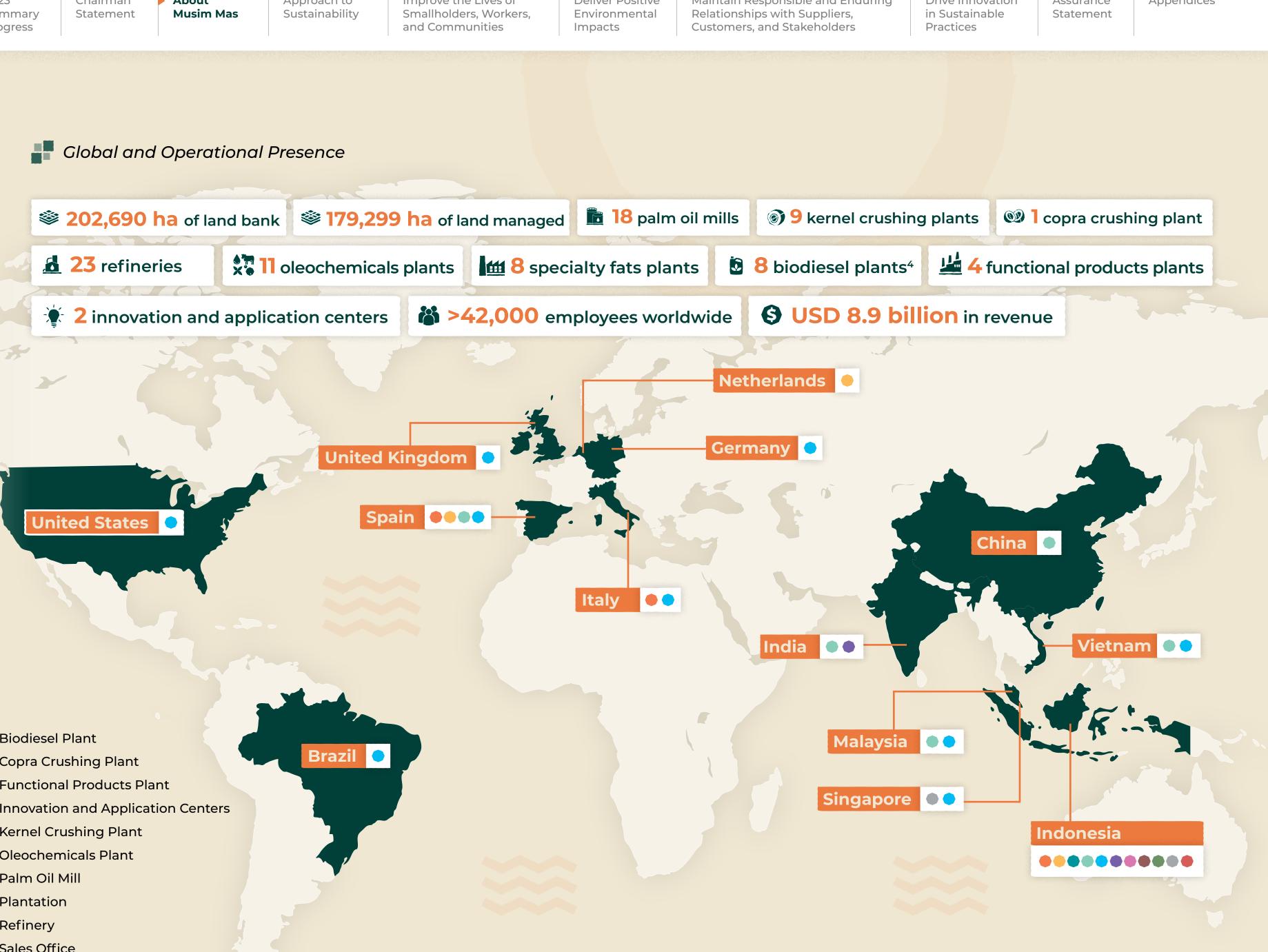
### **Our Business in Brief**

Headquartered in Singapore, Musim Mas Group ("Musim Mas" or the "Group") is a private company and one of the world's largest integrated palm oil companies. With a presence in 13 countries, we are engaged in every aspect of the palm oil supply chain, from upstream to downstream operations, including plantations, milling, refining, manufacturing, and commercial and consumer sales, with our primary operations in Indonesia. Our integrated business model allows us to produce diverse, raw and processed palm-based industrial and consumer products catering to the global market. A small part of our business is in coconut oil.



Ð **Global Presence** 



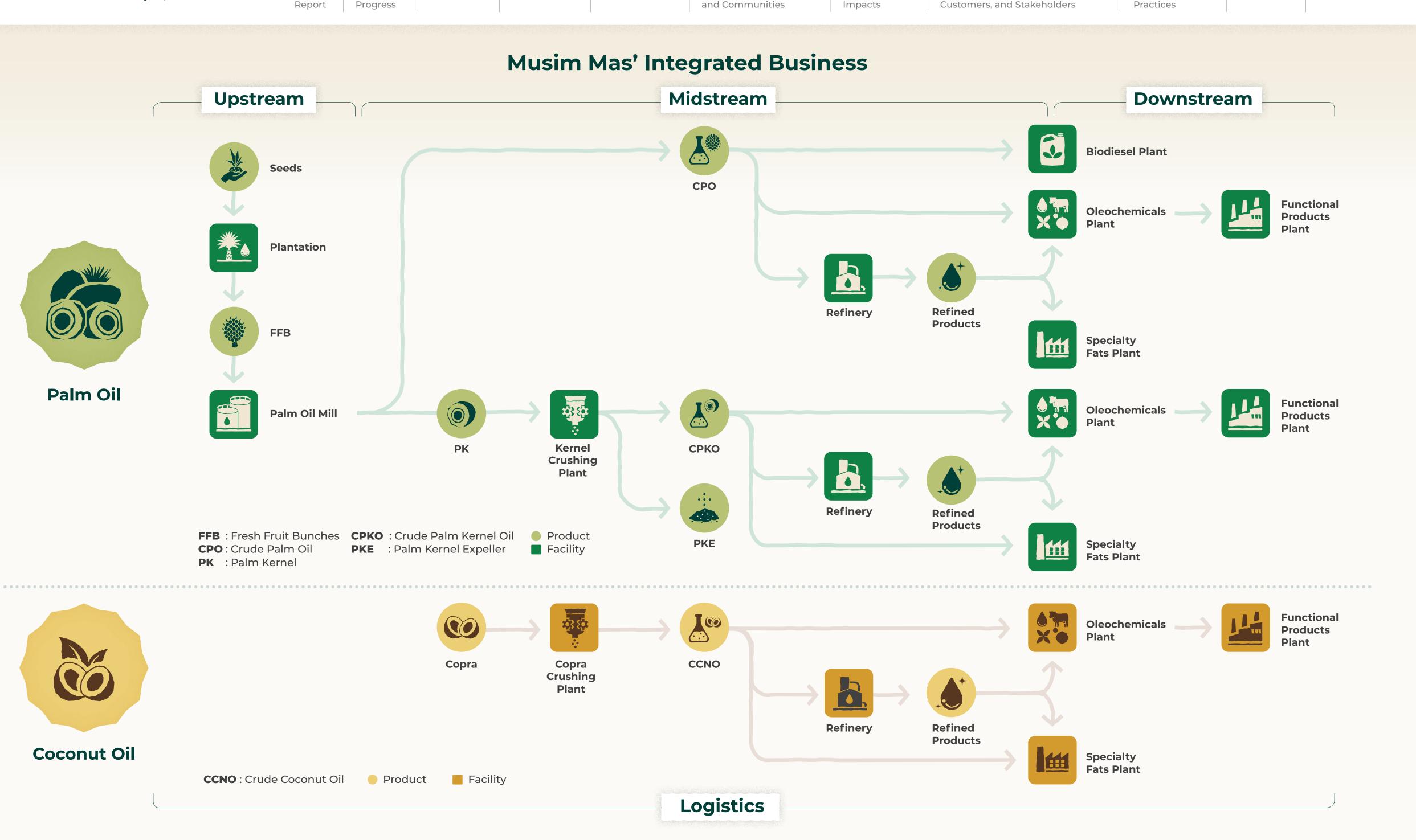


- Biodiesel Plant
- Copra Crushing Plant
- Functional Products Plant
- Innovation and Application Centers
- Kernel Crushing Plant
- Oleochemicals Plant
- Palm Oil Mill
- Plantation
- Refinery
- Sales Office
- Specialty Fats Plant

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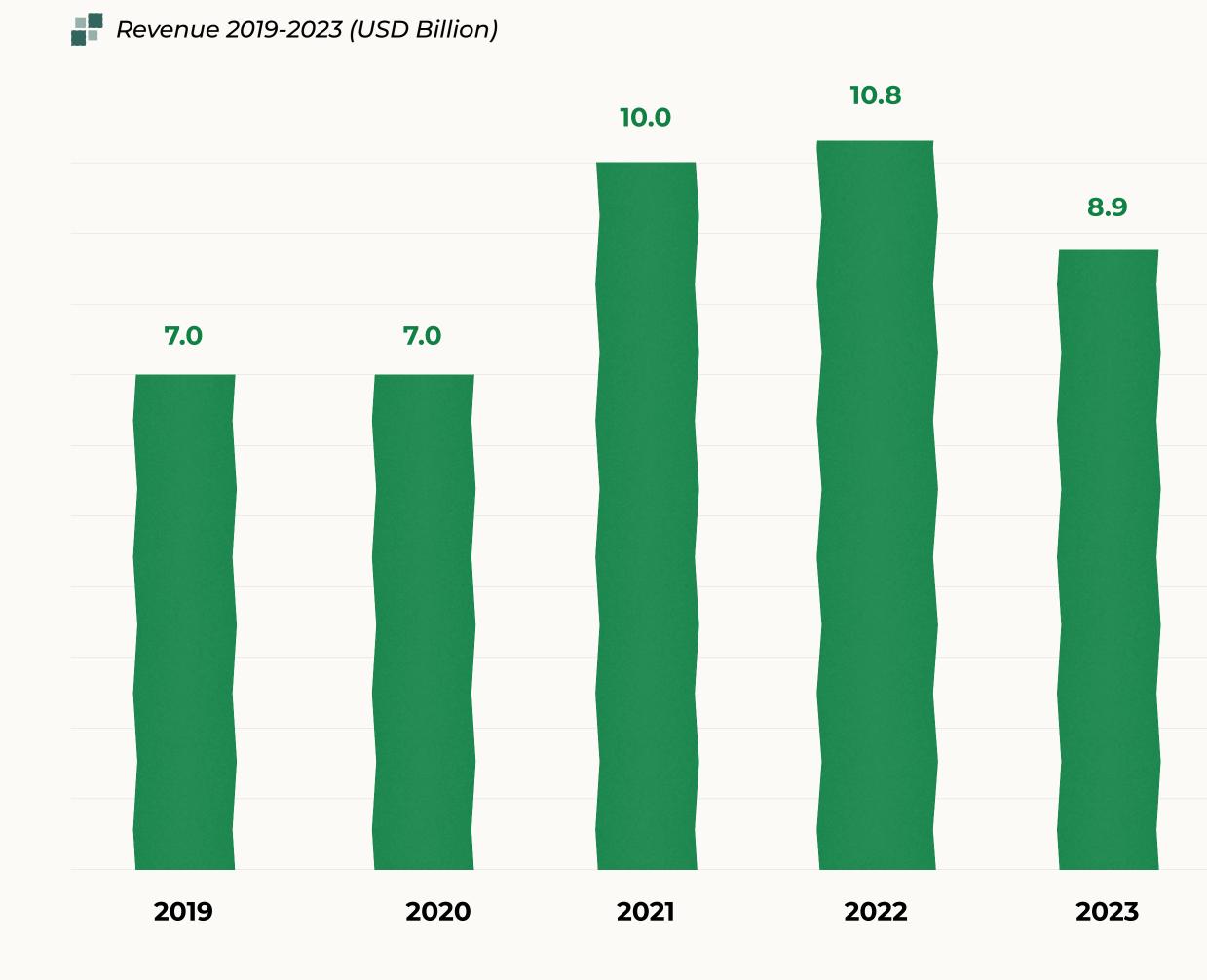
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# **Financial Overview**

The Group's 2023 revenues were USD 8.9 billion, a USD 1.9 billion reduction from 2022. This was mainly due to lower commodity prices in 2023, whereas exceptional market conditions drove higher sales in 2022.



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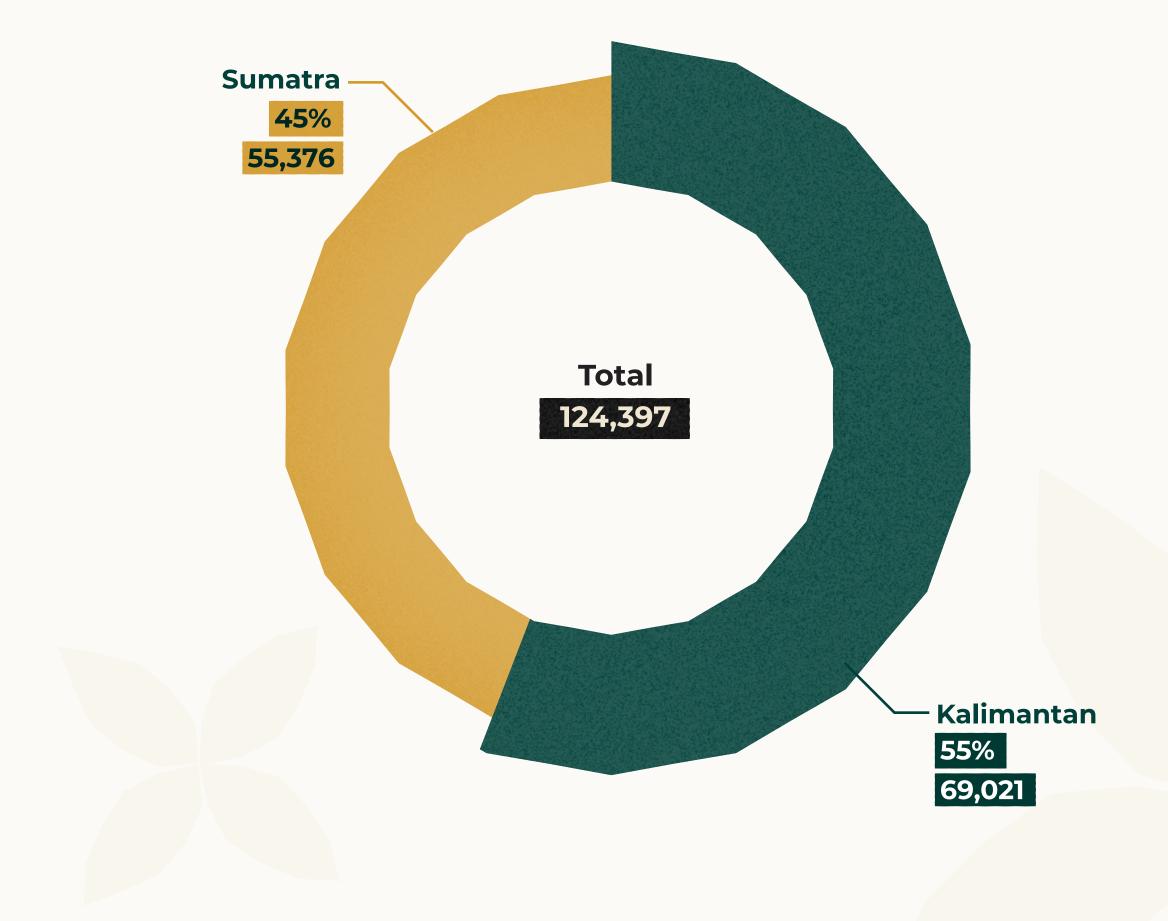
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# **Operational Overview**

### **\*** Upstream Operations

We manage a 202,690 hectare (ha) landbank in Sumatra and Kalimantan, including 124,397 ha of planted area. Our landbank has grown in recent years with the expansion of a plantation in Kalimantan in 2023. We also manage 18 palm oil mills as part of our upstream operations.

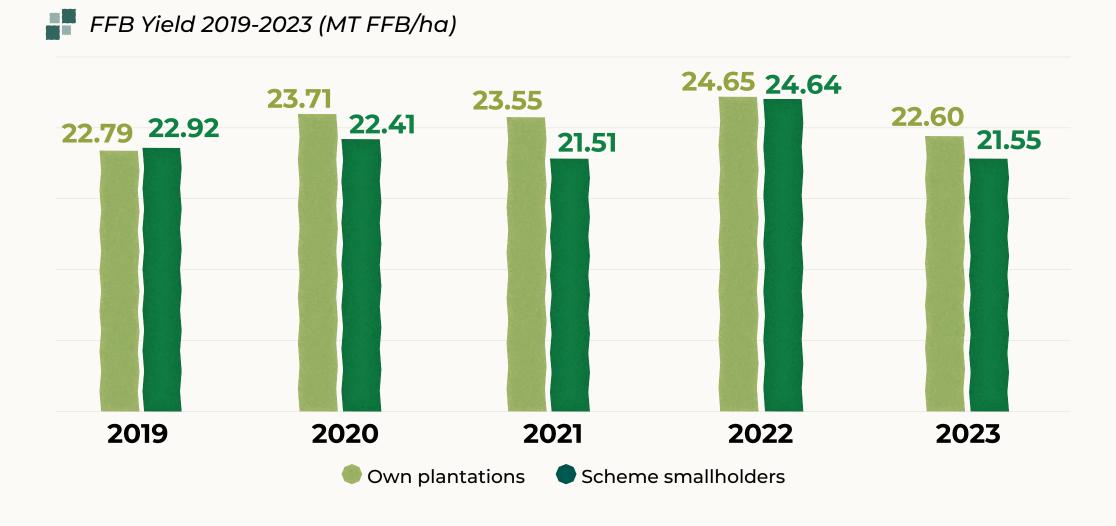




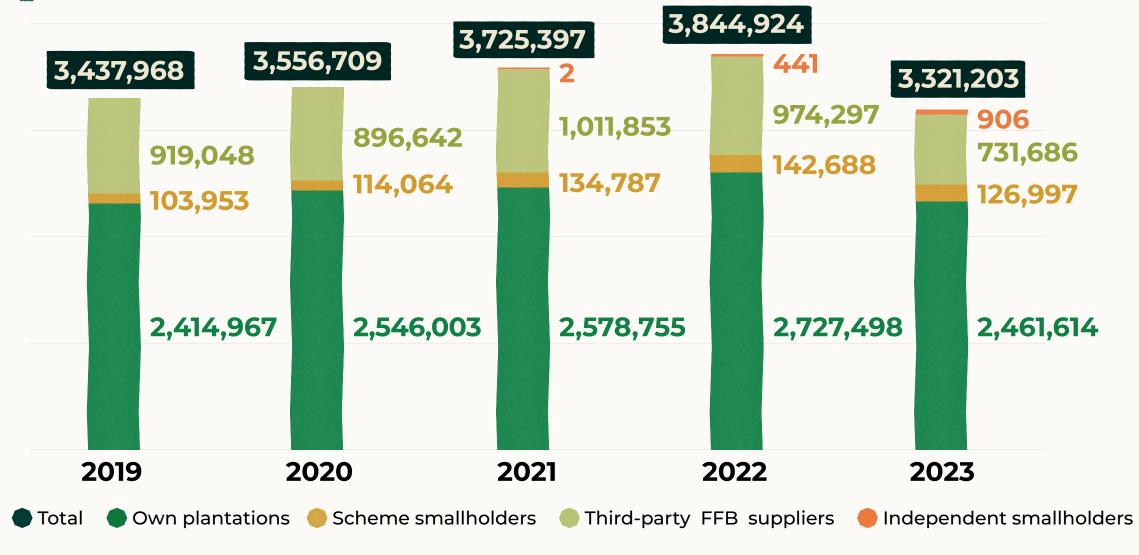


Approach to Sustainability

In 2023, our overall yield of fresh fruit bunches (FFB), as well as processing and production of crude palm oil (CPO) and palm kernel (PK), fell to the lowest levels since 2019. A key factor contributing to this decline was the increase in replanting activities during the year. Extraction rates have remained relatively stable at our operations, with a slight increase in 2023 compared to previous years.



FFB Processed by Source 2019-2023 (MT)



### Note:

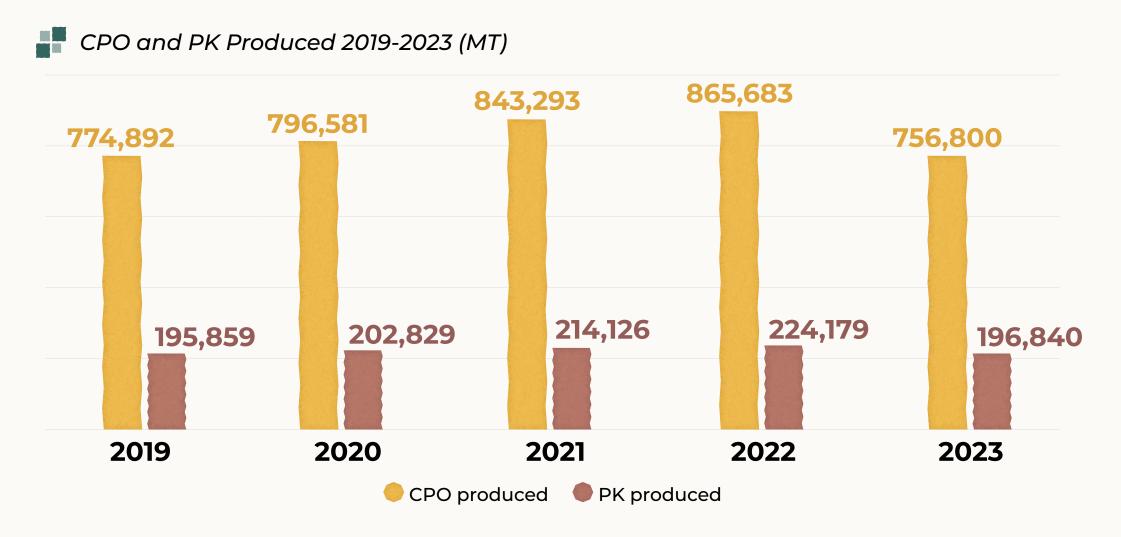
- 1. 2022 data on FFB from own plantations has been restated.
- 2. We began reporting FFB directly sourced from independent smallholders in 2021. Previously, these volumes were reported as part of the total volumes sourced from all third-party FFB suppliers.

**Deliver** Positive Environmental Impacts

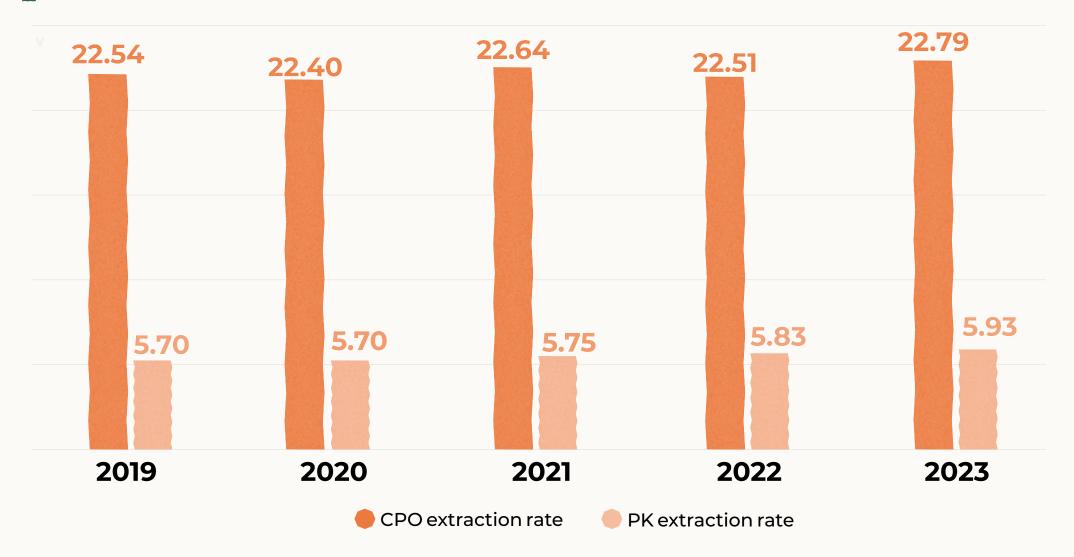
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### Extraction Rates 2019-2023 (%)





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### **X** Midstream Operations

Our midstream operations comprise nine kernel crushing plants in Sumatra, Kalimantan, and Sulawesi that process PK into crude palm kernel oil (CPKO). We also operate 23 refineries that refine and process CPKO and CPO into edible oils and other intermediate products in these areas. We sell the by-product of the crushing plant process - palm kernel expeller (PKE) to third parties for various applications, including animal feed.



We also operate a copra crushing plant in Madidir, Bitung, in the North Sulawesi region. It produces coconut oil from copra sourced from independent smallholders. The coconut oil is sent to our KIM II complex in North Sumatra for further refining. In addition to the coconut oil we produce, we also source a small proportion of our coconut oil supply from third-party producers.

How is Coconut Processed from a Plant into Oil and Oleochemicals

### Downstream Operations

Our downstream operations include eight Musim Mas owns and operates two specialty fats, 11 oleochemicals plants and innovation and applicaton centers in four functional products plants globally. Singapore and Indonesia. These centers are equipped with state-of-the-art facilities These facilities produce high-quality palm oil-based, palm kernel oil-based, and that leverage advanced technologies and coconut oil-based product ingredients for cutting-edge innovations, enabling us a diverse range of downstream consumer to stay ahead of market trends, product and industrial applications, including trends, customer preferences, and food and beverages, personal care and customer requirements. Our centers also cosmetics, pharmaceuticals, and plastics. provide application expertise and technical support to customers worldwide. We also manufacture packaged consumer goods for our house brands and privatelabel products for well-known brands. Research and Development Centers In addition, we operate eight biodiesel plants that cater to the global demand for We operate a Genetic and Agriculture sustainable fuel.<sup>5</sup>

### <u>Musim Products</u>

Musim Mas operates an extensive and efficient logistics network to sell and distribute our products. It comprises tankers, tugboats, and other vessels supported by 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.

How Is Palm Oil Transported? Navigating the Journey from Plantation to Supermarket Shelf

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### 🔆 R&D

Research Center in Riau, which focuses on advancing research and development in key agronomic areas. These include optimizing crop protection, improving peat management on our plantations, and developing oil palm varieties with superior genetic traits.

Vield and Extraction Improvements Driving Innovation in Sustainable Practices 77

In 2023, we released four new oil palm seed varieties (the Musim Mas GS Series) with traits that result in enhanced yield, land-use efficiency, and productivity.





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About Musim Mas Approach to **Sustainability** 

# **Approach to Sustainability**

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

Guided by our 2020 Sustainability Policy and our latest No Deforestation, No Peat, and No Exploitation (NDPE) roadmap, we are unwavering in our commitment to meeting and exceeding the strictest sustainability standards across our operations. Our policy and commitments extend to the third parties we work with, including our suppliers and contractors.

Given the size and reach of our operations, as well as the ever-evolving sustainability issues and challenges, we proactively review our policies regularly to ensure they remain relevant and effective. We are currently reviewing our 2020 Sustainability Policy and expect to launch a revised policy in 2025.

### **Commitment to Children's** and Human Rights 2023-2025

Upholding children's and human rights are a critical component of Musim Mas' sustainability commitments, as demonstrated by our active participation in the Roundtable on Sustainable Palm

Oil (RSPO), the recently concluded Palm Oil Innovation Group (POIG), and more recently, the United Nations Global Compact (UNGC).

Since 2022, we have extended our sustainability commitments beyond our main operations in palm oil to include In July 2023, we published an addendum our coconut oil business. Although the to our Sustainability Policy to strengthen coconut industry is still in the preliminary our commitments to protecting children's stages of developing a comprehensive rights based on the UN Convention on the sustainable production standard, we Rights of the Child; as well as to upholding achieved significant progress for copra human rights according to the UN Guiding traceability in 2023 by leveraging our Principles on Business and Human Rights, extensive experience and expertise in palm national regulations, and fundamental oil traceability. International Labour Organization (ILO) conventions. The commitment applies to Sustainable Coconut Sourcing Strategy all Musim Mas operations and its suppliers, Pillar 3: Maintain Responsible and Enduring Relationships and further embeds respect for children's with Suppliers, Customers, and Stakeholders and human rights into our business strategies and decisions.

- $\gg$ Ensuring No Child or Forced Labour
- Improving Our Labour and Human Rights Practices

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# **Coconut Sustainability**





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### **Contributing to the SDGs**

We recognize the role of businesses in the success of the United Nations' Sustainable Development Agenda and the importance of its Sustainable Development Goals (SDGs) in establishing a common language to communicate sustainability progress.

Since 2021, we have defined priority goals and targets we directly contribute to as our "Primary SDGs" and subordinate goals and targets we directly or indirectly contribute to as our "Secondary SDGs". The corresponding SDG icons are displayed throughout this report. For more information, see Musim Mas' Contributions to the SDGs.











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### Materiality

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

This 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 aligned with the four pillars of our Sustainability Policy and the SDGs to which we contribute.

In Q1 2024, we also considered responsible the environmental marketing and and community impacts on children in our materiality review. 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.

### Commitment to Children and Human Rights

### **\*** Materiality Process

### **Topic Review and Identification**

• Reviewed focus areas identified in GRI 13 • Updated material topics based on industry benchmarking and consultation with on agri-related topics, ZSL SPOTT, WBA Food and Agriculture Benchmark, WBA internal teams Nature Benchmark, and Global Child Forum Benchmark

Revised and reprioritized topics after consulting six external stakeholders: two media partners, one global public-private partnership platform, one sector organization, one multi-stakeholder platform, and one academic institution

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

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### Prioritization

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

**Stakeholder Consultation** 



### Validation and Approval

### \* Changes to Material Topics

### **Revised Topic Name**

### 'Biodiversity, conservation, and restoration'

updates 'Conservation and management of HCV, HCS, and peat areas' to better align with our wider global focus and reporting trends

### **Removed Topic**

'Business continuity' has been removed but is still a critical focus area for all businesses

### **Changes in Importance**

- Smallholder engagement
- Landscapes
- Human rights and labour rights
- Biodiversity, conservation, and restoration
- Governance and business ethics
- Stakeholder collaboration and reporting
- Grievance resolution
- Fire and haze prevention
- Innovation and R&D
- Children's rights



2023

Stakeholders

to

Importance

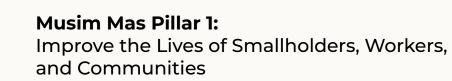
Progress

### **\*** Materiality Matrix

Our materiality matrix covers the most important issues to Musim Mas and our stakeholders, and prioritizes them based on their relative importance.

High Significant Moderate Waste Management **Employee Development** and Talent Retention

Moderate





Musim Mas Pillar 2: Deliver Positive Environmental Impacts

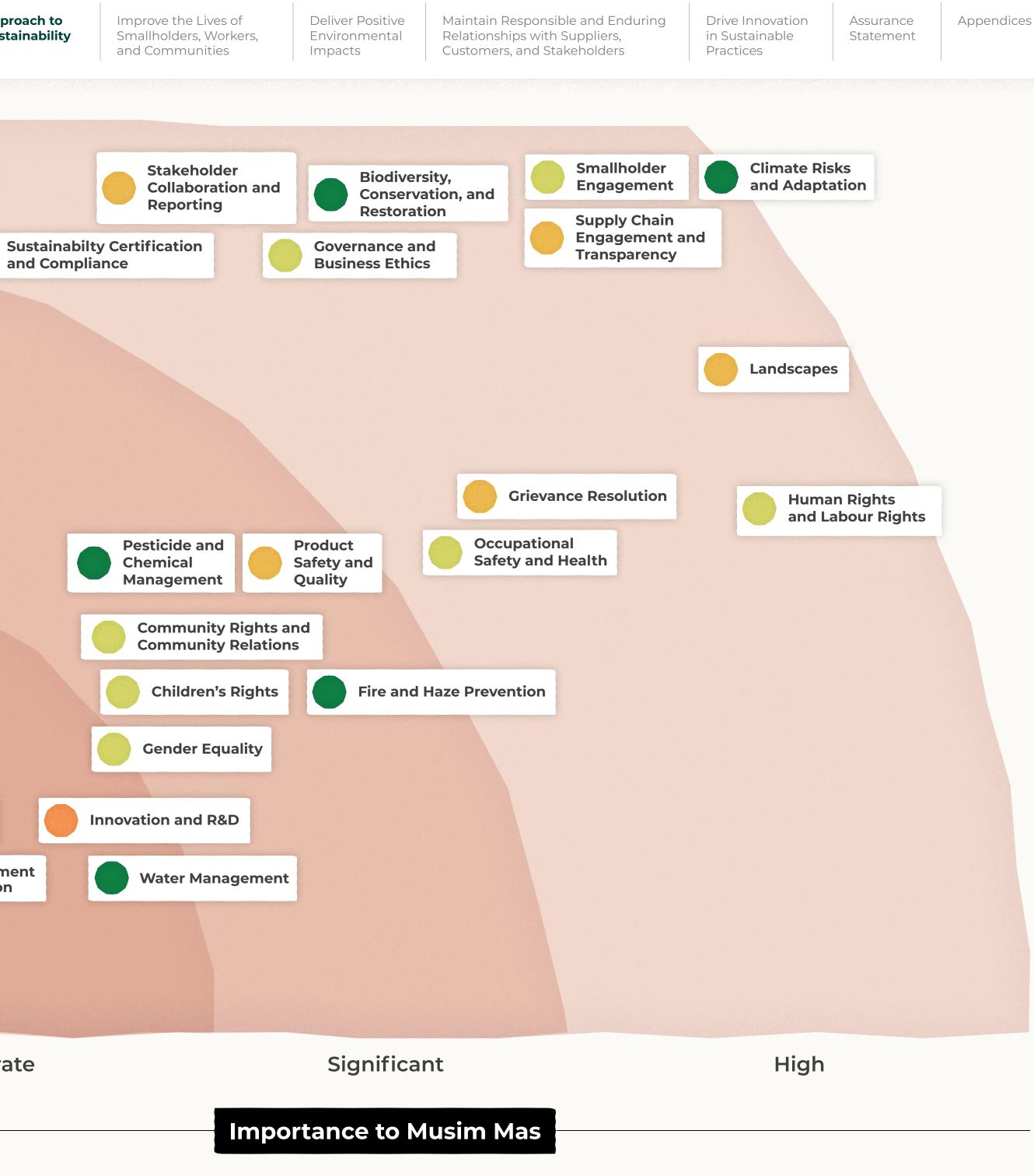
Musim Mas Pillar 3: Maintain Responsible and Enduring Relationships with Suppliers, Customers, and Stakeholders



Musim Mas Pillar 4: Drive Innovation in Sustainable Practices



**Cross-Cutting All Pillars** 





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### **Corporate and Sustainability Governance**

[GRI 2-9, 2-11, 2-12, 2-13, 2-14, 2-16, 2-24]

Musim Mas Board considers lhe sustainability a core component of our corporate identity. The Board oversees critical sustainability and ESG issues (including climate-related risks and opportunities), human rights (including children's rights and child protection), NDPE strategies, and supply chain progress, ensuring that they are embedded into our business strategies and decisions. Led by our Executive Chairman, who also serves as our Chief Executive Officer (CEO), the Board comprises four members, including one woman.

The Board and senior management, including department heads and directors, convene quarterly meetings led by our Executive Chairman to discuss sustainability and ESG issues and assess the Group's sustainability performance. Between meetings, the Board receives monthly reports highlighting key issues, grievances, and critical concerns raised by reducing greenhouse gas (GHG) stakeholders.

Our Director of Sustainability oversees with customers and stakeholders, as all sustainability matters, including the well as continuously improving the implementation of our sustainability company's reputation as an industry

policies and strategies, as well as climateleader. Across the organization, we have also established ESG-linked KPIs for related management programs and action plans for conservation initiatives at relevant personnel such as maintaining or attaining the RSPO and International the Group level, reporting progress to the Executive Chairman and the Board at least Sustainability and Carbon Certification (ISCC) certifications, and implementing quarterly. The Director of Sustainability is supported by senior management and our NDPE commitments. our sustainability team which is made up The Board also engages with an external of over 150 employees across Indonesia, Singapore, and Europe. The team sustainability advisor who serves as a senior strategic consultant on the implements our day-to-day sustainability organization's sustainability issues. Our commitments, including on-the-ground training and outreach programs for senior management team approves suppliers and smallholders to ensure the our annual sustainability reports and all dissemination of sustainable practices relevant stakeholder communications. throughout our operations and supply chain.

Sustainability's Director of The remuneration is contingent on meeting sustainability-related key performance indicators (KPIs) aligned with our decarbonization strategy and NDPE targets and commitments. This includes emissions, complying with sustainability regulations and standards, engaging

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### Sustainability Governance Structure

Business Ethics

For more specific information on our climate governance, see: Aligning with the Recommendations from the Taskforce for Climate-related Financial Disclosures (TCFD).

### **X** Grievance Mechanisms

### [GRI 2-25, 2-26]

We provide all Musim Mas stakeholders access to a transparent and accountable grievance mechanism that safeguards the anonymity of whistleblowers and complainants, including employees, who can file complaints without fear of reprisal or dismissal. Our grievance mechanism is also available to external stakeholders who wish to file complaints against Musim Mas or our suppliers regarding potential breaches of our sustainability policy and certification commitments. We promptly address all grievances, including those raised through external platforms such as the RSPO complaints process, and follow the appropriate resolution procedures.

- **Orievance Mechanisms**
- Worker Access to Grievance Mechanisms
- Scrievances



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### Certification and Compliance



### CPO Produced by Certification Status 2023 (%, MT)

### [GRI 2-27, 3-3]

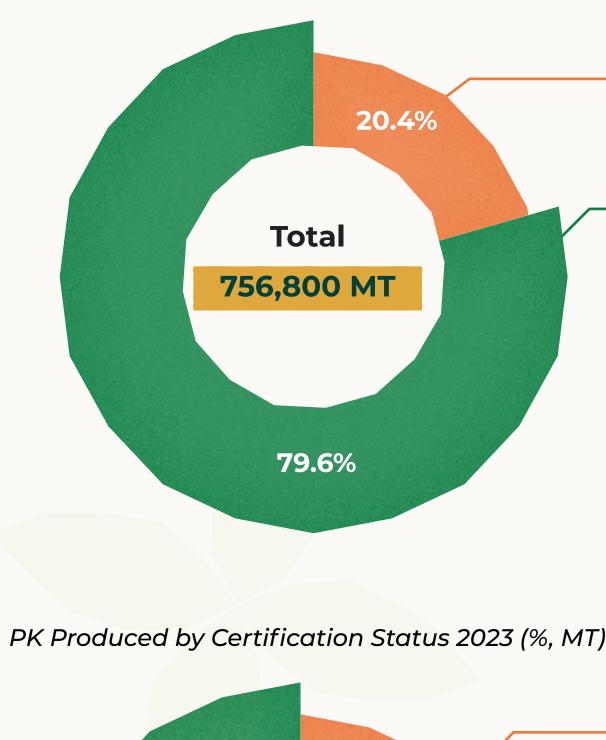
Musim Mas strictly complies with national, regional, and local regulations in the countries where we operate. We subscribe to and comply with voluntary industryleading sustainability certification and verification schemes.

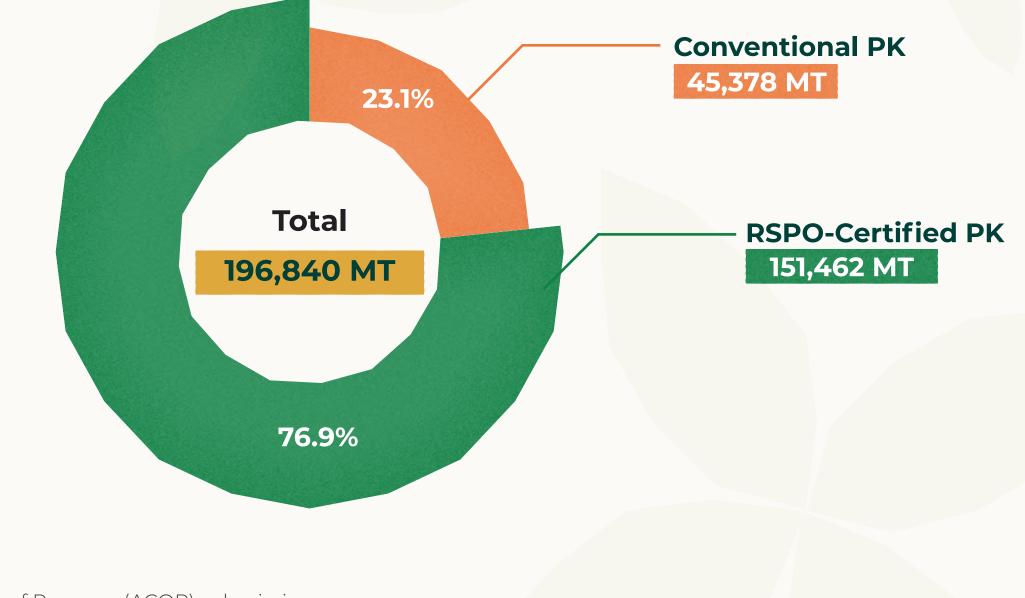
### **\*** Upstream Certification

### **RSPO**

Musim Mas was one of the first Indonesian companies to join the RSPO when it was founded in 2004 and remains an active member. All 15 Musim Mas mills integrated with our plantations are fully certified against the RSPO Principles and Criteria (P&C). Approximately 153,086 hectares plantations, including scheme of our smallholder areas, are RSPO-certified, representing around 85.38% of our total managed area.<sup>6</sup> We strive to certify 100% of our plantations against the RSPO P&C.

In 2023, we produced 602,107 tonnes of RSPO-certified sustainable crude palm oil (CSPO) and 151,462 tonnes of RSPOcertified sustainable palm kernel (CSPK), respectively accounting for 79.6% and 76.9% of our mill output.





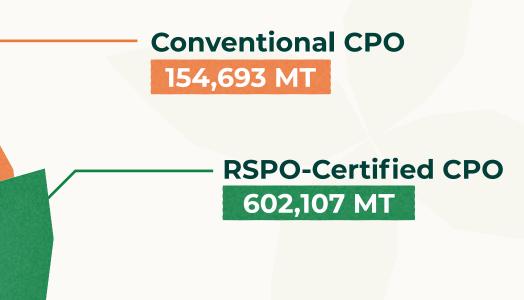
<sup>&</sup>lt;sup>6</sup> The percentage is based on our RSPO Annual Communication of Progress (ACOP) submissions.

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### **ISPO**

adhere to Indonesia's national We certification scheme for sustainable palm oil – the Indonesian Sustainable Palm Oil (ISPO) standard. We are pleased to announce that all 17 of our upstream entities (PTs) have achieved ISPO certification as of August 2023.7

Musim Mas Achieves Full ISPO Certification for Upstream Operations

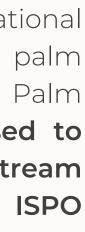
### ISCC

A total of 25 business units, including all our mills, several supply bases, and numerous scheme smallholders, are certified against the International Sustainability and Carbon Certification (ISCC) standard.

### POIG

After a decade of impactful work, the Palm Oil Innovation Group (POIG) concluded in 2023. Musim Mas was featured in the final series of POIG publications, detailing the impact, achievements, and challenges we encountered over the years. Although POIG is no longer active, its pioneering efforts continue to influence the industry through the RSPO and its various working groups.

10 Years of Palm Oil Innovations







<sup>&</sup>lt;sup>7</sup> The month we achieved this (August) has been restated from our 2022 Sustainability Report.

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### **\*** Supply Chain Certification

### [GRI 13.23.3]

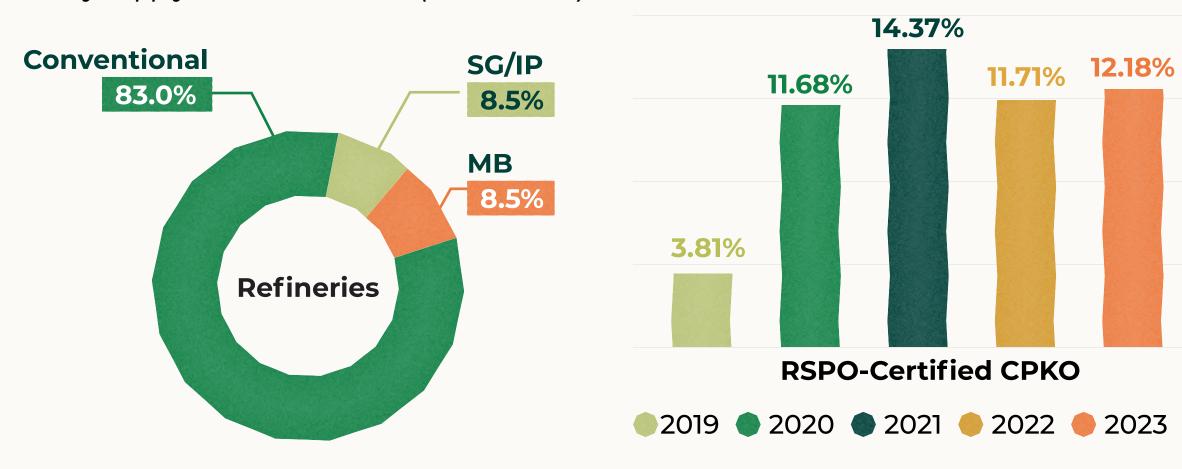
certification efforts extend across our entire value chain. All our midstream downstream palm processing and facilities, which include our refineries in Indonesia and our wholly-owned refinery in Malaysia, are certified under the RSPO SCCS (Supply Chain Certification System).<sup>8</sup> The Malaysian refinery is also certified against the Malaysian Sustainable Palm Oil (MSPO) SCCS standard. We continue to pursue RSPO SCCS certification at our three independent mills. In 2023, 8.5% of the CPO and crude palm kernel oil (CPKO) we sourced were RSPO Segregation (SG) and Identity Preserved (IP) oils, while another 8.5% were RSPO Mass Balance (MB) oils.

Compared to 2022, the volume of RSPOcertified CPO processed at our refineries increased from 13.76% to 18.34%, while the volume of RSPO-certified CPKO processed remained relatively stable.





### Certification Status Raw Material Sourced by Supply Chain Model 2023 (% of volume)



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### **Meeting Increasing Regulatory Requirements**

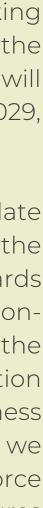
Globally, sustainability has progressively shifted from voluntary practice to a regulatory requirement. This trend is most pronounced in the European Union (EU) but is also evident in other countries, including Singapore. For instance, the European Green Deal, which was established in 2020 as a package of policy initiatives, set the EU on the path to a green transition to reach climate neutrality by 2050. Among the EU regulations impacting Musim Mas are the European Union Deforestation Regulation (EUDR), the Corporate Sustainability Reporting Directive (CSRD), and the Corporate Sustainability Due Diligence Directive (CS3D). Musim Mas is dedicating substantial resources to meeting evolving regulatory demands and customer expectations.

The EUDR requires companies supplying certain agricultural commodities to the EU including palm oil – to ensure their products are deforestation-free and legally produced. Thanks to our long-standing Sustainability Policy and NDPE commitments, established well before these regulations came into effect, and our robust due diligence procedure, we are well-prepared to comply with the EUDR by December 30, 2024. In terms of reporting, we are taking the necessary steps to comply with the CSRD and preparing for the CS3D, which will require compliance between 2027 and 2029, depending on its scope.

Beyond the EU, <u>Singapore</u> will mandate climate reporting aligned with the International Sustainability Standards Board (ISSB) standards for large nonlisted companies incorporated in the country by 2028. To build our foundation in climate reporting and ensure readiness for Singapore's forthcoming mandate, we have begun reporting against the Taskforce on Climate-related Financial Disclosures (TCFD) framework, a predecessor of the ISSB standards.<sup>9</sup>

We continue to actively monitor regulatory developments in countries and regions where we operate, including new advancements in the EU, emerging legislation on deforestation in the United States and the United Kingdom, as well as carbon pricing mechanisms and incentives in Indonesia. As we navigate this increasingly complex regulatory environment, Musim Mas remains focused on adaptability, collaboration, as well as advocacy for smallholders, ensuring that regulatory advancements do not inadvertently exclude them from value chains.

<sup>9</sup> The ISSB Standards marks the culmination of the work of the TCFD. For more information, click link.



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# The Importance of Sectoral Collaboration

### Commentary by

**Eddy Esselink** Senior Manager Sustainable Development MVO - The Netherlands Oils and Fats Industry



Sustainable commodity initiatives such as the RSPO emerged at a time when sustainability efforts were largely voluntary. However, we are now witnessing a significant shift towards mandatory regulatory frameworks, including the EUDR and other initiatives under the European Green Deal, such as the recently approved CS3D and the Forced Labour Regulation.

The adoption of stricter sustainability standards creates considerable challenges for the private sector. Companies like Musim Mas are well-positioned to meet the new regulatory requirements through their alignment with the RSPO. However, they must operate within new limits and fine-tune their existing systems to ensure adherence or risk fines and sanctions. Sectoral collaboration through organizations like MVO is crucial to meet these challenges. Collaborating will allow industry peers to exchange knowledge and insights to better prepare for regulatory compliance. It can also put companies in a better position to enter into discussions with national governments and relevant authorities, directly engage with the EU to address the impact of new regulations on the palm oil industry and advocate for practical solutions.

"You have to work together to implement change" is MVO's motto. Sustainable development requires stakeholders and supply chain players to adopt shared values and practices. Musim Mas' ongoing efforts to engage with supply-chain stakeholders and other MVO members exemplify the collaborative spirit needed to make real progress.

MVO represents the Dutch oils and fats industry. Its members include diverse supply chain actors, including Musim Mas. Its work focuses on trade policy negotiations, food and feed safety, and sustainable products and manufacturing processes. MVO collaborates with industry associations in other sectors, like the food and rubber industries, to address shared sustainability concerns. Improve the Lives of Smallholders, Workers, and Communities Deliver Positive Environmental Impacts

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### Musim Mas' Responsibilities as an Industry Leader

Commentary by Sascha Tischer Deputy Chairman, Forum for Sustainable Palm Oil (FONAP)



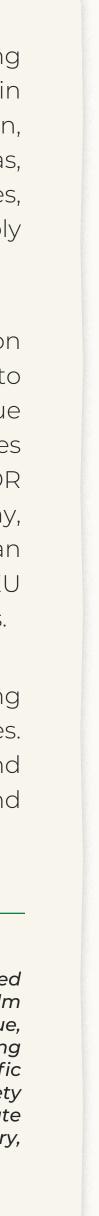
FONAP recognizes the intentions behind the new EU regulations. However, their implementation creates significant obstacles for companies managing their risks to avoid fines, penalties, and other legal repercussions. Corporations are equipped to meet the stringent criteria of the new regulations. However, smallholders may be excluded from the palm oil, coffee, and other value chains because they lack the tools to navigate the administrative hurdles imposed by the new guidelines.

In the last 20 years, Musim Mas has been recognized for its industry-leading sustainability commitments and performance. The company's European subsidiary, ICOF, is a FONAP member and an active participant in our working groups and discussions on supply chain traceability and transparency. In addition, as its parent company, Musim Mas, operates in palm oil-producing countries, it has a deeper understanding of supply chain issues.

Musim Mas can leverage its position to provide on-the-ground support to smallholders and engage in dialogue with governments in producing countries to arrive at a middle ground on EUDR compliance. As ICOF's parent company, Musim Mas must increase its European visibility and engage with German and EU authorities, alerting them to critical issues.

A top-down solution is the wrong approach in these challenging times. FONAP believes in bridging gaps and collaborating to develop workable and credible solutions.

FONAP is a multi-stakeholder platform based in Germany. It advances sustainable palm oil production through industry dialogue, working groups, and other initiatives focusing on smallholders. Its members include scientific platforms, business associations, civil society organizations, government ministries, and private sector companies, including Musim Mas' subsidiary, ICOF.



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Improve the Lives of Smallholders, Workers, and Communities

Deliver Positive Environmental Impacts

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

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# PILLAR 1

# Improve the Lives of Smallholders, Workers, and Communities



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### [GRI 2-24, 13.20.1]

Musim Mas strives to create a lasting, positive legacy everywhere we operate, and is committed to upholding and respecting human, labour, and land rights. The well-being and livelihoods of our workers, communities, and smallholders continue to be our top priorities as we pursue our strategic and business objectives on our sustainable development journey. The addendum to our Sustainability <u>Policy</u> further strengthens our commitment to protecting and children's human rights in line with national and international laws and conventions.

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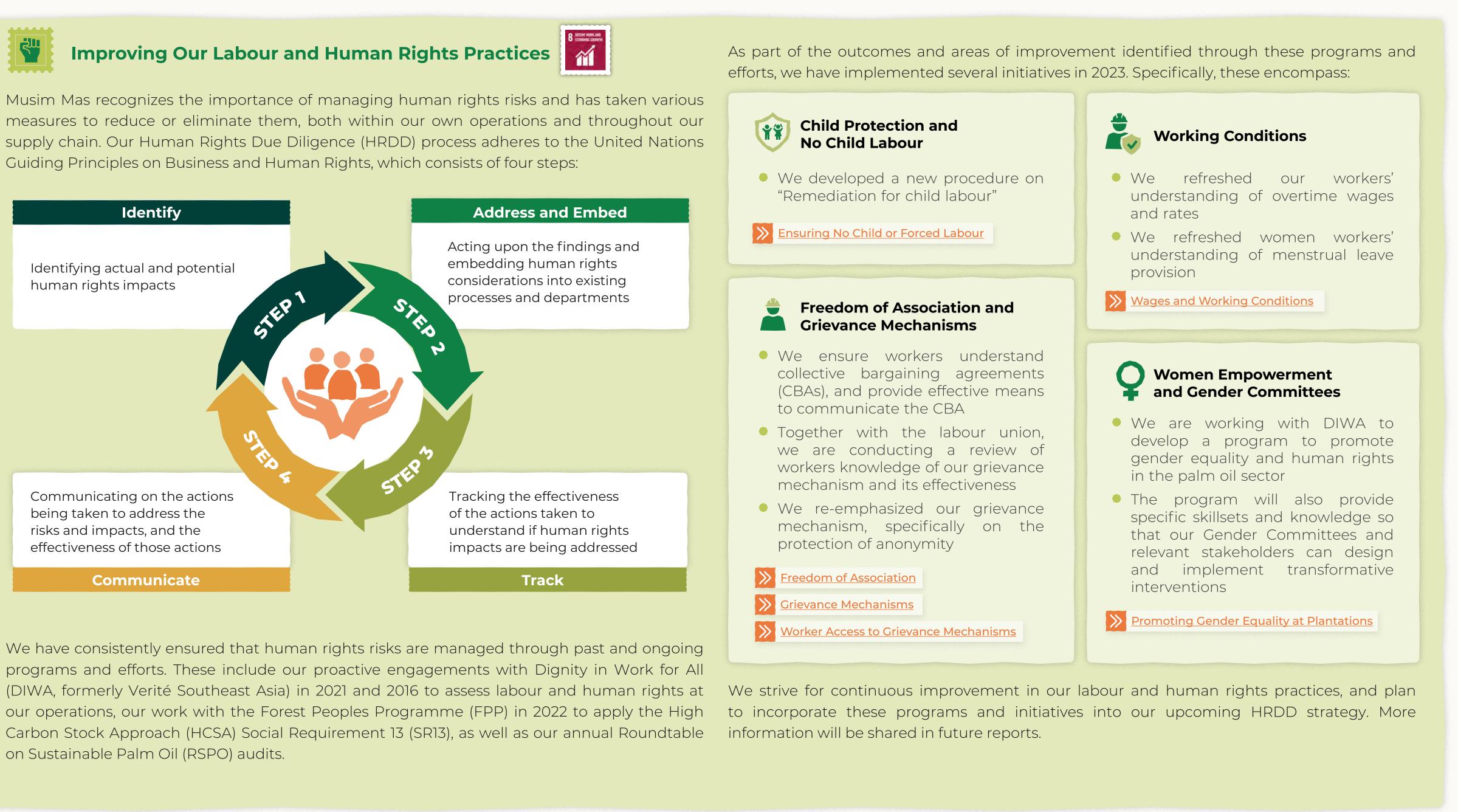


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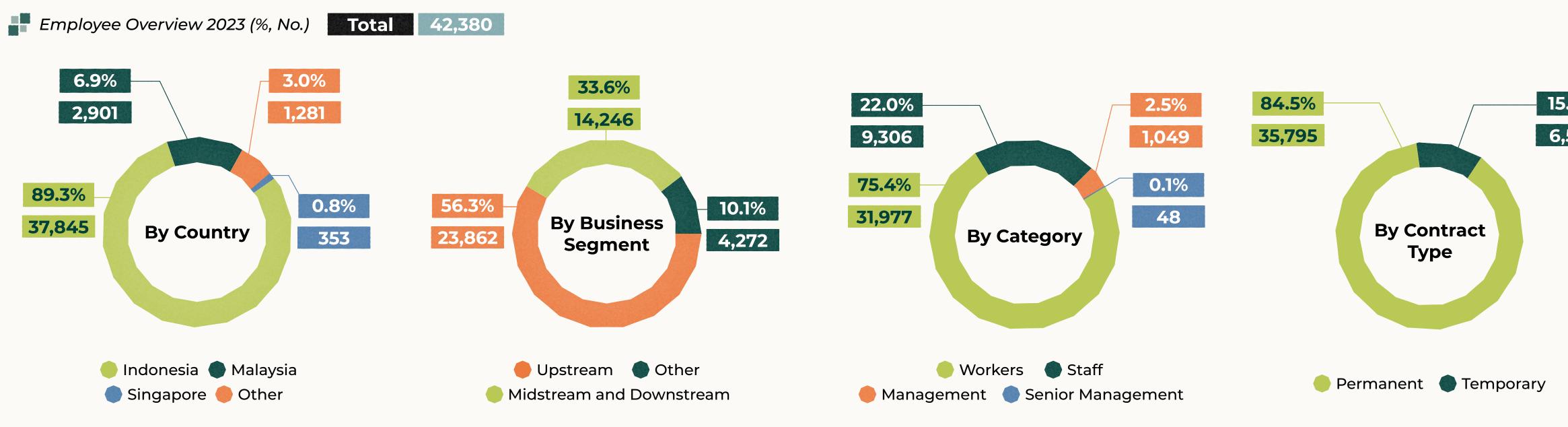
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### [GRI 2-7, 3-3]

Musim Mas' workforce is the backbone of our business. We employ 42,380 people worldwide, with 89.3% employed in our Indonesian operations. Of our total workforce, Although most of our workers occupy permanent, full-time positions, we also employ 56.3% are employed at our upstream operations in Sumatra and Kalimantan, while temporary, short-term contract workers to support operational activities across our 33.6% work in our midstream and downstream facilities in Indonesia, Malaysia, and other upstream, midstream, and downstream businesses during peak periods. In 2023, we engaged 6,585 temporary workers, comprising 15.5% of our workforce. countries. The remaining 10.1% work in our sales and satellite offices worldwide.



Note: "Other" includes our logistics, marketing, sales, and satellite offices, which are outside the scope of this report. Deliver Positive Environmental Impacts

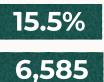
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Workers constitute the majority of our workforce across our upstream, midstream, and downstream operations, representing 75.4% of our employees. The rest of our workforce consists of staff, management, and senior management.





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Wages and In-Kind Benefits vs Living

Wage Benchmark by Region 2023

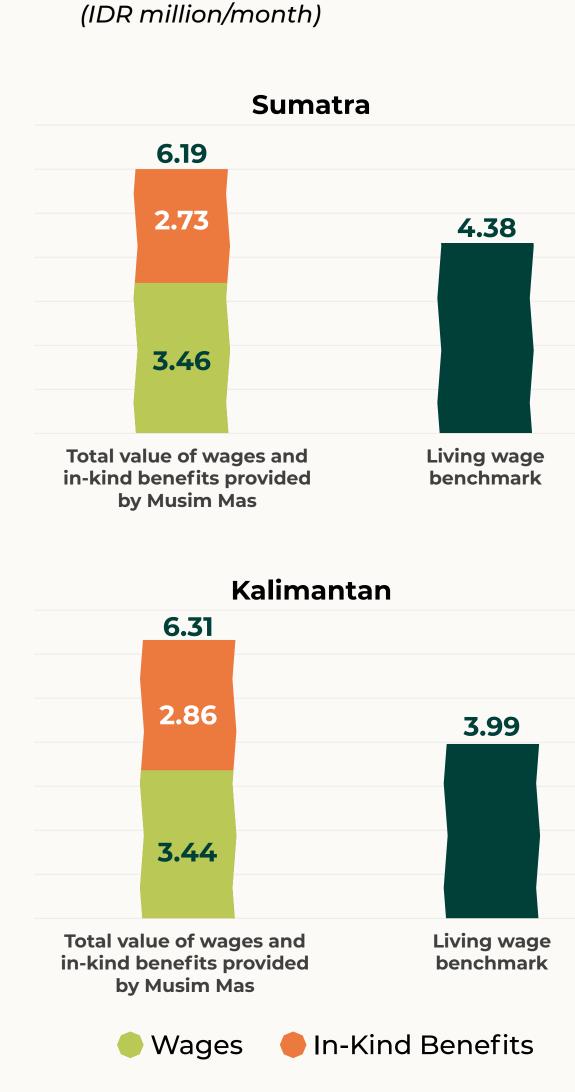
### Wages and Working Conditions

[GRI 3-3, 202-1, 401-2, 13.20.1, 13.21.1, 13.21.3]

All upstream employees in Indonesia, 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 laws. They receive equal entry-level wages (ranging from IDR 2.7 million to almost IDR 3.6 million monthly in 2023, depending on the operating and comprehensive in-kind region) benefits regardless of gender.

2023, we refreshed our workers' understanding of overtime rates and wages. Additionally, we reiterated the women workers' understanding ot menstrual leave provision, ensuring they are fully informed about their entitlements and the processes to access these benefits.

We annually assess living wages and ensure that our workers' wages and in-kind benefits align with the RSPO standards. The total value of wages and inkind benefits for our upstream employees in Sumatra and Kalimantan is IDR 6.19 and 6.31 million per month, respectively. This is around 1.5 times higher than the calculated living wage benchmarks of IDR 4.38 for Sumatra and 3.99 million for Kalimantan.



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### **Spotlight on how Musim Mas' Calculates Living** Wage

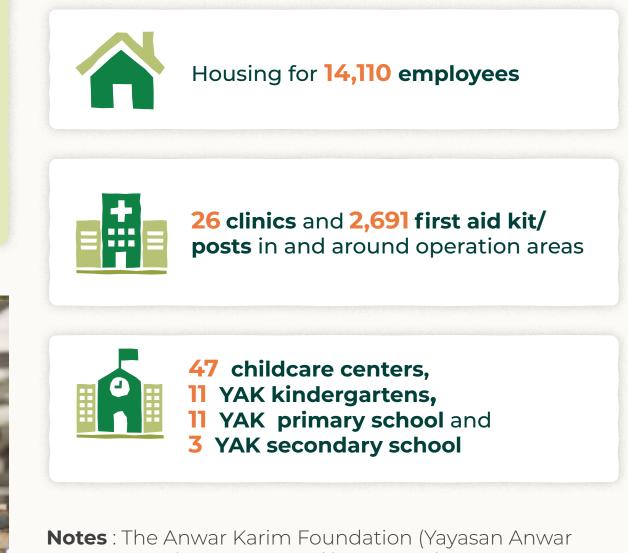
The approach taken by Musim Mas to calculate living wage was featured in a 2023 Palm Oil Innovation Group (POIG) report showcasing how companies in different operational contexts can successfully implement living wages and provide better economic conditions for workers and their families.

Ð Read the POIG report here



### **\* Employee Benefits**

For upstream employees, benefits include free healthcare, housing with electricity and clean water, transportation, childcare, and on-site education for school-age children. In 2023, Musim Mas provided:



Karim — YAK) is Musim Mas' long-standing community outreach initiative.

midstream downstream For and employees, the in-kind benefits we provide vary by region and comply with local and national laws.





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### **\*** A Focus on Education



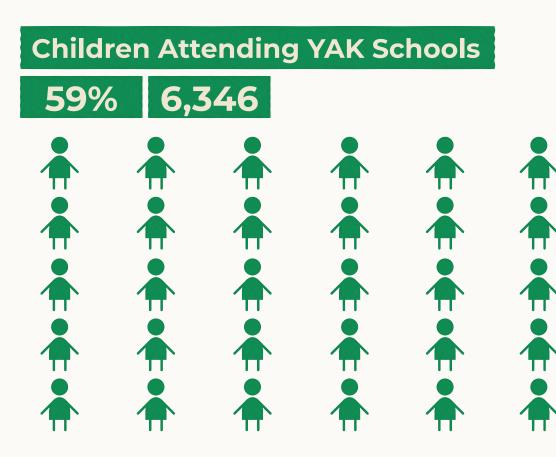
We recognize the importance of education in improving livelihoods and preventing child labour, especially for children of workers who live on our plantations. We encourage all parents to enroll their children and provide free transportation to our YAK schools and schools in neighboring communities. As of 2023, we have built and funded 47 childcare centers, 11 kindergartens, 11 primary schools and three secondary schools at our plantations in Riau, North Sumatra, West Sumatra, South Sumatra, Central Kalimantan, and West Kalimantan.

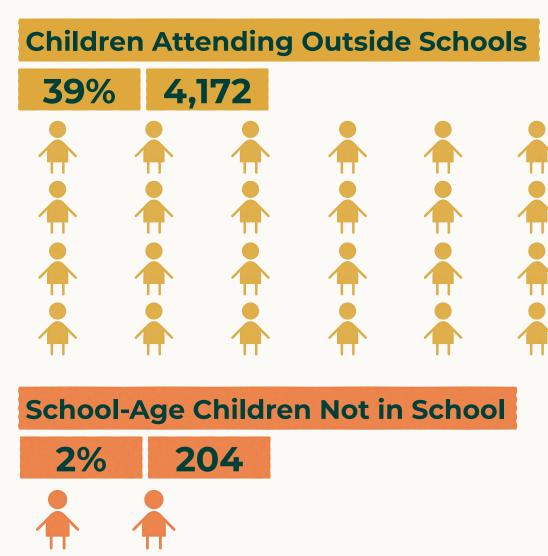
Our latest survey revealed that 12,220 children of mill and estate workers under the age of 18 live on our plantations. Out of the 10,722 children of school-going age, 98% attend our YAK schools or other nearby schools.

kindergartens, Our schools, and childcare centers benefit not only our own workers' children, but also children in surrounding communities, offering high-quality education and care while providing employment opportunities for local teachers. In 2023, 39 children from surrounding communities attended YAK schools.

# School Attendance of Workers' Children 2023 (%, No.)







**Note**: Many children who attend outside schools are from families of Musim Mas employees who do not live on our plantations. The gender balance at YAK schools is almost even.



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

In addition to providing on-site education for school-age children, we have adopted family-friendly practices at several plantations and mills to support our 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. We have also established specific employment policies for women with infants.

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In 2023, Musim Mas and the YAK awarded scholarships to 93 high-achieving students.





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# **Workforce Diversity**

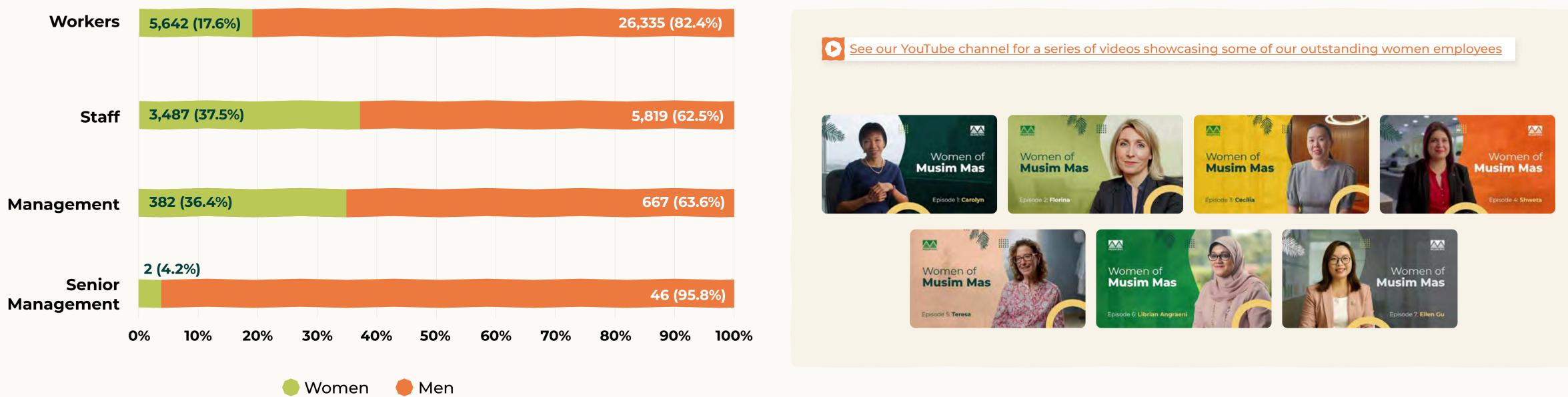


[GRI 3-3, 405-1, 405-2]

Musim Mas hires, promotes, and provides equal pay and opportunities to employees based on merit without any form of discrimination. We train all employees on our no-discrimination policies. No instances of discrimination were reported at our upstream operations in 2023.

Across the Group, we employ 9,513 women, comprising 22.4% of our global workforce. Women also comprise 36.4% of management, 37.5% of staff, and 17.6% of workers at our operations worldwide. In addition, two out of 48 members of senior management are women, and one of the four members of the Musim Mas Board is a woman.







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### **\*** Promoting Gender Equality at **Plantations**

We promote gender equality in 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 through the following initiatives:





knowledge-sharing sessions in collaboration with external entities, including provincial Women's Empowerment Offices



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### **Enhancing Our Women's Empowerment Initiatives**

In 2021, Musim Mas partnered with DIWA to conduct a comprehensive social assessment of our upstream palm oil operations in Indonesia. During this collaboration, DIWA acknowledged Musim Mas' steadfast commitment to upholding the rights of all workers, including women, highlighting the presence of established policies, written procedures, and implementation mechanisms. Both Musim Mas and DIWA also identified areas where further improvements could be made.

Based on DIWA's recommendations, Musim Mas proposed a concept for an internal capacity-building program. We then worked with DIWA to develop the program further, focusing on structural changes and addressing prevailing perceptions that impact workplace dynamics on-the-ground and within the wider worker community. Additionally, the program will focus on equipping the Gender Committee and relevant stakeholders with specialized knowledge and skills essential for developing and implementing transformative gender initiatives.

This dynamic, multi-phased program which includes piloting innovative strategies aims to improve gender equality and human rights practices within the palm oil sector. More information will be shared in future reports.



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### **Freedom of Association**

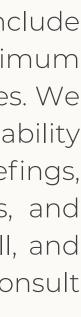
### [GRI 2-30, 3-3, 402-1, 407-1, 13.21.2]

Musim Mas employees are free to join a labour union of their choice and participate in union meetings. We maintain positive relationships between management and union representatives, regularly meeting to discuss wages, benefits, leave, and other employment issues. In Indonesia, we collect employee feedback regularly through bipartite cooperation committees or Lembaga Kerja Sama (LKS) Bipartit, comprising company representatives and workers. Currently, 31,118 employees (100% of our workers in Indonesia) belong to labour unions.

Musim Mas respects employees' right to enter into CBAs. All Indonesian employees are covered by CBAs that comply with

government regulations and include transparent provisions, such as minimum notice periods for operational changes. We communicate CBA terms and availability in union meetings and morning briefings, distribute them to field supervisors, and make them accessible at estate, mill, and union offices so workers can easily consult them.

In countries outside Indonesia, select Musim Mas employees are covered by CBAs or belong to unions, depending on local labour laws and regulations.







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

[GRI 3-3, 408-1, 409-1, 13.20.1]

### 🔆 No Child Labour

Musim Mas is committed to upholding children's rights as outlined in our recent addendum to our Sustainability Policy and maintaining zero-tolerance towards child labour within our operations. Our recruitment policy strictly prohibits employing individuals below the legal age of 18, and is communicated to stakeholders through annual on-site meetings.

We screen all applicants to ensure they meet minimum age requirements and prevent those under 18 from joining our workforce. This process includes crossreferencing their date of birth and verifying family and identity cards using the E-DABU and SIPP online systems.<sup>10</sup>

We have established procedures at our upstream operations that outline the steps that will be taken if children are present at our worksites.



0

### **New Procedure for Child Labour Remediation**

In 2023, we developed procedures on remediation for child labour, detailing the actions to be taken by the company and our Gender Committees in the event that underage workers are identified. The actions include:

Immediately removing the individual from the workplace without affecting the employment status of any family members who are currently working for the company



This procedure underlines our commitment to strengthen our practices to protecting and promoting children's rights.

Our schools and childcare centers for the children of employees living in and around our plantations ensure that parents can work while their children's safety and education are safeguarded (see also: <u>A Focus on Education</u>).

There were no reported incidents of child labour at our operations in 2023.

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Assisting and accompanying the individual during the inspection and remediation process

3

the individual Ensuring is accompanied by their throughout the parents inspection and remediation which includes process, interviews, document checks, as well as physical and mental health assessments

4

If child labour is confirmed the process, the after company will provide support registering the child in educational programs for or other alternatives with consent. Parents parental will also be informed that child labour is prohibited according to company policy

<sup>10</sup> E-DABU (Elektronik Data Badan Usaha) and SIPP (Sistem Informasi Pelaporan Perusahaan) are online platforms used by BPJS Kesehatan to manage company and employee data as well as employment and social security information.



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|----|--------------------------------------|-------------------------|-----------------------------|-----------------------|--------------------|------------------------|
|    |                                      |                         |                             |                       |                    |                        |

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### 🔆 No Forced Labour

Musim Mas does not tolerate all forms of forced and trafficked labour. Our workers are free to move in and out of our estates. Our recruitment, selection, and hiring policies and procedures meet all legal standards and are subject to strict controls to prevent forced labour, debt bondage, and discrimination.

All employees can access our transparent and accountable grievance mechanism without fear of reprisal or dismissal. We ensure they are made fully aware of grievance-raising channels, train them on our internal grievance procedures, and post notices on bulletin We do not employ foreign workers at our Indonesian estates, and seek to hire workers from boards at all our sites. Employees can submit complaints using suggestion boxes in local provinces where possible. When we employ workers from other provinces, we do not and around our operations and grievance logbooks at our administrative offices. They retain their identification and travel documents. We do not use third-party recruiters and can contact our Corporate Affairs Department (Hubungan Masyarakat) directly or file a labour agents or collect any fees from workers, and fully reimburse transportation fees grievance through their labour union. incurred by prospective employees.



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### **Worker Access to Grievance Mechanism**

### [GRI 2-25, 2-26]

We are conducting a review to assess our workers' knowledge of our grievance mechanism





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# **Safety and Health**

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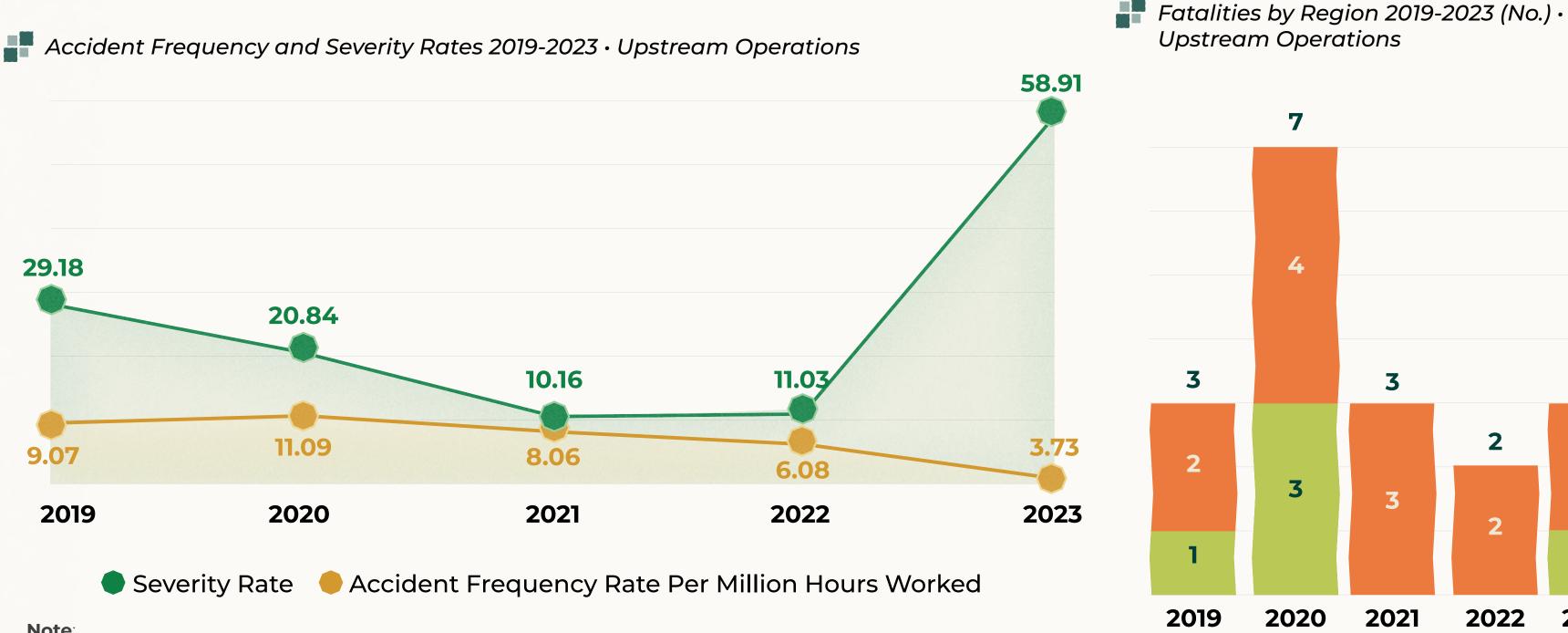
[GRI 3-3, 403-1, 403-7, 403-8, 403-9] [SASB FB-AG-320a.1]

Musim Mas places a high priority on employee safety and health. Our Occupational Safety and Health (OSH) policy and OSH management system covers all permanent and temporary employees. We ensure that all workers at plantations, mills, and factories are equipped with the necessary personal protective equipment (PPE) and receive training in safety and health issues relevant to their roles.

#### \* Upstream Accidents

We are vigilant and apply strict health In 2023, our accident frequency rate was and safety measures to minimize accident 3.73, a reduction by more than 58% since rates at our upstream operations. Most 2019. However, our severity rate was five work-related injuries are minor, such as times higher than in 2022 due to four cuts from handling oil palm fronds and serious incidents during the reporting thorns. Severe injuries typically result from vear. mishandling work tools and motorcycle accidents, among others.





#### Note:

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.

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#### **\*** Upstream Fatalities

Despite our stringent health and safety measures, we deeply regret to report three fatalities at our upstream operations in 2023. Upon investigation, these incidents were due to working without following proper OSH procedures, adverse weather conditions, and road accidents. We take every fatality seriously and report our findings to the appropriate regional Manpower Office (Dinas Tenaga Kerja).



🛑 Kalimantan

Sumatra

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#### **\*** Measures to Improve Safety and Health

We monitor OSH implementation at our work sites and execute programs such as OSH training and education to improve our accident, severity, and fatality rates. To minimize the risk of accidents recurring, we have implemented the following corrective actions:



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

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[GRI 3-3]

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## **Employee Development and Talent Retention**

We provide regular and relevant training to ensure our workers and employees can effectively carry out their roles and responsibilities. We also invest in capacity building and technical skills programs and provide professional development opportunities that enable employees to pursue their career goals while contributing to the overall advancement of the company. At our plantations, we conduct meetings and discussions with workers to establish harvesting targets during their performance assessments, thus fostering a performance-driven approach.

To support the development of green talent in Singapore, our Sustainability Communications team will host ten interns at our Headquarters from 2023 to 2027.





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# **Sustainability With Smallholders**

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

Smallholders in the Indonesian palm oil sector play a crucial role in agricultural production and are highly dependent on the commodity as a source of income.<sup>11</sup> However, they often encounter complex and interconnected challenges related to yields, efficient farming practices, land ownership, financial and market access, and economies of scale. The European Union Deforestation Regulation (EUDR) and increasingly stringent global regulatory landscape could further exacerbate these existing challenges, and may lead to the exclusion of smallholders from value chains.

Musim Mas has a plan to overcome these challenges and maintain smallholder inclusion. We recognize the increasing need for global players like us to engage with and support smallholders, and continue to implement our programs for scheme smallholders (where plantation companies operate nucleus estates that assist and support surrounding community plantations) and **independent** smallholders (farmers who are self-



financed, -managed, and -equipped). Over the years, our programs have received various accolades and recognition, and we continue to innovate and improve them while adapting to changing industry and regulatory requirements and standards.

Meeting Increasing Regulatory Requirements

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

<sup>11</sup> Smallholders are individuals with farms smaller than 20 hectares.

<sup>12</sup> We make all scheme smallholders and Musim Mas concession maps available to the RSPO.

<sup>13</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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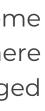
## **Scheme Smallholders**

We operate two programs for scheme smallholders – Kredit Koperasi Primer Anggota (KKPA) and the Village Development Program (VDP) or Kebun Kas Desa. As of December 2023, these programs comprise 43 local initiatives and cover 100% of our smallholders, who manage a combined 8,056 hectares of land area.<sup>12</sup>

|                     | Kredit Koperas<br>Primer Anggot                                                                                                                                                                                                              |                                                                                  | Combined hectarage |                      |                                                                                                                                           | velopment Progra<br>OP)/Kebun Kas De                                        |  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--|
| er                  | A smallholder primary cooperative<br>credit scheme, voluntarily initiated<br>by Musim Mas in 1996. It provides<br>smallholders with practical support<br>to acquire the skills and technology<br>needed to undertake palm oil<br>cultivation |                                                                                  |                    |                      | A Musim Mas program for schem<br>smallholderstailoredtovillageswher<br>plantations are community-manage<br>rather than individually owned |                                                                             |  |
| ed<br>ve<br>m<br>id | Operating<br>since <b>1996</b>                                                                                                                                                                                                               | Number of<br>programs: <b>11</b> #<br>1 in 2023                                  |                    | -                    | erating<br>ce <b>2000</b>                                                                                                                 | Number of programs: <b>32</b> #                                             |  |
|                     | Number of<br>smallholders:<br><b>4,159<sup>#13</sup></b><br>15 in 2023                                                                                                                                                                       | Total scheme<br>smallholder<br>hectarage<br><b>7,814 ha</b><br>• 1,031 ha in 202 | 3                  | ∨illa<br><b>32</b> # | mber of<br>ages:<br>in 2023                                                                                                               | Total scheme<br>smallholder<br>hectarage:<br><b>242 ha</b><br>10 ha in 2023 |  |







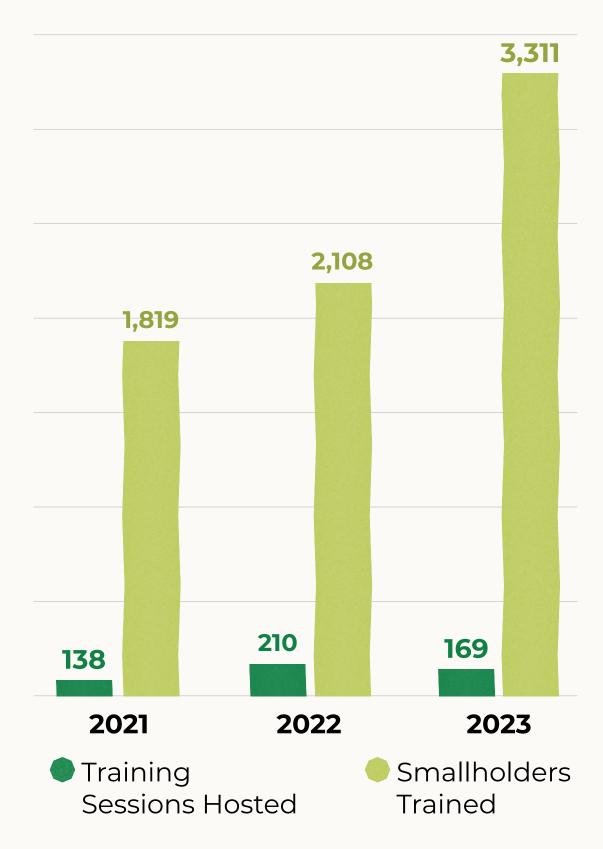
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## **\*** Smallholder Training

We continue to conduct scheme smallholder training programs covering good agricultural practices (GAP), fire management, sustainability standards and certifications, safety and health, and other topics. In 2023, we hosted 169 training sessions for KKPA and VDP smallholders, attended by 3,311 farmers.



Scheme Smallholder Training 2021-2023 (No.)

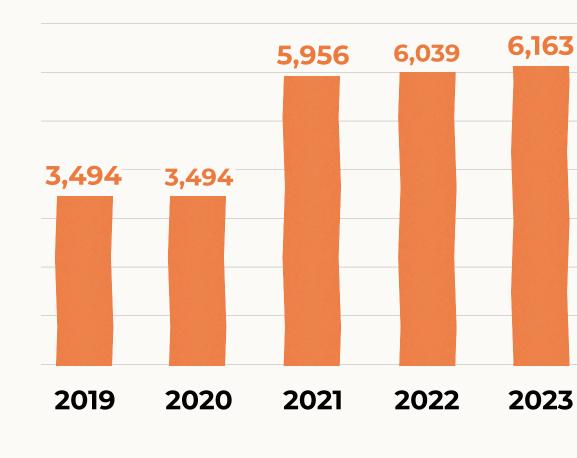


#### \* Production and Income

our scheme smallholders ln 2023. produced 126,997 tonnes of fresh fruit bunches (FFB), sold for a combined gross income of IDR 300 billion (~USD 19.5 million).

#### Certified Smallholders

We work with our scheme smallholders help them obtain sustainability to certification. As of December 2023, 77.54% of scheme smallholder-managed land,<sup>14</sup> representing 6,163 hectares, was RSPOcertified — 124 hectares more than in 2022. Our certified scheme smallholders supplied Musim Mas mills with 115,695 tonnes of certified FFB, representing ~91% of all FFB sourced from scheme smallholders.



#### RSPO-Certified Scheme Smallholder Area 2019-2023 (ha)

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## **Independent Smallholders**



Musim Mas has worked closely with independent smallholders since 2015, helping them align with sector standards and

requirements, encouraging them to obtain certification, and integrating them into our supply chain. We engage with these smallholders on GAP and No Deforestation, No Peat, and No Exploitation (NDPE) commitments tailored to their capacity and resources, and partner with other actors and stakeholders in the local landscape to address barriers and maximize our longterm impact.

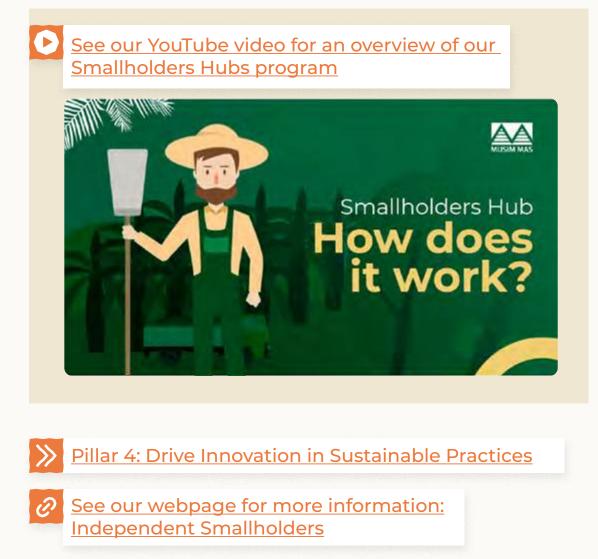
#### Our two main programs are:

- 1. Training for smallholders: directly training smallholders in the communities surrounding Musim Mas and third-party mills, including one-off collaborations.
- 2.Training for trainers through Smallholders Hubs: indirectly providing to independent extended coaching smallholders bv training local government agricultural officials (Village Extension Officers or VEOs) thereby expanding the scale and reach of the programs to benefit more smallholders.
- Through our Smallholders Hubs, we collaborate with district authorities to better support independent smallholders within broader government initiatives,

contributing technical expertise to other stakeholders' jurisdictional and landscape initiatives.

Lessons learned from the various projects, such as knowledge and skills around composting and regenerative agriculture are shared with independent smallholders across our priority landscapes. We continue to identify opportunities to support independent smallholder livelihoods and expand our training modules while increasing the impact of our landscape initiatives.

collaborative, pre-competitive Our approach enables palm oil companies operating in the region to share knowledge, irrespective of a smallholder's buyer.



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#### **Awards and Achievements**

We are proud to announce that Gabungan Asosiasi Pekebun Sawit Inisiasi Musim Mas (GAPSIMA) received RSPO Excellence Award for the Smallholder Impact in November 2023. GAPSIMA is Indonesia's largest RSPOcertified independent smallholders association, comprising nearly 4,586 farmers and managing a combined land area of 11,012 hectares. Its members have been receiving training and guidance from Musim Mas since 2015.

2023, Musim Mas also received In Sawit Indonesia Award for the "Most Reputable Palm Oil the **Company Empowering Independent** Smallholders" from Majalah Sawit Indonesia.

Musim Mas and GAPSIMA, the Largest RSPO-Certified Independent Smallholders <u>Association Clinches the RSPO Excellence</u> Award for Smallholder Impact

The Most Reputable Palm Oil Company on Empowering Independent Smallholder Award

#### **Empowering Smallholders** and Engaging Local Communities

Commentary by Qayyum Amri Chief Editor, Majalah Sawit Indonesia



Indonesian smallholders own 41% of the country's oil palm plantation areas, and the commodity contributes significantly to the livelihoods and development of local communities. However, palm oil standards, certifications, and regulatory requirements often present challenges for smallholder communities, which may lack the necessary resources to comply with their stringent demands.

Musim Mas was one of the first companies to achieve RSPO certification and has demonstrated exceptional consistently dedication to sustainable practices and supporting local communities. One of its standout initiatives is its Smallholders Hubs, which empower independent smallholders with the necessary knowledge and skills to cultivate sustainable palm oil in line with industry standards and best practices such as

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NDPE. Musim Mas also collaborates with the Indonesian government through its Training for Trainers program, equipping government officials to train more smallholder farmers in agricultural best practices.

Another noteworthy aspect of Musim Mas' efforts is its focus on women smallholders. In an industry where women often remain in the background, Musim Mas pays equal attention to women farmers, supporting their livelihoods by equipping them with the knowledge and skills to cultivate palm oil safely and efficiently.

Palm oil is produced by local communities in Indonesia. To change negative perceptions about the commodity, palm oil companies must develop more programs to engage with smallholders and local populations. Musim Mas' industry-leading smallholder programs have set an excellent example, and I hope other plantation companies in Indonesia and elsewhere will follow suit.

Majalah Sawit Indonesia is a leading media publisher focusing on palm oil industry products and technologies. Qayyum Amri is its Chief Editor, overseeing the publication's editorial content and strategic direction. Majalah Sawit Indonesia recognized Musim Mas as the "Most Reputable Palm Oil Company Empowering" Independent Smallholders" in 2023.

#### **\*** Reach of Smallholder Programs

As of December 2023, 36,751 independent smallholders have been trained through Training for Smallholders program, and 460 VEOs and 6,723 independent smallholders have been trained through our Training for Trainers program through our Smallholders Hubs.

In November 2023, we partnered with Bunge through our Smallholders Hub in Sambas, West Kalimantan, with an aim to train more than 1,000 independent smallholders in sustainable palm oil production by 2025. This initiative, funded by Bunge, is aligned with the Tropical Forest Alliance's (TFA) Agriculture Sector Roadmap to 1.5°C.

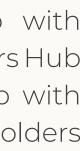
We also renewed our partnership with General Mills through our Smallholders Hub in Aceh Singkil, and our partnership with AAK and Nestlé through our Smallholders Hub in Subulussalam for a third year.

Bunge and Musim Mas Collaborate to Make Palm Value Chain More Sustainable

Transforming Landscapes







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# **Total Independent Smallholders Engaged in Programs:** • 43,474

Total ISHs trained

#### Total VEOs trained

#### **Aceh Tamiang**

● 2,495 ● 73

#### 2020

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

#### **Aceh Singkil**

#### ● 2,105 ● 75

#### 2021

Partnership with General Mills: Targeting independent smallholders from villages the neighboring Leuser Ecosystem, the two parties to integrate collaborated smallholder farmers into the sustainable palm oil supply chain and reduce deforestation.

General Mills pledged to fund the first three years of the program. The partnership was renewed in 2023.

## Smallholder Training

• 36,751

#### Dayun (Riau-Siak)

#### **270 2**4

#### 2021

Siak-Pelalawan collaboration: Small-scale hub established as part of our commitment to the wider Riau District with the same goals as the Siak-Pelalawan Landscape project established by the Proforest-Daemeter Partnership.

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#### **Subulussalam**

#### • 1,138 • 117

#### 2021

Partnership with AAK and Nestlé: Addressing deforestation outside concession areas. AAK and Nestlé pledged to fund the first two years of this five-year program. The partnership was renewed in 2024.

#### Sungai Linau

#### **457** • 32

#### 2022

Partnership with the Proforest-Daemeter Partnership, Nestlé, PepsiCo, IFF, APP, Cargill, Lactalis and Yayasan Mitra Insani: Dubbed the Sungai Linau Landscape Conservation and Livelihoods Program (SLP), the Hub supports communitybased land use development improves villagers' and livelihoods, protects HCS and HCV forest areas, and reduces greenhouse gas emissions through forest and peat management and protection.

#### Notes :

Smallholder training sessions in Sungai Linau were successfully completed with the support of Musim Mas' field assistances. Goverment VEOs are still in training.

#### Sambas **258 139**

#### 2022

Partnership with Earthqualizer to support Musim Mas in liaising with local stakeholders.

#### November 2023 Collaboration with Bunge

to train more than 1,000 independent smallholders in sustainable palm oil production by 2025 in line with the Tropical Forest Alliance's (TFA) Agriculture Sector Roadmap. We trained 258 smallholders in 2023 and are on track to reach our 2025 target.



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

We continue to grow our smallholder outreach programs and training for trainers through our Smallholders Hubs in priority regions. In 2023, we trained 113 VEOs, increasing their number across all hubs from 347 in 2022 to 460. Subsequently, the number of smallholders trained by VEOs increased by almost 50%, from 4,529 in 2022 to 6,723 in 2023. As of June 2024, 460 VEOs and 7,361 smallholders have been trained.

We surpassed our targets for smallholder training at all hubs ahead of schedule, except for Subulussalam and Sambas, which remain on track to achieve their goals.

|                  | VEOs |      |      | Independent Smallholders |       |       |       |             |
|------------------|------|------|------|--------------------------|-------|-------|-------|-------------|
| Area             | 2021 | 2022 | 2023 | 2025 target              | 2021  | 2022  | 2023  | 2025 target |
| Aceh Tamiang     | 73   | 73   | 73   | 40                       | 495   | 2,489 | 2,495 | 1,500       |
| Aceh Singkil     | 75   | 75   | 75   | 60                       | 400   | 892   | 2,105 | 1,750*      |
| Riau-Siak, Dayun | 7    | 1    | 24   | 20                       | 156   | 269   | 270   | 250         |
| Subulussalam     | 28   | 117  | 117  | 60                       | _     | 476   | 1,138 | 1,500*      |
| Sungai Linau     | _    | _    | 32   | 20                       | _     | 367   | 457   | 300         |
| Sambas           | -    | 81   | 139  | 30*                      | _     | 36    | 258   | 1,000*      |
| Total            | 177  | 347  | 460  | -                        | 1,051 | 4,529 | 6,723 | -           |

#### VEOs and Independent Smallholders Trained by Hubs 2021-2023 (No.)

Notes :

1. VEO data in orange is the maximum number to be trained. We continue to increase smallholder engagement through the trained VEOs. 2. Targets marked with \* have been adjusted to account for previous COVID-19 movement restrictions and/or to align with contracts.

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# 🗱 Smallholders Program Partnerships 🔛

Our Smallholders Hubs leverage collaborative partnerships to achieve common goals and have a greater impact. Recently, we concluded our financial literacy workshops with MUFG Bank and PT. Bank Danamon Indonesia Tbk (Danamon) using the AgriON digital finance and financial learning platform.

We continuously seek new opportunities for collaboration while nurturing existing partnerships to ensure long-term progress. Our programs aim to support smallholders on the ground. These include:



#### **Women Smallholders** Program

Women are pivotal to the stability and well-being of their families. They are often responsible for the bulk of household duties, including child rearing, financial management, and ensuring proper nutrition for their children and spouses.

In 2023, we launched the Women Smallholders Program, a collaboration with academic experts from the Universitas Sumatra Utara (USU). This program engaged woman smallholders and smallholders' wives in three Riau regencies. Between May and December 2023, Musim Mas conducted training sessions for 1,206 smallholders, comprising 757 women and 449 men, as part of the first phase of the program. It provided voluntary training on health and nutrition to improve their knowledge and help them make informed decisions about their individual and family well-being.

As a continuation of our health and nutrition training, in January 2024, we conducted a Training for Trainers program for 30 women. They have since delivered training on health and nutrition to the community.

Engaging men in this program is also paramount, as they are vital allies in promoting a positive perspective and fostering a supportive environment for women's empowerment. This holistic approach is critical for the program's sustainability and long-term impact.

We will expand the program in 2024 to include financial literacy and entrepreneurship training for home businesses. We are eager to explore new collaborations during the next phase of the program, ensuring its continued growth and ongoing impact in empowering women within smallholder communities.



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#### **Developing the Next Generation of Farmers**

We are launching an innovative program to inspire the next generation to pursue careers in agriculture, addressing the declining interest that could lead to a shortage of farmers and, ultimately, threaten global food security.

Our program focuses on agricultural students from vocational schools, many of whom are children of independent smallholders. Through career talks, lectures, and interactive sharing sessions, we raise awareness of the palm oil industry, its sustainability challenges, and the critical role of sustainable palm oil in the global market. Additionally, we share basic training in leadership, communication, and social media. Our ultimate goal is to cultivate a new generation of farmers, ensuring a sustainable and resilient agricultural sector for the future.



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

Since 2021, Musim Mas has partnered with the Livelihoods Funds for Family Farming (L3F), SNV, World Agroforestry (ICRAF), Danone, L'Oréal, and Mars Incorporated for the BIPOSC project – a collaborative effort to promote regenerative agriculture among independent palm oil smallholders in Labuhanbatu, near our PT Siringo-Ringo mill in North Sumatra.

The project encompassed group trainings and individual coaching sessions on regenerative agricultural practices, including how to

improve soil conditions, minimize soil erosion, reduce greenhouse gas emissions, support farm functional biodiversity and diversification of crops. Demonstration plots which also served as learning sites for smallholders, were established to showcase the benefits and impact of oil palm regenerative agriculture. Additionally, nurseries were set up to facilitate crop diversification at smallholder farms. The project also includes the formation of cooperatives to support smallholder businesses and other income-generating activities, as well as associations to assist smallholders in achieving RSPO and Indonesian Sustainable Palm Oil (ISPO) certification.

As of June 2024, 891 independent smallholders have been trained in oil palm regenerative agriculture practices, agroforestry, and institutional business development. Seven demonstration plots have been established for oil palm regenerative agriculture, 20 hectares of demonstration plots for agroforestry, and six nurseries for crop diversification. Notably, a smallholder cooperative has been established to set up a composting unit with a self-sustaining business model that produces affordable organic fertilizer from our mill's by-products, with a monthly production capacity of 100 to 150 tonnes. This cooperative also provides loans to smallholders for purchasing fertilizer.

The BIPOSC project will continue until 2031, with ongoing efforts focused on enhancing smallholder livelihoods, reducing pressure on forest ecosystems, and advancing sustainable palm oil cultivation.

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

We continue to collaborate on a joint research project 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 to investigate the conditions under which supply chain sustainability initiatives can reduce deforestation in the Indonesian palm oil sector while safeguarding producer inclusion.

Employing a norm-based intervention approach, the research project trains and empowers smallholders on sustainable practices. Since March 2023, we have trained farmers on GAP, NDPE principles, and financial literacy, with support from the local government and Earthqualizer. The project is scheduled to conclude in June 2028, culminating in an impact report detailing the effects of these trainings on farmer behavior.

<u>See also: Page 6 of our Projects in the Aceh</u> <u>Landscape Report 2022/23</u>



#### **Sharing Expertise**

Musim Mas has been recognized by the United States Agency for International Development (USAID) for our dedicated efforts and expertise in sustainable agriculture. In September 2023, we were invited to assist USAID in delivering GAP training to 120 smallholders through its Sustainable Environmental **Governance Across Regions (SEGAR)** program.

While this collaboration is informal and the smallholders trained may not necessarily supply to us, it aligns with Musim Mas' commitment towards sustainable palm oil production. We continue to engage with USAID and will assist the organization with SEGAR training sessions two to three times a year.

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

development of tropical and Mediterranean regions, with regional offices worldwide.

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#### **Collaborating for Shared Success**

#### Commentary by

Diana Chalil

Head of Magister of Agribusiness, Faculty of Agriculture, Universitas Sumatra Utara (USU); Founder and Leader, Consortium Studies on Smallholders in Palm Oil



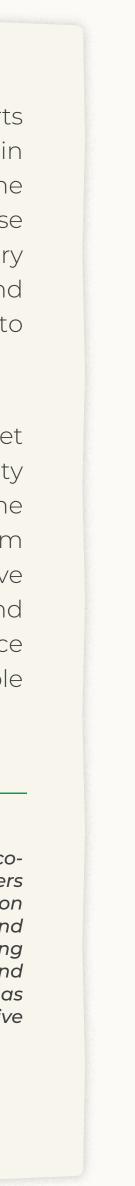
Palm oil is one of Indonesia's most important commodities and a significant driver of economic growth. International stakeholders continue to demand sustainable palm oil. However, the focus of their concerns has shifted from its environmental impact to its social impact, specifically on the livelihoods of smallholders.

Sustainability requires a long-term commitment to impactful programs. Musim Mas' smallholder initiatives have succeeded because the company operates an integrated supply chain that allows it to

communicate and amplify its social efforts and impact, connecting smallholders in Indonesia with consumers worldwide. The company is an industry leader because it willingly collaborates with industry peers, civil society organizations, and governments to find workable solutions to pressing sustainability issues.

While maintaining a competitive market is essential, prioritizing sustainability should be the overarching goal for the industry. Other companies can learn from Musim Mas and adopt similar collaborative approaches to accelerate progress, expand their impact, and positively influence evolving industry standards for sustainable palm oil.

Diana is a researcher and lecturer at USU and the cofounder of the Consortium Studies on Smallholders in Palm Oil. USU has worked with Musim Mas on sustainable palm oil research since 2016. USU and CIRAD have partnered with Musim Mas, inviting the company to participate in workshops and conferences and deliver talks and presentations as part of the university's summer program on Inclusive and Sustainable Palm Oil.<sup>15</sup>



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### Supporting Independent **Smallholder Certification**

Musim Mas, along with our industry and civil society partners, continues to support independent smallholders in achieving RSPO and ISPO certification.

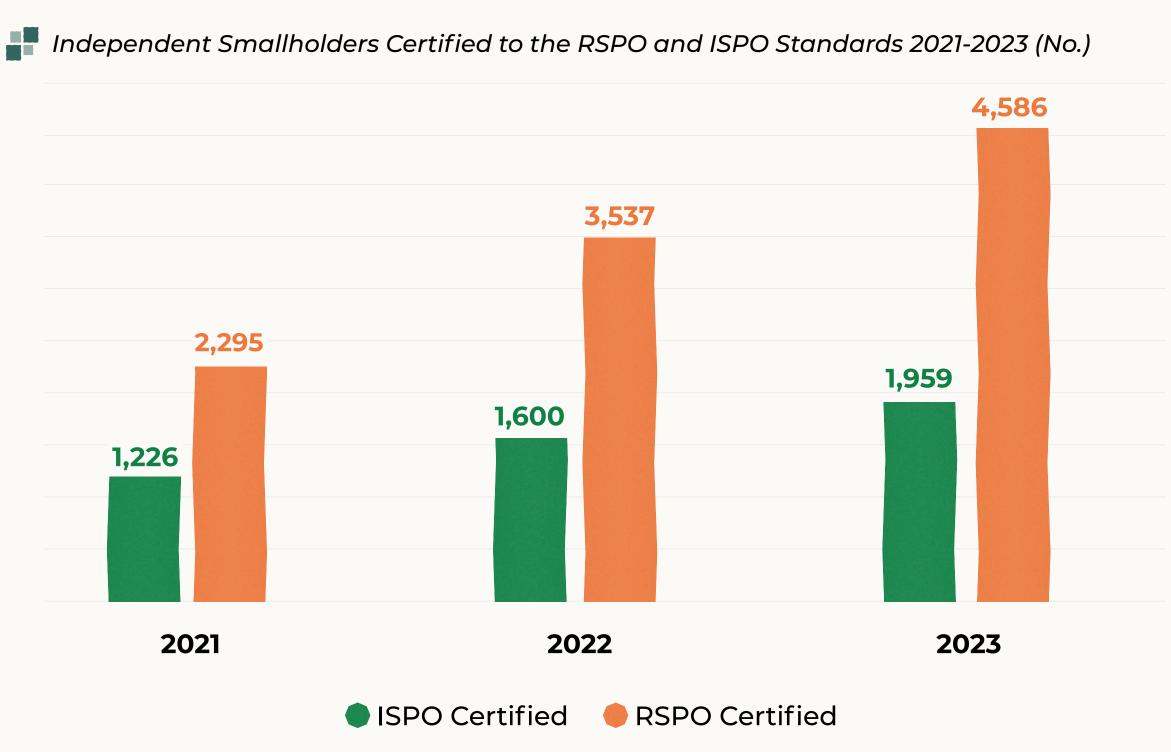
#### **RSPO**

In 2023, we supported 4,586 smallholder farmers in achieving RSPO certification, 3,126 of whom supplied to Musim Mas. Together, they manage a total of 11,012 hectares of plantations.

Our independent smallholder certification program has given smallholders and associations direct farmers' access to the sustainable palm oil market. These smallholders have sold RSPO Independent Smallholder Credits to consumer goods companies Unilever, PepsiCo, and Nestlé, earning premiums of nearly USD 2.6 million as of December 2023.

#### **ISPO**

We also helped 1,959 independent smallholders who manage a combined 4,496 hectares of plantations achieve mandatory ISPO Ministry of the Agriculture Decree No.38 of 2020 (ISPO 38/2020) certification. These smallholders supply to us.



#### **\*** Addressing Challenges

We make every effort to train and educate smallholders, but it can be challenging to ensure that independent smallholders adhere to GAPs, particularly the standard operating procedures (SOPs) and 4R principles for pesticide and fertilizer application.<sup>16</sup>

We are currently trialing a composting project that is part of the wider BIPOSC Project under the North Sumatra Livelihood Funds (L3F) program. If successful, we will scale the project and incorporate the compost across our independent smallholder programs.

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# **Community Rights and Support**

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

Musim Mas is committed to supporting the welfare and livelihoods of populations in our surrounding communities, especially in rural areas. We address challenges to residents' well-being and provide essential amenities like education and healthcare services through long-term partnerships with community leaders and civil society organizations.

## **Upholding Land and Community Rights**

Musim Mas respects and upholds the rights of communities to cultivate the land for their own use and livelihoods. We obtain the Free, Prior and Informed Consent (FPIC) of all community members before initiating any new developments or expanding our operations on community land. We rigorously review all new developments against the RSPO New Planting Procedure and its requirements. As detailed in our HCSA assessment reports, our dedicated teams adopt a comprehensive consultative approach based on FPIC principles,

engaging with local communities in participatory mapping exercises. We negotiate compensation for lost benefits and relinquished rights voluntarily and in agreement with the impacted communities. We strive to address all issues and provide appropriate remedies through our dispute resolution mechanism.

This approach reduces the risk of disagreements and conflicts, allowing us to map village boundaries, customary communal and private land, and infrastructure. It also provides valuable insight into sociocultural, traditional, and religious values, livelihoods, and land use habits, increasing our understanding of local communities' concerns, needs, and aspirations. Additionally, this information helps us formulate our land use, development, monitoring, and management plans, which we align with existing community programs for greater synergy.

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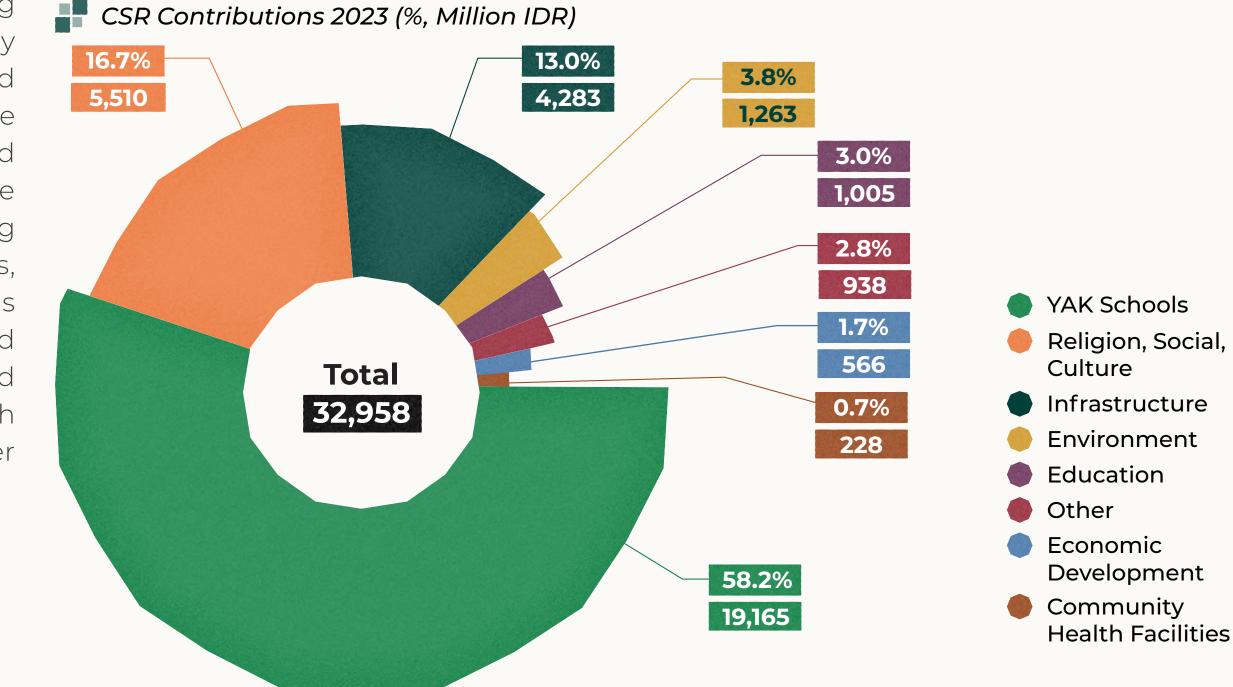
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# **The Anwar Karim Foundation**

Musim Mas operates a long-standing outreach initiative through the Anwar Karim Foundation (Yayasan Anwar Karim - YAK), which organizes and supports various programs that improve the wellbeing of our employees and surrounding communities. In 2023, our monetary contributions exceeded IDR 32.9 billion

(~USD 2.1 million). The largest proportion (about 58%) was allocated to YAK schools, including kindergartens and childcare centers, followed by sociocultural activities, infrastructure improvements, environmental initiatives, local economic development, and public health.





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# **Community Support**



We hold regular meetings with community members and local representatives, including village heads, to inform them of any relevant infrastructure developments that may affect them. We engage in ongoing dialogue and consult with them as needed to ensure that the developments meet their specific needs.

Every year, villages neighboring our operations are invited to submit proposals on how to best use our infrastructure development budget. Over the years, Musim Mas initiatives have helped enhance these communities' access to essential services, including clean water and sanitation, and public facilities, such as mosques and libraries, to promote their well-being.

## **CSR Initiatives in 2023**

#### Classroom Renovations at Universitas Indonesia

As part of our commitment to supporting education, we funded the renovation of four classrooms at the Faculty of Economics and Business, Universitas Indonesia (UI), to help create a more conducive learning environment.

Renovation at Universitas Indonesia

#### **Road Repairs Between Pelalawan District Villages**

We repaired a 5-meter-wide road between Talau Village and Tanjung Beringin Village in the Pelalawan District, distributing 300 tons of stones and deploying heavy equipment. This project helped improve the safety and comfort of community members commuting between the two villages.

CSR Program at Pelalawan District

#### **Donations to Singapore Charities**

We donated SGD 5 million (~USD 3.7 million) to six charities in Singapore,<sup>17</sup> bringing our total philanthropic donations to over SGD 10 million (~USD 7.5 million) since 2019.

Musim Mas Pledges SGD 5 million to Charitable Causes

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development of eco-conscious talent. Some of our engagements include:

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## Advancing Sustainability Knowledge

Universitas Sumatra Utara (USU), Indonesia

We are an annual guest speaker at USU's summer school, sharing best practices and lessons learned about smallholders in our supply chain. Topics include helping on-the-ground smallholders meet challenges and including them in global supply chains.

# **Singapore Institute of**

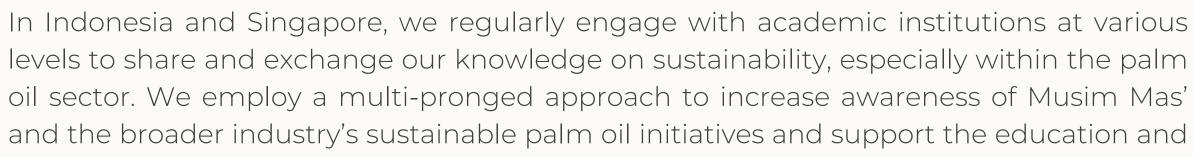
Technology (SIT), Singapore In February 2024, Musim Mas presented a case study on the palm oil industry and sustainable palm oil to students at SIT. During our presentation, we discussed the industry's overall efforts, progress, and challenges, providing insights into the complexities of sustainable practices in the sector.

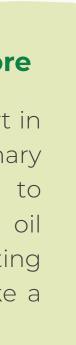
#### Nanyang Technological University (NTU) Nanyang Business School (NBS), Singapore

Starting two years ago, Musim Mas has actively participated as a guest speaker in NTU NBS Sustainability Metrics and Decision-Making module, presenting case studies on our sustainability efforts and initiatives.

#### **Peiying Primary School, Singapore**

In October 2023, Musim Mas took part in knowledge-sharing sessions with primary school children, introducing them to sustainable palm oil and the palm oil industry in general while educating them on how their choices can make a difference.





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# **Business Ethics**

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

Musim Mas is committed to conducting business fairly and ethically, prohibiting corruption or bribery. We are guided by our Code of Business Conduct and an internal Anti-corruption Policy, which we communicate to all employees. In 2023, more than 28,000 employees, including all plantation and mill workers, received training on our anti-corruption policies and procedures.

All stakeholders, including employees, can file complaints confidentially and report issues through our whistleblowing mechanism without fear of retaliation or dismissal.

Corporate and Sustainability Governance

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

#### \* Progress of Legal Proceedings Against a Musim Mas Executive

In 2022, a legal case was initiated against a Musim Mas executive for allegedly obtaining export permits improperly during the 2022 Domestic Market Obligation (DMO) program. The case remains ongoing at the time of this report's publication. In 2023, the office of the Attorney General of Indonesia announced that it was expanding its investigation to Musim Mas Group.

In July 2023, Musim Mas filed a lawsuit against the Ministry of Trade of the Republic of Indonesia through the State Administrative Court (PTUN), about the DMO regulations. On 5 March 2024, the State Administrative Court ruled that there was maladministration and ordered the Ministry of Trade to reformulate the regulations.

Musim Mas remains confident in the judicial process, knowing that it complied with the prevailing laws and regulations at the time of the DMO program and fully supported its implementation.

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# PILLAR 2

# Deliver Positive Environmental Impacts



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Musim Mas strives to minimize the potential negative impacts of our operations on the environment and surrounding communities, and is committed to addressing the climate crisis. We are minimizing greenhouse (GHG) emissions, upholding No gas Deforestation and No Peat principles at our operations and in our supply chain, implementing various supplier and and smallholder programs to address climate-related risks. Our **Biodiversity** Climate Resiliency Action Plan and 2022 further details our commitment biodiversity conservation and to environmental stewardship.

At the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) in Egypt, Musim Mas committed to sector-wide targets as a signatory to the Agriculture Sector Roadmap to 1.5°C facilitated by the Tropical Forest Alliance (TFA).

In 2024, we committed to the <u>Science</u> <u>Based Targets Initiative (SBTi)</u> for our emission reduction targets. We will update our progress towards these targets in our annual sustainability reports.

Targets and Progress

#### Achieving Sector-Wide Goals

Commentary by the Tropical Forest Alliance (TFA)



Leading companies in the palm oil sector, like To achieve sector-wide goals, companies must Musim Mas, have made significant progress in look beyond their individual responsibilities The Tropical Forest Alliance (TFA) is a global public-private meeting their No Deforestation, No Peat, and partnership platform hosted by the World Economic and engage with other supply chain actors, Forum comprising 170 partners, including Musim Mas. No Exploitation (NDPE) commitments and are including palm oil demand-side markets in The TFA facilitated the development of the Agriculture Sector Roadmap to 1.5°C. It is also a strategic partner India and China to focus on physical volumes. nearing 80% satellite monitoring coverage. of the Consumer Goods Forum Forest Positive Coalition Companies can embrace new roles and engage However, the palm oil sector continues to of Action and helped develop that organization's 2021 Strategy for Collective Action in Production Landscapes. in corporate-led sustainability advocacy to grapple with the challenges of a leakage market and negative consumer perception. share lessons learned and drive the industry Our broader challenge remains engaging with forward, as Musim Mas is already doing. See also: TFA's commentary on The Importance of Landscape Approaches Stepping outside their traditional roles, palm the entire industry, particularly companies that have yet to embrace the NDPE agenda. oil companies can call attention to positive Furthermore, the sector needs to catch up with progress and multi-stakeholder efforts on the other industries in measuring and accounting ground and counteract negative perceptions for its Scope 3 emissions and setting ambitious about the sector. SBTi targets.

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**Climate Action** 

Positive Environmental Impacts

# **Climate Action**

#### [GRI 3-3]

Climate change is a critical global issue with far-reaching impacts on ecosystems, human health, and economies. This year alone, we have seen the rise in severe and frequent climaterelated events across the globe, such as heatwaves, floods, and wildfires.

As one of the largest players in the palm oil industry, Musim Mas recognizes that climate change may pose a significant risk to both our direct operations and across our value chain. At the same time, we also believe that the transition to a low carbon future brings about new opportunities such as the growth of biofuels and development of climate-resilient palm variants.





Musim Mas Inaugural Inclusion in CDP's Prestigious 'A-List,' Recognized with a Double 'A' Score for Transparency on Forests and Water Security

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

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#### **Understanding Our Climate-Related Risks and Opportunities**

As a private company, we are not required by law to report against the Taskforce on Climate-related Financial Disclosures (TCFD) recommendations. However, we recognize it as a valuable framework and exercise to help us gain insights into the potential financial impacts of climate-related risks and opportunities on our business and assess our resilience. Aligning with the TCFD will also allow us to communicate more effectively with our stakeholders and prepare us for compliance with Singapore's new mandate for climate reporting using the International Sustainability Standards and to further align with the TCFD Board (ISSB) standards, which will be recommendations, which have been compulsory for all large non-listed companies incorporated in Singapore are essential to organizational operations: by 2028, as well as the European Union's governance (see also section on Corporate Corporate Sustainability Reporting and Sustainability Governance), strategy, Directive (CSRD).

In early 2023, we conducted a preliminary in-house climate risk assessment to identify and evaluate potential climaterelated impacts and mitigation measures at our operations. This proactive exercise enhanced our understanding of how climate change may affect our operations and laid the foundation for climate-resilient business practices and strategies.

Following this preliminary assessment, we engaged an independent consultant to help assess our readiness for TCFD reporting. This second assessment revealed that we were well prepared, thanks to our ongoing CDP submissions. In 2024, we conducted an internal climate risk scenario analysis with the consultant to map our climate risk impact pathways grouped into four key thematic areas that risk management, and metrics and targets.

For more information, see: Aligning with the Recommendations from the Taskforce on **Climaterelated Financial Disclosures (TCFD)** 



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**Climate Action** Positive Environmental Impacts

#### **\*** Climate Scenario Analysis

climate impacts against a range of science-based scenarios. These included Paris-aligned scenarios that project a global temperature increase of up to 1.5°C and business-as-usual (BAU) scenarios that project increases of over 3°C.<sup>18</sup> In collaboration with our consultant, we conducted interviews with key internal stakeholders, and referenced market research, internal studies and academic publications from credible third-party sources such as the Intergovernmental Panel on Climate Change (IPCC) to identify a selection of climate-related physical and transitional risks and opportunities that may impact our business. We qualitatively assessed their significance based on their severity and likelihood, as well as our operations' exposure and vulnerability to them. The outcomes are summarized in the tables below.

Our inaugural climate risk scenario analysis conducted in 2024 evaluated the medium-term (2030) and long-term (2050) impacts of global temperature increases, including climate-related physical and transitional risks on our business. Climaterelated physical risks, such as increased temperatures, altered precipitation patterns, and extreme weather events, can adversely impact our crop yields and disrupt our operations leading to higher costs and reduced revenues. Transitional risks, including regulatory changes, shifts in market preferences, and evolving sustainability standards, may also lead to higher operational costs and an increased demand for sustainable practices. Our analysis was limited in scope to our upstream and downstream activities in Sumatra, including a selection of our plantations, mills and a complex comprising a refinery, oleochemicals plant and specialty fats plant. Using 2023 as a baseline, we assessed

| Physical<br>Risks    | <b>Risk Description</b>                                                                                                                            | <b>Risk Category</b> | Implications for Musim Mas                                                                                                                                                                                                                                                   | Time Horizons | Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pest and<br>Diseases | Temperature and precipitation<br>changes may affect the spread<br>of fungal diseases (e.g., basal<br>stem rot) that may impact oil<br>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 ea<br>detection, regular monitoring, and prompt treatments th<br>effectively detect potential pest and diseases outbreaks.<br>For more information, see <u>Reducing Pesticide Use</u> .                                                                                                                                                                                                                                                                                                |
| <b>Storms</b>        | Climate change may increase<br>the severity and frequency<br>of extreme tropical cyclones,<br>creating strong winds and<br>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 measure<br>to monitor tropical storms and monsoons impacting of<br>plantation operations and the shipment of goods. At the<br>same time, we constructed gray infrastructure, includi<br>embankments, to help mitigate damage from cyclones.<br>Musim Mas has formed an Emergency Response Tea<br>to mitigate and minimize worker safety risks. Musim M<br>conducts annual trainings on Best Management Practice<br>and Safety for all workers to raise awareness of potential risks. |

#### **Climate-Related Physical Risks**

<sup>18</sup> 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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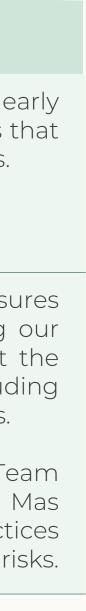
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| <b>3 Musim Mas</b> Su           | stainability Report 2023                                                                                                                                      | About<br>This<br>Report                    | 2023<br>Summary<br>Progress | Chairman<br>Statement |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|-----------------------|
| Climate Action                  | Positive Environmental Impacts                                                                                                                                |                                            |                             |                       |
| Physical<br>Risks               | <b>Risk Descriptio</b>                                                                                                                                        | on                                         | Risk C                      | ategory               |
| Floods                          | Heavy rains may lead<br>overflowing and flash<br>that disrupt fresh fruit<br>(FFB) collection and<br>infrastructure.                                          | flooding<br>bunches                        | Ac                          | ute                   |
| Fires                           | Rising average temp<br>and longer drought<br>increase the risk<br>that may damage o<br>plantations.                                                           | seasons<br>of fires                        | Ac                          | ute                   |
| Droughts                        | Droughts are experincrease in frequent<br>intensity, including of<br>caused by El Niño<br>impacting FFB yields.                                               | ncy and<br>droughts                        | Ac                          | ute                   |
| Rising temperatures & heatwaves | Projected rises in<br>temperatures and h<br>frequency can pose<br>risks to plantation<br>reducing labour efficie<br>increasing the risk<br>related illnesses. | heatwave<br>health<br>workers,<br>ency and | Chr                         | onic                  |

| About<br>Musim Mas                                                     | Approach to<br>Sustainability                       | Improve the Lives of<br>Smallholders, Workers,<br>and Communities          | <ul> <li>Deliver Positive<br/>Environmental<br/>Impacts</li> </ul> | Maintain Responsible and Enduring<br>Relationships with Suppliers,<br>Customers, and Stakeholders                                                                        | Drive Innovation<br>in Sustainable<br>Practices                            | Assurance<br>Statement                | Appendices                     |
|------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------|--------------------------------|
|                                                                        |                                                     |                                                                            |                                                                    |                                                                                                                                                                          |                                                                            |                                       |                                |
| Imp                                                                    | lications for M                                     | usim Mas                                                                   | Time Horizons                                                      | Mitig                                                                                                                                                                    | ation Measures                                                             | 5                                     |                                |
| and ada                                                                | costs from fl<br>ptation efforts<br>FB transportati | ood mitigation<br>(e.g., floods may                                        | Medium to<br>Long Term                                             | Musim Mas has imp<br>adaptation measures<br>embankments with flag<br>installing water pumps.                                                                             |                                                                            | building                              | bund                           |
| of oil pa<br>costs<br>• Loweryie<br>• Increase<br>risks.<br>• Negative | alms and increa<br>elds<br>d worker hea             | the destruction<br>ased replanting<br>Ilth and safety<br>impacts on<br>ies | Medium to<br>Long Term                                             | Musim Mas has impler<br>programs (e.g., the Fire Fire<br>measures (e.g., building<br>monitoring satellite data<br>to prevent wildfires in co<br>For more information, se | ree Village Progr<br>g water ponds<br>a, and installing<br>ncession areas. | ram) and mi<br>and fire<br>fire watch | tigation<br>breaks,<br>towers) |
| producti<br>scarcity                                                   | on capacity ca                                      | due to lower<br>aused by water<br>from lower FFB                           | Medium to<br>Long Term                                             | We have adopted com<br>surface water and groun<br>related risks through<br>Aqueduct tool and are n<br>operations in water-stres                                          | dwater quality.<br>the World Re<br>nindful to not lo                       | We monito<br>sources In               | r water-<br>stitute's          |
| <ul> <li>Increase<br/>labour)</li> </ul>                               | d operating co                                      | sts (energy and                                                            | Long Term                                                          | We have implemented a<br>workers from heat-relate<br>breaks during periods of                                                                                            | ed illness and inj                                                         | uries by ma                           | •                              |



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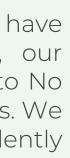
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#### **Climate-Related Transition Risks**

| <b>Transition Risks</b>                                       | <b>Risk Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                     | Risk<br>Category | <b>Potential Impacts</b>                                                                                                               | Time<br>Horizons          | Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Climate or Forestry<br>Regulation                             | Climate-related regulations such as the<br>EU Deforestation Regulation (EUDR) will<br>require palm oil companies to supply<br>deforestation-free products and ensure<br>supply chain traceability. Specifically, the<br>EUDR requires companies to comply with<br>local environmental, human rights, land use,<br>and labour laws. Sanctions include fines and<br>the confiscation of products found to have<br>breached EUDR requirements. | Regulatory       | <ul> <li>Increased compliance<br/>and legal costs</li> <li>Potential revenue loss<br/>from instances of non-<br/>compliance</li> </ul> | Medium<br>Term            | We implemented our Sustainability Policy in 2014 and ha<br>launched EUDR compliance initiatives. For example, of<br>NDPE and sustainability policies include commitments to<br>Deforestation and traceability to plantation, among others. W<br>have achieved 98% traceability to plantation, as independent<br>verified by Control Union.<br>For more information, see <u>Meeting Increasing Regulator</u><br><u>Requirements</u> .                                         |
| Carbon Pricing<br>Mechanisms                                  | Countries where we operate already have or<br>are planning to implement carbon pricing<br>mechanisms. These include Indonesia's<br>recently introduced carbon offsetting and cap<br>and trade measures.                                                                                                                                                                                                                                     | Regulatory       | <ul> <li>Increased operating<br/>and procurement costs<br/>due to upstream power<br/>suppliers passing on<br/>carbon costs</li> </ul>  | Medium<br>to<br>Long Term | We are committed to reducing our GHG emissions by setti<br>ambitious targets aligned with the SBTi. We have install<br>methane capture facilities for the treatment of palm oil me<br>ffluent, significantly reducing our dependence on extern<br>electricity at our upstream operations. We are exploring<br>renewable energy alternatives for our midstream a<br>downstream operations.<br>For more information, see <u>Group Emissions</u> and <u>Upstreaternations</u> . |
| Shift in Customer<br>Preferences Towards<br>Palm Alternatives | Consumer scrutiny of the potentially negative<br>impacts of palm oil cultivation may lead<br>to a shift towards palm oil substitutes and<br>alternatives.                                                                                                                                                                                                                                                                                   | Market           | <ul> <li>Reduced revenues from<br/>traditional palm oil<br/>products</li> </ul>                                                        |                           | While the risk of palm oil alternatives to our business rema-<br>low, we recognize the increasing preference of Wester<br>consumers for sustainable palm oil. As a result, Musim M<br>was the first Indonesian company to join the Roundtak<br>on Sustainable Palm Oil (RSPO) when it was established.<br>of December 2023, more than 85% of our total manag-<br>area are RSPO-certified, and all our upstream entities ha                                                   |
| Development of<br>Lab-Grown Palm<br>Alternatives              | Development of lab-grown palm oil, including<br>through precision fermentation, may become<br>an alternative to traditional palm oil. However,<br>developments are still limited.                                                                                                                                                                                                                                                           | Technology       | <ul> <li>Decreased operating<br/>revenue due to loss in<br/>market share</li> </ul>                                                    | Long Term                 | achieved Indonesian Sustainable Palm Oil (ISPO) certificati<br>since August 2023.<br>For more information, see <u>Certification and Compliance</u> .                                                                                                                                                                                                                                                                                                                         |
|                                                               | Increasing stakeholder pressure to rehabilitate used peatlands may result in additional costs.                                                                                                                                                                                                                                                                                                                                              | Policy           | <ul> <li>Increased compliance<br/>and rehabilitation costs</li> </ul>                                                                  | Medium<br>Term            | Musim Mas employs best practices that align with RSI guidelines and local regulations for managing peatlands a fragile soils.                                                                                                                                                                                                                                                                                                                                                |
| Long-Term<br>Peatland Use                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |                                                                                                                                        |                           | For more information, see <u>Conservation and Restoration</u> .                                                                                                                                                                                                                                                                                                                                                                                                              |

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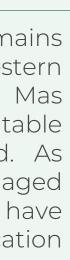


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#### **Climate-Related Transition Opportunities**

| Transition Opportunities                                   | Opportunity Description                                                                                                                                                                                | Opportunity<br>Category | Potential Impacts                                                                                                                                                                                                               | Time Horizo            |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Increased Use of</b><br><b>Precision Agriculture</b>    | Precision agriculture can reduce excess waste and fuel use while maximizing crop yields.                                                                                                               | Technology              | <ul> <li>Increased revenues and material output due to<br/>improved agricultural productivity</li> <li>Reduced soil degradation</li> </ul>                                                                                      | Medium to<br>Long Term |
| Increased Use of<br>Renewable Energy                       | Using renewable energy sources, including on-site solar and biomass, as well as renewable energy credits (RECs), as fossil fuel substitutes.                                                           | Technology              | <ul> <li>Decreased carbon-related costs, when regulatory pricing is in place</li> </ul>                                                                                                                                         | Long<br>Term           |
| <b>Use of Technology-</b><br>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<br/>agricultural productivity and efficiency</li> </ul>                                                                                                             | Medium to<br>Long Term |
| <b>Development of Climate-<br/>Resilient Palm Variants</b> | The recent release of the Musim Mas GS Series oil palm seed<br>varieties highlights the potential for higher FFB yields against the<br>backdrop of rising temperatures and harsher growing conditions. | Technology              | <ul> <li>Reduced environmental impacts of climate-related<br/>events on plantations</li> <li>Increased revenues from higher FFB yields</li> <li>New revenue streams from the sale of climate-<br/>resilient variants</li> </ul> | Medium<br>Term         |



The scenario analysis has been invaluable in helping us identify climate risks and opportunities both in our direct operations and across our value chain. In the near future, we will refine our analysis methodology to better understand the scale and financial implications of key climate-related risks and opportunities across all our operations.

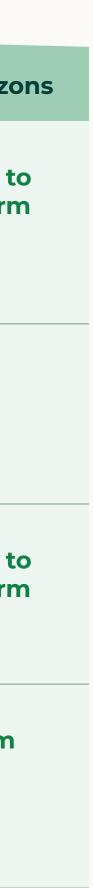
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## **Group Emissions**

[GRI 305-1, 305-2, 305-3, 305-5, 406-1]

[SASB FB-AG-110a.1]



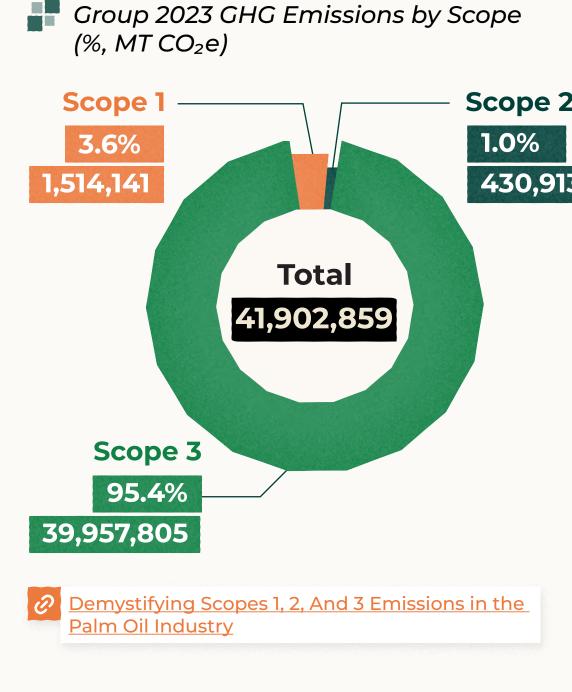
#### Setting Science-Based Targets for Emissions Reduction

In January 2024, Musim Mas announced our commitment to the SBTi, which has been acknowledged by SBTi. This marks a major milestone in our ongoing journey and builds upon the groundwork we have diligently laid in the previous years. Currently, our near- and long-term emission reduction targets are undergoing validation by SBTi. The development of an emissions reduction roadmap will follow these targets, and we anticipate providing updates in future reports.

Musim Mas Commits to Setting Science-Based Targets For GHG Reductions

Musim Mas has consistently measured and reported on our Scope 1 and Scope 2 emissions in line with the GHG Protocol. In 2022, we expanded our efforts to cover the full scope of our carbon footprint and completed a Scope 3 emissions analysis. This is the first time we are reporting on our Scope 3 emissions data for the entire Group. In 2023, our total GHG emissions were 41,902,859 tonnes of carbon dioxide equivalent (MT CO<sub>2</sub>e). Scope 1 and Scope 2 emissions combined amounted to 4.6% of the total emissions (1,945,054 MT CO<sub>2</sub>e), while Scope 3 emissions were 95.4% (39,957,805 MT CO<sub>2</sub>e). Our Scope 1 and 3 emissions disclosures also include land-use change emissions from our own operations and supply chain.

We are aware of the dynamic nature in the GHG calculations guideline. We will anticipate the finalization of the GHG Protocol Land Sector and Removals Guidance in 2025.



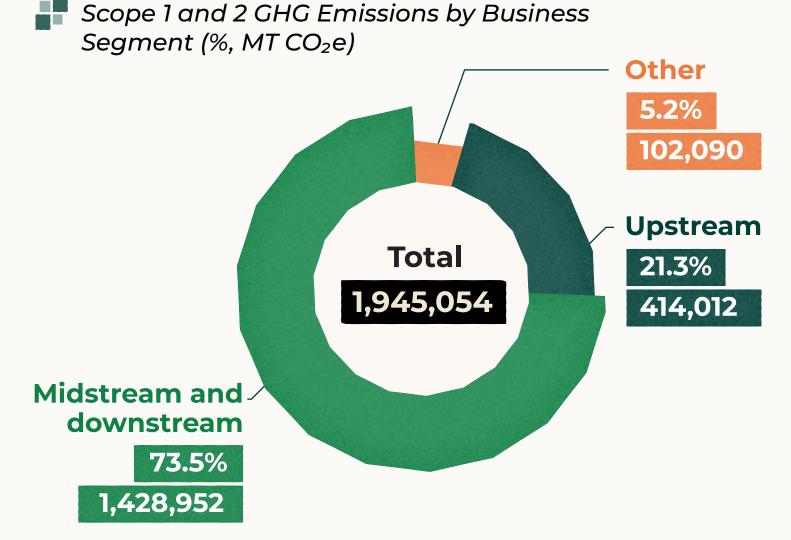
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#### **\*** Scope 1 and Scope 2

Of our Group's total Scope 1 and Scope 2 emissions, midstream and downstream operations contributed 73.5%, while upstream operations (plantations and mills) accounted for 21.3%. The remaining 5.2% of emissions stem from other operations, including warehouses, logistics, and satellite offices.



#### Scope 1 and 2 Emissions per Business Segment (MT CO<sub>2</sub>e)

|                                                                                    | Upst                    | Upstream       |                   |         |       |
|------------------------------------------------------------------------------------|-------------------------|----------------|-------------------|---------|-------|
| Scope                                                                              | Oil Palm<br>Plantations | Palm Oil Mills | and<br>Downstream | Others  | То    |
| <b>Scope 1</b><br>Direct emissions<br>from owned or<br>controlled sources          | 366,703                 | 47,309         | 999,383           | 100,746 | 1,514 |
| <b>Scope 2</b><br>Indirect emissions<br>from the generation<br>of purchased energy | 0                       | 0              | 429,569           | 1,344   | 430   |
| Total                                                                              | 366,703                 | 47,309         | 1,428,952         | 102,090 | 1,945 |

#### Notes:

- · Others include warehouses, logistics, and satellite offices.
- Scope 1 and Scope 2 emissions are defined according to the GHG Protocol.
- Data reported is according to <u>our CDP Climate Change 2023 submission</u>, which covers our previous reporting cycle (2022 financial year).



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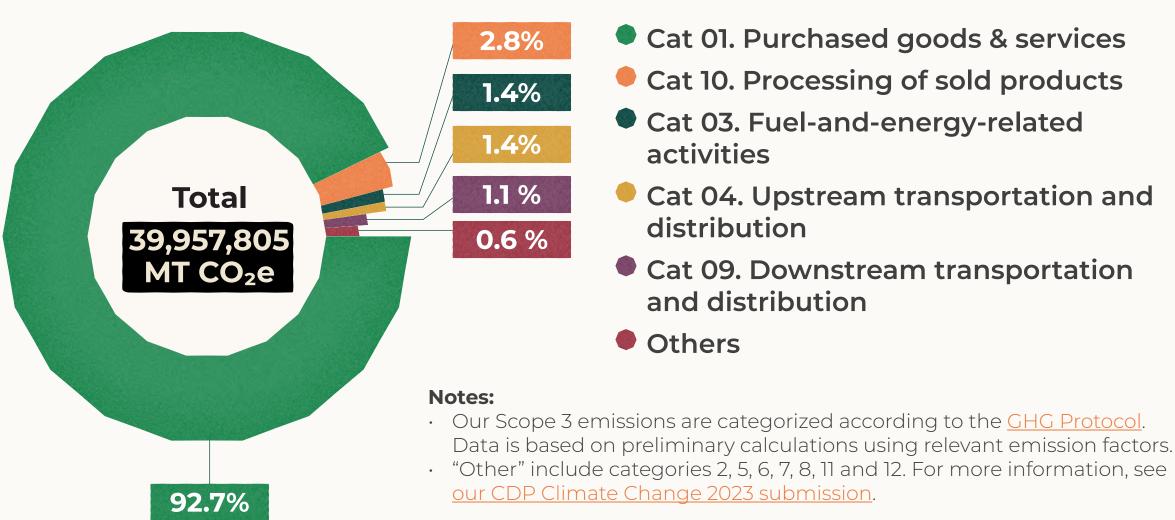
## **\*** Scope 3

Scope 3 emissions represent indirect emissions outside of direct operational control and Musim Mas first embarked on Life Cycle Assessments for our upstream products in 2019. arising from activities within a company's value chain (e.g., emissions from suppliers), and This initiative was initially driven by the new LCA requirements of Indonesia's Ministry make up the bulk of a company's emissions across many industries. of Environment and Forestry's PROPER (Public Disclosure Program for Environmental Compliance), aimed at improving environmental performance among companies. Of our total Group Scope 3 emissions, 92.7% came from purchased goods and services

(predominantly crude palm oil – CPO, palm kernel – PK or crude palm kernel oil – CPKO). All other categories of Scope 3 emissions make up less than 8%.

As global efforts towards decarbonization gained momentum, there was a growing demand from customers for LCAs and Product Carbon Footprint (PCF) evaluations to better understand and mitigate indirect (Scope 3) emissions within their supply chains.<sup>19</sup> Musim Mas recognizes that while we have limited influence over the management of Recognizing our role in supporting these needs, Musim Mas engaged a registered Scope 3 emissions, it is important to understand and account for them so that we can independent LCA consultant in 2022 to conduct LCAs adhering to the ISO 14040:2006 engage with supply chain partners to implement effective reduction strategies crucial for and ISO 14044:2006 international frameworks for selected downstream products. This driving sector-wide change. comprehensive assessment covered the entire production system, from the cultivation of raw materials—specifically FFB at the plantation—to the final product (cradle-to-gate).

#### Scope 3 GHG Emissions by Category 2023 (% of Total)



<sup>19</sup> An LCA evaluates various environmental impact categories associated with our upstream products, such as eutrophication, and ozone depletion. It also evaluates the product carbon footprint (PCF), which addresses global warming potential (GWP) or potential environmental impact related to climate change.

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## Life Cycle Assessment (LCA)

The LCA project has allowed us to enhance the existing LCA model we had in place since 2019, by taking the learnings and integrating the updated LCA model with our existing in-house system. The updated LCA model now complements our PCF calculations across our wide range of palm oil derivative products, ensuring we effectively meet the increasing demands of our customers while upholding our sustainability commitments.

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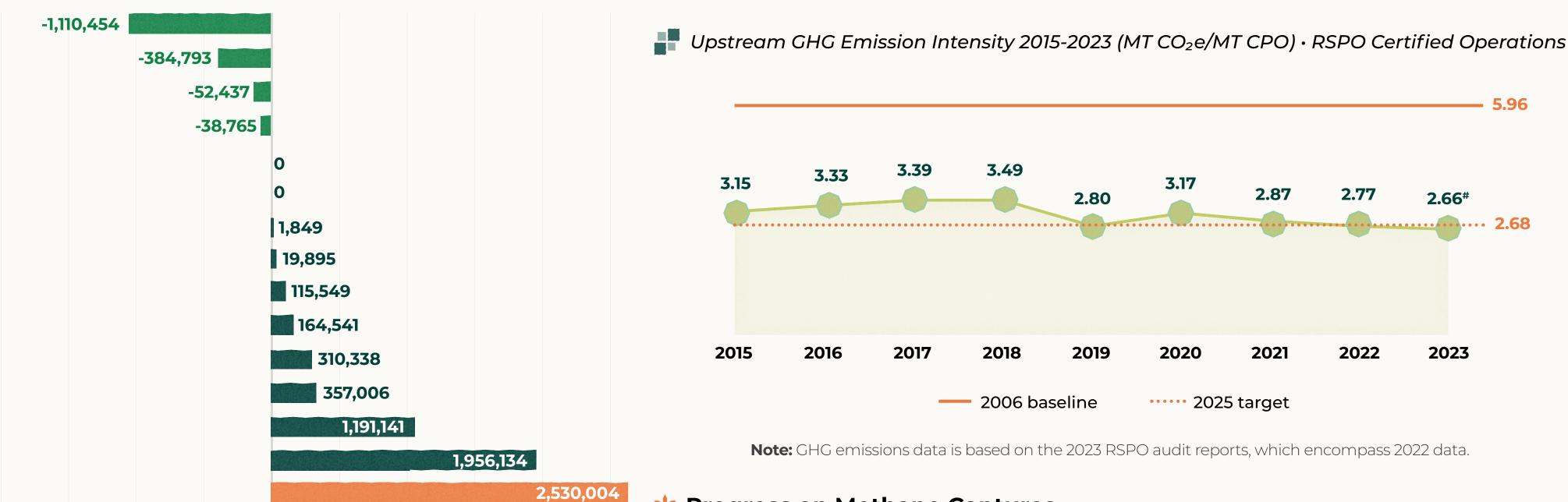
# **Upstream Emissions**

#### **X Net Emissions**

In 2023, we achieved and surpassed our target of reducing upstream GHG emission intensity by 55% against our 2006 baseline two years ahead of schedule, arriving [GRI 305-1, 305-2, 305-4, 13.1.2] at 2.66<sup>#</sup> MT CO<sub>2</sub>e per tonne of CPO produced (MT CO<sub>2</sub>e/MT CPO). In addition to the methane capture facilities installed at 17 of our mills, this accomplishment is attributable In addition to utilizing the GHG Protocol to calculate emissions for our global operations, to increased FFB and CPO production in the previous year. Moving forward, our focus will we use the RSPO PalmGHG v4 calculator to calculate emissions across our RSPO-certified upstream operations. This covers all our 15 RSPO-certified integrated mills, which source be on our Group emissions reduction target. from all Musim Mas plantations.<sup>20</sup>

#### Upstream Emissions Sources and Sinks 2023 (MT CO<sub>2</sub>e) • RSPO Certified Operations

Crop sequestration Sale of palm kernel shell Export of excess electricity to housing & grid Sequestration in conservation area Mill electricity credit Grid electricity utilization Mill fuel comsumption Field fuel consumption POME CO<sub>2</sub> emissions from fertilizer Third-party emissions N<sub>2</sub>O Emissions (Peat & Fertilizer) Land conversion Peat oxidation Net Emissions



Methane capture facilities remain a key approach to reducing our upstream emissions. Our primary emissions are from land-use change combining land conversion and peat oxidation. The total land-use change emissions were 3,147,275 MT CO<sub>2</sub>e in 2023, These facilities prevent the release into the atmosphere of methane biogas generated by the treatment of palm oil mill effluent (POME) and convert it into electricity that powers accounting for 76.5% of our gross upstream emissions using the RSPO PalmGHG v4 calculator. Combined with other emissions sources and offsets, our net emissions our mills, estates, and workers' housing. In 2023, our 17 methane capture facilities resulted in 539,225 MT CO<sub>2</sub>e of avoided emissions. amounted to about 2.5 million MT  $CO_2e$ .

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

<sup>20</sup> Three of our remaining mills are independent mills without plantations.

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#### **\*** GHG Emission Intensity

For more information, see: Setting Science-Based Targets for Emissions Reduction

#### **\*** Progress on Methane Captures



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#### **Energy Management**

[GRI 3-3, 302-1, 302-3, 302-4] [SASB FB-AG-130a.1]

Musim Mas continues to promote the use of renewable energy and improve efficiencies across our upstream operations to minimize our overall energy consumption. More than 95% of our upstream energy is derived from renewable sources, primarily milling process by-products comprising of palm fiber (from empty fruit bunches and fruitlet fibers) and palm kernel shell used as boiler fuel at our mills, as well as methane gas from POME converted into electricity by our methane capture facilities. Biodiesel makes up 4.4% of our total energy consumed, while other nonrenewable sources such as diesel and petrol contribute less than 1%.

We export surplus renewable electricity generated by our methane capture facilities to the national grid, totaling 25.2 million kilowatt hours (kWh) in 2023.

7,670,509 7,300,478 370,031 2021 Total

In 2023, our total upstream energy consumption was more than We have embarked on efforts to adopt solar energy to power 7.3 million GJ, a decrease from 8.1 million GJ in 2022. Despite this, one of our facilities since December 2023. The first stage of the our energy intensity increased to 7.70 GJ per tonne of CPO/PK solar panel installation has been completed, and we hope to complete the second stage by August 2024. We will provide produced, compared to 7.49 GJ per tonne of CPO/PK produced in 2022. This is due to the lower volume of FFB processed by our more information on our downstream energy use and efficiency mills in 2023. initiatives in future reports.

Energy Consumption 2021-2023 (GJ) · Upstream Operations



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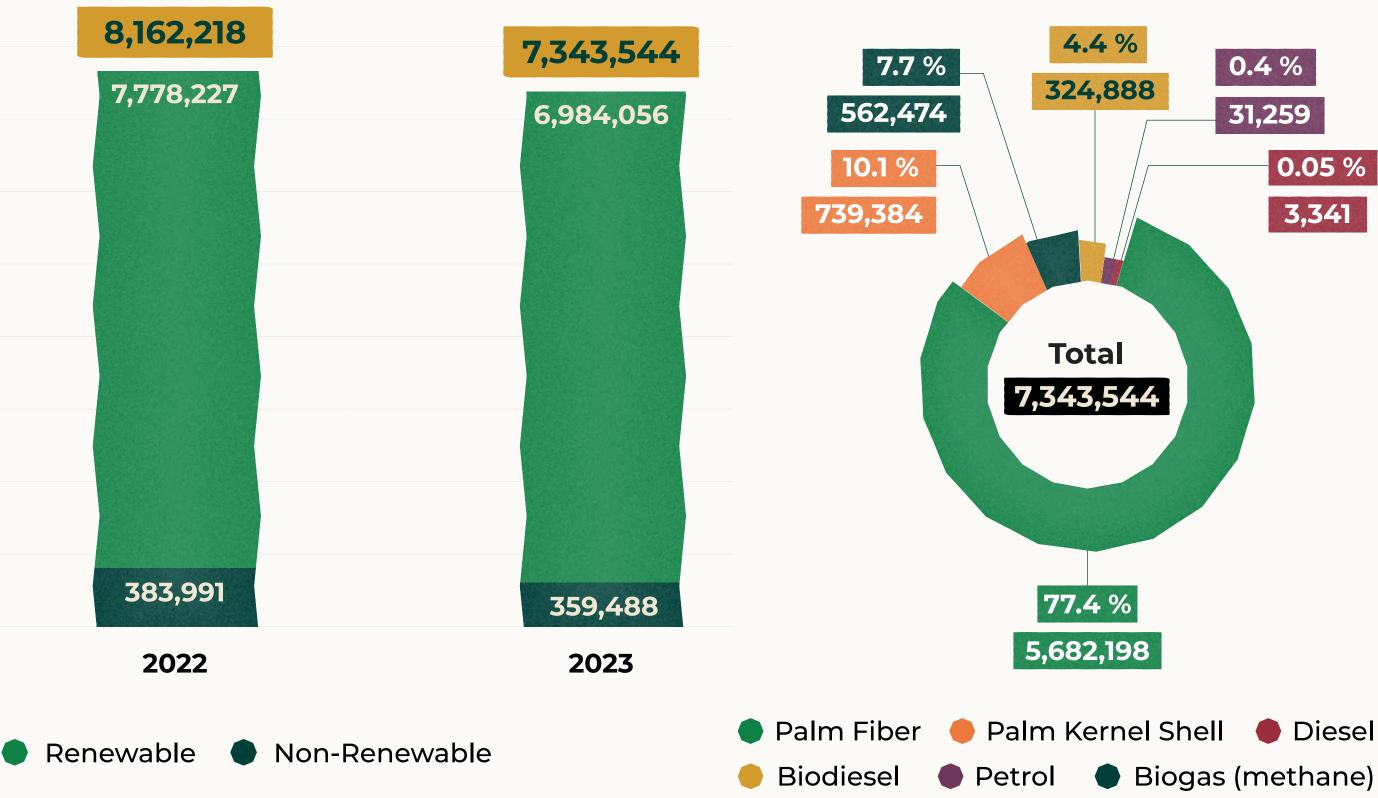


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#### Energy Consumption 2023 (%, GJ) • Upstream Operations





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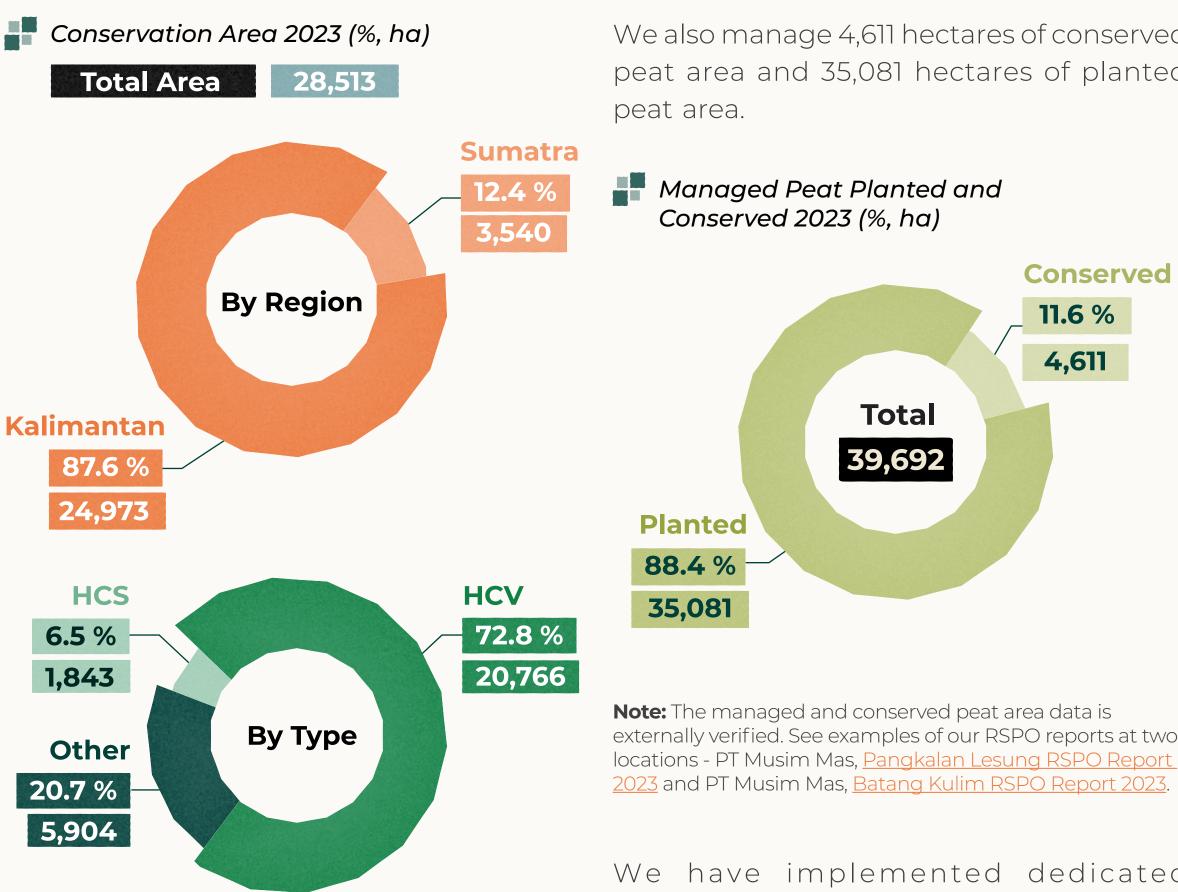
# **Positive Environmental Impacts**

[GRI 3-3, 304-3]

# Conservation and Restoration Conservation Area 2023 (%, ha)

Musim Mas complies with all relevant national and international standards, requirements on new development, and the expansion of plantation areas. We are guided by our <u>NDPE Roadmap</u> and **Biodiversity and Climate Resiliency Action** Plan 2022, and are committed to zero conversion of natural ecosystems within our operations, particularly in areas of high conservation value (HCV), high carbon stock (HCS), and peatland. We have also maintained zero deforestation at our operations per our 31 December 2015 NDPE cut-off date.

As of December 2023, we manage 28,513 hectares of conservation area representing more than 14% of our titled land. Approximately 87.6% of our total conservation area is in Kalimantan, while 12.4% is in Sumatra. As of July 2024, our conservation area has increased to 29,189 hectares following the completion of a new HCV-HCS assessment of our expanded plantation in Kalimantan.



#### **Notes:**

• Overlapping HCV and HCS areas are reflected in HCV figures.

• "Other" includes steep areas, wildlife corridors, and riparian buffer zones not identified by HCV and HCSA assessments.

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We also manage 4,611 hectares of conserved peat area and 35,081 hectares of planted

externally verified. See examples of our RSPO reports at two

We have implemented dedicated strategies to manage, protect, and monitor conservation areas at our plantations and HCV/HCS areas in surrounding landscapes, as appropriate. We operate regular ground controls to discourage hunting and use satellites to monitor encroachment, fires, and land clearing. We are also working to restore natural ecosystems<sup>21</sup> in our management areas affected by fire, deforestation, conversion, and noncompliance, per our NDPE cut-off date.

We continue to optimize our HCV/HCS monitoring methods and employ best practices in line with RSPO and legal requirements in managing peatlands and fragile soils, seeking expert advice when required.

At the end of 2023, Musim Mas officially withdrew our membership from the High Carbon Stock Approach (HCSA). Nevertheless, we continue to uphold its best practices to maintain and conserve HCV and HCS areas following its guidance and lessons learned. This include consulting and engaging with local communities to develop and implement conservation management plans.

See also: Upholding Land and Community Rights

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## **Protecting Biodiversity**

Asia Rainforest Research Partnership (SEARRP)'s independent biodiversity assessment of our operations, Musim Mas shared the findings and insights with the RSPO to help inform industry best practices for biodiversity conservation. Per the commitments in 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 in the broader landscape (See our 2019-2023 Sustainability Performance Data for the list of species identified at our operations that are on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species).

Our activities include restoring and rehabilitating riparian areas along nearby rivers and water bodies and co-managing HCV areas that are beyond our immediate management and control with local rightsowners since 2008. These areas serve as important wildlife corridors that enhance connectivity for biodiversity.

Since the conclusion of the South East Asia Rainforest Research Partnership (SEARRP)'s independent biodiversity assessment of our operations, Musim Mas shared the findings and insights with

In 2023, we embarked on a one-year collaboration with a local university on a project called *Taman Kehati*, focusing on research for the development of a biodiversity park and wildlife conservation efforts within our estate's conservation area. The project aims to strengthen our efforts in education, research, and community service. We will share more information and developments in future reports.

<u>12 Years of Biodiversity Data In Musim Mas' Plantations:</u> <u>An Analysis By SEARRP</u> 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

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# Reducing Human-Elephant Conflicts in 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* (BKSDA)], and local communities to address human-elephant conflicts and support elephant conservation efforts in the Tesso Nilo landscape.

We sponsor and support a patrol program covering a vast 150,000-hectare area within the national park, which includes a 'Flying Squad' consisting of seven local people or mahouts and three trained elephants dedicated to mitigating conflicts with wild elephants that encroach onto community agricultural areas. The work also includes engaging and educating communities on elephant behavior and effective conflict mitigation strategies. Our squad is supported by ongoing training provided by the BKSDA, enhancing the team's expertise in elephant management and response.

The BKSDA operates a call center serving as an early warning system for elephanthuman conflicts. Complaints from the community regarding such conflicts are swiftly processed, analyzed, and addressed in collaboration with the Flying Squad to prevent escalation. Local-level mitigation teams have also been established in four villages, empowering communities to take part and implement proactive measures like setting up blockades and guiding elephants to neutral zones.

Musim Mas also supports wildlife monitoring efforts using advanced technologies such as drones, GPS collars, and camera traps to track elephant movement and behaviors, including around community plantations. For instance, our trials showed that orange plants are effective elephant deterrents and helpful in reducing human-elephant conflicts while providing a source of income for the local community. Other activities, such as planting food for elephants and producing compost from elephant waste also provided sources of income.

We have renewed our contract with YTNTN for an additional three years, covering the period from 2024 to 2026. As part of this renewal, we are introducing a new program in collaboration with women in the local community to plant crops that either attract or deter elephants. This is to manage their movement better and guide them effectively back to their natural habitat.



Mitigating Human-Wildlife Conflict with Tesso Nilo National Park Foundation

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## **Deforestation-Free Operations**

There has been no deforestation on land managed by Musim Mas since the RSPO cut-off date of 31 December 2015. All forest areas are protected through ongoing monitoring efforts. We conduct patrols and use satellite data to detect any encroachment on conservation areas and facilitate prompt interventions.

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

We have also committed to sourcing coconut from deforestation-free areas in line with our Sustainable Coconut Sourcing Strategy.

See: The Musim Mas Supply Chain



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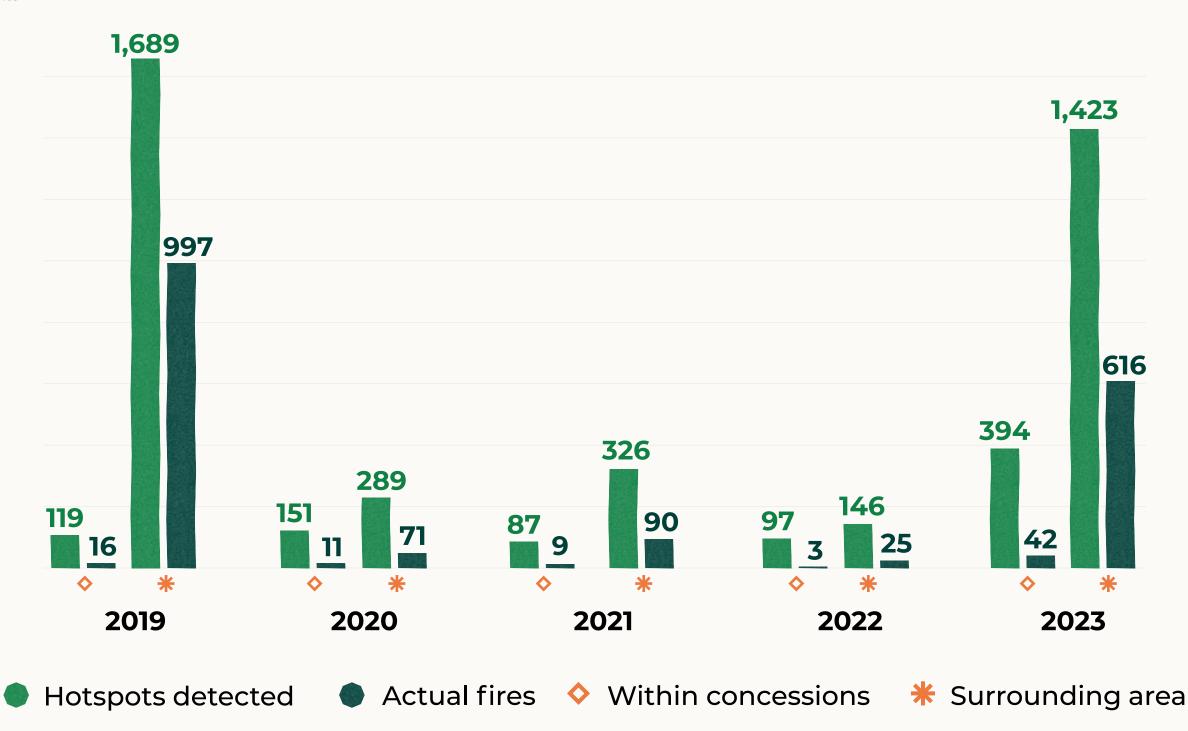
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## Monitoring and Managing Fires

#### [GRI 3-3]

and prohibits the use of fire within both our operations and those of our suppliers. We employ fire-monitoring towers and satellite surveillance to regularly monitor forests for potential fires and hotspots in our concessions and surrounding areas, and adopt precautionary measures in response to weather forecasts. Our efforts include raising awareness among employees, workers, and community members; building water ponds and fire breaks at strategic locations to serve as barriers that contain fires; and assigning dedicated teams at regional head offices to monitor satellite data and promptly respond to detected hotspots in and around our operations. We extend aid beyond our concessions to support broader community efforts in fire prevention and control.

Musim Mas upholds a zero-burning policy and prohibits the use of fire within both our operations and those of our suppliers. We employ fire-monitoring towers and satellite surveillance to regularly monitor forests for potential fires and hotspots in our concessions and surrounding areas, and adopt precautionary measures



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#### Hotspots vs. Fires Within Concessions and Surrounding Areas 2019-2023 (no.)



We actively encourage the involvement of communities through our Fire Free Village Program (FFVP) (Masyarakat Bebas Api – MBA), raising awareness about fire risks and encouraging the adoption of alternative, fire-free land-clearing techniques. Through the FFVP, we provide educational resources, agricultural equipment, and incentives to communities that abstain from using fire, including enhancements to infrastructure and services. Since its inception, we have launched the program in 75 villages, spanning over 457,000 hectares of land. In 2023, we conducted 150 training sessions and rewarded 35 villages for remaining fire-free. Given the effects of a strong El Niño, fewer villages were able to maintain a fire-free status, compared to 46 in 2022.

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**

[GRI 3-3, 13.5.1, 13.6.1, 13.6.2]

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

We track and monitor the toxicity levels of herbicides at our estates in line with palm At our plantations, we implement Integrated Pest Management (IPM) best practices oil industry best practices. Over the past five years, we have maintained an average supported by our extensive long-term research and development (R&D) efforts to herbicide toxicity rate of ~474 units/ha, and strive to reduce our reliance by optimizing manage pest populations. IPM involves a combination of cultural, physical, mechanical, their use. We do not use herbicides classified as highly hazardous or extremely hazardous biological, and chemical methods. Our IPM practices include: at our operations.<sup>24</sup>

#### **Cultivating Beneficial Plants to Combat Leaf-Eating Caterpillars**

Leaf-eating caterpillars (LEC) like nettle caterpillars and bagworms can severely damage oil palm fronds, leading to reduced yields if not properly controlled. To manage these pests, we plant and maintain beneficial plants-Cassia cobanensis, Antigonon leptopus, Turnera subulata, and Euphorbia heterophylla. These plants attract natural enemies of LECs like Cantheconidae furcellata and Spinaria spinator which help keep LEC populations in check.

See Flower Power: Using Beneficial Plants to Combat Pests

#### **Supporting Barn Owl Populations for Effective Rat Control in Plantations**

Rats pose a threat to oil palm yields by consuming both ripe and unripe fruits. To combat this, we utilize barn owls as a natural method of pest control, reducing the reliance on rodenticides. To support barn owl populations, we have installed at least 1,300 nest boxes throughout our plantations. These barn owls serve as natural predators, effectively managing rat populations.

See Barn Owls Pest Control: Combat Rats in Plantation

In 2023, we used 1.42 and 2.42 tonnes of fertilizer per mature hectare (MT/ha) in Sumatra and Kalimantan, respectively.<sup>25</sup> We follow agronomic recommendations for fertilizer We only use highly hazardous or extremely hazardous pesticides in emergencies and application, including conducting soil and leaf analyses, to maximize utility and minimize under exceptional circumstances when other methods are not viable.<sup>23</sup> As the Palm leaching or loss. We use dried decanter solids instead of potassium on sandy soil Oil Innovation Group (POIG) Charter and its initiatives have concluded, we no longer whenever possible to increase moisture retention and enhance its physical and chemical report on our progress in phasing out pesticides. Nevertheless, we remain committed to properties. We also apply operational waste, including boiler ash from our mills, as implementing IPM best practices in our upstream operations, using pesticides judiciously fertilizer in selected areas to maintain pH levels. and not indiscriminately.

See: Integrated Pest Management (IPM) for Sustainable Palm Oil Production

<sup>23/24</sup> Pesticides are classified according to the WHO Recommended Classification of Pesticides by Hazard and Guidelines to Classification. <sup>25</sup> Fertilizer data includes organic and inorganic fertilizers.

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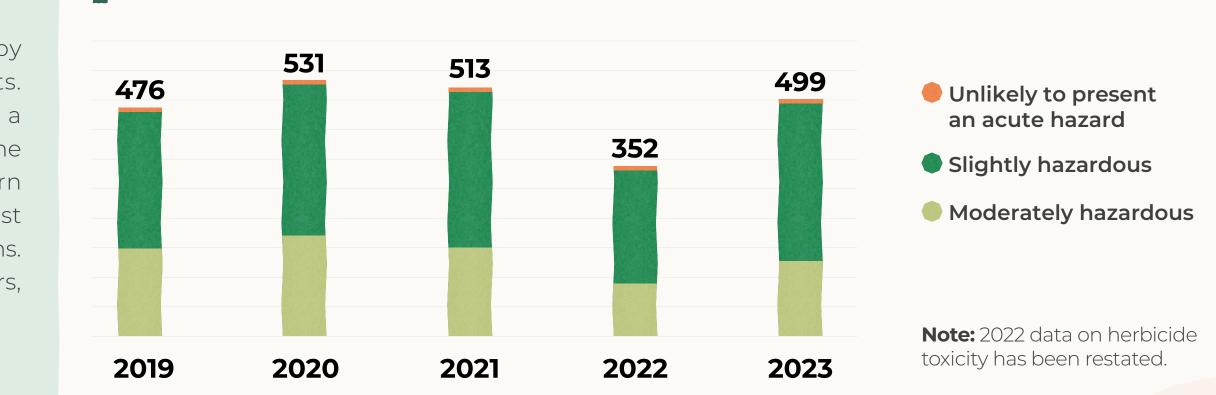
Toxicity Rate of Herbicides 2019-2023 (Toxicity Units/ha)

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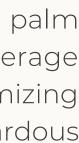
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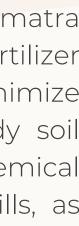
#### Herbicides



#### **\*** Fertilizers

Waste Management





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## Water Management

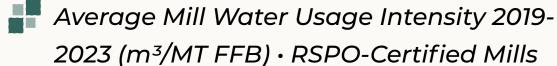


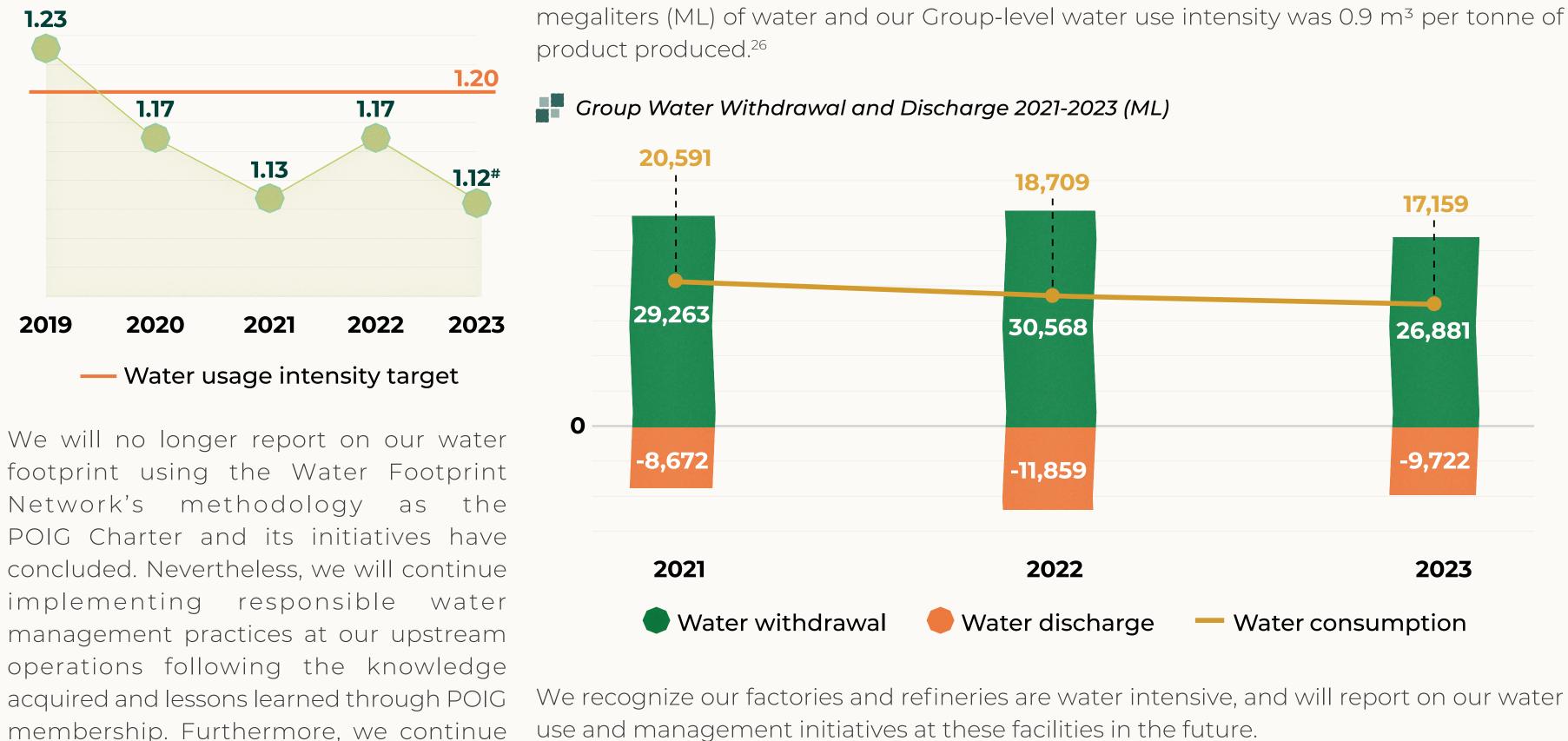
[GRI 3-3, 303-1, 303-2, 303-3, 303-4, 303-5] [SASB FB-AG-140a.1, FB-AG-140a.2, FB-AG-140a.3]

Musim Mas recognizes that water is a finite resource and has adopted comprehensive measures to preserve the quality and availability of surface water and groundwater for our business and surrounding communities.

We draw surface water and groundwater for upstream operational processes, including steam generation, pesticide mixing, seedling irrigation, and domestic purposes, such as cleaning and cooking. We ensure that our upstream operations are not located in water-stressed areas, assessing water-related risks using the World Resources Institute's <u>Aqueduct</u> tool.

In 2023, water usage intensity at our RSPO-certified mills was 1.12<sup>#</sup> cubic meters per tonne of FFB processed (m<sup>3</sup>/ MT FFB), matching 2021 levels and meeting our annual target of keeping water usage implementing responsible water intensity at or below 1.20 m<sup>3</sup>/MT FFB.





membership. Furthermore, we continue to disclose our water-related sustainability practice through the CDP Water Security assessment.

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

In addition to our upstream operations, we also monitor water consumption at our midstream and downstream operations Group-wide and report on our management approaches to CDP's Water Security assessment. In 2023, the Group consumed 17,159 megaliters (ML) of water and our Group-level water use intensity was 0.9 m<sup>3</sup> per tonne of

*Evaluation For more information, see our 2023 CDP Water Security Assessment* 

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

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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 discharging it. 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 are below national regulatory thresholds.<sup>27</sup>

See: SR2023 Sustainability Performance Data for BOD and COD levels

Zero-Waste Mills at Musim Mas

In 2023, we externally verified the COD levels of treated PORE discharged to sea by our refinery, PT Musim Mas Belawan. The average COD levels were 104.18<sup>#</sup> milligrams per liter (mg/L) and  $84.77^{\#}$  mg/L at two discharge points respectively, below the regulatory threshold of 145 mg/L. There were no instances of non-compliance in 2023.

Treatment of PORE



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

<sup>27</sup> The regulatory thresholds are 5,000 parts per million (ppm) for BOD in land applications, 100 ppm for BOD in waterways, and 350 ppm for COD in waterways.

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### Waste Management

#### [GRI 3-3, 306-1, 306-2, 306-3, 306-4, 306-5]

We recycle and reuse all non-hazardous waste produced by our upstream processes. We identify all waste produced at our operations as liquid, solid, or gas, and manage it according to our standard operating procedures (SOPs). 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 reuse waste from our mills, including palm kernel shells (PKS), palm fiber, and empty fruit bunches (EFB), to fuel our boilers. We recycle decanter solids and boiler ash as organic fertilizer at our plantations. Finally, we direct liquid waste – POME from our mills, to our methane capture facilities to generate electricity (see <u>Energy Management</u>) before it is channeled to our treatment ponds and processed into treated wastewater for irrigation.

In 2023, we reused 87,924 tonnes of organic

waste, including EFB, decanter solids, boiler ash, and more than 2.2 million  $m^3$  of POME. To minimize the pollution risks associated with hazardous waste at our upstream operations, such as used lubricants, batteries, containers, and drums, we have established waste management protocols for their proper handling and disposal. All hazardous waste is disposed of by government-licensed vendors. We also provide regular education and training to our workers to ensure proper waste handling and segregation.

We will provide information on our waste management initiatives at our midstream and downstream operations in future reports.

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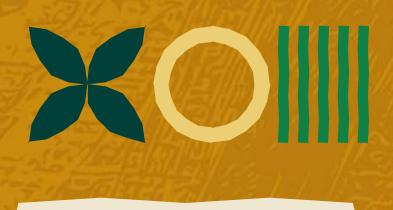
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As the industry faces increasingly stringent regulations, Musim Mas remains committed to sector-wide collaboration to effect meaningful change and tackle common challenges, including deforestation and labour abuses. Our policies and commitments extend to our third-party suppliers across all our operations, and we continue to assess and monitor our operations and supply chain for No Deforestation and No Peat (NDP) risks per our <u>NDP Risk Management Framework</u>.

We collaborated with other palm oil supply chain actors to set sector-wide targets in the Agriculture Sector Roadmap to 1.5°C and are committed to this initiative that minimizes the industry's carbon footprint and drives sectoral transformation. We have made significant progress on coconut traceability since launching our Sustainable Coconut Sourcing Strategy. 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





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[GRI 2-6, 3-3, 204-1, 13.4.1]

#### **Overview**

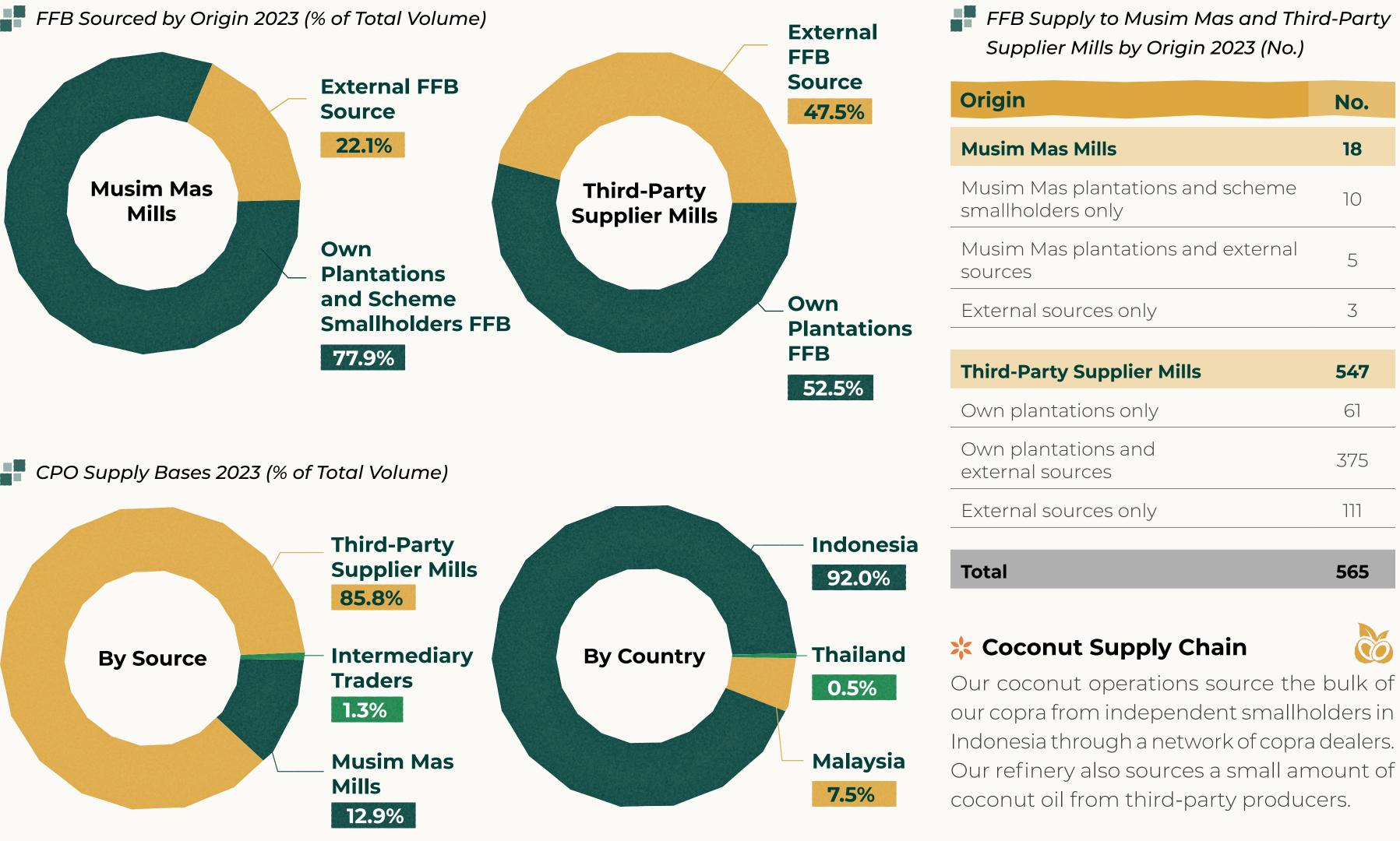
#### 🔆 Palm Oil Supply Chain

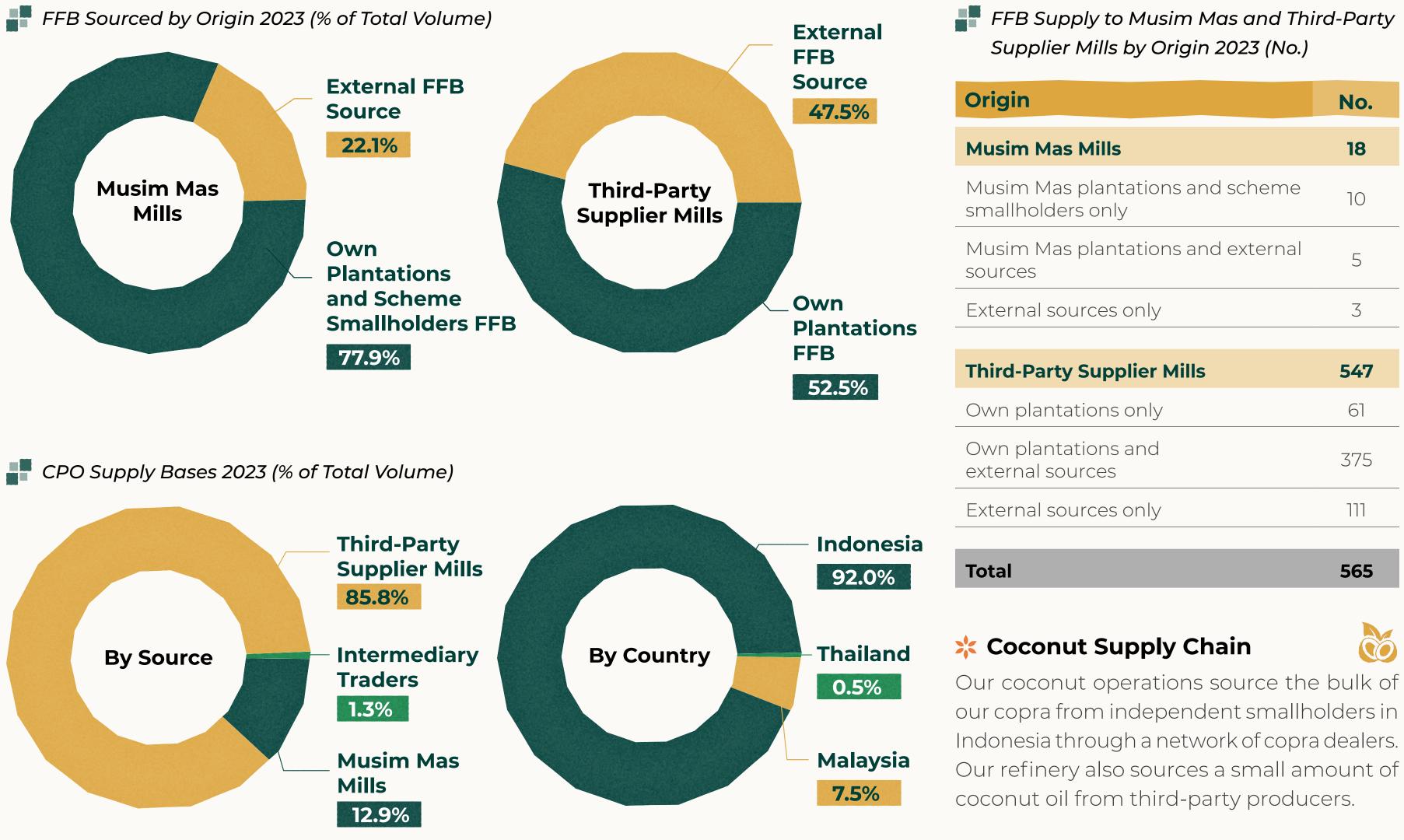
Our palm oil operations comprise a complex supply chain with multiple players contributing large- and small-scale volumes.

We exclusively source fresh fruit bunches (FFB) locally in Indonesia: 77.9% from our plantations and scheme smallholders, and 22.1% from FFB dealers and smallholders.

We source 85.8% of our crude palm oil (CPO) from third-party supplier mills, where we actively engage suppliers and have established landscape initiatives. Our mills supply 12.9% of our CPO, while the remainder (1.3%) is sourced from third-party intermediary traders.

Our CPO primarily originates from Indonesia (92.0%), with a small proportion from Malaysia (7.5%) and Thailand (0.5%).





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# Traceability

[GRI 13.23.1, 13.23.2]

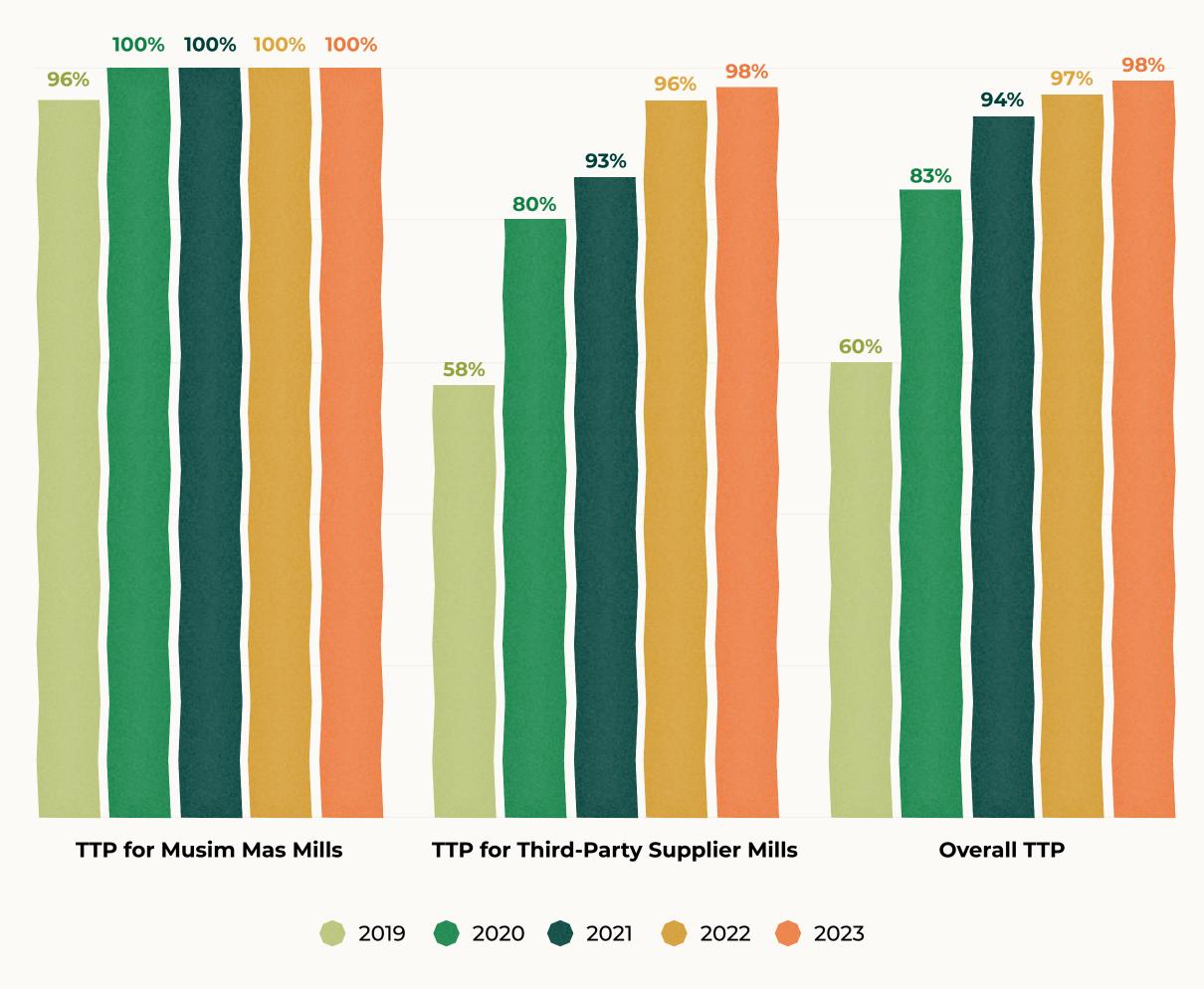
#### **\*** Palm Oil Traceability

Managing and addressing potential deforestation and peat development risks requires detailed knowledge of the supply sheds of the mills we source from. Since 2015, we have achieved 100%\* overall traceability to mill (TTM). We also achieved 100% traceability to plantation (TTP)<sup>28</sup> for Musim Mas-owned mills' FFB supply base since 2020.

We are pursuing our goal of 100% TTP across our entire supply chain, including third-party CPO and palm kernel (PK) supplying mills. Although CPO and PK sources from Roundtable on Sustainable Palm Oil (RSPO)-certfied supply chains are traceable, collecting and validating traceability data from non-certified suppliers remains challenging due to changing market factors and the dynamic nature of FFB supplied by dealers and independent smallholders. Despite these challenges, Musim Mas continues to make progress. We achieved 98%\* TTP for thirdparty supplier mills and our overall TTP in 2023, and are on track to reach 100% TTP by 2025.

For an overview of our traceability approaches, see our <u>website</u>





Note: Our 2019 and 2020 traceability data covered our Indonesian and Malaysian supply bases. Since 2021, it has included our Thailand supply base after we began sourcing from the region.

<sup>28</sup> Traceability to plantation (TTP) refers to traceability to place of production, i.e., a company's concession, a farm, or a village for certain FFB dealers and/or smallholders. <sup>29</sup> We have adopted the same TTP methodology for palm oil and coconut oil.

source from the 14 verified refineries are also excluded from verification to avoid repetition. See the verification statements for TTM and TTP.

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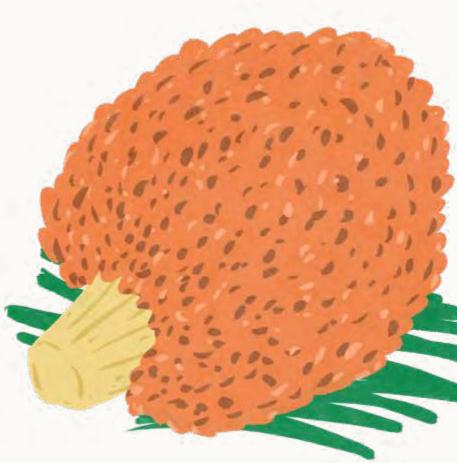
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Coconut Traceability In 2022, Musim Mas began mapping the supply base of our coconut operations. We are proud to announce we achieved 99% TTP for the coconut oil we sourced in 2023 by applying our experience and expertise in palm oil traceability.<sup>29</sup> This accomplishment is also a testament to our robust supplier and smallholder engagement initiatives.

Although we apply the same rigorous standards to sourcing coconut as we do to palmoil, coconut traceability is a relatively new endeavor with its unique set of challenges. We continue to fine-tune our traceability programs and are currently focused on engaging more stakeholders, including governments and industry peers as we strive to achieve 100% coconut TTP by 2025.



\* These figures, independently verified by Control Union (Malaysia) Sdn. Bhd., cover 14 refineries as well as nine kernel crushing plants. Three refineries not processing palm-based products are excluded. Additionally, six other refineries that only

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# Assessing, Managing and Monitoring NDP Risks

[GRI 308-1, 308-2, 414-1, 414-2, 13.23.4]

[SASB FB-AG-430a.1, FB-AG-430a.3]

We use a combination of approaches to manage NDP risks in applying our No Deforestation, No Peat, and No Exploitation (NDPE) commitments, as outlined in our 2021 <u>NDP Risk Management Framework</u> (<u>RMF</u>). Our NDP Risk Management Framework informs but does not replace independent assessments of NDPE compliance. Our annual assessments categorize new and existing suppliers as low-, medium-, or high-risk by overlaying TTP data on supply shed maps that include conservation and peat areas.

In 2023, as per our RMF methodology, we incorporated updated maps and information on palm planted areas to ensure that our assessment remains stringent and is based on the latest available data. As a result, we identified one supplier mill as high-risk and 36 mills as medium-risk. Nevertheless, 93.8%<sup>#</sup> of the total 601 CPO and PK suppliers assessed were identified as low-risk. We are developing plans to engage the high-risk mill in 2024.<sup>#</sup> Risk<br/>LevelCriteriaII<br/>HighOverlaps with >10% of<br/>risk indicatorsII<br/>MediumOverlaps with 2-10% of<br/>risk indicatorsI<br/>LowOverlaps with 2-10% of risk indicators

Supplier Risk Levels 2021–2023 (No., %)



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| 2021 |       | 20  | 22    | 2023 |        |  |
|------|-------|-----|-------|------|--------|--|
| No.  | %     | No. | %     | No.  | %      |  |
| 1    | 0.2%  | 0   | 0%    | 1    | 0.2%#  |  |
| 15   | 2.6%  | 16  | 2.7%  | 36   | 6.0%#  |  |
| 560  | 97.2% | 586 | 97.3% | 564  | 93.8%# |  |

In 2022, we established that our copra and coconut sourcing area has a low deforestation risk. We continue to assess risks via the NDP RMF.



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## **\*** Monitoring for Deforestation

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 2023, more than 10.36<sup>#</sup> million hectares of our suppliers' concessions in Indonesia, Malaysia, and Thailand were also remotely monitored for deforestation by Earthqualizer.<sup>30</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). We augment these tools with our outreach programs and landscape initiatives, which supply landscape-level spatial development data to guide future expansion and development in line with regulations.

Musim Mas Deforestation Monitoring System

#### **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

# **Internal Monitoring**

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

## **GFW Integrated Deforestation Alerts**

An innovative platform by the Global Forest Watch (GFW) and supporting agencies/universities that provides deforestation alerts through multiple analytical systems, namely GLAD, GLAD-S2 and RADD. Combined, these can detect change in primary forests as well as plantations and younger forests

- <sup>#</sup> EY has performed limited assurance procedures on these figures/information.
- <sup>30</sup> This area covers suppliers' group-level concessions in Indonesia, Malaysia, and Thailand.

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

We use a systematic, volume-based approach, leveraging our NDP RMF and TTP data to calculate the deforestation-free volume of our supply chain. First, we compute the TTP percentages for internally- and externally-sourced FFB.

Next, we use our NDP RMF methodology to calculate the percentage of risk by assessing the overlap between FFB supply sheds, as well as conservation and peat areas. The percentage of deforestation-free claim for

each mill will be derived from the identified risk percentage. This results in a deforestationfree percentage for each mill and its supply base.

Finally, we calculate a weighted percentage of deforestation-free volume based on the contribution of each individual mill to our total supply.

This report marks the first time we are reporting on supplier verified deforestationfree volumes. Our deforestation-free score in 2023 was 99.41%.\*







<sup>\*</sup> This figure has been independently verified by Control Union (Malaysia) Sdn. Bhd. See the verification statement <u>here</u>.

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#### **\*** Supplier Progress on **NDP Commitments**

[GRI 13.4.3] [SASB FB-AG-430a.1, FB-AG-430a.2]

As a signatory to the Agriculture Sector <u>Roadmap to 1.5°C</u>, Musim Mas is committed to having 100% of our palm oil volumes in the "Delivering" category for No Deforestation and No Peat according to the NDPE Implementation Reporting Framework (IRF) by 2025.<sup>31</sup>

In 2023, 95.00%\* of our supplier volumes were in the "Delivering" category for their No Deforestation commitments, and 95.69%\* were in the "Delivering" category for their No Peat commitments. Our suppliers' progress has improved over the years, and we continue to collaborate closely with them to reach the 100% target.

#### Supplier Progress According to NDPE IRF Categories (% Volumes)

#### No Deforestation Progress 2021-2023 (%)

#### Delivering

|                        |                | 95.0   |
|------------------------|----------------|--------|
|                        | and the second | 89.05  |
|                        |                | 85.59% |
| Progressing            |                |        |
| 0.20%                  |                |        |
| 0.73%                  |                |        |
| 0.47%                  |                |        |
| Commitments and Starti | ng Acti        | ons    |
| 4.80%                  |                |        |
| 10.23%                 |                |        |
| 13.93%                 |                |        |
| Awareness              |                |        |
| 0%                     |                |        |
| 0%                     |                |        |
| 0.02%                  |                |        |
| Known                  |                |        |
| 0%                     |                |        |
| 0%                     |                |        |
| 0%                     |                |        |
| Unknown                |                |        |
| 0%                     |                |        |
| 0%                     |                |        |
| 0%                     |                |        |

#### Notes:

1. All suppliers are classified into one of six categories based on the NDPE IRF.

2. The charts above present the aggregated data for all our plants which source CPO, PK and its derivatives, as well as all supplying mills in our supply chain for the January-December 2023 reporting period\*.

<sup>31</sup> See the Tropical Forest Alliance and Proforest's report on Progress on No Deforestation & No Peat Commitments in the Palm Oil Sector: Reporting Using the NDPE- Implementation Reporting Framework. \* The individual data has been independently verified by Control Union (Malaysia) Sdn. Bhd. See the verification statement here.

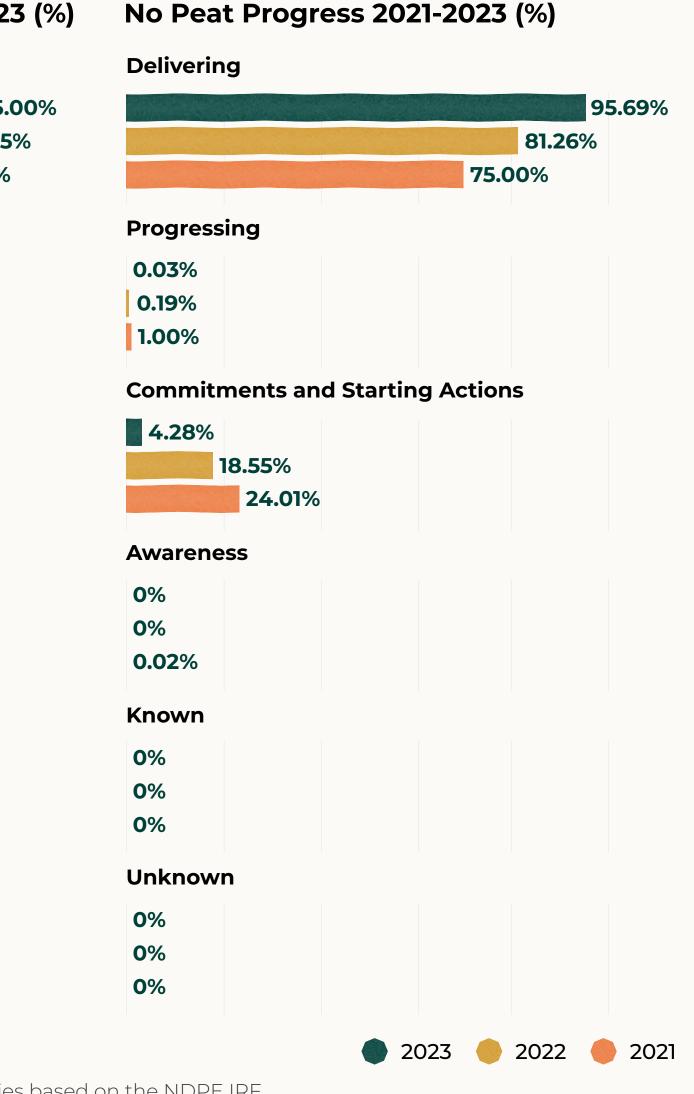
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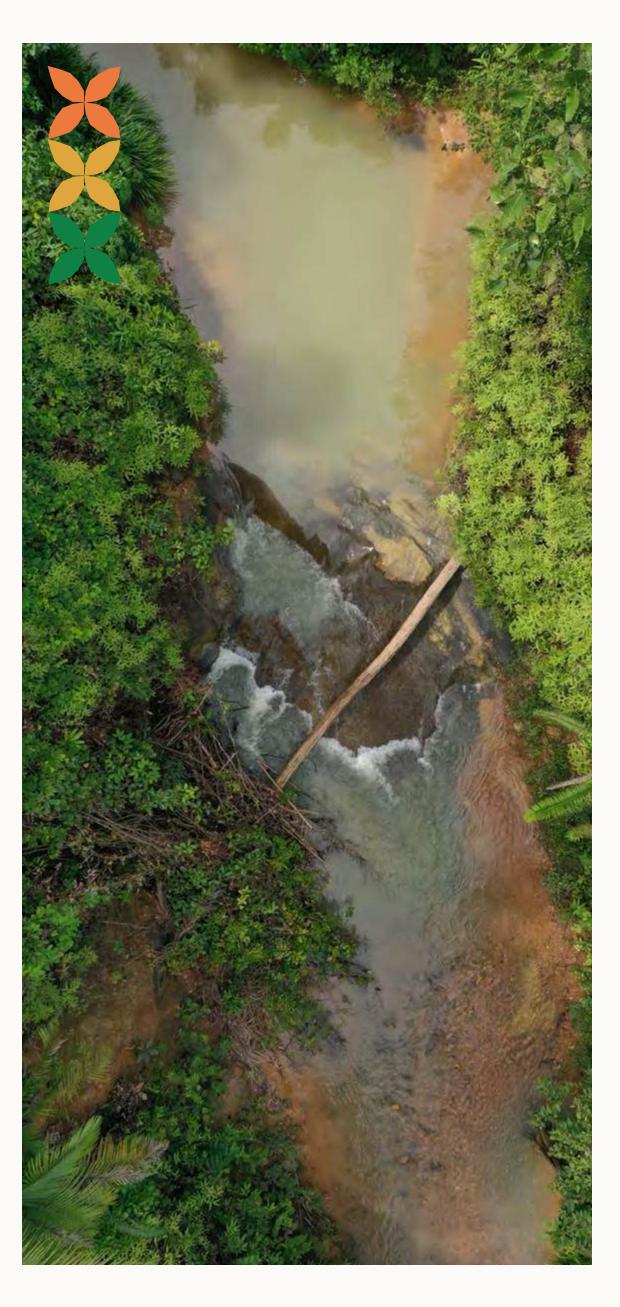
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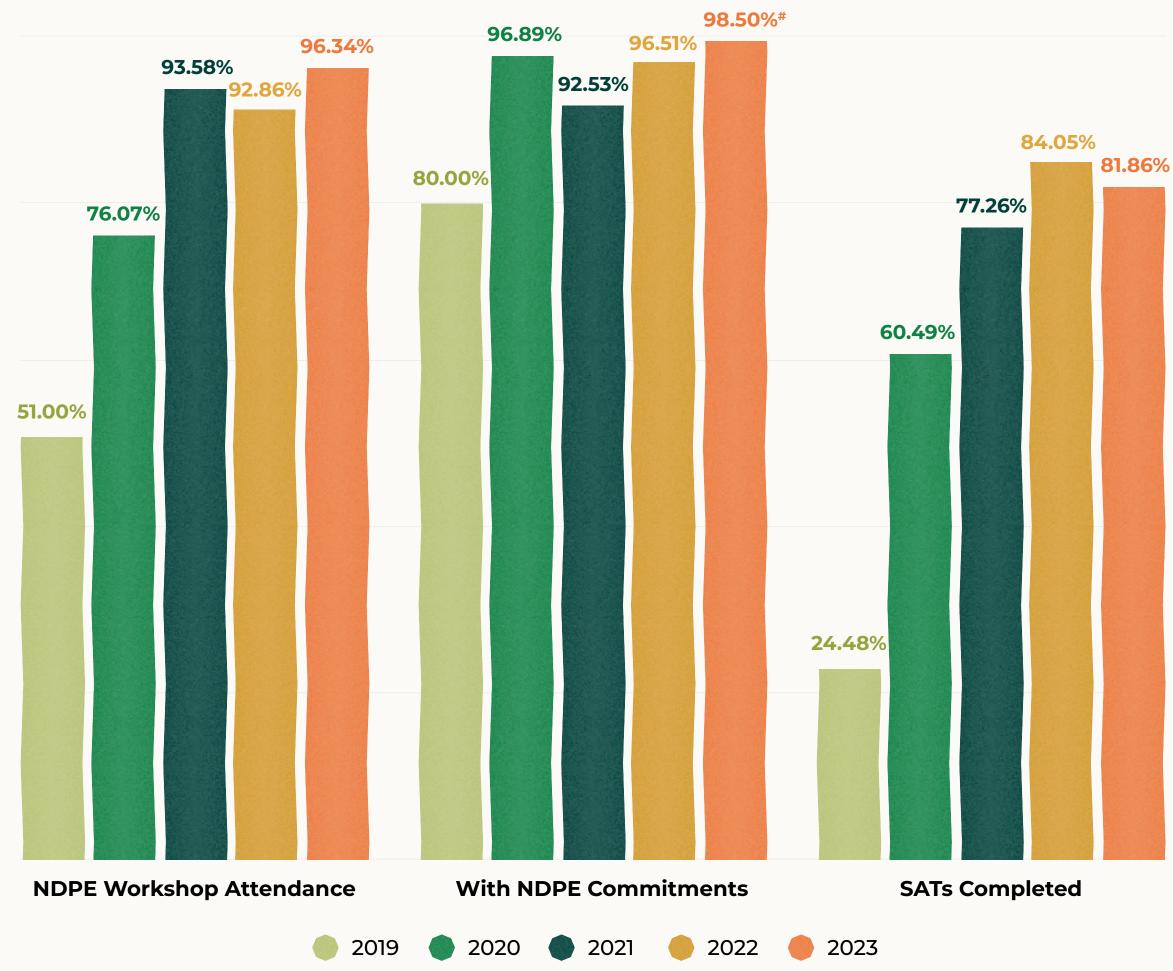
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# Supplier NDPE Engagement

Our suppliers' progress determines the success of our entire supply chain. We engage with suppliers over the phone, online, and through in-person meetings. We require them to attend workshops and submit their NDPE commitments in line with our policy obligations. In 2023, we conducted six in-person and online workshops. In addition to NDPE topics, we also introduced our new digital traceability system to our suppliers.

We also require suppliers to complete the Musim Mas Self-Assessment Tool (SAT) to disclose their NDPE commitments and implementations. This tool allows us to identify potential improvement areas and develop tailored roadmaps and time-bound action plans to monitor their progress towards compliance while supporting them in meeting our requirements.

As of December 2023, 96.34% of our suppliers have attended an NDPE workshop, 98.50%<sup>#</sup> have submitted their NDPE commitments, and 81.86% have completed SATs.



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# Supplier Engagement on NDPE Commitments 2019-2023 (%)





Musim Mas continues to engage with and train our copra and coconut oil suppliers, conducting one NDPE workshop in 2023.

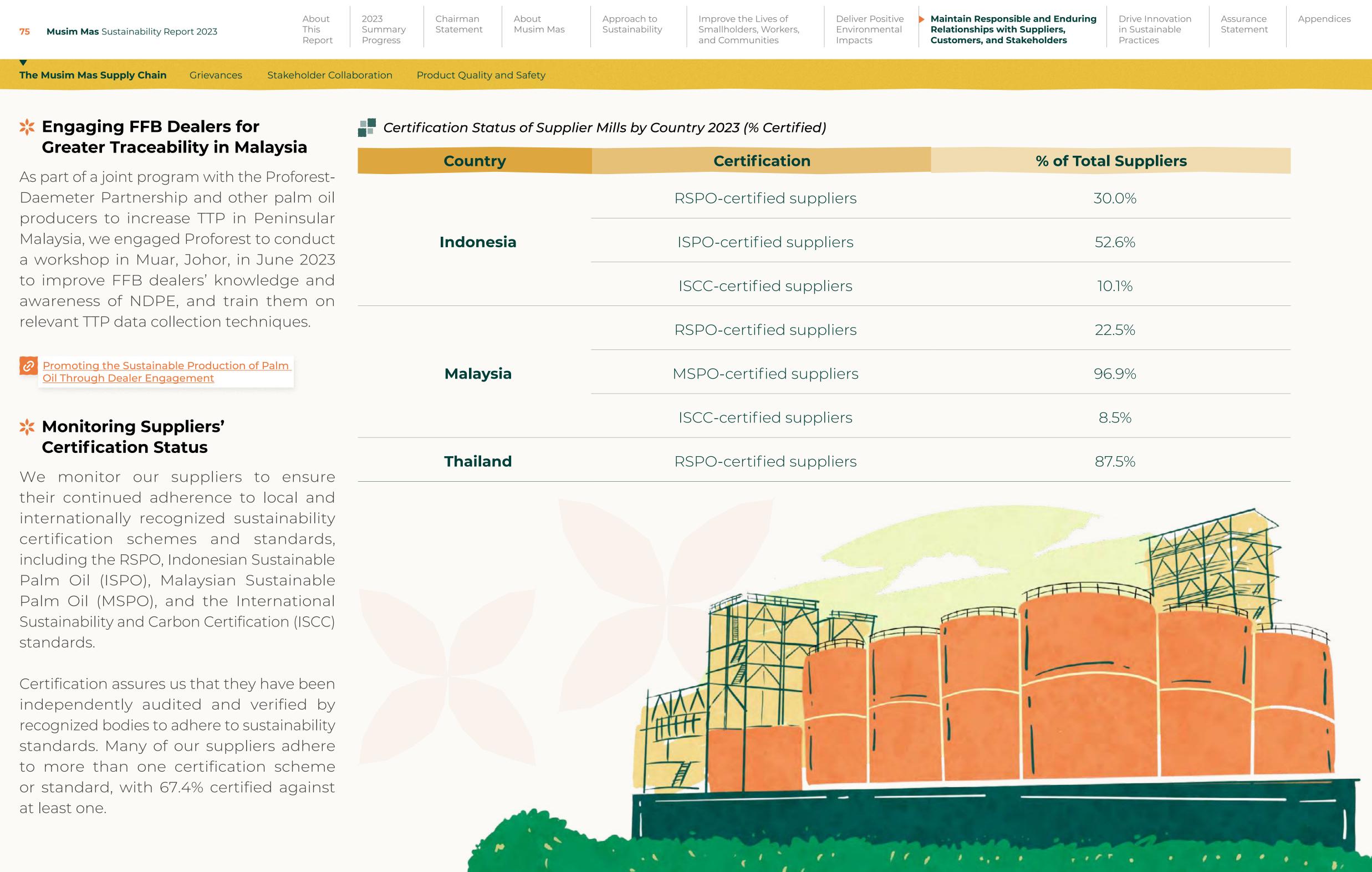
#### **\*** Training Independent **Smallholders in Our Supply Base**

We continue to train independent smallholders inside and outside our supply base to improve their understanding of NDPE principles and support their certification efforts. In 2023, 16,269# independent smallholders were part of the Musim Mas supply base, 3,496<sup>#</sup> (21%) of which were part of our training programs.

**For more information of our training programs**, <u>ee: Independent Smallholders</u>







| Certification            | % of Total Suppliers |
|--------------------------|----------------------|
| RSPO-certified suppliers | 30.0%                |
| ISPO-certified suppliers | 52.6%                |
| ISCC-certified suppliers | 10.1%                |
| RSPO-certified suppliers | 22.5%                |
| MSPO-certified suppliers | 96.9%                |
| ISCC-certified suppliers | 8.5%                 |
| RSPO-certified suppliers | 87.5%                |

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# Addressing No Exploitation in Supply Chains

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

Musim Mas is a member of the United Nations Global Compact (UNGC), upholding its principles on human rights and social responsibility. We are developing a strategy to engage suppliers further and ensure their alignment particularly with the No Exploitation component of our NDPE commitments.

In 2023, following our labour and human rights assessment with Dignity in Work for All (DIWA, formerly Verité Southeast Asia), we integrated its findings into our developing Human Rights Due Diligence (HRDD) strategy. We will build our strategy taking into account the latest industrydriven standards and regulations, including the draft NDPE IRF provisions on land and labour rights.

In order to identify, prevent, mitigate, and account for human rights risks, the strategy will detail our approach to risk management. This includes how we build capacity among suppliers through our supplier workshops. The strategy also outlines our risk assessment process, from data collection via our SAT to categorizing our suppliers according to their risk level.

Additionally, we will take into consideration public information on land conflicts and other No Exploitation-related complaints submitted through our internal and the RSPO grievance platforms.

 $\gg$ For more information, see: Improving Our Labour and Human Rights Practices

As an active member of the NDPE IRF Working Group, Musim Mas volunteered to pilot the draft NDPE IRF for land and labour rights, and integrated key criteria to our Musim Mas SAT during the testing phase. Key learnings from the pilot include the need for companies to implement robust systems to monitor and manage social issues and related non-compliances within their supply chains.

We are revising our SAT to incorporate HRDD elements. This work is targeted to be completed in 2024. The revised SAT will include more questions about supplier land and labour rights programs and their implementation. We are also planning HRDD workshops for Malaysian and Indonesian suppliers in 2024 and will share more information about these initiatives in our next report.

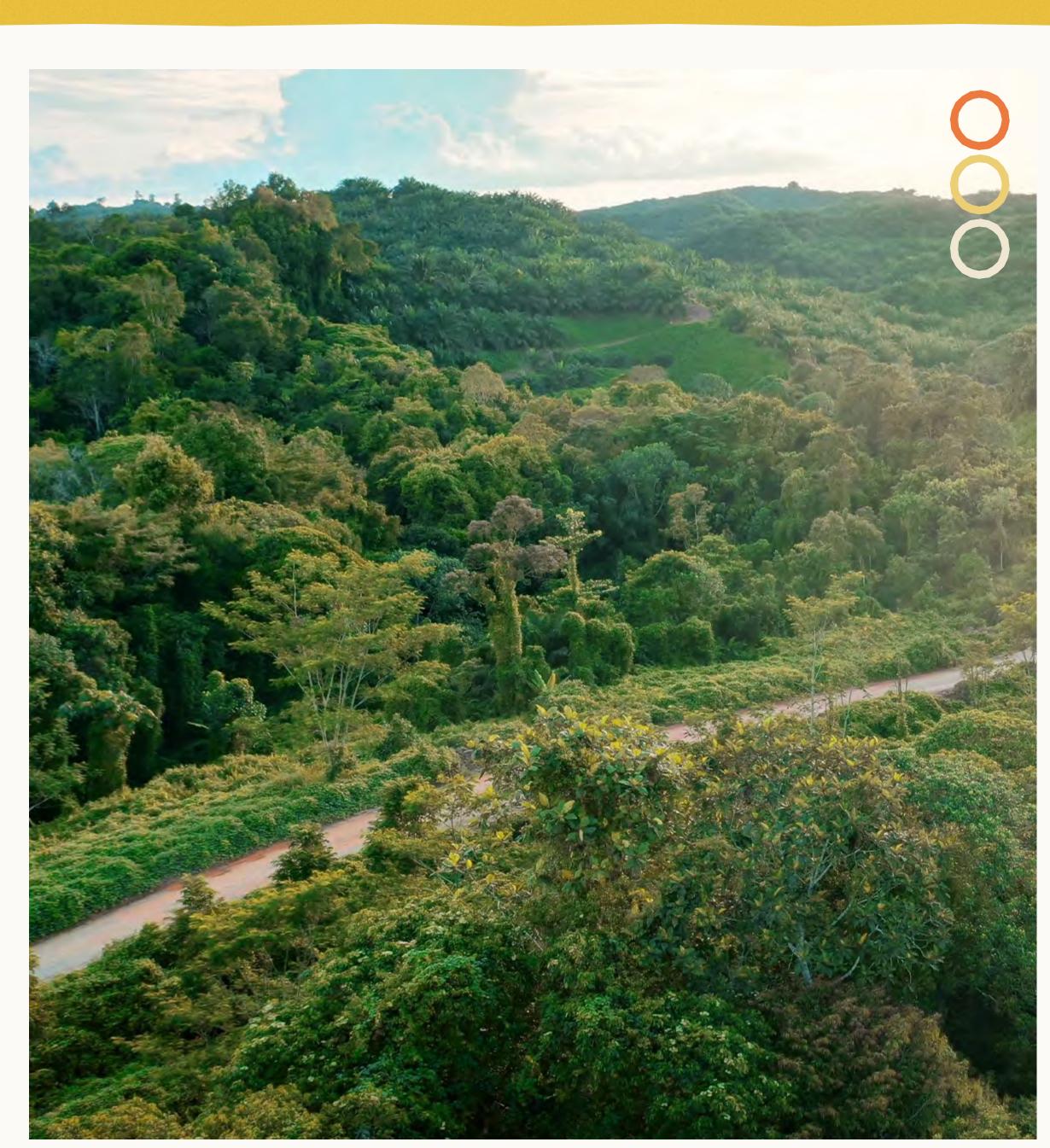
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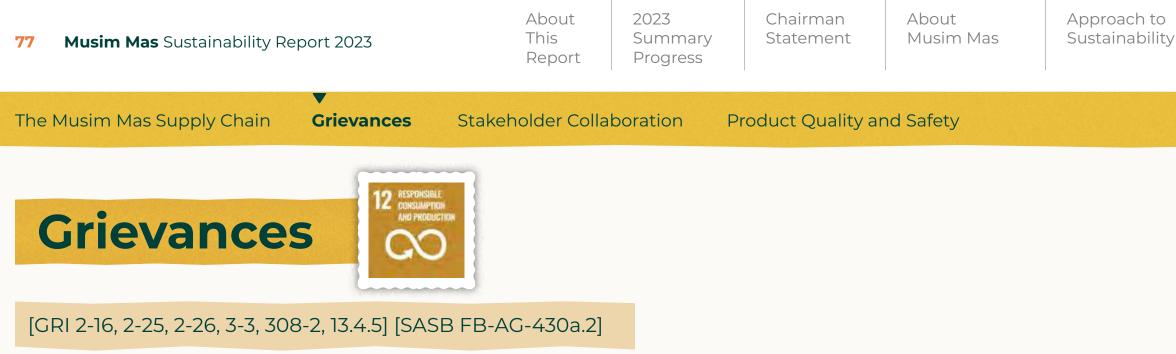
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## **Update on a Musim Mas Grievance on RSPO Portal**

# **Supplier Grievances**

In January 2021, a grievance alleging customary land ownership issue concerning our West Sumatra subsidiary was filed via the RSPO complaints portal. In August 2023, the RSPO Complaints Panel issued a decision letter dismissing the case. Following the 60day appeal period, the RSPO Complaints Panel officially closed the case in November 2023. For more details regarding the case, please refer to the link <u>here</u>.

Any confirmed cases of deforestation or to alleged environmental, human rights, peatland development by existing suppliers and governance violations resulting from that occurred after the cut-off date of 31 operations without a land use permit on December 2015 activates our grievance community-titled land. mechanism and necessary remediation steps Our teams review and monitor all active

under our Controlled Purchase Protocol.<sup>32</sup> grievance cases to arrive at compliance and a In 2023, two grievances were filed against resolution. We are working with the suppliers our suppliers via the Musim Mas grievance and affected stakeholders to resolve these two grievance cases and 19 active cases from mechanism. The first was related to alleged deforestation while the second was related previous years.

#### Third-Party Supplier Grievances Raised and Closed

|                            | Raised | Closed | Active |
|----------------------------|--------|--------|--------|
| 2023 cases                 | 2      | 0      | 2      |
| Cumulative cases 2019-2023 | 70     | 49     | 21     |

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We recognize that reconciling cases and satisfying industry requirements for a fully NDPE-compliant supply chain may take years. Beyond procedural formalities, Musim Mas requires suppliers to make demonstrable progress when resolving grievances to ensure meaningful change. The three grievances stemming from a 2022 Rainforest Action Network Report alleging indirect sourcing of FFB from plantations that encroach on the boundaries of the Rawa Singkil Wildlife Reserve have since been closed.

#### **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 them. The protocol is based on three principles: suppliers' willingness to engage, their positivity 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 agreed-upon milestones in cases involving critical grievances, including breaches of ND or NP commitments, regulatory violations, and withdrawal from the RSPO. In 2023, one supplier was reinstated into our supply chain, while another was suspended for refusing to halt deforestation and undergo High Conservation Value – High Carbon Stock (HCV-HCSA) assessments.

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# **Stakeholder Collaboration**



#### [GRI 2-28, 2-29, 3-3, 13.4.1]

Musim Mas seeks to be at the forefront of sustainability conversations, engaging directly with stakeholder groups that either impact or are impacted by our operations and the wider 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 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 publish and update our sustainability policies and reporting, inviting stakeholder input at every opportunity, consulting our technical experts, and engaging with

selected stakeholders for our annual materiality updates and sustainability reports. For an overview of our stakeholder engagement approaches and objectives, see <u>here</u>.

Our Partners

Our annual materiality assessments cover the environmental, social, and governance (ESG) issues we focus on. Consulting with stakeholders is critical to identifying and prioritizing these topics.

Materiality Process



One of the core focus areas of our <u>Sustainable</u> <u>Coconut Sourcing Strategy</u> 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.

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#### **X** Notable Partnerships in 2023

#### **Environmental Programs**

- Renewed Tesso Nilo National Park Foundation (YTNTN) contract for another three years (2024-2026); added a new program with local women community members to plant crops to deter elephants and direct them back to their natural habitat
- Collaborated with a local university on Taman Kehati project to develop a biodiversity park and wildlife conservation efforts within one of our estate's conservation area

# **Supply Chain Programs**

- ☆ Involved in the NDPE IRF No **Deforestation and No Peat Working** Group, and Land and Labour Working Group
- Engaged Proforest to conduct a TTP workshop in Muar, Johor, Malaysia in partnership with the Proforest-Daemeter Partnership and other palm oil producers

#### **Human Rights Programs**

Collaborated with DIWA to improve or better implement human rights grievance mechanisms, women empowerment programs, and gender committees

#### **Smallholder Programs**

- Established new partnership with **Bunge** to promote sustainable practices among smallholder farmers in Sambas
- ✿ Renewed partnership with General Mills in Aceh Singkil
- Renewed partnership with Nestlé and AAK in Subulusalam
- ☆ Continued Biodiverse & Inclusive Palm Oil Supply Chain (BIPOSC) partnership with Livelihood Funds (L3F), SNV, ICRAF, Danone, L'Oréal and Mars Incorporated
- **Continued ETH Zurich research** program to better understand the conditions under which supply chain sustainability initiatives can lead to reduced deforestation



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# Transparency, Reporting, and Evaluation

To help us improve our operations, we maintain an open dialogue with our stakeholders, welcome their constructive feedback, and strive to be transparent by keeping them wellinformed 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 monitor our progress, including EcoVadis, CDP (formerly known as Carbon Disclosure Project), PROPER, Forest500, the Zoological Society of London's Sustainability Policy Transparency Toolkit (ZSL SPOTT), and the World Benchmarking Alliance's (WBA) Food and Agriculture Benchmark and WBA <u>Nature Benchmark</u>.<sup>33</sup>

### Notable Achievements in 2023



2023 EcoVadis assessment: **Received Gold Medal for** PT Musim Mas



2023 ZSL SPOTT assessment: Ranked 7th out of 100 companies (91.8% score)



Inaugural Double 'A' achievement for CDP 2023 • Water Security (A) Forests (A) Climate Change (B)

Received RSPO Excellence Award for Smallholder Impact

Received Green PROPER ratings for 11 mills, and Blue PROPER ratings for two mills and seven plantations

# **Sustainable Financing**

Musim Massigned its inaugural Sustainability-linked Revolving Credit Facility with Rabobank and HSBC Bank in August 2024. The uncommitted Revolving Credit Facility (RCF) of EUR 150 million was converted into a Sustainability-linked Loan (SLL).

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Striking a Balance: **Avoiding Greenwashing** While Enhancing **Corporate Vulnerability** 

Commentary by **Robin Hicks** Associate Director, Eco-Business



The rise of sustainability reporting has led to a concurrent increase in greenwashing - misleading or exaggerated sustainability claims. This growing problem poses significant challenges and is facilitated by business-friendly regulatory frameworks, limited NGO presence, low consumer awareness, and minimal penalties for filing false claims. Greenwashing will remain a problem in Asia unless robust regulations are implemented and enforced.

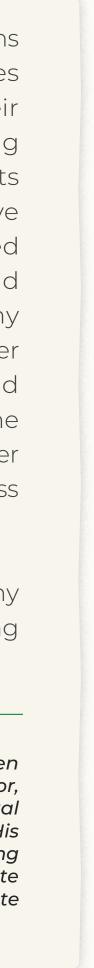
Genuine sustainability exposes corporations to more vulnerabilities, and companies must be more transparent about their challenges and setbacks in becoming greener. I commend Musim Mas for its sustainability efforts and the progressive leadership the company has displayed through its smallholder programs and other initiatives. However, the company can improve its status as an industry leader by acknowledging the complexities and challenges of sustainability. Reporting the difficulties Musim Mas encounters will foster greater trust and drive meaningful progress in the palm oil industry.

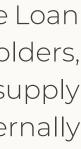
I look forward to seeing how the company will navigate these challenges in pursuing its sustainability agenda.

Robin is a sustainability journalist with over seven years of experience writing about the palm oil sector, including indigenous rights and the environmental and social impact of land use and deforestation. His work with Musim Mas includes independent reporting and sponsored content. Robin also writes about waste and plastic pollution, deep-sea mining, and corporate sustainability claims.

The SLL is hinged on three material Key Performance Indicators (KPIs), in line with the Loan Market Association (LMA) SLL Principles: RSPO certification of independent smallholders, training of independent smallholders, and maintaining a deforestation-free palm oil supply chain. To ensure transparency and accountability, the progress of KPIs will be externally verified on an annual basis.

See our press release: Musim Mas Signs its first SLL with Rabobank and HSBC Bank





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**Product Quality and Safety** 

# **Product Quality and Safety**

#### [GRI 3-3, 416-1] [SASB FB-AG-430b.1]

Musim Mas works closely with global brands to supply products customized for their specific needs and applications. We fully understand the highest standards of product safety and quality expected by our customers. We cultivate non-genetically modified (non-GMO) oil palms and adhere to strict product quality and safety policies.

Our products and refineries undergo regular inspections and audits and are certified against various domestic and international Global Food Safety Initiative (GFSI)-recognized standards, including:

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

Our products are also certified under Good Our efforts also extend to our suppliers. We Manufacturing Practice (GMP), Halal, and collaborate with them and provide support Kosher standards, affirming our adherence to ensure they meet our customers' stringent to international quality standards and dietary requirements and the highest product quality requirements. Furthermore, certifications and safety standards. such as RSPO, ISCC, and ISPO demonstrate Healthier Without 3-MCPD that our products meet the highest standards of sustainability. Managing Mineral Oil Contaminants in Foods

We adhere to applicable EU regulations, including contaminant thresholds for vegetable oils and fats. We screen possible entry routes for contaminants like mineral oils, glycerol-based contaminants 3-monochloropropane diol (3-MCPD), and glycidyl esters (GE) in our processing chains and use various methods to effectively remove them and their precursors per the Codex Alimentarius International Food Standards. We use only food-grade lubricants and incorporate double refining and poststripping 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.



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# **Drive Innovation in** Sustainable Practices



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[GRI 3-3]

Musim Mas strives to meet the increasing demand for palm oil while navigating an ever-changing global market and an evolving regulatory landscape. Our innovative solutions expand the scope and reach of our sustainability commitments, ensuring they are effectively and meaningfully implemented within and beyond our operations.

#### **\*** Notable Innovations in 2023





Release of new oil palm varieties

See: Improving Yields



Women smallholders program

See: Smallholders Program Partnership



**Ongoing stakeholder partnerships** to improve smallholder livelihoods, reduce deforestation, and advance regenerative agriculture

See: Smallholders Program Partnership

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# **Transforming Landscapes**



#### [GRI 3-3, 203-2, 304-1, 13.4.1]

Musim Mas believes in a multifaceted, involving all collaborative approach to address the dynamic stakeholders of industry supply bases, nature particularly those involving independent smallholders. Our landscape approach is based on engaging with stakeholders base, including outside our supply smallholders, local communities, thirdparty suppliers, civil society organizations, local governments, industry peers, and various program implementation partners to achieve tangible, long-term impacts. Leveraging our experience and expertise in landscape programs, we play a vital role in driving collective action to achieve the objectives of the Agriculture Sector Roadmap to 1.5°C.

Our efforts are focused on several priority landscapes in Indonesia, selected based on the presence of critical conservation areas, locations of our key operations, and multistakeholder collaborations that enable the effective implementation of our programs.

We continue to support independent smallholders in these priority landscapes through our Smallholders Hubs and other initiatives.

In September 2024, we rolled out a second landscape strategy covering our remaining priority landscapes: Riau, South Sumatra, West Kalimantan, North Sumatra and Central Kalimantan. With this strategy, we have successfully achieved our <u>No Deforestation</u>, <u>No Peat</u>, and <u>No</u> Exploitation (NDPE) roadmap target of developing landscape strategies for all six of our initial priority areas. Moving forward, we will provide annual progress updates for all six priority landscapes in a consolidated report.

See our Projects in the Aceh Landscape Report 2022/23

See our Landscape Strategy

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#### Note:

- 1. This map shows an overview of our existing programs.
- 2. Those in green are protected areas adjacent to our operations.

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#### The Importance of Landscape Approaches

Commentary by The Tropical Forest Alliance (TFA)



Palm oil companies with midstream and downstream operations lead the way in landscape programs, surpassing all other sectors. The number of these companies is increasing, and they continue to expand the scope and reach of their initiatives. However, these companies represent a tiny fraction of the thousands of palm oil processors and manufacturers who belong to the Roundtable on Sustainable Palm Oil (RSPO). The industry must improve its outreach efforts and incentivize companies to collaborate with stakeholders outside their supply chains on long-term projects that will not only benefit palm oil producers, but also society and the environment.

Landscape-level approaches must adopt long-term strategies to address three challenges: the leakage market, inclusion, and smallholder scale. They must account for the relatively large number of smallholders in geographically restricted agricultural zones, the complexities of maintaining relationships and engaging extensively with independent smallholders and other stakeholders, and increasingly strict legal and regulatory frameworks, including the European Union Deforestation Regulation (EUDR).

Musim Mas is one of the few companies that understands the importance of a long-term approach to landscape-level projects. Its industry-leading Smallholders Hubs integrate with jurisdictional-scale projects, multiplying the company's impact through collaborations with industry, government, and civil society stakeholders, NGOs, and local populations. The strength of Musim Mas' work lies their on-the-ground knowledge In and strong relationship with partners and buyers, all of whom support their landscape initiatives.

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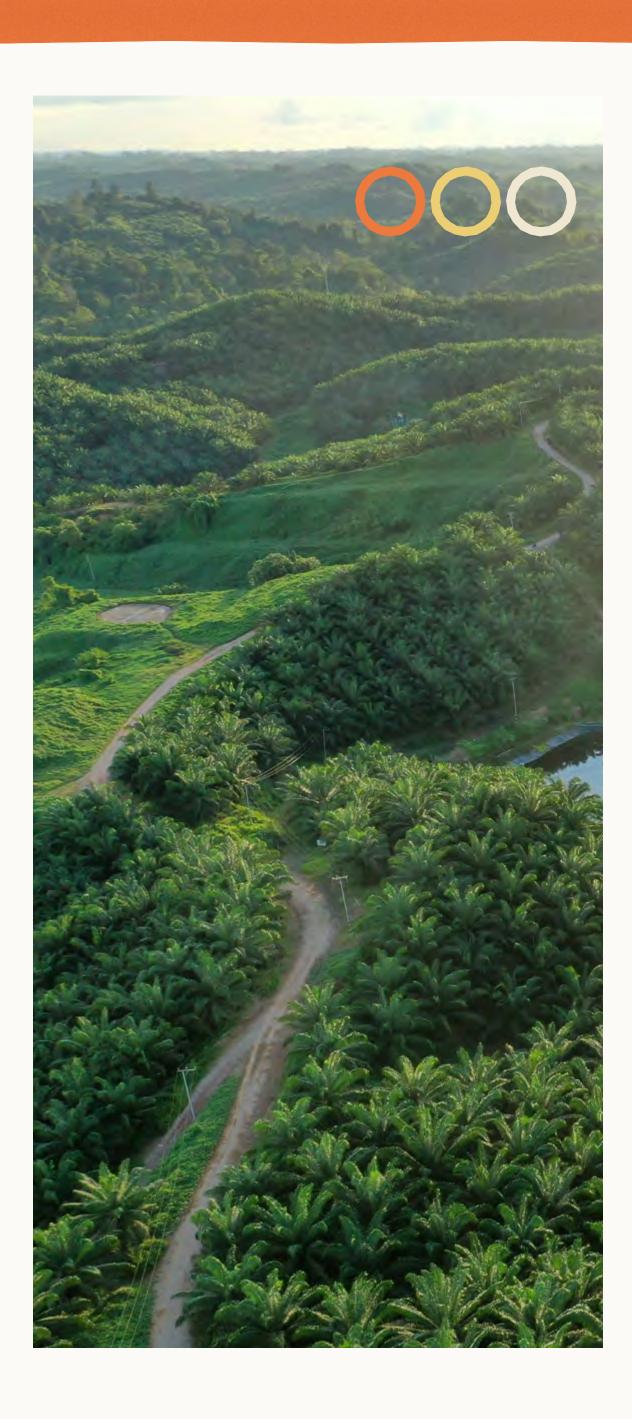
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Musim Mas is an industry leader, setting an example and providing insights that other companies can follow to integrate landscape-level projects into their sustainability strategies. Like Musim Mas, companies must look beyond sustainability risks, find ways to prioritize action and engage in collaborative multisector projects with stakeholders in committed and progressive jurisdictions. The palm oil sector must realize that a single company going 'clean' and purchasing 100% sustainable palm oil is not enough. The entire industry must embrace sustainability to have an impact.

TFA is a global public-private partnership platform with 170 partners, including Musim Mas. Collaborating with diverse stakeholders, TFA mobilizes private sector actors to embrace sustainability in production landscapes. TFA also facilitates knowledge exchange through its Jurisdictional Action Network and Jurisdictional Approaches Resource Hub (JARH) and has published a JARH case study on Musim Mas' Smallholders Hubs



See also: TFA's commentary on Achieving Sector-Wide Goals



Improving Yields

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Musim Mas believes that future growth in oil palm production should rely on higher-yielding oil palm developing varieties rather than expanding land use. We invest in research and development (R&D) to strengthen land-use efficiency, maximize yields, and enhance productivity. Focusing on these improvements allows us to reduce greenhouse gas emissions and minimize our impact on forests and biodiversity as we meet the growing demand for palm oil.

Our Genetic and Agriculture Research Center in Riau houses specialized facilities and teams dedicated to driving innovation in agronomic practices, such as cultivating superior oil palm varieties and optimizing crop protection and peat management methods at our plantations.





Our GS Series demonstrates the strength After more than a decade of extensive of our R&D efforts and further cements R&D, we have released four new oil palm Musim Mas' reputation as a leading seedvarieties: GS1, GS2, GS3, and GS4, also to-shelf agribusiness. We continue to known as the Musim Mas GS Series. pursue and invest in R&D into newer These new varieties have resulted from the selective crossbreeding of non-GMO Dura oil palm varieties with desirable traits and Pisifera (DxP) oil palms and have been that allow them to thrive in harsh approved by the Indonesian government's environmental conditions and further improve productivity, land-use efficiency, assessment body for plantation varieties (TPV). and yields.

Our new GS varieties have a rapid fruiting cycle and can produce fruit bunches within

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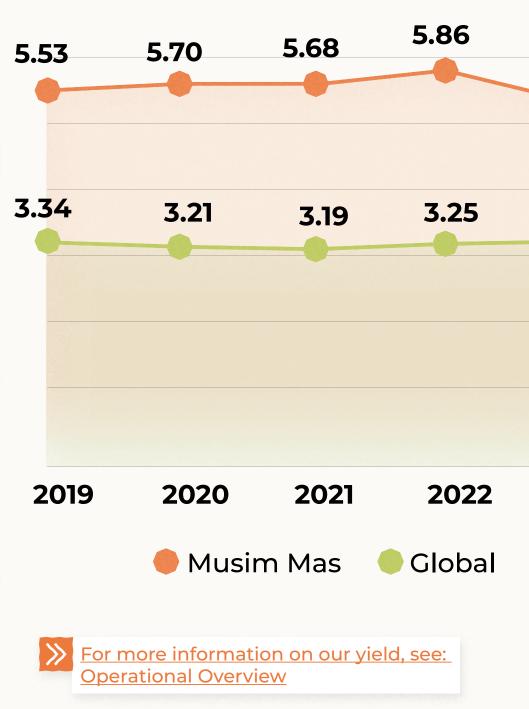
of 30 months. They grow into oil palms with longer stalks that facilitate easier harvesting. Bigger fruitlets also boost crude palm oil (CPO) extraction rates to 30%, with potential yields exceeding 10 tonnes (MT) of CPO per hectare, triple the industry average of 3.25 MT of CPO per hectare.

25 months instead of the industry average

Musim Mas Releases New Oil Palm Seed Varieties That Yield Nearly Triple the Industry Average

Our industry-leading CPO yield was 5.42 tonnes per hectare in 2023 – 1.6 times higher than the global average.

#### Musim Mas CPO Yield vs. Global Average 2018-2022 (MT CPO/ha)





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

include food Our customers manufacturers who regularly require new and innovative products and ingredients. To meet their demands, our state-ofthe-art R&D facility in Singapore, the Novel IDEAS Center, enhances existing formulations and develops advanced palm oil products, including specialty fats for the food and beverage and animal feed industries. These versatile blends of highquality fats, emulsifiers, and stabilizers can be used in gluten-free, sugar-free, frozen, and plant-based items, as well as livestock feed.

These innovations elevate the quality of food and beverages, contributing to desirable textures and seasonal flavors that appeal to international and regional palates. We take pride in our collaborative approach, working with customers to fulfill their requirements for palm oil products and ingredients that align with evolving consumer tastes.

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



# NOVEL IDEAS CENTER



Impacts

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# Assurance Statement

#### [GRI 2-5]

# 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, here after referred to as the engagement, to report on Musim Mas' sustainability performance metrics as set out in the Subject Matter Information section below (the "Subject Matter") contained in Musim Mas' sustainability report as of 20 September 2024 for the financial year ended 31 December 2023 ("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:

| SI. No. | Information for Assurance                                                                                                                                                                                                                                                                                                                                   | Scope for Palm Oil Segment                                                                      | Count                       |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------|
| 1       | GHG emissions intensity across palm operations in 2023                                                                                                                                                                                                                                                                                                      | RSPO-certified mills only                                                                       | Indone                      |
| 2       | Water use intensity (m³/MT FFB processed) in 2023                                                                                                                                                                                                                                                                                                           | RSPO-certified mills only                                                                       | Indone                      |
| 3       | BOD and COD quality (mg/l) for POME in 2023                                                                                                                                                                                                                                                                                                                 | RSPO-certified mills only                                                                       | Indone                      |
| 4       | <ul> <li>Scheme smallholders that Musim Mas supports under these programs:</li> <li>KKPA: Number of KKPA programs and number of smallholders</li> <li>VDP: Number of villages</li> </ul> Note: Musim Mas operates two scheme smallholder programs: <ol> <li>Kredit Koperasi Primer Anggota (KKPA) and</li> <li>VIIIage Development Program (VDP)</li> </ol> | Mills and plantations                                                                           | Indone                      |
| 5       | <ol> <li>Number of independent smallholders involved in Musim Mas program that<br/>supplies Musim Mas in 2023;</li> <li>Total number of independent smallholders supplying to Musim Mas in 2023</li> </ol>                                                                                                                                                  | Mills and plantations                                                                           | Indone                      |
| 6       | Total hectares of suppliers' (group-level) concession monitored through a combination of methods as at 31 December 2023                                                                                                                                                                                                                                     | Concession land owned by monitored suppliers (i.e. supplying mills integrated with plantations) | Indone<br>Malays<br>Thailar |
| 7       | Programs in place to support high-risk mills identified as at 31 December 2023                                                                                                                                                                                                                                                                              | All supplying mills during the year                                                             | Indone<br>Malays<br>Thailar |
| 8       | Percentage of suppliers classified under low- to medium- to high-risk mills as of 31<br>December 2023                                                                                                                                                                                                                                                       | All supplying mills during the year                                                             | Indone<br>Malays<br>Thailar |
| 9       | Percentage of suppliers that have an NDPE policy or adopted Musim Mas<br>Sustainability Policy as at 31 December 2023                                                                                                                                                                                                                                       | All supplying mills during the year                                                             | Indone<br>Malays<br>Thailar |
| 10      | COD quality (mg/l) for PORE in 2023                                                                                                                                                                                                                                                                                                                         | PT Musim Mas Belawan                                                                            | Indone                      |
|         |                                                                                                                                                                                                                                                                                                                                                             |                                                                                                 |                             |







About Musim Mas

Approach to Sustainability

#### \* Criteria Applied by Musim Mas

In preparing the Subject Matter, Musim Mas applied the criterion of "Accuracy" as defined by GRI 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.

## **X** EY's Responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matter requirements of the Code of Ethics for 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 Information 3000 Financial (Revised)') and ISAE 3410: Assurance Engagements on Greenhouse Statements and the terms of reference for this engagement as agreed with Musim Mas on 24 May 2024. 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 Professional Accountants issued by the International Ethics Standards Board for Accountants and have the required competencies and experience to conduct this assurance engagement.

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EY also applies International Standard on Quality Management 1, Quality Management for Firms that Perform Audits or Reviews of Financial Statements, Gas or Other Assurance or Related Services engagements, which requires that we design, implement and operate a system of quality management including policies or 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.

procedures relating to systems.



Approach to Sustainability

GHG quantification process is lhe subject to scientific uncertainty, which arises because of incomplete scientific knowledge about the measurement of GHGs. Additionally, GHG procedures are subject to estimation (or measurement) uncertainty resulting from the measurement and calculation processes used to quantify emissions within the bounds of existing scientific knowledge.

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' Sustainable Supply Chain team, Independent Smallholder team and Sustainability team to:
  - a. Understand principal business operations,
  - **b.** Appreciate key sustainability issues and developments,
  - **c.** Map out information flow for sustainability reporting and the relevant controls, and
  - d. Identify data providers with their responsibilities

- 2. Virtual interviews with and sou clarifications from employ Management Singap and in Indonesia to understand and sustainability issues related to selected indicators, data collec<sup>-</sup> processes and accuracy of report
- **3.** Conducting walk-through processes for systems and aggregation and reporting relevant personnel to underst the quality of checks and cor mechanisms in relation to the Sub Matter in the Sustainability Rep
- 4. Performing of analytical revi on data and inquire with relev personnel when anomalies are observ
- 5. Obtaining of 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.

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| ught<br>yees<br>pore<br>key                           | <b>7.</b> Obtaining of relevant certifications<br>and reports in relation to the Subject<br>Matter in the Sustainability Report. |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| the<br>ction<br>ting.                                 | 8. Relying on Musim Mas' management<br>representation letter on the Subject<br>Matter in the Sustainability Report.              |
| of<br>data<br>with<br>tand<br>ntrol<br>oject<br>port. |                                                                                                                                  |
| riews<br>evant<br>rved.                               |                                                                                                                                  |

# **\*** 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 20 September 2024 for the year ended 31 December 2023, in order for it to be in accordance with the Criteria.

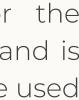
## **\*** Restricted Use

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** 20 September 2024 Singapore





Progress

# Appendices

# Aligning with the Recommendations from the Taskforce on **Climate-Related Financial Disclosures (TCFD)**

Our first TCFD disclosure aims to identify and enhance our understanding of the climate-related risks and opportunities affecting our business. By aligning with the TCFD, we can more effectively communicate these impacts to our stakeholders, outline the actions we will take to mitigate the worst effects of climate change and seize opportunities in the transition to a low-carbon economy.

## **\*** Governance

The Musim Mas Board, led by our Executive Chairman, maintains oversight over the management of climate-related and opportunities. At quarterly risks meetings, the Board, Directors, and Heads of Departments assess and review key These include formulating various action plans, risk management policies, and annual plans to address climate-related risks and opportunities.

Our sustainability objectives regarding climate change, reducing greenhouse

working groups, to maintain a robust and (GHG) emissions, and upholding gas diversified skill set for tackling climateour No Deforestation, No Peat, and No Exploitation (NDPE) commitments are related issues. We assign dedicated key drivers of our operational actions, personnel in the relevant departments to inform our teams about climatedecision-making, and business strategy. For example, the budget to improve related issues by continuously monitoring our environmental performance is an regulatory developments, changing important part of our financial planning. weather patterns, soil quality, and water It includes measures to reduce emissions balance, among others, to assess our (e.g., building methane capture facilities exposure to climate-related risks and opportunities. We have also established a and adopting power co-generation in our mills), promote smallholder collaboration carbon team with the expertise to assess and monitor our carbon emissions and in upholding our NDPE commitments, and engage with local communities to their reduction. prevent and manage fires.

Sustainability Governance Musim Mas is fully committed to ensuring our relevant personnel and collaborators the appropriate expertise to have 🗱 Risk Management manage sustainability and climate-related issues. Our Director of Sustainability is Musim Mas' Sustainability Policy has extensively involved and well-versed served as the principal framework for our in the latest forest-related issues and sustainability commitments since 2014. standards. He currently sits on the Board It includes climate-related topics that are integrated into our company-wide risk of the Roundtable on Sustainable Palm management process, as well as risks and Oil (RSPO), where he also co-chairs the opportunities to be discussed as part of the Standing Committee for Standards sustainability and ESG issues, and trends. and is a member of the Board Finance Board agenda. Recognizing the potentially are shared and assigned to the relevant significant impacts of climate-related risks Committee. on our business, Musim Mas employs a comprehensive risk management Our sustainability regularly team participates in training sessions, such as framework and Standard Operating Procedure (SOP) to continuously monitor, peat management and Science Based Targets initiative (SBTi) target-setting identify, assess, and manage climaterelated risks. best practices, as well as various RSPO

productivity of oil palm crops as well as palm oil supply, (3) any drastic drop in supply (of raw materials) of 20 percent or more, which affects our production cost as well as production volume.

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For more details, see: Corporate and

These include, among others, physical climate risks relating to the rise in frequency and severity of extreme weather events, and transitional risks relating to regulatory, market, and technological disruptions brought about by the transition to a lowcarbon economy. The size and scope of each risk is monitored by specific teams in relevant departments through a climate risk assessment that considers factors such as business growth, existing and emerging climate-related regulatory requirements, environmental outlooks (e.g., changing weather patterns and soil conditions), and potential worst-case scenarios in different timeframes (short-, medium- and longterm).

The SOP then outlines the processes that allow relevant departments and teams to mitigate, transfer, accept, and control these risks based on their scale and financial impact.<sup>34</sup> The Board regularly reviews these risk areas, considering ESG factors and the necessary actions to achieve strategic objectives. After the Board's review, responsibilities and actions 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 on a quarterly basis to ensure their oversight of the risk management process.

<sup>&</sup>lt;sup>34</sup> Musim Mas identifies substantive financial impact as: (1) any impact that could potentially inflict a financial loss of around 10 percent or higher of current EBITDA estimates, (2) any climatic event that will drastically affect the yield and

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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, identified the impacts of medium- and long-term climaterelated risks and opportunities on our business. The outcomes of this analysis will guide our management of these climaterelated risks and opportunities and will be integrated into our business strategy and financial planning.

instance, we invest heavily in ⊢or 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.

See: Understanding our Climate-related **Risks and Opportunities** 

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

Recognizing the urgency of combatting 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.

This year, we bolstered our long-term commitment to sustainability by reaching our target to reduce upstream GHG emission intensity by 55% from a 2006 baseline, two years ahead of schedule. Building on this progress, we are currently seeking SBTi validation for our near- and long-term emission reduction targets, with the goal of reaching net-zero emissions by 2050.

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: Targets and Progress

See also: Pillar 2: Deliver Positive Environmental Impacts

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Risk Management, and Metrics & Targets.

**TCFD Recommendations** 

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Sections referenced in our 2023

**Sustainability Report** 

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# **TFCD Index**

Pillar

|             | Governance           | Board oversight· Corporate and Sustainability GoernanceRole of management· Aligning with the RecommendationRole of management· Aligning with the Recommendation |                                                                                                                                   |
|-------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| כ<br>ר      |                      |                                                                                                                                                                 | Disclosures (TCFD)                                                                                                                |
| ٦           | Strategy             | Climate-related risks and opportunities over the short medium, and long term                                                                                    | <ul> <li>Approach to Sustainability</li> <li>Understanding our Climate-Related Risks<br/>and Opportunities</li> </ul>             |
| ]           |                      | Impact on business, strategy,<br>and financial planning                                                                                                         | <ul> <li>Aligning with the Recommendations from<br/>the Taskforce for Climate-Related Financial<br/>Disclosures (TCFD)</li> </ul> |
|             |                      | Resilience of strategy and scenario analysis                                                                                                                    | Disclosules (ICFD)                                                                                                                |
| y<br>d<br>r | Risk<br>Management   | Process for identifying and assessing climate-related risks                                                                                                     | <ul> <li>Understanding our Climate-Related Risks<br/>and Opportunities</li> <li>Aligning with the Recommendations from</li> </ul> |
| ý           |                      | Processformanagingclimate-<br>related risks                                                                                                                     | the Taskforce for Climate-Related Financial<br>Disclosures (TCFD)                                                                 |
| r<br>B      |                      | Integrating processes into<br>overall risk management<br>framework                                                                                              |                                                                                                                                   |
| ,<br>/      |                      | Metrics used                                                                                                                                                    | <ul> <li>Targets and Progress</li> </ul>                                                                                          |
| 5           |                      | ricke                                                                                                                                                           | Group Emissions                                                                                                                   |
|             | Metrics &<br>Targets |                                                                                                                                                                 | <ul> <li>Understanding our Climate-Related Risks<br/>and Opportunities</li> </ul>                                                 |
|             |                      | Targets and performance                                                                                                                                         | <ul> <li>Aligning with the Recommendations from<br/>the Taskforce for Climate-Related Financial</li> </ul>                        |

Disclosures (TCFD)







2023 Summary Progress Chairman Statement About Musim Mas Approach to Sustainability

# Musim Mas' Contributions to the SDGs

As part of our 2023 materiality update, we revisited the alignment of our material topics, program objectives, and downstream risks and opportunities to the United Nations' Sustainable Development Goals (SDGs) and their targets, and our four Sustainability Policy Pillars. This is detailed below.

# **Our Sustainability Pillars**



# **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.

| Relevant SDG Target                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2.3:</b> 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 | <b>Smallholder Engag</b><br>Including smallhold<br>to support them<br>management, land<br>of scale, and qualit<br>operational landscap<br>new dedicated prog                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>2.4:</b> 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                      | <b>Innovation and R&amp;I</b><br>Investing in R&D to<br>reliance on chemica<br>agriculture to impr<br>worldwide. We relea<br>result in greater yield                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                      | <ul> <li>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</li> <li>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</li> </ul> |

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| Ν | laterial Topics and Contributions |  |
|---|-----------------------------------|--|
|   | accital reples and contributions  |  |

Musim Mas Sustainability Policy Pillar

#### agement:

Iders in our supply chain and implementing training and engagement programs in addressing complex and interlinked barriers around yields, plantation d ownership, financial access and income, market access, replanting, economies lity of life. Our programs cover scheme and independent smallholders in our capes. Beyond oil palm smallholders, we support women smallholders through a bgram, and we are also working with coconut smallholders.

#### PILLAR 1

#### &D:

to produce premium seedlings, increase yields, improve oil extraction rates, reduce icals, improve soil management, and focusing on sustainable and regenerative prove the amount and quality of production and contribute to food security eased four new oil palm seedlings (Musim Mas GS Series) with superior traits that eld, land-use efficiency, and productivity.





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| SDG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Relevant SDG Target                                                                                                                                                                                                                                                            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| <b>4.1:</b> By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <ul> <li>Children's Rights:</li> <li>Providing access to surrounding comm</li> <li>Building and ope</li> <li>Providing access</li> <li>Offering scholars</li> </ul>                                                                                                                                                                                                                          |
| G CLEAN WATER<br>AND SANITATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>6.1:</b> By 2030, achieve universal and equitable access to safe and affordable drinking water for all                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <ul> <li>Human Rights and</li> <li>Providing access</li> <li>Building wells in a</li> </ul>                                                                                                                                                                                                                                                                                                  |
| SDG 6:<br>CLEAN WATER AND<br>SANITATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>6.2:</b> By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul> <li>Community Rights</li> <li>Providing sanitati</li> <li>Ensuring access t</li> <li>Providing toilets t</li> </ul>                                                                                                                                                                                                                                                                     |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | eradicate forced labour, end modern slavery and<br>human trafficking and secure the prohibition<br>and elimination of the worst forms of child labour,<br>including recruitment and use of child soldiers, and<br>by 2025 end child labour in all its forms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <ul> <li>Upholding no-for<br/>Policy</li> <li>Adhering to the U</li> <li>Consistently ensure<br/>programs and eff</li> </ul>                                                                                                                                                                                                                                                                 |

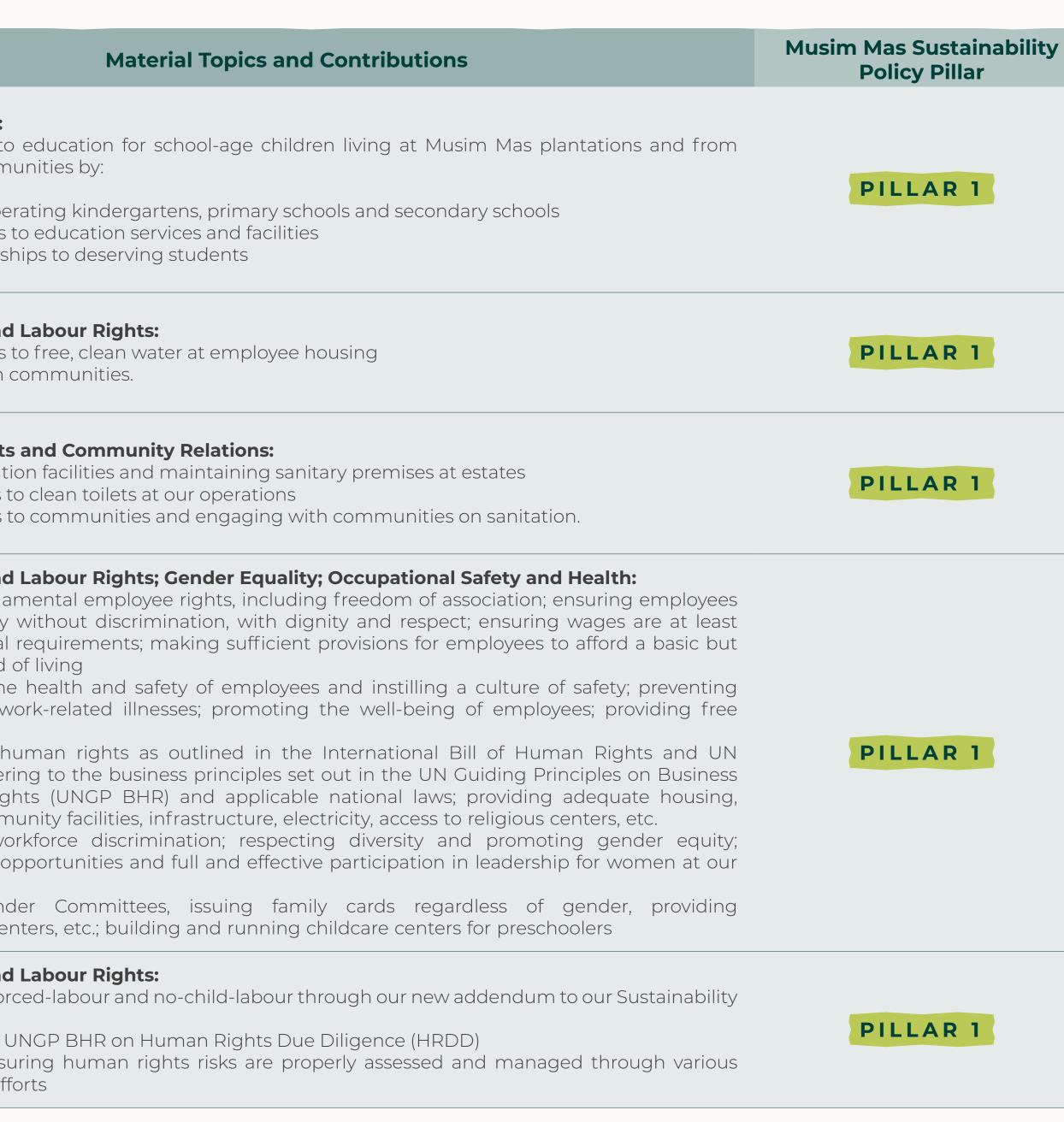
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#### SDG

#### **Relevant SDG Target**

#### **12.2:** By 2030, achieve the sustainable management and efficient use of natural resources

**12.7:** Promote public procurement practices that

are sustainable, in accordance with national policies

**13.1:** Strengthen resilience and adaptive capacity to

- Optimizing water use and consumption at our mills
- Minimizing waste generated at our operations; reducing, reusing, recycling, and recovering 100% of upstream waste; exploring ways to reduce and recycle midstream and downstream waste



**SDG 12:** RESPONSIBLE CONSUMPTION AND PRODUCTION

#### Supply Chain Engagement and Transparency; Grievance Resolution:

#### Sustainability Certification and Compliance:



SDG 13: **CLIMATE ACTION**  climate-related hazards and natural disasters in all countries

and priorities

#### **Climate Risk and Adaption:**

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#### **Material Topics and Contributions**

#### Water Management; Waste Management:

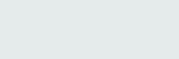
• Supply chain engagement and transparency; Grievance resolution:

· Continuously engaging with suppliers on our NDPE policy commitments through our NDPE roadmap to move the industry towards responsible and sustainable production; verifying NDPE progress using evidence-based approaches; supporting smallholders with national certification schemes (i.e. ISPO); supply chain engagement for coconut production

• Resolving external complaints and grievances in an accessible, effective, timely, and appropriate manner; bringing suppliers into compliance with NDPE requirements by enacting our Controlled Purchase Protocol (CPP) in cases of verified grievances on breached commitments.

· Complying with leading industry certification and verification schemes within our operations to progressively raise standards in the palm oil sector; supporting leading industry certification and verification schemes to delink oil palm expansion and deforestation, protect forests, optimize productivity and efficiency, etc.

• Minimizing GHG emissions through targeted reduction plans; generating energy from process waste, and investing in renewable energy sources (e.g., methane capture facilities). In 2023, we began reporting against the TCFD framework for the first time.



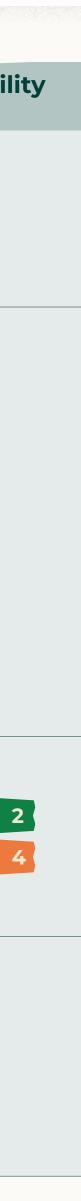
PILLAR 3





#### **Musim Mas Sustainability Policy Pillar**





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#### SDG

#### **Relevant SDG Target**

2023

15.1: 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



- rehabilitating H assessing the in • Implementing
- supply chain; ho • Managing the ι
- fertilizer and pe

#### Fire and Haze Pre

- Managing and to manage exis chemicals respo
- Implementing and the second sec chain; holding s

#### **Supply Chain Eng**

Working towards supply chains

#### **Stakeholder Colla**

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- Collaborating w and support jur
- Staying respons efforts during awareness of nu

#### Innovation and R

· Developing nev to address differ

**•**~~ SDG 15:

15 INFE ON LAND

#### LIFE ON LAND

15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally



SDG 17: PARTNERSHIPS FOR THE GOALS **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

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| Material Topics and Contributions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Musim Mas Sustainability<br>Policy Pillar |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Ad Management of HCV, HCS, and Peat Areas; Supply Chain Engagement and<br>esticide and Chemical Management:<br>our NDPE policy at Musim Mas operations; conserving, managing, and<br>HCS forests and HCV areas, including riparian buffer zones; protecting waterways;<br>mpact of our operations on biodiversity, water, and ecosystems<br>our NDPE policy to promote deforestation-free commodities throughout the<br>holding suppliers, including smallholders, accountable for deforestation activities<br>use and handling of pesticides and chemicals; optimizing and reducing chemical<br>esticide use; adopting organic substitutes where possible.                                                                         | PILLAR 2                                  |
| revention:<br>I monitoring fires; reforestation of burnt areas; applying best management practices<br>isting plantations on peat; protecting soil from degradation; handling waste and<br>consibly<br>our NDPE policy to promote deforestation-free commodities throughout the supply<br>suppliers, including smallholders, accountable for deforestation activities                                                                                                                                                                                                                                                                                                                                                                | PILLAR 2                                  |
| gagement and Transparency:<br>s traceability to plantation and full supplier visibility to eliminate deforestation in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | PILLAR 3                                  |
| <b>Iaboration and Reporting; Landscapes; Product Quality and Safety:</b><br>a broad range of industry players, government bodies, and civil society organizations<br>assing issues; collaborating on transforming the industry; maintaining transparent<br>oble partnerships; contributing expertise, resources, and innovation to partnerships;<br>on for coconut supply chain sustainability<br>with private and public sector stakeholders in landscapes to transform the industry<br>urisdictional approaches<br>nsive to customer needs and legislation on contaminant levels requiring mitigation<br>the production of edible oils to minimize contaminants; increasing consumer<br>nutritional, dietary, and health benefits | PILLAR 3                                  |
| <b>R&amp;D:</b><br>w solutions for using sustainable palm oil-based functional blends and specialty fats<br>erent industry needs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | PILLAR 3                                  |

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# Secondary SDGs

|                                                 | SDG                                                  | Relevant SDG Target                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Musim Mas Sustainabili<br>Policy Pillar |
|-------------------------------------------------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 1 <sup>no</sup><br>Poverty<br><b>Ř¥ŘŤŤŤ</b>     | 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 ZERG<br>HUMOLR                                | 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<br>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 GENOER<br>FQUALITY                            | SDG 5: GENDER EDUCATION                              | <b>Target 5.1:</b> End all forms of discrimination against all women and girls everywhere<br><b>Target 5.6:</b> Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Program of<br>Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents<br>of their review conferences                                                                                        | PILLAR 1                                |
| 8 BECENT WORK AND<br>ECONOMIC GROWTH            | SDG 8: DECENT WORK AND<br>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<br>CONSUMPTION<br>AND PRODUCTION | SDG 12: RESPONSIBLE<br>CONSUMPTION<br>AND PRODUCTION | <b>Target 12.2:</b> By 2030, achieve the sustainable management and efficient use of natural resources<br><b>Target 12.6:</b> Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate<br>sustainability information into their reporting cycle<br><b>Target 12.7:</b> Promote public procurement practices that are sustainable, in accordance with national policies and priorities                                                           | PILLAR 2<br>PILLAR 3                    |
| 13 CLIMATE                                      | 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 LIFE<br>01 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<br>AND STRONG<br>INSTITUTIONS  | SDG 16: PEACE, JUSTICE AND<br>STRONG INSTITUTIONS    | Target 16.5: Substantially reduce corruption and bribery in all their forms                                                                                                                                                                                                                                                                                                                                                                                                                               | PILLAR 1                                |

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#### 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.



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## 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 (CO<sub>2</sub>e)** 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, emissions are released into the atmosphere Independent Smallholders Oil palm farmers who cultivate up to 20 hectares of including mill processes, discharged into from the indirect consumption of energy another body of water. land that are self-financed, managed, and commodities. equipped but not bound to any one mill.

High Carbon Stock Approach (HCSA) A Fire-Free Village Programme (FFVP) A fire management pilot program which global methodology used in agricultural provides training, equipment and economic land development planning and currently incentives to local communities to help applied in fragmented tropical landscapes on mineral soils in the humid tropics. It prevent fire. distinguishes between HCS forest areas that Fresh fruit bunches (FFB) The raw material require protection and degraded lands with harvested from an oil palm tree. This weighs low carbon and biodiversity values that may 10 to 40 kg, depending on the size and age be considered for development.

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

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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.

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.



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Approach to Sustainability

**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.

**PalmGHG** An RSPO tool that calculates the emissions generated and sequestered from activities and processes at plantations and mills. See how it works <u>here</u>.

**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 Scheme Smallholders Farmers operating production, be it a large industrial plantation under a program initiated by the Indonesian with concessions and mills, a large farm government to encourage the development without a mill, or a smallholder farm. of smallholder plantations, where plantation companies (nucleus estates) assist and Public Program Disclosure for

supportsurroundingcommunityplantations. **Environmental Compliance (PROPER)** environmental Indonesia's Segregated (SG) A supply-chain model national reporting initiative. It uses a colour-coded assuring that RSPO-certified palm oil and rating scheme to grade factories' pollution its derivatives delivered to the end-user originate only from RSPO-certified sources. control performance against regulatory It permits the mixing of RSPO-certified standards. palm oil from a variety of sources.

Integrated Deforestation Alert (IDA) A system by Global Forest Watch (GFW) that Supply Shed A group of suppliers integrates satellite imagery and/or radar comprising mills and their associated data (i.e., Radar for Detecting Deforestation plantations the independent and plantations and smallholders that supply [RADD]) for monitoring and near real-time alerts of deforestation. them.

**Roadmap** This term has two distinct **Toxicity** The degree to which a substance meanings in this report. Our Roadmap to is harmful to living organisms. Toxicity in Responsible Supply Base) is Musim Mas' agricultural chemicals is measured using the LD50 methodology, i.e., the number of communication piece on targets and plans toxicity units corresponding to a lethal dose to bring suppliers into compliance with our commitments. Musim Mas also compiles for 50% of a rat population. supplier roadmaps with timebound plans Village Development Program (VDP) and clear implementation milestones to A Musim Mas program for scheme guide suppliers toward compliance with our smallholders tailored to villages where NDPE commitments. plantations are community-managed rather than individually owned. **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.

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