Musim Mas Holdings Pte Ltd

2025 CDP Corporate Questionnaire 2025

Word version

Important: this export excludes unanswered questions
This document is an export of your organization's CDP questionnaire response. It contains all data points for questions that are answered or in progress. There may be questions or data points that you have been requested to provide, which are missing from this document because they are currently unanswered. Please note that it is your responsibility to verify that your questionnaire response is complete prior to submission. CDP will not be liable for any failure to do so.
Read full terms of disclosure

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C1. Introduction

(1.1) In which language are you submitting your response?

Select from:

☑ English

(1.2) Select the currency used for all financial information disclosed throughout your response.

Select from:

☑ USD

(1.3) Provide an overview and introduction to your organization.

(1.3.2) Organization type

Select from:

☑ Privately owned organization

(1.3.3) Description of organization

Headquartered in Singapore, Musim Mas Group is a fully integrated palm oil corporation that delivers the highest quality and innovative palm oil products and derivatives used across multiple industries worldwide. As one of the most prominent players in the palm oil industry, we aspire to be a responsible leader in the evolution of the industry, driving a new era of sustainability with innovation across the globe. To that aim, our dedicated, global team of professionals across the entire palm oil supply chain works closely with local and international stakeholders, ensuring that our products are economically viable, socially responsible, and environmentally appropriate. Since 1972, Musim Mas has established deep and long-standing relationships with our customers and stakeholders worldwide. Our multi-cultural and multi-disciplinary workforce, located in 13 countries, brings innovation to meet the growing needs of our customers. We are proud to be the preferred supply chain partner for palm oil and its derivatives. From our plantations, mills, refineries, kernel crushing plants, oleochemicals, and specialty fats plants, we manufacture palm oil and value-added derivatives before exporting these to customers via our extensive fleet of tankers and barges. Today, Musim Mas is Indonesia's largest palm oil exporter to customers located all around the world. The steady growth of Musim Mas is underpinned by the quality of our management and supported by professionals dedicated to the highest standards of quality, safety, and efficiency. Our global marketing activities are undertaken by Inter-Continental Oils and Fats (ICOF), a member of Musim Mas Group. Despite these achievements our business continues to face new challenges. As we have progressed, so have expectations from stakeholders for a responsible supply base. To achieve this, environmental stewardship has been a core pillar of our sustainability measures. Musim Mas strives to minimise and mitigate adverse impacts on the environment, by regularly assessing the impact of our operations through recognized independent sustainability certifications (i.e. RSPO, ISCC, ISPO) and disclosure platforms (i.e. CDP, Ecovadis, and SPOTT). In January 2024,

Musim Mas announced our commitment to the Science Based Targets Initiative (SBTi), which has been acknowledged by SBTi to transition our global operations toward Net Zero. This alignment with scientific principles is a testament to our commitment to the Best Practices for climate action and reporting. In October 2024, SBTi officially approved our near- and long-term emissions reduction targets under the SBTi Corporate Net-Zero Standard and the SBTi Forest, Land, and Agriculture Guidance (FLAG). 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. Recognizing our role in supporting these needs, we initiated our first Life Cycle Assessment (LCA) up to upstream products in 2019 to evaluate the impact of our operations on the environment. In 2022, we have expanded our LCA study to selected downstream products with cradle-to-gate scope following the ISO 14040 and ISO 14044 frameworks. Presently, we are able to provide product carbon footprint (PCF) across our wide range of palm oil derivative products ensuring we effectively meet the increasing demands of our customers while upholding our sustainability commitments. Musim Mas takes the impact of climate change seriously and is strongly committed to minimising GHG emissions within our operations. Our sustainability teams, senior management and the Board, are involved in decision-making pertaining to our climate-related risks and opportunities to ensure emission reductions are adequately managed throughout our operations.
[Fixed row]

(1.4) State the end date of the year for which you are reporting data. For emissions data, indicate whether you will be providing emissions data for past reporting years.

	End date of reporting year	Alignment of this reporting period with your financial reporting period	Indicate if you are providing emissions data for past reporting years
	12/30/2024	*Select from:* ☑ Yes	*Select from:* ☑ No

[Fixed row]

(1.4.1) What is your organization's annual revenue for the reporting period?

8200000000

(1.5) Provide details on your reporting boundary.

	Is your reporting boundary for your CDP disclosure the same as that used in your financial statements?
	Select from: ☑ Yes

[Fixed row]

(1.7) Select the countries/areas in which you operate.

Select all that apply

☑ China
☑ India
☑ Italy
☑ Spain
☑ Brazil
☑ Netherlands
☑ United States of America
☑ United Kingdom of Great Britain and Northern Ireland
☑ Germany
☑ Malaysia
☑ Viet Nam
☑ Indonesia
☑ Singapore

(1.8) Are you able to provide geolocation data for your facilities?

	Are you able to provide geolocation data for your facilities?	Comment
	Select from: ☑ No, this is confidential data	*N/A*

[Fixed row]

(1.11) Are greenhouse gas emissions and/or water-related impacts from the production, processing/manufacturing, distribution activities or the consumption of your products relevant to your current CDP disclosure?

Production

(1.11.1) Relevance of emissions and/or water-related impacts

Select from:

☑ Value chain (including own land)

Processing/ Manufacturing

(1.11.1) Relevance of emissions and/or water-related impacts

Select from:

☑ Direct operations

Distribution

(1.11.1) Relevance of emissions and/or water-related impacts

Select from:

☑ Direct operations

Consumption

(1.11.1) Relevance of emissions and/or water-related impacts

Select from:

☑ Yes

[Fixed row]

(1.22) Provide details on the commodities that you produce and/or source.

Palm oil

(1.22.1) Produced and/or sourced

Select from:

☑ Produced and sourced

(1.22.2) Commodity value chain stage

Select all that apply

☑ Production

☑ Processing

☑ Trading

☑ Manufacturing

☑ Retailing

(1.22.4) Indicate if you are providing the total commodity volume that is produced and/or sourced

Select from:

☑ Yes, we are providing the total volume

(1.22.5) Total commodity volume (metric tons)

5368929

(1.22.8) Did you convert the total commodity volume from another unit to metric tons?

Select from:

☑ No

(1.22.11) Form of commodity

Select all that apply

☑ Palm biodiesel

☑ Fresh fruit bunches (FFB)

☑ Refined palm oil
☑ Crude palm oil (CPO)
☑ Palm oil derivatives
☑ Palm kernel meal (PKM)
☑ Palm kernel oil derivatives
☑ Crude palm kernel oil (CPKO)

(1.22.12) % of procurement spend

Select from:
☑ 100%

(1.22.13) % of revenue dependent on commodity

Select from:
☑ 100%

(1.22.14) In the questionnaire setup did you indicate that you are disclosing on this commodity?

Select from:
☑ Yes, disclosing

(1.22.15) Is this commodity considered significant to your business in terms of revenue?

Select from:
☑ Yes

(1.22.19) Please explain

Musim Mas is an integrated palm oil company covering every aspect of the palm oil supply chain, from upstream to downstream operations, including plantations, milling, refining, manufacturing, and commercial and consumer sales. The disclosed total commodity volume corresponds to the CPO sourced by our refineries. [Fixed row]

(1.23) Which of the following agricultural commodities that your organization produces and/or sources are the most significant to your business by revenue?

Cotton

(1.23.1) Produced and/or sourced

Select from:

☑ No

Dairy & egg products

(1.23.1) Produced and/or sourced

Select from:

☑ No

Fish and seafood from aquaculture

(1.23.1) Produced and/or sourced

Select from:

☑ No

Fruit

(1.23.1) Produced and/or sourced

Select from:

☑ No

Maize/corn

(1.23.1) Produced and/or sourced

Select from:

☑ No

Nuts

(1.23.1) Produced and/or sourced

Select from:

☑ No

Other grain (e.g., barley, oats)

(1.23.1) Produced and/or sourced

Select from:

☑ No

Other oilseeds (e.g. rapeseed oil)

(1.23.1) Produced and/or sourced

Select from:

☑ No

Poultry & hog

(1.23.1) Produced and/or sourced

Select from:

☑ No

Rice

(1.23.1) Produced and/or sourced

Select from:

☑ No

Sugar

(1.23.1) Produced and/or sourced

Select from:

☑ No

Tea

(1.23.1) Produced and/or sourced

Select from:

☑ No

Tobacco

(1.23.1) Produced and/or sourced

Select from:

☑ No

Vegetable

(1.23.1) Produced and/or sourced

Select from:

☑ No

Wheat

(1.23.1) Produced and/or sourced

Select from:

☑ No

Other commodity

(1.23.1) Produced and/or sourced

Select from:

☑ Produced and sourced

(1.23.2) % of revenue dependent on this agricultural commodity

Select from:

☑ 100%

(1.23.3) Is this commodity considered significant to your business in terms of revenue?

Select from:

☑ Yes

(1.23.4) Please explain

Commodity: Palm Oil. Musim Mas business activities cover the whole palm oil supply chain including: (1) Managing oil palm plantations to produce Fresh Fruit Bunches. (2) Milling oil palm fruits to produce crude palm oil (CPO) and Palm Kernel (PK). (3) Crushing PK to obtain crude palm kernel oil (PKO). (4) Refining CPO and PKO. (5) Further processing to produce value-added products such as specialty fats, oleochemicals, biodiesel, soap, palm wax, and functional products such as emulsifiers. (6) Manufacturing consumer goods such as cooking oil and personal care products. (7) Shipping and merchandising value-added products to global destinations.
[Fixed row]

(1.24) Has your organization mapped its value chain?

(1.24.1) Value chain mapped

Select from:

☑ Yes, we have mapped or are currently in the process of mapping our value chain

(1.24.2) Value chain stages covered in mapping

Select all that apply

☑ Upstream value chain

(1.24.3) Highest supplier tier mapped

Select from:

☑ Tier 2 suppliers

(1.24.4) Highest supplier tier known but not mapped

Select from:

☑ All supplier tiers known have been mapped

(1.24.6) Smallholder inclusion in mapping

Select from:

☑ Smallholders relevant and included

(1.24.7) Description of mapping process and coverage

COLLECTED INFORMATION: Our traceability systems include traceability to mills (TTM) and traceability to plantation (TTP). VALUE CHAIN MAPPING COVERAGE: Our traceability system has a full coverage of value chain mapping. TOOLS AND METHODS: We currently use three approaches, depending upon the availability of TTP data and mapping of oil palm-planted areas. (1) Village-based risk traceability approach, village boundaries are overlayed with the conservation area and peat moratorium maps. Villages that have overlapping boundaries are considered high risk. If detailed mapping indicates that FFB is produced within no-go areas, the respective supplier must exclude these sources of FFB from the supply chain. (2) Augmented village-based risk traceability approach, similar to the village-based approach, the village boundary data is overlayed with previous data sources on peat and conservation areas and then augmented with maps of palm-planted areas derived from official or open access sources, as well as national forest cover maps of MoEF. Moreover, we will integrate recognized HCV/HCS maps into our risk screening. This approach is very precise but requires the development of dedicated maps of planted palms. (3) Fixed radius approach, this approach is used if (1) and (2) are not applicable. We map overlap between conservation and peat areas within a 50-km radius of the mill. Depending upon the extent of overlaps, mills are classified as low, medium or high risk. This approach is very coarse and only serves as a proxy for potential risk. Once we obtain TTP data, we re-classify risks based on the other two methodologies. Additionally, we use various methods and tools to continuously monitor our supply chain including satellite monitoring, ground-truthing, RADD partnership, NDPE Implementation Reporting Framework (IRF), and Musim Mas's SAT. In 2024, 78% of suppliers have completed the SAT. Through these various approaches, we can then track the progress of suppliers on NDPE commitments and detect (or verify) any non-compliance suppliers. Since 2015, we have achieved 100% traceability to mill with 98% of the total supply is traceable to plantation in 2024. We are on track to achieving 100% traceability to plantation by 2025.

[Fixed row]

(1.24.1) Have you mapped where in your direct operations or elsewhere in your value chain plastics are produced, commercialized, used, and/or disposed of?

	Plastics mapping	Primary reason for not mapping plastics in your value chain	Explain why your organization has not mapped plastics in your value chain
	Select from: ☑ No, and we do not plan to within the next two years	*Select from:* ☑ Other, please specify :n/a	*N/A*

[Fixed row]

(1.24.2) Which commodities has your organization mapped in your upstream value chain (i.e., supply chain)?

Palm oil

(1.24.2.1) Value chain mapped for this sourced commodity

Select from:
☑ Yes

(1.24.2.2) Highest supplier tier mapped for this sourced commodity

Select from:
☑ Tier 2 suppliers

(1.24.2.3) % of tier 1 suppliers mapped

Select from:
☑ 100%

(1.24.2.4) % of tier 2 suppliers mapped

Select from:

☑ 100%

(1.24.2.7) Highest supplier tier known but not mapped for this sourced commodity

Select from:

☑ All supplier tiers known have been mapped for this sourced commodity

[Fixed row]

C2. Identification, assessment, and management of dependencies, impacts, risks, and opportunities

(2.1) How does your organization define short-, medium-, and long-term time horizons in relation to the identification, assessment, and management of your environmental dependencies, impacts, risks, and opportunities?

Short-term

(2.1.1) From (years)

0

(2.1.3) To (years)

2

(2.1.4) How this time horizon is linked to strategic and/or financial planning

In principle, our strategic and financial planning are divided into short-term (the next two years), medium-term (3 to 9 years), and long-term (10 to 30 years). Targets, strategies, and action plans can be found in our annual Sustainability Report. https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/

Medium-term

(2.1.1) From (years)

3

(2.1.3) To (years)

9

(2.1.4) How this time horizon is linked to strategic and/or financial planning

In principle, our strategic and financial planning are divided into short-term (the next two years), medium-term (3 to 9 years), and long-term (10 to 30 years). Targets, strategies, and action plans can be found in our annual Sustainability Report. https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/

Long-term

(2.1.1) From (years)

10

(2.1.2) Is your long-term time horizon open ended?

Select from:

☑ No

(2.1.3) To (years)

30

(2.1.4) How this time horizon is linked to strategic and/or financial planning

In principle, our strategic and financial planning are divided into short-term (the next two years), medium-term (3 to 9 years), and long-term (10 to 30 years). Targets, strategies, and action plans can be found in our annual Sustainability Report. https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/ [Fixed row]

(2.2) Does your organization have a process for identifying, assessing, and managing environmental dependencies and/or impacts?

	Process in place	Dependencies and/or impacts evaluated in this process
	Select from:	*Select from:*

	Process in place	Dependencies and/or impacts evaluated in this process
	☑ Yes	☑ Both dependencies and impacts

[Fixed row]

(2.2.1) Does your organization have a process for identifying, assessing, and managing environmental risks and/or opportunities?

	Process in place	Risks and/or opportunities evaluated in this process	Is this process informed by the dependencies and/or impacts process?
	Select from: ☑ Yes	*Select from:* ☑ Both risks and opportunities	*Select from:* ☑ Yes

[Fixed row]

(2.2.2) Provide details of your organization's process for identifying, assessing, and managing environmental dependencies, impacts, risks, and/or opportunities.

Row 1

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

☑ Forests

☑ Water

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

☑ Downstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.5) Supplier tiers covered

Select all that apply

☑ Tier 1 suppliers

☑ Tier 2 suppliers

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ More than once a year

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Site-specific

☑ Local

☑ Sub-national

☑ National

(2.2.2.12) Tools and methods used

Commercially/publicly available tools

☑ EcoVadis

☑ Global Risk Assessment Services (GRAS)

☑ Sustainability Policy Transparency Toolkit (SPOTT)

☑ WRI Aqueduct

International methodologies and standards

☑ Global Forest Watch

☑ Life Cycle Assessment

Databases

☑ FAO/AQUASTAT

☑ Nation-specific databases, tools, or standards

Other

☑ Jurisdictional/landscape assessment

☑ Materiality assessment

☑ Partner and stakeholder consultation/analysis

☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Acute physical

☑ Drought

☑ Wildfires

☑ Heat waves

☑ Heavy precipitation (rain, hail, snow/ice)

☑ Flood (coastal, fluvial, pluvial, ground water)

☑ Storm (including blizzards, dust, and sandstorms)

Chronic physical

☑ Heat stress

☑ Water stress

☑ Soil degradation

☑ Change in land-use

☑ Declining water quality

☑ Increased levels of environmental pollutants in freshwater bodies

☑ Water quality at a basin/catchment level

☑ Increased severity of extreme weather events

☑ Water availability at a basin/catchment level

☑ Changing temperature (air, freshwater, marine water)

☑ Changing precipitation patterns and types (rain, hail, snow/ice)

Policy

☑ Carbon pricing mechanisms

☑ Changes to international law and bilateral agreements

☑ Changes to national legislation

☑ Regulation of discharge quality/volumes

Market

☑ Availability and/or increased cost of certified sustainable material

☑ Changing customer behavior

☑ Inadequate access to water, sanitation, and hygiene services (WASH)

☑ Uncertainty about commodity origin and/or legality

Reputation

☑ Impact on human health

☑ Negative press coverage related to support of projects or activities with negative impacts on the environment (e.g. GHG emissions, deforestation & conversion, water stress)

☑ Stakeholder conflicts concerning water resources at a basin/catchment level

☑ Stigmatization of sector

Technology

☑ Data access/availability or monitoring systems

☑ Limited access to drought-resistant crop varieties

☑ Transition to lower emissions technology and products

☑ Transition to water efficient and low water intensity technologies and products

Liability

☑ Non-compliance with regulations

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ NGOs

☑ Customers

☑ Employees

☑ Investors

☑ Suppliers

☑ Regulators

☑ Local communities

☑ Indigenous peoples

☑ Water utilities at a local level

☑ Other water users at the basin/catchment level

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

In order to identify, assess, and manage our dependencies, impacts, risks and opportunities, we have a comprehensive tools and methods as follows: (1) Ecovadis: We actively participate in various voluntary benchmarking and public verification programs to assess our sustainability commitments and monitor our progress, including EcoVadis. (2) Global Risk Assessment Services (GRAS): We employ fire-monitoring towers and satellite surveillance to regularly monitor forests for potential fires. One of our tools to monitor fire risk is through GRAS. (3) SPOTT: We participate in SPOTT public disclosure regarding ESG issues. We ranked 10th out of 100 companies in 2024 assessment. (4) WRI Aqueduct: We utilize this tool to analyze whether the commodity we produce, and source originated from water stress area. (5) Global Forest Watch (GFW): Within our deforestation monitoring system, we collect, update, and crosscheck information from public sources such as GeoRSPO, Greenpeace, and GFW. (6) Life Cycle Assessment (LCA): To meet the increasing demands of our customers, we conduct Product Carbon Footprint (PCF) calculations based on LCA approach. (7) National-specific tools and databases: We use tools like National Land Agency (Badan Pertanahan Nasional) to check the legality of supplier concessions. Moreover, we also utilize databases such as FAO for analysis purposes. (8) Jurisdictional/landscape assessment: We have identified Aceh, Riau, South Sumatra, and West Kalimantan as priority landscapes based on our sourcing areas, palm oil volumes, and the significance of NDPE risks in these areas. (9) Musim Mas Self - Assessment Tool (SAT): A self-administered questionnaire developed in line with our sustainability commitments. Suppliers' responses help us identify potential areas of improvement against our policy commitments and develop tailored roadmaps with timebound plans specific to each supplier. (10) Scenario analysis - Taskforce on Climate-related Financial Disclosures (TCFD): A preliminary in-house climate risk assessment to identify and evaluate potential climate-related impacts and mitigation measures at our operations including scenario analysis. (11) Third party assurance: All upstream operations are certified under sustainability certification schemes such as RSPO, ISPO and ISCC certifications which are audited annually and independently by third party auditors. Moreover, our mill's water use intensity, and mills' BOD and COD are assured annually by third party ensuring credibility and transparency in our sustainability reporting. (12) Controlled Purchase Protocol (CPP): A process supporting the resolution of grievances while maintaining business relationships. This protocol is based on three principles: suppliers' willingness to engage, positivity to act, and proof of progress against agreed-upon milestones and criteria. (13) Science Based Target initiative (SBTi): In 2024, our near-term and Net Zero targets have been validated by SBTi. (14) Drought resistance seed varieties: Musim Mas GS Series oil palm seed varieties highlight the potential for higher FFB yields against the backdrop of rising temperatures and harsher growing conditions.
[Add row]

(2.2.7) Are the interconnections between environmental dependencies, impacts, risks and/or opportunities assessed?

(2.2.7.1) Interconnections between environmental dependencies, impacts, risks and/or opportunities assessed

Select from:

☑ Yes

(2.2.7.2) Description of how interconnections are assessed

Musim Mas' Sustainability Policy has served as the principal framework for our sustainability commitments since 2014. The policy covers various sustainability topics including Climate, Forest, and Water aspects that are then integrated into our company-wide risk management process. Assessment on the interconnection between environmental dependencies, impacts, risks and/or opportunities is conducted to be discussed as part of the Board agenda. The Board reviews the assessment result and decides the necessary actions to achieve strategic objectives. After the Board's review, responsibilities and actions are shared and assigned to the relevant departments, which are then tasked with developing action plans and projects to address the risks or gain the opportunity. Implementation of action plans requires Board approval, and progress is reported to the Board to ensure their oversight of the dependencies, impacts, risks and/or opportunities assessed.
[Fixed row]

(2.3) Have you identified priority locations across your value chain?

(2.3.1) Identification of priority locations

Select from:

☑ Yes, we have identified priority locations

(2.3.2) Value chain stages where priority locations have been identified

Select all that apply

☑ Direct operations

☑ Upstream value chain

(2.3.3) Types of priority locations identified

Sensitive locations

☑ Areas important for biodiversity

☑ Areas of high ecosystem integrity

☑ Areas of rapid decline in ecosystem integrity

☑ Areas of limited water availability, flooding, and/or poor quality of water

☑ Areas of importance for ecosystem service provision

Locations with substantive dependencies, impacts, risks, and/or opportunities

☑ Locations with substantive dependencies, impacts, risks, and/or opportunities relating to forests

☑ Locations with substantive dependencies, impacts, risks, and/or opportunities relating to water

☑ Locations with substantive dependencies, impacts, risks, and/or opportunities relating to biodiversity

(2.3.4) Description of process to identify priority locations

Besides our own mills, Musim Mas's refineries also source from third-party mills. Hence, knowing the exact composition of our FFB supply sheds is key to identify priority locations and assess the risk of deforestation and peat development. Using traceability to plantation (TTP) data and overlaying supply shed maps with conservation and peat areas, we categorize all the mills in our supply chain as low, medium, or high risk. Our No Deforestation, No Peat (NDP) Risk Management Framework was released in September 2021 and clearly outlines our approaches to risk identification, assessment, mitigation, and monitoring. For more details, please refer to https://www.musimmas.com/sustainability/responsible-sourcing/risk-management/. For example, one of the identified priority locations is our landscape project in Riau. Riau is the largest provincial contributor to national palm oil production with significant numbers of independent smallholder producers who need counseling and assistance with various agricultural challenges. The province is also home to protected areas such as the Tesso Nilo National Park, Giam Siak Kecil Biosphere Reserve and Zamrud National Park. Musim Mas recognized the need for long-term protection and will continue to contribute through our landscape initiatives in the region. Our landscape projects in Riau are located in Bengkalis, Siak, Pelalawan, and Rokan Hulu. We collaborate with multiple stakeholders including downstream actors and NGOs to add sustainability values to the regions. For more details, please refer to https://www.musimmas.com/sustainability/partnership-collaboration/landscape-approach-and-programs/riau-province/

(2.3.5) Will you be disclosing a list/spatial map of priority locations?

Select from:

☑ No, we have a list/geospatial map of priority locations, but we will not be disclosing it

[Fixed row]

(2.4) How does your organization define substantive effects on your organization?

Risks

(2.4.1) Type of definition

Select all that apply

☑ Qualitative

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ EBITDA

(2.4.3) Change to indicator

Select from:

☑ % decrease

(2.4.4) % change to indicator

Select from:

☑ 11-20

(2.4.6) Metrics considered in definition

Select all that apply

☑ Likelihood of effect occurring

☑ Other, please specify :Intensity, Exposure, Vulnerability

(2.4.7) Application of definition

Musim Mas defines substantive financial impact as impacts that significantly affect and disrupt our supply chains which in turn affect the financial performance of the company. QUANTITATIVE DEFINITION: We identify substantive financial impact in the following ways: (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 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. QUALITATIVE DEFINITION: We classify risk into high, medium, and low using the following metrics: (1) Likelihood: probability of event occurring to Musim Mas. (2) Intensity: degrees of change in the risk drive that might lead to negative impacts on Musim Mas' property/operations. (3) Exposure: business components affected by risk driver. (4) Vulnerability: degree of susceptibility to damage/disruption (production/operational) when exposed to force generated by risk driver with consideration of existing measures. Recognizing the climate-related risks, Musim Mas implements a robust corporate governance and risk management framework to continuously monitor, identify, and manage the arising risks. This framework is managed and aligned with our NDPE and sustainability policies which include no deforestation, no peatland development regardless of its depth, GHG emission reduction, waste management, traceability to plantations, etc.

Opportunities

(2.4.1) Type of definition

Select all that apply

☑ Qualitative

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ EBITDA

(2.4.3) Change to indicator

Select from:

☑ % increase

(2.4.4) % change to indicator

Select from:

☑ 11-20

(2.4.6) Metrics considered in definition

Select all that apply

☑ Other, please specify :Benefit, Accessibility

(2.4.7) Application of definition

Musim Mas defines substantive financial impact as impacts that significantly affect the financial performance of the company. QUANTITATIVE DEFINITION: We identify substantive financial impact in the following ways: (1) Any impact that could potentially inflict a financial benefit of around 10 percent or higher of current EBITDA estimates. (2) Any significant increase in yield (of raw materials) of 20 percent or more, which affects our production cost as well as production volume. QUALITATIVE DEFINITION: We classify opportunity into major, moderate, and minor using the following metrics: (1) Benefit: potential cost savings or increases in revenue as a result of opportunity drivers. (2) Accessibility: amount of effort needed as a prerequisite for opportunity to be accessed.
[Add row]

(2.5) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

(2.5.1) Identification and classification of potential water pollutants

Select from:

☑ Yes, we identify and classify our potential water pollutants

(2.5.2) How potential water pollutants are identified and classified

POLICY, PROCESS, AND STANDARDS: (1) We identify potential water pollutants by source and metric, in line with our Sustainability Policy and compliant with RSPO P&C and PP No. 22/2021. (2) Plantations: The main risk is nutrient runoff from mineral fertilizers. We test estate watercourses for phosphate and nitrate at least once a year. (3) Mills: Untreated POME has high BOD and COD. We treat all POME before discharge. Final effluent is tested at permit-required frequencies (usually monthly) and verified by independent ISO/IEC 17025–accredited labs. (4) We sample at high-risk points (e.g., drainage outlets, estate boundaries, downstream points, mill discharge points) and compare results with legal and RSPO limits. CLASSIFICATION AND FOLLOW UPS: Results are classified as compliant, watch-list (near the limit), or exceedance, based on PP 22/2021 and permit limits. If results are watch-list or exceedance, we take corrective action: (1) Plantations: adjust fertilizer rate/timing, improve runoff control, strengthen riparian buffers. (2) Mills: optimize treatment and re-sample to confirm improvement. INDICATORS: (1) Nutrients: High levels of nutrients such as phosphates and nitrates can lead to eutrophication and algae blooms. (2) Biochemical Oxygen Demand (BOD): High BOD levels indicate organic pollution. (3) Chemical Oxygen Demand (COD): High COD levels can reduce dissolved oxygen and harm aquatic life. [Fixed row]

(2.5.1) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Row 1

(2.5.1.1) Water pollutant category

Select from:

☑ Other nutrients and oxygen demanding pollutants

(2.5.1.2) Description of water pollutant and potential impacts

The wastewater from mills, namely Palm Oil Mill Effluent (POME), contains high BOD (Biochemical Oxygen Demand) and COD (Chemical Oxygen Demand) levels which will negatively impact the watercourses if discharged without treatment. BOD and COD are measures of the amount of oxygen required to oxidize organic substances present in water. Both BOD and COD levels provide valuable information about the level of organic pollutants and the potential for oxygen depletion in aquatic environments. High BOD levels in water indicate a large quantity of organic matter that microorganisms need to decompose. The decomposition process

consumes a significant amount of dissolved oxygen, which can lead to oxygen depletion in water bodies. As a result, aquatic life and water quality can be adversely affected. High COD levels are often associated with nutrient-rich water, which can lead to eutrophication. Eutrophication is the excessive growth of algae and aquatic plants due to an abundance of nutrients like nitrogen and phosphorus. Algal blooms can block sunlight and reduce oxygen availability, further contributing to oxygen depletion and impacting aquatic life.

(2.5.1.3) Value chain stage

Select all that apply

☑ Direct operations

(2.5.1.4) Actions and procedures to minimize adverse impacts

Select all that apply

☑ Beyond compliance with regulatory requirements

☑ Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

(2.5.1.5) Please explain

RISK MANAGEMENT: Following sector-specific processes, such as methane capture, we treat all POME before discharging them. This is conducted to ensure compliance with regulatory requirement as well as manage the risks of the potential impacts. We strictly manage BOD and COD levels and keep them below regulatory thresholds to avoid impacting groundwater and nearby water sources. The Indonesian government regulated the BOD and COD limit for POME discharge as 100 milligrams per litre (mg/L) and 350 mg/L respectively. On a monthly basis, we assess the BOD and COD levels of our mills through independent and accredited lab testing. Moreover, we provide quarterly reports to the relevant environmental services agency on our wastewater quality. SUCCESS MEASUREMENT: As the measured of success, there were no instances of non-compliance regarding BOD and COD at our upstream operations to date. In 2024, our BOD levels for our operations in Sumatra and Kalimantan are 57.99 and 32.61 mg/L respectively which are well below the regulatory threshold of 100 mg/L. As for the COD levels in 2024, the value for our operations in Sumatra and Kalimantan are 200.71 and 139.38 mg/L respectively which are also below the regulatory threshold of 350 mg/L. This indicates our commitment on compliance with regulatory requirements. We also published the BOD and COD figures in our annual sustainability reporting where the figures are verified by third-party assurance.
[Add row]

C3. Disclosure of risks and opportunities

(3.1) Have you identified any environmental risks which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

Climate change

(3.1.1) Environmental risks identified

Select from:

☑ Yes, both in direct operations and upstream/downstream value chain

Forests

(3.1.1) Environmental risks identified

Select from:

☑ Yes, both in direct operations and upstream/downstream value chain

Water

(3.1.1) Environmental risks identified

Select from:

☑ Yes, both in direct operations and upstream/downstream value chain

Plastics

(3.1.1) Environmental risks identified

Select from:

☑ No

(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:

☑ Other, please specify :Not relevant

(3.1.3) Please explain

N/A
[Fixed row]

(3.1.1) Provide details of the environmental risks identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk1

(3.1.1.3) Risk types and primary environmental risk driver

Acute physical

☑ Drought

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Indonesia

(3.1.1.9) Organization-specific description of risk

Musim Mas is a fully integrated palm oil company with all of our oil palm plantations located in Indonesia. The occurrence of extreme weather such as drought and flood can lower the productivity of our operations and disrupt our palm oil sales, which in turn, affects the performance of the company. In 2015, Indonesia experienced the climatic phenomenon of El Nino. The El Nino phenomenon has led to lower rainfalls and higher temperatures contributing to drought stress for crops including oil palm crops.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Disruption to sales

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Likely

(3.1.1.14) Magnitude

Select from:

☑ Medium-high

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Our data suggested that a prolonged drought can lower the oil palm fruits (FFB) yield by approximately 15%. Moreover, prolonged drought may also increase the risk of fire. Other extreme weather occurrences such as floods can affect the fertilizer application schedule, leading to a lower yield. Thus, this poses risks to Musim Mas operations.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

692

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

830

(3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)

692

(3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)

830

(3.1.1.25) Explanation of financial effect figure

Adverse weather conditions can have significant impacts on the productivity of our operations, specifically, prolonged drought or floods that occur over several weeks. Our average CPO yield is estimated to be in the range of 5-6 MT CPO/ha. Hence, taking a reduction of yield by 15% due to extreme weather (i.e. prolonged drought), CPO production can drop to 4.25 - 5.1 MT CPO/ha (or lowered by 0.75 - 0.9 MT CPO/ha). Consequently, taking an average CPO price in 2024 of USD 922 per MT CPO, the potential financial impact varies between USD 692 - USD 830 per hectare. Calculations: (A x B x C), where (A) is the average CPO yield of 5-6 MT CPO/ha, (B) is the average CPO price of USD 922/MT CPO, and (C) is the estimated yield reduction of 15% due to prolonged drought.

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Secure alternative water supply

(3.1.1.27) Cost of response to risk

30000

(3.1.1.28) Explanation of cost calculation

Musim Mas tracks and monitors hotspots within and surroundings our concessions and invest in training firefighters to take action at the first sign of an outbreak. Moreover, we constructed water ponds in our upstream operations areas to be used as water reserves in mitigating the risk of long drought and fire. COST OF RESPONSE: Corresponds to the construction of water ponds in our operations. Calculation: (A x B), where (A) is the estimated cost of a single water pond of USD 1,000 and (B) is the approximated number of water ponds constructed in our operations. This result in a total cost of USD 30,000. The actual construction cost may fluctuate depending on the location, soil type, and size of each water pond.

(3.1.1.29) Description of response

As stipulated in our Sustainability Policy (covering 2020-2025), we are committed to no deforestation of HCS forests, no conversion of HCV areas, and no new developments on peatlands (regardless of depth) after 31 Dec 2015. Best management practices and operating procedures are carried out to alleviate the impacts of extreme weather such as drought, the practices with respective timescales are as follows: (1) Construct water ponds in our upstream operations areas to be used as water reserves in mitigating the risk of long drought and fire (no end date). (2) Satellite monitoring such as the MODIS, NOAA, and GRASS is used to monitor hotspots at and around our concessions with monthly reports available (no end date). In 2024, our monitoring system identified 334 hotspots within our concessions, which took place during the dry season. Of these, only 22 (7%) turned out to be fires, affecting approximately 14.28 hectares of unplanted area. (3) Provide training and equip firefighting teams to take action at the first sign of an outbreak as well as install fire breaks to slow the spread, should a fire occur (no end date). (4) Launch a Fire Free Village Programme (FFVP) to engage and educate local communities on fire risks that may arise due to prolonged drought (no end date). As of December 2024, our FFVP covered 76 villages spanning over 498,500 hectares and has conducted 140 trainings in the communities with 33 villages awarded for being fire-free. These initiatives are still ongoing in 2024 (no end date). (5) Utilize the dried decanter solids, boiler ash, and POME produced at mills as organic fertilizer and land application respectively which improves the soil nutrition and moisture retention capability to ameliorate the drought effects (no end date).

Forests

(3.1.1.1) Risk identifier

Select from:

☑ Risk2

(3.1.1.2) Commodity

Select all that apply

☑ Palm oil

(3.1.1.3) Risk types and primary environmental risk driver

Market

☑ Changing customer behavior

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Indonesia

(3.1.1.9) Organization-specific description of risk

With the growing international agreements concerning deforestation, the implementation of stricter International and/or national regulations becomes inevitable. For example, the decision of the international market to pose stricter guidelines on the import of palm oil has impacted the market. Consequently, more customers prefer sustainably certified palm oil products and derivatives.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Increased compliance costs

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Likely

(3.1.1.14) Magnitude

Select from:

☑ Medium-high

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

With the variability of international regulations and decisions imposed on the palm oil sector, the financial impact on our business varies accordingly. Failure to comply may result in fines and/or loss of market. Moreover, rather than self-declarations by companies, independent third parties' verifications will be required in terms of demonstrating credibility and transparency leading to an increase in compliance costs. Thus, this poses a risk to Musim Mas.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

95000

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

95000

(3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)

95000

(3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)

95000

(3.1.1.25) Explanation of financial effect figure

Financial impact due to changes in customers' behavior and preferences could range widely from mild to severe. For example, if the European market shifts its preferences solely to demand more sustainable and certified palm oil products, then the financial impact will be milder in comparison to if the palm oil products are to be rejected completely. The impact on stricter sustainable demand is only limited to the cost needed in fulfilling the third-party verifications (including the operational cost to comply with the certification scheme standards) and supplier engagement costs, whereas the latter, the financial impact will be severe due to the loss of our major market. The certification cost per unit to be able to enter the European Market i.e. ISCC is 5000. In 2024, 19 of our business units have been ISCC certified. Calculation: (A x B), where (A) is the certification cost per unit of USD 5000 and (B) is the total certified units of 19. Hence, the financial impact corresponds to the estimated certification costs of MMG operations is USD 95,000. All our ISCC certificates are available publicly on the ISCC website https://www.iscc-system.org/certification/certificate-database/valid-certificates/

(3.1.1.26) Primary response to risk

Compliance, monitoring and targets

☑ Implementation of environmental best practices in direct operations

(3.1.1.27) Cost of response to risk

60000000

(3.1.1.28) Explanation of cost calculation

To ensure compliance and reduction in our GHG emissions, we have installed 17 methane capture facilities in our mills with a total of 490,885 MT CO2e emissions avoided in 2024. COST OF RESPONSE: Corresponds to the total cost for the methane capture installation in our operations. Calculation: (A x B), where (A) is the capital cost of one methane capture plant of USD 3.5 million and (B) is the total methane capture built of 17. This result in the total cost for methane capture installation in our operations about USD 60 million. Full information on our sustainability practices can be found at https://www.musimmas.com/sustainability/policies-and-roadmap/sustainability-policy/ and https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/

(3.1.1.29) Description of response

To prepare for the new possible requirements of regulations and standards, we take measures with respective timescales as follows: (1) Participates in working groups of various certification schemes to maintain compliance with the up-and-coming standards (no end date). For example, Musim Mas actively participates in RSPO working groups. (2) Achieves and maintains 100% sustainability certification schemes such as RSPO, ISCC, MSPO, ITSNC, and ISPO in our operations (no end date). These will serve as a credible benchmark in our operation to keep track of our sustainability progress. In 2024, all 15 integrated mills and 12 mills are RSPO and ISCC certified respectively. (3) Promotes traceability tools such as Musim Mas Self-Assessment Tool to engage with suppliers. As of 2024, 78% of

suppliers have completed the form. We are on track to achieve 100% of suppliers completing the SAT by 2025. (4) Participates in various known public assessment programs including CDP and Ecovadis (no end date). (5) Implements best agricultural practices and pledges to no deforestation, no peatland development regardless of its depth, emission reduction, waste management, traceability to plantations, etc (no end date). (6) Collaborate with multiple stakeholders in sustainability initiatives to assist surrounding communities and communicate our brand values (no end date).

Water

(3.1.1.1) Risk identifier

Select from:

☑ Risk3

(3.1.1.3) Risk types and primary environmental risk driver

Acute physical

☑ Drought

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Upstream value chain

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Indonesia

(3.1.1.7) River basin where the risk occurs

Select all that apply

☑ Other, please specify :Sumatra and Kalimantan

(3.1.1.9) Organization-specific description of risk

The occurrence of extreme weather such as drought may impact the supply chain activity as well as productivity, which in turn, disrupts our supply chain arrangement and supply of raw materials. For example, in 2015 Indonesia experienced the climatic phenomenon of El Nino. The El Nino phenomenon has led to lower rainfalls and higher temperatures contributing to drought stress and fire incidents for agricultural crops including oil palm crops. A prolonged drought can lower the FFB yield by approximately 15%. Furthermore, approximately 90% of our CPO processed originated from third-party suppliers where the sourcing areas are located in Indonesia.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Disruption in upstream value chain

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Likely

(3.1.1.14) Magnitude

Select from:

☑ Medium-high

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Our suppliers' yield can also be affected by the occurrence of extreme weather, thus, posing risks to Musim Mas as it may create a disruption to the supply of raw materials needed in our production. Moreover, this situation may also affect the ability of the suppliers to get back to the normal condition as they will require more time and resources to recover from the prolonged drought effects that may last up to 2 to 3 years.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

2000

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

2300

(3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)

2000

(3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)

2300

(3.1.1.25) Explanation of financial effect figure

Our mills have a Fresh Fruit Bunch (FFB) intake target to keep the production running based on the mill capacity that are ranging from 45 tons to 90 tons FFB / hour. Thus, it is important to meet the FFB intake target to fulfil the production capacity. The constraint in FFB supply due to extreme weather will trigger the need to find another source of FFB to fulfil the target. The financial impact corresponds to the estimated cost needed to find other alternative suppliers and to make sure they are aligned with our sustainability commitment before we can decide to include them in our supply chain. The cost includes finding new suppliers, engagement with suppliers, training, and socialization about our NDPE as well as other Sustainability commitments that must be adhered to prior to sending the raw materials to Musim Mas. Thus, the financial impact is estimated at around 2000-2300 per engagement event.

(3.1.1.26) Primary response to risk

Engagement

☑ Engage with suppliers

(3.1.1.27) Cost of response to risk

500

(3.1.1.28) Explanation of cost calculation

Engagement with smallholders can lead to an increase in yields, better access to national and international markets, improvement in livelihoods, and a reduction in the risk of land conversion. COST OF RESPONSE: Corresponds to training and workshop on Good Agricultural Practices (GAP) which is estimated to be around 500 per training event. The cost can vary depending on the number of participating suppliers.

(3.1.1.29) Description of response

In line with our Sustainability Policy - Pillar 1, Musim Mas is committed to maintaining good relations with our suppliers (no end date). Engagement with smallholders can lead to an increase in yields, better access to national and international markets, improvement in livelihoods, and a reduction in the risk of land conversion. Our Smallholders Program embeds valuable skills within the smallholders and communities through the Smallholders Hub approach. Instead of training the smallholders directly, we build greater capacity by training local government agricultural officers, also known as Village Extension Officers (VEOs). We train VEOs on Best Management Practices (BMP) including Good Agricultural Practices (GAP) and NDPE principles. These officers then share their expertise with independent smallholder farmers and equip them with the knowledge needed for responsible farming. In 2024, we trained 25 VEOS, increasing their number across all hubs from 460 in 2023 to 485. Subsequently, the number of smallholders trained by VEOs increased by 41%, from 6,723 in 2023 to 9,479 in 2024. We will continue to educate and provide training to our smallholders (no end date). To ensure credibility that Musim Mas's supply chain is in full and beyond compliance with the highest sustainability standards, Musim Mas encourages smallholders to obtain certification schemes such as RSPO and ISPO. As of 2024, approximately 4,654 and 2,961 independent smallholders have been RSPO and ISPO certified respectively. We will continue to engage and socialize the importance of sustainability certification to relevant smallholders (no end date).
[Add row]

(3.1.2) Provide the amount and proportion of your financial metrics from the reporting year that are vulnerable to the substantive effects of environmental risks.

Climate change

(3.1.2.1) Financial metric

Select from:
☑ Revenue

(3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

60000000

(3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:

☑ Less than 1%

(3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

100000000

(3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:

☑ 1-10%

(3.1.2.7) Explanation of financial figures

For transitional risk: The financial metric corresponds to product(s) that could be affected following regulatory requirement changes. Taking an average price of the affected product(s) in 2024, the percentage of financial metric vulnerable to transitional risk is estimated to be roughly less than 1%. For physical risk: The financial metric is estimated using the estimated reduction of yield by 15% due to physical risk (i.e. prolonged drought). Taking an average CPO price in 2024 of USD 922 per MT CPO and historical CPO yield, the percentage of financial metric vulnerable to physical risk is estimated to be roughly 1-10%.

Forests

(3.1.2.1) Financial metric

Select from:

☑ Revenue

(3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

60000000

(3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:

☑ Less than 1%

(3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

100000000

(3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:

☑ 1-10%

(3.1.2.7) Explanation of financial figures

For transitional risk: The financial metric corresponds to product(s) that could be affected following regulatory requirement changes. Taking an average price of the affected product(s) in 2024, the percentage of financial metric vulnerable to transitional risk is estimated to be roughly less than 1%. For physical risk: The financial metric is estimated using the estimated reduction of yield by 15% due to physical risk (i.e. prolonged drought). Taking an average CPO price in 2024 of USD 922 per MT CPO and historical CPO yield, the percentage of financial metric vulnerable to physical risk is estimated to be roughly 1-10%.

Water

(3.1.2.1) Financial metric

Select from:

☑ Revenue

(3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

300000

(3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:

☑ Less than 1%

(3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

100000000

(3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:
☑ 1-10%

(3.1.2.7) Explanation of financial figures

For transitional risk: The financial metric corresponds to estimated certification cost to meet market demand. Taking a certification cost of USD 11,500 per unit, the percentage of financial metric vulnerable to transitional risk is estimated to be less than 1%. For physical risk: The financial metric is estimated using the estimated reduction of yield by 15% due to physical risk (i.e. prolonged drought). Taking an average CPO price in 2024 of USD 922 per MT CPO and historical CPO yield, the percentage of financial metric vulnerable to physical risk is estimated to be roughly 1-10%.
[Add row]

(3.2) Within each river basin, how many facilities are exposed to substantive effects of water-related risks, and what percentage of your total number of facilities does this represent?

Row 1

(3.2.1) Country/Area & River basin

Indonesia
☑ Other, please specify :Sumatra and Kalimantan

(3.2.2) Value chain stages where facilities at risk have been identified in this river basin

Select all that apply

☑ Direct operations

(3.2.3) Number of facilities within direct operations exposed to water-related risk in this river basin

1

(3.2.4) % of your organization's total facilities within direct operations exposed to water-related risk in this river basin

Select from:

☑ 26-50%

(3.2.10) % organization's total global revenue that could be affected

Select from:

☑ Less than 1%

(3.2.11) Please explain

The number of facilities disclosed correspond to our aggregated mills' operations. River is an important aspect as the source of water for the operations as well as for the surrounding communities as they depend on the river as well. Prior to the establishment of the operational units, the source of water or river is assessed through a series of assessments, such as the Environmental Impact Assessment, High Conservation Value assessment as well as Social Impact Assessment. Through these assessments, the company identifies the river basins surrounding the operational units, the impact of companies' existence on the river basins and surrounding communities, and the methodology to maintain and enhance the river basins. Furthermore, the company conducted annual stakeholder consultations together with the local government and the surrounding communities to brainstorm and identify any issues, if any, and efforts for monitoring and management of river and riparian buffer zone. During stakeholder consultation, we emphasized and socialized the importance of the river area, prohibiting littering in the river and buffer zone area by installing signboards, and prohibiting the use of poison or explosives to catch fish. Similarly, companies have policies to avoid chemical run-off to the water body and we also pledge to zero wastewater discharge to the water body. As instructed by the regulation, the company conducted regular tests to ensure that company's activities do not harm the environment and the water body. The company's effort also aims to avoid and minimize the occurrence of extreme weather such as drought and flood which can lower the productivity of our operations and disrupt our palm oil sales, which in turn, affects the performance of the company. In 2015, Indonesia experienced the climatic phenomenon of El Nino. The El Nino phenomenon has led to lower rainfalls and higher temperatures contributing to drought stress for agricultural crops including oil palm crops. A prolonged drought can lower the FFB yield by approximately 15%. Moreover, prolonged drought may also increase the risk of fire. Other extreme weather occurrences such as floods can affect the fertilizer application schedule, leading to a lower yield. With the lower yield, this may cause disruption in the supply chain.
[Add row]

(3.3) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

	Water-related regulatory violations	Comment
	Select from: ☑ No	*Musim Mas complies with all relevant regulatory standards.*

[Fixed row]

(3.5) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Select from:

☑ Yes

(3.5.1) Select the carbon pricing regulation(s) which impact your operations.

Select all that apply

☑ Indonesia ETS

☑ Netherlands carbon tax

(3.5.2) Provide details of each Emissions Trading Scheme (ETS) your organization is regulated by.

Indonesia ETS

(3.5.2.1) % of Scope 1 emissions covered by the ETS

0

(3.5.2.2) % of Scope 2 emissions covered by the ETS

0

(3.5.2.3) Period start date

12/31/2023

(3.5.2.4) Period end date

12/30/2024

(3.5.2.5) Allowances allocated

0

(3.5.2.6) Allowances purchased

0

(3.5.2.7) Verified Scope 1 emissions in metric tons CO2e

0

(3.5.2.8) Verified Scope 2 emissions in metric tons CO2e

0

(3.5.2.9) Details of ownership

Select from:

☑ Facilities we own and operate

(3.5.2.10) Comment

The Indonesian government has pledged climate commitments to peak GHG emissions by 2030. The government has announced its carbon trading exchange platform and implemented the cap-and-trade mechanisms. Presently, the mandatory sector to implement the mechanisms is coal-fired power plants. Upcoming regulations will be enforced for other sectors in stages.
[Fixed row]

(3.5.3) Complete the following table for each of the tax systems you are regulated by.

Netherlands carbon tax

(3.5.3.1) Period start date

12/31/2023

(3.5.3.2) Period end date

12/30/2024

(3.5.3.3) % of total Scope 1 emissions covered by tax

0

(3.5.3.4) Total cost of tax paid

0

(3.5.3.5) Comment

Our operations are not included among the high-emissions goods (cement, steel, aluminium, fertilisers, electricity, and hydrogen). Accordingly, no direct carbon tax applies to us. However, energy producers in the Netherlands are subject to carbon pricing, and these costs are typically passed through to end-users via electricity prices, resulting in an indirect carbon cost for our operations.
[Fixed row]

(3.5.4) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

To help limit global warming to 1.5°C, the Government of Indonesia has set a Nationally Determined Contribution (NDC) and is advancing carbon-pricing policies for industry, which are expected to take effect for the palm oil sector within the next three years (around 2027), subject to implementing regulations. In anticipation, we are executing strategies to align our business with a 1.5°C pathway. Together with 13 leading agribusiness companies, Musim Mas endorsed the Agriculture Sector Roadmap to 1.5°C at COP27, focusing on reducing emissions from land-use change. This action builds on our COP26 commitments, is anchored in our No Deforestation, No Peat, No Exploitation (NDPE) policy, and accelerates deforestation-free efforts in ways that support food security, economic development, and

smallholder livelihoods. In 2024, Musim Mas committed to achieve net zero by 2050, aligning with climate science and the Science Based Targets initiative (SBTi)—a major milestone in our long-term decarbonisation journey. Among our key initiatives, third-party certification schemes such as RSPO, ISCC, and ISPO remain critical to ensuring the credibility and transparency of our sustainability practices. We will continue to pursue and maintain these certifications across our operations. We also refresh our Sustainability Policy at least every five years to reflect evolving standards and requirements; the policy applies to all Musim Mas operations and business units worldwide. To maintain strong relationships with customers and stakeholders, we communicate progress, milestones, and targets through our annual sustainability reporting and through partnerships that apply a landscape approach in Aceh and Riau (e.g., Siak and Pelalawan).

(3.6) Have you identified any environmental opportunities which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

	Environmental opportunities identified
Climate change	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized
Forests	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized
Water	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized

[Fixed row]

(3.6.1) Provide details of the environmental opportunities identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.6.1.1) Opportunity identifier

Select from:
☑ Opp1

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Markets

☑ Increased demand for certified and sustainable materials

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ Indonesia

(3.6.1.8) Organization specific description

With the growing international agreements concerning climate change and GHG emission reduction commitment, the implementation of stricter International and/or national regulations becomes inevitable. Sustainability schemes such as RSPO, ISCC, ITSNC, and ISPO are conducted independently in our operations, thus, ensuring proper implementation and compliance with the principles and criteria of the respective sustainability certification schemes. Our operations are audited and benchmarked annually against the principles and guidelines of the schemes. Dedicated teams are established to ensure continued adherence to the respective schemes. Regular training and workshops are also conducted to ensure adherence to the latest principle and criteria of the schemes. Moreover, Musim Mas participates in many public assessments and benchmarking programs including CDP, Ecovadis, SPOTT, and PROPER to communicate and rate our sustainability commitments, achievements, and progress at the highest level.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues resulting from increased demand for products and services

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

☑ Long-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Likely (66–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Following the increasing demand for sustainable products, there is an opportunity for Musim Mas to better market products that fulfill the emission guidelines and are sustainably certified. In line with our sustainability policy, we will maintain and improve our brand value through sustainability certifications and disclosure.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ Yes

(3.6.1.19) Anticipated financial effect figure in the medium-term - minimum (currency)

9000000

(3.6.1.20) Anticipated financial effect figure in the medium-term - maximum (currency)

9000000

(3.6.1.21) Anticipated financial effect figure in the long-term - minimum (currency)

9000000

(3.6.1.22) Anticipated financial effect figure in the long-term – maximum (currency)

9000000

(3.6.1.23) Explanation of financial effect figures

As more customers transitioning toward sustainable practices, the preferences in the market toward sustainable labeled products have increased. It is assumed that the increase in brand value is in line with the potential increase in sales of certified palm oil. FINANCIAL IMPACT FIGURE: Corresponds to the annual increase of revenue due to the increase in certified palm oil sales. The financial impact figure is derived from (A x B), where (A) is the estimated year-to-year increase in sales of certified palm oil of 2% and (B) is the estimated revenue from sales of certified palm oil in 2024 of USD 450 million. This results in a potential financial impact of USD 9 million.

(3.6.1.24) Cost to realize opportunity

95000

(3.6.1.25) Explanation of cost calculation

The certification cost per unit to be able to enter the European Market i.e. ISCC is USD 5,000. In 2024, 19 of our business units have been ISCC certified. COST OF RESPONSE: Corresponds to the estimated total certification costs for all of our processing operations. The figure of USD 95,000 is derived from the certification cost per unit (USD 5000) multiplied by the total units (19). All our ISCC certificates are available publicly on the ISCC website https://www.iscc-system.org/certification/certificate-database/valid-certificates/.

(3.6.1.26) Strategy to realize opportunity

To seize this opportunity, Musim Mas takes actions with respective timescale as follows: (1) Invests and takes technological approaches to reduce GHG emissions such as methane capture plant installation (no end date). As of December 2024, a total of 17 methane capture plants are operated in our mills. (2) Adopts and maintains various well-recognized certification and verification schemes in our operations (no end date) such as RSPO, ISCC, and ISPO to track and rate our sustainability progress including GHG emissions. Since 2021, we continue to maintain RSPO certification for all of our 15 integrated mills. (3) Publicly disclose our annual progress, milestones, and targets of our sustainability commitments and practices through Musim Mas websites, stakeholders' meetings, and Sustainability Report according to GRI standards (no end date). For more information, please refer to https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/ (4) Partner and collaborate with other stakeholders to engage in landscape approaches to mitigate the risk of NDPE in our supply chains and communicate our brand values (no end date). For instance, Musim Mas collaborates with the Sustainable Trade Initiative, the Government of Aceh, Forum Konservasi Leuser, Pusat Unggulan Perkebunan Lestari, downstream actors (e.g. General Mills, Nestle, AAK), local civil society organizations (Earthqualizer & Earthworm Foundation) and suppliers, including those outside our supply chain to have Aceh Tamiang verified as a deforestation-free and traceable commodities producer. (5) Achieves full traceability to plantation throughout our supply chain. Presently, we have achieved 100% traceability to mill since 2015 and 98% traceability to plantation as of December 2024. We are on track to achieve 100% full traceability to plantation by 2025. (6) Promote our sustainability practices and brand through public assessments (no end date). We actively participate in various voluntary benchmarking and public verification programs to assess our sustainability commitments and monitor our progress, including SPOTT. In 2024, we ranked 10th out of 100 companies in SPOTT assessment.

Forests

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp2

(3.6.1.2) Commodity

Select all that apply

☑ Palm oil

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Markets

☑ Increased brand value

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ Indonesia

(3.6.1.8) Organization specific description

To achieve real transformation on the ground, Musim Mas look beyond our own supply chains and work together with all stakeholders across the palm oil sector to tackle issues that impact both our industry and the global landscape at large. For example, Musim Mas partners with AAK and Nestlé to address deforestation outside of concession areas in Aceh, Indonesia. AAK and Nestlé have pledged to fund the first two years of the five-year program, reaching out to approximately 1,000 oil palm independent smallholders within two years and enrolling them in Musim Mas' smallholders program supported by Smallholders Hub. These collaborations and partnerships are not only beneficial to the environment (i.e. NDPE commitments) but also to the livelihood of our smallholders. Musim Mas will continue to demonstrate leadership in the space and promote our brand as a sustainable conscience company.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues resulting from increased demand for products and services

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

☑ Medium-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Likely (66–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

With the growing focus on climate change and deforestation, sustainability metrics have become important for companies to source sustainably and shared that responsibility. As such, increasing brand value through sustainability certifications and environmental disclosure is beneficial for our business performance. Hence, there is an opportunity for Musim Mas to increase our brand value by demonstrating sustainability commitments, progress, and achievements in our operations and supply chains which lead to an increase in sales volume.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ Yes

(3.6.1.17) Anticipated financial effect figure in the short-term - minimum (currency)

9000000

(3.6.1.18) Anticipated financial effect figure in the short-term – maximum (currency)

9000000

(3.6.1.19) Anticipated financial effect figure in the medium-term - minimum (currency)

9000000

(3.6.1.20) Anticipated financial effect figure in the medium-term - maximum (currency)

9000000

(3.6.1.23) Explanation of financial effect figures

As more customers transitioning toward sustainable practices, the preferences in the market toward sustainable labeled products have increased. It is assumed that the increase in brand value is in line with the potential increase in sales of certified palm oil. FINANCIAL IMPACT FIGURE: Corresponds to the annual increase of revenue due to the increase in certified palm oil sales. The financial impact figure is derived from (A x B), where (A) is the estimated year-to-year increase in sales of certified palm oil of 2% and (B) is the estimated revenue from sales of certified palm oil in 2024 of USD 450 million. This results in a potential financial impact of USD 9 million.

(3.6.1.24) Cost to realize opportunity

250000

(3.6.1.25) Explanation of cost calculation

We have entered a partnership with General Mills, Nestlé, and AAK to address deforestation outside of palm oil concession areas in Aceh. The target of the program will positively impact some 2,000 smallholders in two years. COST OF RESPONSE: The cost to realize the opportunity corresponds to the annual estimated funding in two locations in the Aceh landscape. The cost of USD 250,000 is derived from the estimation of funding for each location per year (USD 125,000) multiplied by the number of locations (2). The fund will be used to conduct Musim Mas' smallholder program where government extension officers will be trained in good agricultural practices and NDPE.

(3.6.1.26) Strategy to realize opportunity

To seize this opportunity, Musim Mas takes actions with respective timescale as follows: (1) Partner and collaborate with other stakeholders to engage in landscape approaches to mitigate the risk of NDPE in our supply chains and communicate our brand values (no end date). In 2024, we entered into a public–private partnership with the Danish Government, Preferred by Nature, Ferrero, Sustainable Agriculture Network (SAN), and Agriterra. The partnership kicked off in May 2025 and aims to

build the capacity of independent smallholders by strengthening farmer groups, improving access to sustainable markets, and supporting the adoption of NDPE-compliant practices through targeted training, coaching, and collaboration with local cooperatives to boost yields responsibly while preserving forests. (2) Adopts and maintains various well-recognized certification schemes in our operations (no end date) such as RSPO, ISCC, and ISPO to track and rate our sustainability progress including GHG emissions. Since 2021, we continue to maintain RSPO certification for all of our 15 integrated mills. (3) Maintain 100% completion of NDPE IRF profiles for Musim Mas refineries. (4) Publicly disclose our annual progress, milestones, and targets of our sustainability commitments and practices through Musim Mas websites, stakeholders meetings, and Sustainability Report according to GRI standards (no end date). For more information, please refer to https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/ (5) Achieves full traceability to plantation throughout our supply chain. Presently, we have achieved 100% traceability to mill since 2015 and 98% traceability to plantation (TTP) as of December 2024. We are on track to achieve 100% TTP by 2025. (6) Promote traceability tools such as the Self-Assessment Tool to assess suppliers' profiles including NDPE risks at the mill level. In 2024, 78% of our suppliers have completed the SAT. By 2025, we aim to engage with 100% of our suppliers on NDPE requirements and complete the SAT. (7) Promote our sustainability practices and brand through public assessments (no end date). We actively participate in various voluntary benchmarking and public verification programs to assess our sustainability commitments and monitor our progress, including SPOTT. In 2024, we ranked 10th out of 100 companies in SPOTT assessment.

Water

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp3

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Resource efficiency

☑ Other resource efficiency opportunity, please specify :Improved water efficiency in operations

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ Indonesia

(3.6.1.6) River basin where the opportunity occurs

Select all that apply

☑ Other, please specify :Sumatra and Kalimantan

(3.6.1.8) Organization specific description

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. All water withdrawn from the water source (i.e. river) will be sent to the water treatment plant and the water volume is recorded and monitored using flow meter. Furthermore, the volume of water is then input into the company program system. The verification is conducted by the PIC to check whether the data has been inputted correctly. Other improvement measures include but are not limited to enhancing the efficiency of the unit's processes and machines to maintain the quality of water.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Reduced direct costs

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

☑ Medium-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Likely (66–100%)

(3.6.1.12) Magnitude

Select from:

☑ Low

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

By increasing our operations' water efficiency, we are not only reducing the water consumption, but also reducing cost.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ Yes

(3.6.1.17) Anticipated financial effect figure in the short-term - minimum (currency)

2

(3.6.1.18) Anticipated financial effect figure in the short-term – maximum (currency)

4

(3.6.1.19) Anticipated financial effect figure in the medium-term - minimum (currency)

2

(3.6.1.20) Anticipated financial effect figure in the medium-term - maximum (currency)

4

(3.6.1.23) Explanation of financial effect figures

Prior to the pressure-based methodology, we demanded approximately 200 tonnes of water for mills' backwashing purposes daily. Utilising the pressure-based methodology, we can save approximately 5-10% of the backwash water used or 10-20 tonnes of water per day. FINANCIAL IMPACT FIGURE: Derived from the amount of water savings (10-20 tonnes/day) multiplied by the domestic pricing of water per tonne (0.2/tonne) resulting in 2 - 4/day per mill.

(3.6.1.24) Cost to realize opportunity

4500

(3.6.1.25) Explanation of cost calculation

Following our sustainability policy, we are committed to water accountability, with respect to water quantity and quality, as well as equity (extraction, use, treatment and discharge, and management of riparian areas and water sources according to best practices). Our mills' operations have set target to maintain mill water usage

intensity to be below 1.2 m3/MT FFB processed. In 2024, our average mill water usage intensity was 1.13 m3/MT FFB. To ensure credibility and transparency in our communication, we conduct third-party verification on our mill water usage intensity annually. COST OF RESPONSE: The cost to realize the opportunity corresponds to the cost in conducting the annual third-party verification in 2024.

(3.6.1.26) Strategy to realize opportunity

Musim Mas Group is a fully integrated palm oil corporation. In our mills' operations, we monitor and compile our daily water usage and processed Fresh Fruit Bunch (FFB) data into our in-house program. The water usage is continuously measured using flow meters while the processed FFB data is continuously measured using weighbridges. Through these collected data, we can calculate the water use intensity (m3 water use/ton of fresh fruit bunch). Moreover, we have adopted comprehensive measures to preserve surface water and groundwater quality. We monitor water-related risks through the World Resources Institute's Aqueduct tool and are mindful to not locate our upstream operations in water-stressed areas.
[Add row]

(3.6.2) Provide the amount and proportion of your financial metrics in the reporting year that are aligned with the substantive effects of environmental opportunities.

Climate change

(3.6.2.1) Financial metric

Select from:
☑ Revenue

(3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

450000000

(3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:
☑ 1-10%

(3.6.2.4) Explanation of financial figures

The financial metric corresponds to the demand for sustainable products which is estimated from the sales of certified palm oil in 2024. The percentage of financial metric aligned with the opportunity is estimated to be in the range of 1-10%.

Forests

(3.6.2.1) Financial metric

Select from:

☑ Revenue

(3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

450000000

(3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:

☑ 1-10%

(3.6.2.4) Explanation of financial figures

The financial metric corresponds to the demand for sustainable products which is estimated from the sales of certified palm oil in 2024. The percentage of financial metric aligned with the opportunity is estimated to be in the range of 1-10%.

Water

(3.6.2.1) Financial metric

Select from:

☑ Revenue

(3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

450000000

(3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:

☑ 1-10%

(3.6.2.4) Explanation of financial figures

The financial metric corresponds to the demand for sustainable products which is estimated from the sales of certified palm oil in 2024. The percentage of financial metric aligned with the opportunity is estimated to be in the range of 1-10%.
[Add row]

C4. Governance

(4.1) Does your organization have a board of directors or an equivalent governing body?

(4.1.1) Board of directors or equivalent governing body

Select from:

☑ Yes

(4.1.2) Frequency with which the board or equivalent meets

Select from:

☑ Quarterly

(4.1.3) Types of directors your board or equivalent is comprised of

Select all that apply

☑ Executive directors or equivalent

(4.1.4) Board diversity and inclusion policy

Select from:

☑ Yes, and it is publicly available

(4.1.5) Briefly describe what the policy covers

Musim Mas is committed to respecting diversity and promoting gender equality. This is outlined in our Policy and applied in our Board. Led by our Executive Chairman, who also serves as our Chief Executive Officer (CEO), the Board comprises three members as of January 2025. The Musim Mas Board considers 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.

(4.1.6) Attach the policy (optional)

(4.1.1) Is there board-level oversight of environmental issues within your organization?

	Board-level oversight of this environmental issue
Climate change	*Select from:* ☑ Yes
Forests	*Select from:* ☑ Yes
Water	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.1.2) Identify the positions (do not include any names) of the individuals or committees on the board with accountability for environmental issues and provide details of the board's oversight of environmental issues.

Climate change

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply
☑ Director on board

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Individual role descriptions

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Reviewing and guiding annual budgets
☑ Overseeing and guiding scenario analysis
☑ Overseeing the setting of corporate targets
☑ Monitoring progress towards corporate targets
☑ Approving corporate policies and/or commitments
☑ Overseeing reporting, audit, and verification processes
☑ Monitoring the implementation of a climate transition plan
☑ Overseeing and guiding the development of a business strategy
☑ Overseeing and guiding acquisitions, mergers, and divestitures
☑ Monitoring supplier compliance with organizational requirements
☑ Monitoring compliance with corporate policies and/or commitments
☑ Overseeing and guiding the development of a climate transition plan
☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities
☑ Overseeing and guiding public policy engagement
☑ Reviewing and guiding innovation/R&D priorities
☑ Approving and/or overseeing employee incentives
☑ Overseeing and guiding major capital expenditures
☑ Monitoring the implementation of the business strategy

(4.1.2.7) Please explain

At Musim Mas, sustainability governance is embedded in our core corporate identity. Our Board of Directors oversee critical sustainability and ESG issues, including climate-related risks and opportunities, ensuring they are embedded into our overall business strategies and decision-making processes. The Board convene meetings to discuss ESG issues and assess the Group's sustainability performance including the progression of all ongoing projects and matters, such as GHG emission reduction to achieve Net Zero. Between meetings, the Board receives reports highlighting key issues, grievances, and critical concerns raised by stakeholders. The outcome of this discussion includes plans of action, risk management policies, annual budgets, business plans and so on. Consequently, the results of discussions and action plans will be shared and communicated throughout all relevant departments, ensuring the messages are conveyed to all layers of workers. Example of climate related outcome includes signing up to the Agriculture Sector Roadmap to 1.5C at COP27 and committing and developing emissions reduction targets following the SBTi framework to set near-term (2030) and net-zero (2050) targets. In alignment with the GRI reporting standard, we publicly communicate our annual sustainability progress through Sustainability Report (https://www.musimmas.com/sustainability-report/).

Forests

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Director on board

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Individual role descriptions

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Reviewing and guiding annual budgets

☑ Overseeing and guiding public policy engagement

☑ Overseeing and guiding scenario analysis
☑ Overseeing the setting of corporate targets
☑ Monitoring progress towards corporate targets
☑ Approving corporate policies and/or commitments
☑ Overseeing reporting, audit, and verification processes
☑ Monitoring the implementation of a climate transition plan
☑ Overseeing and guiding the development of a business strategy
☑ Overseeing and guiding acquisitions, mergers, and divestitures
☑ Monitoring supplier compliance with organizational requirements
☑ Monitoring compliance with corporate policies and/or commitments
☑ Overseeing and guiding the development of a climate transition plan
☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities
☑ Reviewing and guiding innovation/R&D priorities
☑ Approving and/or overseeing employee incentives
☑ Overseeing and guiding major capital expenditures
☑ Monitoring the implementation of the business strategy

(4.1.2.7) Please explain

At Musim Mas, sustainability governance is embedded in our core corporate identity. Our Board of Directors oversee critical sustainability and ESG issues, including forest-related risks and opportunities, ensuring they are embedded into our overall business strategies and decision-making processes. The Board convene meetings to discuss ESG issues and assess the Group's sustainability performance including the implementation of our sustainability policies and strategies, as well as forest-related management programs and action plans for NDPE commitment and conservation initiatives at the Group level. Between meetings, the Board receives reports highlighting key issues, grievances, and critical concerns raised by stakeholders. The outcome of this discussion includes plans of action, risk management policies, annual budgets, business plans and so on. Consequently, the results of discussions and action plans will be shared and communicated throughout all relevant departments, ensuring the messages are conveyed to all layers of workers. Example of forest related outcome includes 100% Traceability to Plantation (TTP), obtaining a commitment from 100% of supplying mills to abide by NDPE principles, and ensuring 100% of suppliers have completed the Musim Mas Self-Assessment Tool (SAT) by 2025. These measures are crucial in fighting deforestation and/or other conversion of other natural ecosystems along our supply chains. In alignment with the GRI reporting standard, we publicly communicate our annual sustainability progress through Sustainability Report (https://www.musimmas.com/sustainability-report/).

Water

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Director on board

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Individual role descriptions

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Reviewing and guiding annual budgets
☑ Overseeing and guiding scenario analysis
☑ Overseeing the setting of corporate targets
☑ Monitoring progress towards corporate targets
☑ Approving corporate policies and/or commitments
☑ Overseeing reporting, audit, and verification processes
☑ Monitoring the implementation of a climate transition plan
☑ Overseeing and guiding the development of a business strategy
☑ Overseeing and guiding acquisitions, mergers, and divestitures
☑ Monitoring supplier compliance with organizational requirements
☑ Monitoring compliance with corporate policies and/or commitments
☑ Overseeing and guiding the development of a climate transition plan
☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities
☑ Overseeing and guiding public policy engagement
☑ Reviewing and guiding innovation/R&D priorities
☑ Approving and/or overseeing employee incentives
☑ Overseeing and guiding major capital expenditures
☑ Monitoring the implementation of the business strategy

(4.1.2.7) Please explain

At Musim Mas, sustainability governance is embedded in our core corporate identity. Our Board of Directors oversee critical sustainability and ESG issues, including water-related risks and opportunities, ensuring they are embedded into our overall business strategies and decision-making processes. The Board convene meetings to discuss ESG issues and assess the Group's sustainability performance including the implementation of water-related management programs and action plans. Between meetings, the Board receives reports highlighting key issues, grievances, and critical concerns raised by stakeholders. The outcome of this discussion includes plans of action, risk management policies, annual budgets, business plans and so on. Consequently, the results of discussions and action plans will be shared and communicated throughout all relevant departments, ensuring the messages are conveyed to all layers of workers. Example of water related outcome would be ensuring mills' water use intensity to be below 1.2 m3/ton FFB processed. In 2024, we achieve average mills' water use intensity of 1.13 m3/ton FFB processed. In alignment with the GRI reporting standard, we publicly communicate our annual sustainability progress through Sustainability Report (https://www.musimmas.com/sustainability-report/).

Biodiversity

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Director on board

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Individual role descriptions

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Reviewing and guiding annual budgets

☑ Overseeing and guiding public policy engagement

☑ Overseeing and guiding scenario analysis
☑ Overseeing the setting of corporate targets
☑ Monitoring progress towards corporate targets
☑ Approving corporate policies and/or commitments
☑ Overseeing reporting, audit, and verification processes
☑ Monitoring the implementation of a climate transition plan
☑ Overseeing and guiding the development of a business strategy
☑ Overseeing and guiding acquisitions, mergers, and divestitures
☑ Monitoring supplier compliance with organizational requirements
☑ Monitoring compliance with corporate policies and/or commitments
☑ Overseeing and guiding the development of a climate transition plan
☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities
☑ Reviewing and guiding innovation/R&D priorities
☑ Approving and/or overseeing employee incentives
☑ Overseeing and guiding major capital expenditures
☑ Monitoring the implementation of the business strategy

(4.1.2.7) Please explain

At Musim Mas, sustainability governance is embedded in our core corporate identity. Our Board of Directors oversee critical sustainability and ESG issues, including biodiversity-related risks and opportunities, ensuring they are embedded into our overall business strategies and decision-making processes. The Board convene meetings to discuss ESG issues and assess the Group's sustainability performance including management of riparian buffer zones. Between meetings, the Board receives reports highlighting key issues, grievances, and critical concerns raised by stakeholders. The outcome of this discussion includes plans of action, risk management policies, annual budgets, business plans and so on. Consequently, the results of discussions and action plans will be shared and communicated throughout all relevant departments, ensuring the messages are conveyed to all layers of workers. Example of biodiversity related outcome include restoring riparian buffer zones within our concession areas to enhance wildlife corridors. Moreover, we released our Biodiversity and Climate Resiliency Action Plan in 2022 that details our commitment to biodiversity conservation and environmental stewardship. In alignment with the GRI reporting standard, we publicly communicate our annual sustainability progress through Sustainability Report (https://www.musimmas.com/sustainability-report/).
[Fixed row]

(4.2) Does your organization's board have competency on environmental issues?

Climate change

(4.2.1) Board-level competency on this environmental issue

Select from:

☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply

☑ Consulting regularly with an internal, permanent, subject-expert working group

☑ Engaging regularly with external stakeholders and experts on environmental issues

☑ Integrating knowledge of environmental issues into board nominating process

☑ Regular training for directors on environmental issues, industry best practice, and standards (e.g., TCFD, SBTi)

☑ Having at least one board member with expertise on this environmental issue

(4.2.3) Environmental expertise of the board member

Experience

☑ Executive-level experience in a role focused on environmental issues

☑ Management-level experience in a role focused on environmental issues

☑ Staff-level experience in a role focused on environmental issues

☑ Experience in an organization that is exposed to environmental-scrutiny and is going through a sustainability transition

☑ Active member of an environmental committee or organization

Forests

(4.2.1) Board-level competency on this environmental issue

Select from:

☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply

☑ Consulting regularly with an internal, permanent, subject-expert working group

☑ Engaging regularly with external stakeholders and experts on environmental issues

☑ Integrating knowledge of environmental issues into board nominating process
☑ Regular training for directors on environmental issues, industry best practice, and standards (e.g., TCFD, SBTi)
☑ Having at least one board member with expertise on this environmental issue

(4.2.3) Environmental expertise of the board member

Experience
☑ Executive-level experience in a role focused on environmental issues
☑ Management-level experience in a role focused on environmental issues
☑ Staff-level experience in a role focused on environmental issues
☑ Experience in an organization that is exposed to environmental-scrutiny and is going through a sustainability transition
☑ Active member of an environmental committee or organization

Water

(4.2.1) Board-level competency on this environmental issue

Select from:
☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply
☑ Consulting regularly with an internal, permanent, subject-expert working group
☑ Engaging regularly with external stakeholders and experts on environmental issues
☑ Integrating knowledge of environmental issues into board nominating process
☑ Regular training for directors on environmental issues, industry best practice, and standards (e.g., TCFD, SBTi)
☑ Having at least one board member with expertise on this environmental issue

(4.2.3) Environmental expertise of the board member

Experience

☑ Executive-level experience in a role focused on environmental issues

☑ Management-level experience in a role focused on environmental issues

☑ Staff-level experience in a role focused on environmental issues

☑ Experience in an organization that is exposed to environmental-scrutiny and is going through a sustainability transition

☑ Active member of an environmental committee or organization

[Fixed row]

(4.3) Is there management-level responsibility for environmental issues within your organization?

	Management-level responsibility for this environmental issue
Climate change	*Select from:* ☑ Yes
Forests	*Select from:* ☑ Yes
Water	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.3.1) Provide the highest senior management-level positions or committees with responsibility for environmental issues (do not include the names of individuals).

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Sustainability Officer (CSO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Engagement

☑ Managing engagement in landscapes and/or jurisdictions

☑ Managing public policy engagement related to environmental issues

☑ Managing supplier compliance with environmental requirements

☑ Managing value chain engagement related to environmental issues

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

☑ Measuring progress towards environmental corporate targets

☑ Measuring progress towards environmental science-based targets

☑ Setting corporate environmental policies and/or commitments

☑ Setting corporate environmental targets

Strategy and financial planning

☑ Developing a climate transition plan

☑ Implementing a climate transition plan

☑ Conducting environmental scenario analysis

☑ Managing annual budgets related to environmental issues

☑ Implementing the business strategy related to environmental issues

☑ Developing a business strategy which considers environmental issues

☑ Managing environmental reporting, audit, and verification processes
☑ Managing acquisitions, mergers, and divestitures related to environmental issues
☑ Managing major capital and/or operational expenditures relating to environmental issues
☑ Managing priorities related to innovation/low-environmental impact products or services (including R&D)

Other
☑ Providing employee incentives related to environmental performance

(4.3.1.4) Reporting line

Select from:
☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:
☑ Quarterly

(4.3.1.6) Please explain

The Director of Communications and Sustainability and the Director of Climate Action and Supply Chain Sustainability (equivalent to Chief Sustainability Officer) oversee all sustainability matters, including the implementation of our sustainability policies and strategies at the Group level and report directly to the Board. The Board convene meetings with The Director of Communications and Sustainability and the Director of Climate Action and Supply Chain Sustainability to discuss sustainability and ESG issues as well as evaluate the Group's sustainability performance including the impact, risks, and opportunities. Climate Change related topics such as GHG reductions, NDPE commitment, and Net Zero targets are discussed. Between meetings, the Board receives reports highlighting key issues, grievances, and critical concerns raised by stakeholders. The outcome of this discussion includes plans of action, risk management policies, annual budgets, business plans and so on. Consequently, the results of discussions and action plans will be shared and communicated throughout all relevant departments, ensuring the messages are conveyed to all layers of workers.

Forests

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Sustainability Officer (CSO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Engagement

☑ Managing engagement in landscapes and/or jurisdictions

☑ Managing public policy engagement related to environmental issues

☑ Managing supplier compliance with environmental requirements

☑ Managing value chain engagement related to environmental issues

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

☑ Measuring progress towards environmental corporate targets

☑ Measuring progress towards environmental science-based targets

☑ Setting corporate environmental policies and/or commitments

☑ Setting corporate environmental targets

Strategy and financial planning

☑ Developing a climate transition plan

☑ Implementing a climate transition plan

☑ Conducting environmental scenario analysis

☑ Managing annual budgets related to environmental issues

☑ Implementing the business strategy related to environmental issues

☑ Developing a business strategy which considers environmental issues

☑ Managing environmental reporting, audit, and verification processes

☑ Managing acquisitions, mergers, and divestitures related to environmental issues
☑ Managing major capital and/or operational expenditures relating to environmental issues
☑ Managing priorities related to innovation/low-environmental impact products or services (including R&D)

Other
☑ Providing employee incentives related to environmental performance

(4.3.1.4) Reporting line

Select from:
☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:
☑ Quarterly

(4.3.1.6) Please explain

The Director of Communications and Sustainability and the Director of Climate Action and Supply Chain Sustainability (equivalent to Chief Sustainability Officer) oversee all sustainability matters, including the implementation of our sustainability policies and strategies at the Group level and report directly to the Board. The Board convene meetings with The Director of Communications and Sustainability and the Director of Climate Action and Supply Chain Sustainability to discuss sustainability and ESG issues as well as evaluate the Group's sustainability performance including the impact, risks, and opportunities. Forest related topics such as NDPE commitment, landscape projects, and smallholders are discussed. Between meetings, the Board receives reports highlighting key issues, grievances, and critical concerns raised by stakeholders. The outcome of this discussion includes plans of action, risk management policies, annual budgets, business plans and so on. Consequently, the results of discussions and action plans will be shared and communicated throughout all relevant departments, ensuring the messages are conveyed to all layers of workers.

Water

(4.3.1.1) Position of individual or committee with responsibility

Executive level
☑ Chief Sustainability Officer (CSO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Engagement

☑ Managing engagement in landscapes and/or jurisdictions

☑ Managing public policy engagement related to environmental issues

☑ Managing supplier compliance with environmental requirements

☑ Managing value chain engagement related to environmental issues

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

☑ Measuring progress towards environmental corporate targets

☑ Measuring progress towards environmental science-based targets

☑ Setting corporate environmental policies and/or commitments

☑ Setting corporate environmental targets

Strategy and financial planning

☑ Developing a climate transition plan

☑ Implementing a climate transition plan

☑ Conducting environmental scenario analysis

☑ Managing annual budgets related to environmental issues

☑ Implementing the business strategy related to environmental issues

☑ Developing a business strategy which considers environmental issues

☑ Managing environmental reporting, audit, and verification processes

☑ Managing acquisitions, mergers, and divestitures related to environmental issues

☑ Managing major capital and/or operational expenditures relating to environmental issues

☑ Managing priorities related to innovation/low-environmental impact products or services (including R&D)

Other

☑ Providing employee incentives related to environmental performance

(4.3.1.4) Reporting line

Select from:

☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ Quarterly

(4.3.1.6) Please explain

The Director of Communications and Sustainability and the Director of Climate Action and Supply Chain Sustainability (equivalent to Chief Sustainability Officer) oversee all sustainability matters, including the implementation of our sustainability policies and strategies at the Group level and report directly to the Board. The Board convene meetings with The Director of Communications and Sustainability and the Director of Climate Action and Supply Chain Sustainability to discuss sustainability and ESG issues as well as evaluate the Group's sustainability performance including the impact, risks, and opportunities. Water related topics such as water management, water use intensity, and water quality are discussed. Between meetings, the Board receives reports highlighting key issues, grievances, and critical concerns raised by stakeholders. The outcome of this discussion includes plans of action, risk management policies, annual budgets, business plans and so on. Consequently, the results of discussions and action plans will be shared and communicated throughout all relevant departments, ensuring the messages are conveyed to all layers of workers.

Biodiversity

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Sustainability Officer (CSO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Engagement

☑ Managing engagement in landscapes and/or jurisdictions

☑ Managing public policy engagement related to environmental issues

☑ Managing supplier compliance with environmental requirements

☑ Managing value chain engagement related to environmental issues

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

☑ Measuring progress towards environmental corporate targets

☑ Measuring progress towards environmental science-based targets

☑ Setting corporate environmental policies and/or commitments

☑ Setting corporate environmental targets

Strategy and financial planning

☑ Developing a climate transition plan

☑ Implementing a climate transition plan

☑ Conducting environmental scenario analysis

☑ Managing annual budgets related to environmental issues

☑ Implementing the business strategy related to environmental issues

☑ Developing a business strategy which considers environmental issues

☑ Managing environmental reporting, audit, and verification processes

☑ Managing acquisitions, mergers, and divestitures related to environmental issues

☑ Managing major capital and/or operational expenditures relating to environmental issues

☑ Managing priorities related to innovation/low-environmental impact products or services (including R&D)

Other

☑ Providing employee incentives related to environmental performance

(4.3.1.4) Reporting line

Select from:

☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ Quarterly

(4.3.1.6) Please explain

The Director of Communications and Sustainability and the Director of Climate Action and Supply Chain Sustainability (equivalent to Chief Sustainability Officer) oversee all sustainability matters, including the implementation of our sustainability policies and strategies at the Group level and report directly to the Board. The Board convene meetings with The Director of Communications and Sustainability and the Director of Climate Action and Supply Chain Sustainability to discuss sustainability and ESG issues as well as evaluate the Group's sustainability performance including the impact, risks, and opportunities. Biodiversity related topics such as landscape restoration as well as biodiversity and wildlife protection are discussed. Between meetings, the Board receives reports highlighting key issues, grievances, and critical concerns raised by stakeholders. The outcome of this discussion includes plans of action, risk management policies, annual budgets, business plans and so on. Consequently, the results of discussions and action plans will be shared and communicated throughout all relevant departments, ensuring the messages are conveyed to all layers of workers.
[Add row]

(4.5) Do you provide monetary incentives for the management of environmental issues, including the attainment of targets?

Climate change

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

100

(4.5.3) Please explain

As one of the most prominent players in the palm oil industry, 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. Hence, environmental issues such as climate change, forest, and water are all integrated within the KPI of our relevant operational decisions and management which are related to the monetary incentives.

Forests

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

100

(4.5.3) Please explain

As one of the most prominent players in the palm oil industry, 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. Hence, environmental issues such as climate change, forest, and water are all integrated within the KPI of our relevant operational decisions and management which are related to the monetary incentives.

Water

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

100

(4.5.3) Please explain

As one of the most prominent players in the palm oil industry, 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. Hence, environmental issues such as climate change, forest, and water are all integrated within the KPI of our relevant operational decisions and management which are related to the monetary incentives. [Fixed row]

(4.5.1) Provide further details on the monetary incentives provided for the management of environmental issues (do not include the names of individuals).

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Sustainability Officer (CSO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

☑ Promotion

☑ Salary increase

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

☑ Achievement of environmental targets

☑ Reduction in absolute emissions in line with net-zero target

Strategy and financial planning

☑ Board approval of climate transition plan

☑ Shareholder approval of climate transition plan
☑ Achievement of climate transition plan
☑ Shift to a business model compatible with a net-zero carbon future

Emission reduction
☑ Implementation of an emissions reduction initiative
☑ Reduction in emissions intensity
☑ Increased share of renewable energy in total energy consumption
☑ Reduction in absolute emissions

Resource use and efficiency
☑ Energy efficiency improvement
☑ Reduction in total energy consumption

(4.5.1.4) Incentive plan the incentives are linked to

Select from:
☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

Our Director of Communications and Sustainability and Director of Climate Action and Supply Chain Sustainability (equivalent to Chief Sustainability Officer) works are evaluated annually based on the Key Performance Indicator (KPI) where compensation and benefits are awarded accordingly. Both qualitative and quantitative assessments are developed by the Board and Compensation Committees in assessing the KPI. Examples of performance indicators include but are not limited to: (1) Full compliance with the sustainability standards and certifications such as RSPO, ISCC, ISPO, ITSNC, as well as HCV and HCS guidelines. (2) Progress in transitioning the Group in line with the 1.5°C pathway including SBTi targets. (3) Maintain responsible and enduring relationships with suppliers, customers, and stakeholders. Others include awards and recognitions related to sustainability such as the SPOTT ranking, CDP scorecard, and Ecovadis scorecard. Among many, these indicators were selected as they are aligned with the company's vision, and they allow Musim Mas to objectively quantify the progress of the company in the field of sustainability including climate change. The results of the KPI will link to promotion, salary, and the amount of bonus earned.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

Musim Mas uses progress toward its sustainability targets as the threshold of success. Therefore, incentives are provided if progress is either linear to the overall target or exceeds a linear trend. Below are some of the performance indicators and the progresses as of 2024: (1) In alignment with the 1.5C pathway, Musim Mas has set near- and long-term emissions reduction targets which have been approved by SBTi. (2) Completed Product Carbon Footprint (PCF) calculations to meet all customers' requests. (3) Maintain and achieve full compliance with recognized sustainability standards and certification schemes (RSPO, ISCC, MSPO, ITSNC, ISPO) in our operations. (4) Retained a double 'A' score on the 2024 CDP Forests and Water Security Questionnaires, securing a place on the CDP 'A List'.

Forests

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Sustainability Officer (CSO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

☑ Promotion

☑ Salary increase

(4.5.1.3) Performance metrics

Targets

☑ Organization performance against an environmental sustainability index

Resource use and efficiency

☑ Eliminating deforestation and conversion of other natural ecosystems in direct operations and/or other parts of the value chain

☑ Improvements in commodity production efficiency

☑ Improvements in commodity volume data collection, reporting and third-party verification/certification

Policies and commitments

☑ Securing Free, Prior and Informed Consent (FPIC) of Indigenous peoples and local communities

☑ Adopting UN International Labour Organization principles

Engagement

☑ Increased engagement with suppliers on environmental issues

☑ Increased engagement in landscape (including river basin) and jurisdictional initiatives

☑ Increased value chain visibility (traceability, mapping)

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

Our Director of Communications and Sustainability and Director of Climate Action and Supply Chain Sustainability (equivalent to Chief Sustainability Officer) oversee and resolve any sustainability matter including forest-related issues such as conservation of biodiversity, High Conservation Value (HCV), High Carbon Stock (HCS), traceability, NDPE risk management framework, smallholders' engagement, landscape approaches, grievances as well as supply chain engagement. Additionally, the Directors also develop forest management programs and action plans related to conservation initiatives at the group level. Our Directors works are evaluated annually based on the Key Performance Indicator (KPI) where compensation and benefits are awarded accordingly. Examples of performance indicators include but are not limited to full compliance with NDPE, HCV, and HCS guidelines, landscape projects as well as RSPO NPP. Others include awards and recognitions related to sustainability such as the SPOTT ranking, CDP scorecard, and Ecovadis scorecard. Among many, these indicators were selected as they are aligned with the company's vision and they allow Musim Mas to objectively quantify the progress of the company in the field of sustainability including forest management.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

Musim Mas uses progress toward its sustainability targets as the threshold of success. Therefore, incentives are provided if progress is either linear to the overall target or exceeds a linear trend. Below are some of the performance indicators and the progresses as of 2024: (1) Traceability to plantations: We proactively monitor our supply chain to detect deforestation, development of peat, and fires. Our suppliers share maps and information about their supply base, enabling us to conduct risk assessments and establish Traceability to Plantation (TTP) measures. We are aiming to achieve 100% traceability to plantations by 2025. As of 2024, we have achieved 98% and are on track to achieve the target. (2) Musim Mas Self Assessments Tool (SAT): A self-administered questionnaire developed in line with our sustainability commitments to identify potential areas of improvement against our policy commitments and develop tailored roadmaps with timebound plans specific to each supplier. In 2024, 78% of our suppliers have completed their assessments and are on track to achieve 100% by 2025. Moreover, in 2024, 98.80% of supplier volumes are 'Delivering' on No Deforestation commitments based on the NDPE IRF framework (3) Landscape approaches: We reach out to supplying mills and their FFB suppliers in key sourcing areas to inform and comply with NDPE requirements through Suppliers Workshops and our Training for Trainers: Smallholders Hub Program. In 2024, we have successfully trained 485 Village Extension Officers (VEOs), who have gone on to train 9,479 smallholders through Smallholders Hubs.

Water

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Sustainability Officer (CSO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

☑ Promotion

☑ Salary increase

(4.5.1.3) Performance metrics

Resource use and efficiency

☑ Reduction of water withdrawals – direct operations

☑ Improvements in water efficiency – direct operations

☑ Reduction in water consumption volumes – direct operations

☑ Improvements in water efficiency – upstream value chain (excluding direct operations)

☑ Improvements in water efficiency – downstream value chain (excluding direct operations)

☑ Reduction of water withdrawal and/or consumption volumes – upstream value chain (excluding direct operations)

☑ Reduction of water withdrawal and/or consumption volumes – downstream value chain (excluding direct operations)

Pollution

☑ Improvements in wastewater quality – direct operations

☑ Improvements in wastewater quality – upstream value chain (excluding direct operations)

☑ Improvements in wastewater quality – downstream value chain (excluding direct operations)

☑ Reduction of water pollution incidents

☑ Reduction or phase out of hazardous substances

Policies and commitments

☑ Increased access to workplace WASH – direct operations

☑ Increased access to workplace WASH – upstream value chain (excluding direct operations)

☑ Increased access to workplace WASH – downstream value chain (excluding direct operations)

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

Our Director of Communications and Sustainability and Director of Climate Action and Supply Chain Sustainability (equivalent to Chief Sustainability Officer) oversee and resolve any sustainability matter including water-related issues such as management of riparian areas. Additionally, the Directors also develop water management programs and action plans related to conservation initiatives at the group level. Our Director of Sustainability works are evaluated annually based on the Key Performance Indicator (KPI) where compensation and benefits are awarded accordingly. Examples of performance indicators include but are not limited to reduction of water intensity and/or full compliance with regulations and certification schemes such as RSPO where water-related issues are discussed. Others include awards and recognitions related to sustainability such as the SPOTT ranking, CDP scorecard, and Ecovadis scorecard. Among many, these indicators were selected as they are aligned with the company's vision and they allow Musim Mas to objectively quantify the progress of the company in the field of sustainability including water management.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

As stipulated in our Sustainability Policy, Musim Mas is committed to water accountability, with respect to water quantity and quality, as well as equity. We adhere to relevant regulatory standards and sector specific sustainability certification schemes to ensure water-related compliance. Musim Mas uses progress toward its sustainability targets as the threshold of success. Therefore, incentives are provided if progress is either linear to the overall target or exceeds a linear trend. Below are some of the performance indicators and the progress in 2024: (1) Water use intensity: To ensure water efficiency in our mills, we set a target to achieve water use intensity to be below 1.2 m3/MT FFB processed. In 2024, our mills' water use intensity is 1.13 m3/MT FFB processed in line with the set target. (2) Wastewater quality: We strictly manage BOD and COD levels below the regulatory thresholds. We treat all palm oil mill effluent (POME) before discharging them. On a monthly basis, we assess the BOD and COD levels of our mills through independent and accredited lab testing. To date, there were no instances of non-compliance regarding BOD and COD at our upstream operations. (3) Retained a double 'A' score on the 2024 CDP Forests and Water Security Questionnaires. This achievement underscores Musim Mas' unwavering dedication to combatting deforestation and ensuring water security while advancing toward our ambitious goal of achieving net-zero emissions by 2050.
[Add row]

(4.6) Does your organization have an environmental policy that addresses environmental issues?

	Does your organization have any environmental policies?
	Select from: ☑ Yes

[Fixed row]

(4.6.1) Provide details of your environmental policies.

Row 1

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Climate change

☑ Forests

☑ Water

☑ Biodiversity

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

(4.6.1.4) Explain the coverage

Our Sustainability Policy encompasses all our operations worldwide from oil palm plantations to facilities involved in processing, refining and trading of palm oil products, thus it is applicable company organization-wide. This policy also applies to our suppliers and contractors as our upstream value chain. First launched in 2014, the Policy established the framework for our no deforestation, no peat, and no exploitation (NDPE) commitments. Refresh every 5 years, Musim Mas updated the Policy in September 2020 which lays out a renewed and deepened commitment to improving the livelihoods of smallholders, workers, and communities; while maintaining a strict stance on NDPE. The overview of the Policy also includes but is not limited to our commitment to no use of fire in operations (zero burning), minimization and targeted reductions of greenhouse gas emissions, water accountability with respect to water quantity and quality and compliance with regulations and mandatory standards, commitment beyond regulatory compliance, and commitment to water stewardship. Progress towards the implementation of the Policy is annually reported through our Sustainability Report which gives a description of our business dependency and impact on water, as well as water-related performance standards for direct operations. For more information on our sustainability policy, please refer to: https://www.musimmas.com/wp-content/uploads/2020/09/Musim-Mas-Sustainability-Policy-2020-2025.pdf

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to avoidance of negative impacts on threatened and protected species

☑ Commitment to comply with regulations and mandatory standards

☑ Commitment to engage in integrated, multi-stakeholder landscape (including river basin) initiatives to promote shared sustainability goals

☑ Commitment to stakeholder engagement and capacity building on environmental issues

Climate-specific commitments

☑ Commitment to net-zero emissions

☑ Commitment to not funding climate-denial or lobbying against climate regulations

Forests-specific commitments

☑ Commitment to no development on peat regardless of depth

☑ Commitment to best management practices for soils and peat

☑ Commitment to no land clearance by burning or clearcutting

☑ Commitment to the use of the High Conservation Value (HCV) approach

☑ Commitment to facilitate the inclusion of smallholders into the value chain

☑ Commitment to no deforestation, to no planting on peatlands, and to no exploitation (NDPE) by target date, please specify :No deforestation of High Carbon Stock (HCS) forests, no conversion of High Conservation Value (HCV) areas and no new developments on peatlands (regardless of depth) after 31 December 2015

☑ Commitment to no-conversion of natural ecosystems by target date, please specify :No deforestation of High Carbon Stock (HCS) forests, no conversion of High Conservation Value (HCV) areas and no new developments on peatlands (regardless of depth) after 31 December 2015

☑ Commitment to no-deforestation by target date, please specify :No deforestation of High Carbon Stock (HCS) forests, no conversion of High Conservation Value (HCV) areas and no new developments on peatlands (regardless of depth) after 31 December 2015

Water-specific commitments

☑ Commitment to reduce or phase out hazardous substances

☑ Commitment to control/reduce/eliminate water pollution

☑ Commitment to reduce water withdrawal volumes

☑ Commitment to safely managed WASH in local communities

☑ Commitment to the conservation of freshwater ecosystems

Social commitments

☑ Adoption of the UN International Labour Organization principles

☑ Commitment to respect and protect the customary rights to land, resources, and territory of Indigenous Peoples and Local Communities

☑ Commitment to respect internationally recognized human rights

☑ Commitment to secure Free, Prior, and Informed Consent (FPIC) of indigenous people and local communities

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ Yes, in line with the Paris Agreement

☑ Yes, in line with the Kunming-Montreal Global Biodiversity Framework

☑ Yes, in line with Sustainable Development Goal 6 on Clean Water and Sanitation

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

Musim-Mas-2020-Sustainability-Policy-1.pdf
[Add row]

(4.10) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

(4.10.1) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

Select from:

☑ Yes

(4.10.2) Collaborative framework or initiative

Select all that apply

☑ UN Global Compact

☑ Global Forest Watch

☑ New York Declaration on Forests

☑ Tropical Forest Alliance 2020 (TFA)

☑ Roundtable on Sustainable Palm Oil (RSPO)

☑ Science-Based Targets Initiative (SBTi)

☑ International Sustainability & Carbon Certification (ISCC)

☑ Task Force on Climate-related Financial Disclosures (TCFD)

(4.10.3) Describe your organization's role within each framework or initiative

(1) We use Global Forest Watch (GFW) as of the monitoring tools to monitor deforestation of surrounding concessions. (2) Our operations are certified under RSPO and ISCC certification schemes. We also actively participate in the RSPO Working Group. (3) Our sustainability strategy, in line with the New York Declaration on Forests, guides our No Deforestation targets outlined in the NDPE Roadmap. (4) In 2024, we have obtained SBTi approved Net Zero targets in line with the 1.5C pathway. (5) We began reporting against the Taskforce on Climate-related Financial Disclosures (TCFD) requirements in 2024. (6) Together with 13 others leading Agri companies, Musim Mas signed up to Agriculture Sector Roadmap to 1.5°C At COP27 which is supported by Tropical Forest Alliance (TFA). (7) Since September 2022, Musim Mas is a member of the UN Global Compact (UNGC).
[Fixed row]

(4.11) In the reporting year, did your organization engage in activities that could directly or indirectly influence policy, law, or regulation that may (positively or negatively) impact the environment?

(4.11.1) External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the environment

Select all that apply

☑ Yes, we engaged directly with policy makers

☑ Yes, we engaged indirectly through, and/or provided financial or in-kind support to a trade association or other intermediary organization or individual whose activities could influence policy, law, or regulation

(4.11.2) Indicate whether your organization has a public commitment or position statement to conduct your engagement activities in line with global environmental treaties or policy goals

Select from:

☑ Yes, we have a public commitment or position statement in line with global environmental treaties or policy goals

(4.11.3) Global environmental treaties or policy goals in line with public commitment or position statement

Select all that apply

☑ Paris Agreement

☑ Kunming-Montreal Global Biodiversity Framework

☑ Sustainable Development Goal 6 on Clean Water and Sanitation

(4.11.4) Attach commitment or position statement

Musim Mas Commits To Setting Science-Based Targets For GHG Reductions.pdf

(4.11.5) Indicate whether your organization is registered on a transparency register

Select from:

☑ Yes

(4.11.6) Types of transparency register your organization is registered on

Select all that apply

☑ Voluntary government register

(4.11.7) Disclose the transparency registers on which your organization is registered & the relevant ID numbers for your organization

RSPO's Transparency register: 832413729653-30 Musim Mas membership no: 2-0907-18-000-00 For more information, please refer to https://rspo.org/members/2-0907-18-000-00/

(4.11.8) Describe the process your organization has in place to ensure that your external engagement activities are consistent with your environmental commitments and/or transition plan

Musim Mas has been a member of the RSPO since 2004 to develop and implement global standards for sustainable palm oil. As such, Musim Mas has been actively involved in the RSPO over the years, co-chaired the Biodiversity and HCV working group, the Compensation task force, and currently sits on the board of the RSPO. Among others, we are a substantive member of the RSPO P&C Review Task Force as well as a substantive member of many Working Groups such as Smallholders and GHG. Following our participation in the Working Group, the RSPO endorsed a report on River and Riparian Management in 2022. The report is a technical review as a basis for compiling a guide for companies and smallholders for the determination and management of river borders whose width has not been determined by the government. Through the implementation of the RSPO P&C and Riparian BMP, the RSPO is in line with the government's goal of protecting rivers and rivers border. In turn, this extensive engagement and involvement have shaped our sustainability policy to the highest standards. Accordingly, sustainability achievements such as full and beyond compliance with international certification schemes including RSPO, ISCC, MSPO, ISPO, and ITSNC principles and guidelines have been fully maintained. Action if inconsistency: If inconsistencies arise, we will take steps to address and escalate the issue to the association's board or higher-level policymakers. We will present a comprehensive analysis of our perspectives and suggest resolution or corrective action plans to effectively resolve these inconsistencies.
[Fixed row]

(4.11.1) On what policies, laws, or regulations that may (positively or negatively) impact the environment has your organization been engaging directly with policy makers in the reporting year?

Row 1

(4.11.1.1) Specify the policy, law, or regulation on which your organization is engaging with policy makers

Rountable Sustainable Palm Oil (RSPO) Principles and Standards

(4.11.1.2) Environmental issues the policy, law, or regulation relates to

Select all that apply

☑ Climate change

☑ Forests

☑ Water

(4.11.1.3) Focus area of policy, law, or regulation that may impact the environment

Other

☑ International agreement related to climate change adaptation

☑ International agreement related to climate change mitigation

☑ International agreement relating to water- and/or forests-related issues

(4.11.1.4) Geographic coverage of policy, law, or regulation

Select from:

☑ Global

(4.11.1.6) Your organization's position on the policy, law, or regulation

Select from:

☑ Support with no exceptions

(4.11.1.8) Type of direct engagement with policy makers on this policy, law, or regulation

Select all that apply

☑ Participation in working groups organized by policy makers

(4.11.1.9) Funding figure your organization provided to policy makers in the reporting year relevant to this policy, law, or regulation (currency)

2164

(4.11.1.10) Explain the relevance of this policy, law, or regulation to the achievement of your environmental commitments and/or transition plan, how this has informed your engagement, and how you measure the success of your engagement

Following our sustainability policy, we are actively participating in RSPO working groups to contribute and ensure alignment to the latest/updated sustainability framework in our operations. In 2024, we maintain full compliance of RSPO certification in our upstream operations. The provided funding figure correspond to annual RSPO membership fee.

(4.11.1.11) Indicate if you have evaluated whether your organization's engagement on this policy, law, or regulation is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.1.12) Global environmental treaties or policy goals aligned with your organization's engagement on this policy, law or regulation

Select all that apply

☑ Paris Agreement

☑ Kunming-Montreal Global Biodiversity Framework

☑ Sustainable Development Goal 6 on Clean Water and Sanitation

Row 2

(4.11.1.1) Specify the policy, law, or regulation on which your organization is engaging with policy makers

Other international bodies: - United Nation Global Compact (UNGC) - Carbon Disclosure Project (CDP)

(4.11.1.2) Environmental issues the policy, law, or regulation relates to

Select all that apply

☑ Climate change

☑ Forests

☑ Water

(4.11.1.3) Focus area of policy, law, or regulation that may impact the environment

Other

☑ International agreement related to climate change adaptation

☑ International agreement related to climate change mitigation

☑ International agreement relating to water- and/or forests-related issues

(4.11.1.4) Geographic coverage of policy, law, or regulation

Select from:

☑ Global

(4.11.1.6) Your organization's position on the policy, law, or regulation

Select from:

☑ Support with no exceptions

(4.11.1.8) Type of direct engagement with policy makers on this policy, law, or regulation

Select all that apply

☑ Ad-hoc meetings

☑ Discussion in public forums

☑ Participation in working groups organized by policy makers

☑ Responding to consultations

(4.11.1.9) Funding figure your organization provided to policy makers in the reporting year relevant to this policy, law, or regulation (currency)

25000

(4.11.1.10) Explain the relevance of this policy, law, or regulation to the achievement of your environmental commitments and/or transition plan, how this has informed your engagement, and how you measure the success of your engagement

Musim Mas participates in many global initiatives including policy makers to ensure that our global operations are aligned with the highest sustainability standards. To ensure transparency and accountability, we report our annual sustainability achievement and progress through our Sustainability Report. For more information, please refer to our Sustainability Report (https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/).

(4.11.1.11) Indicate if you have evaluated whether your organization's engagement on this policy, law, or regulation is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.1.12) Global environmental treaties or policy goals aligned with your organization's engagement on this policy, law or regulation

Select all that apply

☑ Paris Agreement

☑ Kunming-Montreal Global Biodiversity Framework

☑ Sustainable Development Goal 6 on Clean Water and Sanitation

[Add row]

(4.11.2) Provide details of your indirect engagement on policy, law, or regulation that may (positively or negatively) impact the environment through trade associations or other intermediary organizations or individuals in the reporting year.

Row 1

(4.11.2.1) Type of indirect engagement

Select from:

☑ Indirect engagement via a trade association

(4.11.2.4) Trade association

Asia and Pacific

☑ Indonesian Palm Oil Association (GAPKI)

(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

Select all that apply

☑ Climate change

☑ Forests

☑ Water

(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with

Select from:

☑ Consistent

(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

Select from:

☑ Yes, we publicly promoted their current position

(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

GAPKI's vision to realize a sustainable national palm oil industry as a source of prosperity for the nation is in line with our missions which is 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.

(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)

60000

(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment

By participating in the trade association, we hope to align ourselves with the latest updates and regulations in the palm oil industry. Moreover, we hope to be involved and able to contribute for any upcoming/new initiatives affecting palm oil industry. The provided figure corresponded to GAPKI's membership fee in 2024.

(4.11.2.11) Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.2.12) Global environmental treaties or policy goals aligned with your organization's engagement on policy, law or regulation

Select all that apply

☑ Paris Agreement

☑ Kunming-Montreal Global Biodiversity Framework

☑ Sustainable Development Goal 6 on Clean Water and Sanitation

Row 2

(4.11.2.1) Type of indirect engagement

Select from:

☑ Indirect engagement via a trade association

(4.11.2.4) Trade association

Asia and Pacific

☑ Indonesia Chamber of Commerce and Industry (KADIN)

(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

Select all that apply

☑ Climate change

(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with

Select from:

☑ Consistent

(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

Select from:

☑ Yes, we publicly promoted their current position

(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

In line with Musim Mas trajectory to Net Zero, KADIN is accelerating national decarbonization transition toward Net Zero through KADIN's Net Zero Hub to build a sustainable business ecosystem towards Net Zero emissions.

(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)

600

(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment

By participating in the trade association, we hope to align ourselves with the latest updates and regulations in the palm oil industry. Moreover, we hope to be involved and able to contribute for any upcoming/new initiatives affecting palm oil industry. The provided figure corresponded to KADIN's membership fee in 2024.

(4.11.2.11) Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.2.12) Global environmental treaties or policy goals aligned with your organization's engagement on policy, law or regulation

Select all that apply

☑ Paris Agreement

Row 3

(4.11.2.1) Type of indirect engagement

Select from:

☑ Indirect engagement via a trade association

(4.11.2.4) Trade association

Asia and Pacific

☑ Indonesia Employers Association (APINDO)

(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

Select all that apply

☑ Climate change

(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with

Select from:

☑ Consistent

(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

Select from:

☑ Yes, we publicly promoted their current position

(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

Our operations are in line with APINDO's mission to develop harmonious, dynamic, productive and equitable industrial relations.

(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)

2400

(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment

By participating in the trade association, we hope to align ourselves with the latest updates and regulations in the palm oil industry. Moreover, we hope to be involved and able to contribute for any upcoming/new initiatives affecting palm oil industry. The provided figure corresponded to APINDO's membership fee in 2024.

(4.11.2.11) Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.2.12) Global environmental treaties or policy goals aligned with your organization's engagement on policy, law or regulation

Select all that apply

☑ Paris Agreement

[Add row]

(4.12) Have you published information about your organization's response to environmental issues for this reporting year in places other than your CDP response?

Select from:

☑ Yes

(4.12.1) Provide details on the information published about your organization's response to environmental issues for this reporting year in places other than your CDP response. Please attach the publication.

Row 1

(4.12.1.1) Publication

Select from:

☑ In mainstream reports, in line with environmental disclosure standards or frameworks

(4.12.1.2) Standard or framework the report is in line with

Select all that apply

☑ GRI

☑ TCFD

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

☑ Forests

☑ Water

☑ Biodiversity

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Strategy
☑ Governance
☑ Emission targets
☑ Emissions figures
☑ Commodity volumes
☑ Water accounting figures
☑ Water pollution indicators
☑ Content of environmental policies
☑ Deforestation- and conversion-free (DCF) status metrics
☑ Risks & Opportunities
☑ Value chain engagement
☑ Dependencies & Impacts
☑ Biodiversity indicators
☑ Public policy engagement

(4.12.1.6) Page/section reference

Our SR includes but is not limited to content of environmental policies, governance, public policy, engagement, dependencies & impacts, risks & opportunities, strategy, value chain engagement, biodiversity indicators, emissions figures, emission targets, DCF status metric, commodity volumes, water accounting figures, water pollution indicators. These elements relate to the four pillars in our Sustainability Report 2024 on page 26-96.

(4.12.1.7) Attach the relevant publication

Musim-Mas-SR2024.pdf

(4.12.1.8) Comment

Musim Mas Sustainability Report 2024
[Add row]

C5. Business strategy

(5.1) Does your organization use scenario analysis to identify environmental outcomes?

Climate change

(5.1.1) Use of scenario analysis

Select from:

☑ Yes

(5.1.2) Frequency of analysis

Select from:

☑ Annually

Forests

(5.1.1) Use of scenario analysis

Select from:

☑ Yes

(5.1.2) Frequency of analysis

Select from:

☑ Annually

Water

(5.1.1) Use of scenario analysis

Select from:

☑ Yes

(5.1.2) Frequency of analysis

Select from:
☑ Annually
[Fixed row]

(5.1.1) Provide details of the scenarios used in your organization's scenario analysis.

Climate change

(5.1.1.1) Scenario used

Climate transition scenarios
☑ Bespoke climate transition scenario

(5.1.1.3) Approach to scenario

Select from:
☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:
☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply
☑ Policy
☑ Market
☑ Liability
☑ Acute physical
☑ Chronic physical

☑ Reputation
☑ Technology

(5.1.1.6) Temperature alignment of scenario

Select from:
☑ 1.5°C or lower

(5.1.1.7) Reference year

2023

(5.1.1.8) Timeframes covered

Select all that apply
☑ 2025
☑ 2030
☑ 2040
☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts
☑ Climate change (one of five drivers of nature change)

Stakeholder and customer demands
☑ Consumer sentiment
☑ Consumer attention to impact
☑ Impact of nature footprint on reputation

Regulators, legal and policy regimes
☑ Global regulation
☑ Level of action (from local to global)
☑ Global targets

☑ Methodologies and expectations for science-based targets

Macro and microeconomy

☑ Globalizing markets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

As a private company, we are not required by law to engage in reporting against the Taskforce on Climate-related Financial Disclosures (TCFD) recommendations. However, 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 Board (ISSB) standards, which will be compulsory for all large non-listed companies incorporated in Singapore by 2028. In 2023, we started climate risk scenario analysis to evaluate the medium-term (2030) and long-term (2050) impacts of global temperature increases, including climate-related physical and transitional risks on our business. Climate-related 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. 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. Our analysis was limited in scope to our upstream and downstream activities in Sumatra, including a selection of our plantations and mills and a complex comprising a refinery, oleochemicals plant and specialty fats plant. For more information, please refer to our Sustainability Report. https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/

(5.1.1.11) Rationale for choice of scenario

Complementing our SBTi commitment, we recognize TCFD 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. Using 2023 as a baseline for TCFD assessment, we assessed 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. 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 IPCC to identify a selection of climate-related physical and transitional risks and opportunities that may impact our business. We assessed their significance based on their severity and likelihood, as well as our operations' exposure and vulnerability to them. 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.

Forests

(5.1.1.1) Scenario used

Forests scenarios

☑ Bespoke forests scenario

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

☑ Policy

(5.1.1.7) Reference year

2023

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Stakeholder and customer demands

☑ Consumer sentiment

☑ Consumer attention to impact

☑ Impact of nature footprint on reputation

Regulators, legal and policy regimes

☑ Global regulation

☑ Level of action (from local to global)

☑ Global targets

☑ Methodologies and expectations for science-based targets

Macro and microeconomy

☑ Globalizing markets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

In 2023, we started climate risk scenario analysis to evaluate the medium-term (2030) and long-term (2050) impacts of global temperature increases following the TCFD framework, including climate-related physical and transitional risks on our business. Climate-related 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. These physical climate-related risks relate closely with forest-related risks such as wildfires which could lead to disruption in supply chains as well as loss of forest and biodiversity. Moreover, 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. For more information, please refer to our Sustainability Report. https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/

(5.1.1.11) Rationale for choice of scenario

Complementing our SBTi commitment, we recognize TCFD 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. We recognize that the climate-related risks are often interlinked with forest-related risks. For example, climate-related risks such as drought which lead to forest-relate risks such increases the frequency in fire. We assessed forest impacts against a range of science-based scenarios using 2023 as a baseline for our TCFD assessment. 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. 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 IPCC to identify a

selection of climate-related physical and transitional risks and opportunities that may impact our business. We assessed their significance based on their severity and likelihood, as well as our operations' exposure and vulnerability to them. 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 forest-related risks and opportunities across all our operations.

Water

(5.1.1.1) Scenario used

Water scenarios

☑ WRI Aqueduct

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

☑ Reputation

(5.1.1.7) Reference year

2023

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Stakeholder and customer demands

☑ Consumer attention to impact

☑ Impact of nature footprint on reputation

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

In relation to the water-related scenario, we used the WRI Aqueduct Water Risk Atlas tool to assess the water stress up to the 2050 timeframe. According to the WRI Aqueduct Water Risk Atlas, the water stress risk is medium to high in 2050 compared to the baseline.

(5.1.1.11) Rationale for choice of scenario

Our upstream operations of plantations and mills are all located in Indonesia specifically in Sumatra and Kalimantan regions. These operations require water for plant growth and production processes respectively. Hence, scenario analysis of the physical risks is assessed for our operations in these regions.

Climate change

(5.1.1.1) Scenario used

Physical climate scenarios

☑ Bespoke physical climate scenario

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Policy

☑ Market

☑ Liability

☑ Reputation

☑ Technology

☑ Acute physical

☑ Chronic physical

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 3.0ºC - 3.4ºC

(5.1.1.7) Reference year

2023

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Stakeholder and customer demands

☑ Consumer sentiment

☑ Consumer attention to impact

☑ Impact of nature footprint on reputation

Regulators, legal and policy regimes

☑ Global regulation

☑ Level of action (from local to global)

☑ Global targets

☑ Methodologies and expectations for science-based targets

Macro and microeconomy

☑ Globalizing markets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

As a private company, we are not required by law to engage in reporting against the Taskforce on Climate-related Financial Disclosures (TCFD) recommendations. However, 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 Board (ISSB) standards, which will be compulsory for all large non-listed companies incorporated in Singapore by 2028. In 2023, we started climate risk scenario analysis to evaluate the medium-term (2030) and long-term (2050) impacts of global temperature increases, including climate-related physical and transitional risks on our business. Climate-related 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. 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. Our analysis was limited in scope to our upstream and downstream activities in Sumatra, including a selection of our plantations and mills and a complex comprising a refinery, oleochemicals plant and specialty fats plant. For more information, please refer to our Sustainability Report. https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/

(5.1.1.11) Rationale for choice of scenario

Complementing our SBTi commitment, we recognize TCFD 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. We recognize TCFD 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. Using 2023 as a baseline for our TCFD assessment, we assessed 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. 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. 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 IPCC to identify a selection of climate-related physical and transitional risks and opportunities that may impact our business. We assessed their significance based on their severity and likelihood, as well as our operations' exposure and vulnerability to them. 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.

Water

(5.1.1.1) Scenario used

Water scenarios

☑ WWF Water Risk Filter

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

☑ Policy

☑ Market
☑ Reputation

(5.1.1.7) Reference year

2023

(5.1.1.8) Timeframes covered

Select all that apply
☑ 2030
☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts
☑ Changes to the state of nature
☑ Speed of change (to state of nature and/or ecosystem services)
☑ Climate change (one of five drivers of nature change)

Stakeholder and customer demands
☑ Consumer sentiment

Regulators, legal and policy regimes
☑ Global regulation

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

The pathways for the Water Risk Filter scenarios follow the respective narratives: (1) Optimistic scenario pathway represents a world with sustainable socio-economic development (SSP1) and moderate reduction of GHG emissions (RCP2.6 /RCP4.5), leading to an increase of global mean surface temperature of approximately 1.5°C by the end of the 21st century. (2) Current trend scenario pathway represents a world similar to current socio-economic development trends (SSP2) and intermediate GHG emission levels (RCP4.5 /RCP6.0), leading to an increase of global mean surface temperature of approximately 2°C by the end of the 21st century. (3) Pessimistic scenario pathway represents a world with unequal and unstable socio-economic development (SSP3) and high GHG emission levels (RCP6.0 /RCP8.5), leading to an increase of global mean surface temperature of approximately 3.5/4°C by the end of the 21st century.

(5.1.1.11) Rationale for choice of scenario

In line with the Task Force on Climate-related Financial Disclosure (TCFD) recommendations, the scenarios dataset builds on the framework of the tool's current basin risk assessment but takes into account the most relevant climate scenarios (IPCC Representative Contract Pathways - RCP) and socio-economic scenarios (IIASA Shared Socioeconomic Pathways - SSP). The scenario analysis is helpful in identifying water risks in our operations especially those located in Indonesia. [Add row]

(5.1.2) Provide details of the outcomes of your organization's scenario analysis.

Climate change

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

☑ Strategy and financial planning

☑ Resilience of business model and strategy

☑ Capacity building

☑ Target setting and transition planning

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

RESULTS OF SCENARIO ANALYSIS: Following our scenario analysis on climate related risks, herewith summary of the outcomes of the scenario analysis and mitigation measures: 1. RISK AND OPPORTUNITIES IDENTIFICATION, ASSESSMENT AND MANAGEMENT: Through scenario analysis, we identify, assess and manage risks and opportunities that may impact our operations in the future. For example, acute physical risk such as rising average temperatures and longer drought seasons increase the risk of fires that may damage oil palm plantations. Potential implications to Musim Mas include: • Loss of revenue from the destruction of oil palms and increased replanting costs. • Lower yields. • Increased worker health and safety risks. • Negative health impacts on surrounding communities. Mitigation measures/action plans: Musim Mas has implemented community engagement programs (e.g., the Fire Free Village Program) and mitigation measures (e.g., building water ponds and fire breaks, monitoring satellite data, and installing fire watch towers) to prevent wildfires in concession areas. Moreover, we have adopted comprehensive measures to preserve surface water and groundwater quality. We monitor water-related risks through the World Resources Institute's

Aqueduct tool and are mindful to not locate our upstream operations in water-stressed areas. For more information, please see our Fire Management in the website. (https://www.musimmas.com/sustainability/positive-environmental-impacts/fire-prevention-and-management/) 2. CORPORATE STRATEGY AND FINANCIAL PLANNING: Projected rises in average temperatures and heatwave frequency can pose health risks to plantation workers, reducing labour efficiency and increasing the risk of heat-related illnesses. Potential implication to Musim Mas is increased operating costs (energy and labour). Mitigation measures/action plans: We have implemented a range of OHS measures to protect workers from heat-related illness and injuries by mandating breaks during periods of high temperatures. 3. RESILIENCE OF BUSINESS MODEL AND STRATEGY: Consumer scrutiny of the potentially negative impacts of palm oil cultivation may lead to a shift towards palm oil substitutes and alternatives. Potential implication to Musim Mas is reduced revenues from traditional palm oil products. Mitigation measures/action plans: While the risk of palm oil alternatives to our business remains low, we recognize the increasing preference of Western consumers for sustainable palm oil. As a result, Musim Mas was the first Indonesian company to join the RSPO when it was established. Since June 2021, 100% of our mills with plantations have been certified against the RSPO Principles and Criteria. Moreover, we also have achieved ISPO certification for all our upstream entities since August 2023 and have Net Zero targets approved by SBTi in October 2024. 4. CAPACITY BUILDING: We provide regular, relevant training to ensure our workers and employees can effectively carry out their roles and responsibilities including climate-related mitigation measures. 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. We also 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 them on good agricultural practices (GAP) and 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 long-term impact. 5. TARGET SETTING AND TRANSITION PLANNING: The 2022 Enhanced NDC Indonesia has committed to reducing emissions unconditionally by nearly 32% and to achieve net-zero by 2060 or sooner. Moreover, international guidelines such as the EU Corporate Sustainability Reporting Directive (CSRD) will require European companies to start reporting on various climate-related targets, along with other elements of sustainability in 2025. As such, failure in meeting the sustainability metrics such as the GHG threshold and NDPE commitments may limit the availability of qualified supply bases which may damage the brand, thus, leading to a loss of market. In regard to both transitional and physical risks, Musim Mas takes commitment to achieve Net Zero by 2050 aligning with climate science as per the Science Based Targets Initiative (SBTi). Our commitment has been endorsed by SBTi and is displayed on the SBTi website since 12 January 2024. Furthermore, we have set emissions reduction targets for near term (2030) and long term (2050) in line with the SBTi and FLAG guidance following the 1.5 pathway scenario and these targets have been approved by SBTi in October 2024.

Forests

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

☑ Strategy and financial planning

☑ Resilience of business model and strategy

☑ Capacity building

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

RESULTS OF SCENARIO ANALYSIS: Below is the summary outcomes of the scenario analysis and mitigation measures: 1. RESILIENCE OF BUSINESS MODEL AND STRATEGY: With the growing international agreements concerning deforestation, the implementation of stricter International and/or national regulations becomes inevitable. Consequently, more customers prefer sustainably certified palm oil products and derivatives. Potential implication to Musim Mas is reduced revenues from traditional palm oil products. Mitigation measures/action plans: • Since June 2021, 100% of our mills with plantations have been certified against the RSPO Principles and Criteria. We also have achieved ISPO certification for all our upstream entities since August 2023. • Furthermore, we are working closely with the local community and other relevant parties (i.e. Siak and Pelalawan Landscape collaboration) to ensure that our actions are not only done in accordance with the FPIC principles but also help the surrounding communities. • Communicate our sustainability progress and targets, Musim Mas annually publishes Sustainability Report and actively participates in various recognized third-party assessments such as CDP, Ecovadis, SPOTT, and PROPER to benchmark and showcase our sustainable progress at the highest level. • Enhance connectivity of existing HCV/HCS areas (e.g. all biodiverse habitats) and the wider landscape by establishing wildlife corridors, where feasible. 2. RISK AND OPPORTUNITIES IDENTIFICATION, ASSESSMENT AND MANAGEMENT: Acute Physical risk: Drought and Fire Rising average temperatures and longer drought seasons increase the risk of fires that may damage oil palm plantations. Potential implications to Musim Mas include: • Loss of revenue from the destruction of oil palms and increased replanting costs. • Lower yields. • Increased worker health and safety risks. • Negative health impacts on surrounding communities. • Decrease in revenues due to lower production capacity caused by water scarcity. Mitigation measures/action plans: Musim Mas has implemented community engagement programs (e.g., the Fire Free Village Program) and mitigation measures (e.g., building water ponds and fire breaks, monitoring satellite data, and installing fire watch towers) to prevent wildfires in concession areas. Moreover, we have adopted comprehensive measures to preserve surface water and groundwater quality. We monitor water-related risks through the World Resources Institute's Aqueduct tool and are mindful to not locate our upstream operations in water-stressed areas. For more information, please see our Fire Management in the website. (https://www.musimmas.com/sustainability/positive-environmental-impacts/fire-prevention-and-management/) Chronic Physical Risk: Rising temperatures & heatwaves. Projected rises in average temperatures and heatwave frequency can pose health risks to plantation workers, reducing labour efficiency and increasing the risk of heat-related illnesses. Potential implication to Musim Mas is increased operating costs (energy and labour). Mitigation measures/action plans: We have implemented a range of OHS measures to protect workers from heat-related illness and injuries by mandating breaks during periods of high temperatures.

Water

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

☑ Strategy and financial planning

☑ Resilience of business model and strategy

☑ Capacity building

☑ Target setting and transition planning

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

RESULTS OF SCENARIO ANALYSIS: According to WRI aqueduct tool and WWF Water Risk Filter, our upstream operations are free from water stress. Nevertheless, there are climate-related physical risk such as drought and flood which lead to water-related risk. Hence, we conduct scenario analysis and the result is summarized as follows: 1. RISK AND OPPORTUNITIES IDENTIFICATION, ASSESSMENT AND MANAGEMENT: Through scenario analysis, we identify, assess and manage risks and opportunities that may impact our operations in the future. For example, prolonged drought seasons increase the risk of fires which related to water availability/supply, Moreover, heavy rains may lead to rivers overflowing and flash flooding that disrupt FFB collection and damage infrastructure. Potential implications to Musim Mas include: • Loss of revenue from the destruction of oil palms and increased replanting costs. • Lower yields. • Increased worker health and safety risks. • Negative health impacts on surrounding communities. • Decrease in revenues due to lower production capacity caused by water scarcity. To mitigate these risks, we have adopted comprehensive water-related measures/action plans such as: • Ensure water efficiency in our mills, we set a target to achieve water use intensity to be below 1.2 m3/MT FFB processed. In 2024, our average mills' water use intensity is 1.13 m3/MT FFB processed in line with the set target. • Monitor water-related risks through the World Resources Institute's Aqueduct tool and are mindful to not locate our upstream operations in water-stressed areas. 2. STRATEGY AND FINANCIAL PLANNING: Water-related issues are also included in our financial planning since water is an important resource for our operations. Toward the climate transition of net zero by 2050, we utilize scenario analysis tools such as WWF Water Risk Filter and WRI Aqueduct Water Risk Atlas tool to look at our operations' risk exposure to various physical risks (drought, sea level rise, and flood) and water stress in a timeframe of 2001-2050 and 2040 respectively. Depending on the likelihood and exposure of the risk to our operations, the management would budget in preparation for the current and upcoming action plans/projects. For example, we would budget to construct more water ponds for some units in preparation for the dry season. Realizing the possible water shortages in the future, we are seeking for alternatives to increase water efficiency. This is included in our financial planning. The time horizon of 11-15 years was selected as it aligned with our definition of long-term. As Musim Mas is not a public company, thus, internal figures relating to budget, sales, and profits are not shared externally. 3. RESILIENCE OF BUSINESS MODEL AND STRATEGY: As stipulated in our Sustainability Policy, water-related issues are integrated into Musim Mas operations with respect to water quantity and quality, as well as equity. We adhere to regulatory standards and sector-specific sustainability certification schemes. In 2024, we remain implemented the following practices: • Continue to achieve and maintain certification schemes in our operations such as RSPO where water-related aspects are integrated within its standards and principles. To date, all of our integrated mills continue are 100% RSPO certified. • Manage BOD and COD levels and keep them below regulatory thresholds. We treat all effluents before discharging them and assess the BOD and COD levels of the effluents monthly. To date, there were no instances of non-compliance regarding BOD and COD at our upstream operations. • Monitor the N & P levels in watercourses. • We are committed to protecting those areas especially HCV 4 in riparian areas. • Operate 100% zero waste mills utilizing dried decanter solid, boiler ash, and POME to be repurposed as organic fertilizer and land application respectively which improves soil nutrition and moisture retention capability.
[Fixed row]

(5.2) Does your organization's strategy include a climate transition plan?

(5.2.1) Transition plan

Select from:

☑ Yes, we have a climate transition plan which aligns with a 1.5°C world

(5.2.3) Publicly available climate transition plan

Select from:

☑ Yes

(5.2.4) Plan explicitly commits to cease all spending on, and revenue generation from, activities that contribute to fossil fuel expansion

Select from:

☑ No, but we plan to add an explicit commitment within the next two years

(5.2.6) Explain why your organization does not explicitly commit to cease all spending on and revenue generation from activities that contribute to fossil fuel expansion

Consistent with our commitment to reach net zero by 2050 under the SBTi framework, decarbonising our energy mix is a priority. Transitioning from fossil fuels to renewable energy—particularly biogas, biomass, and solar—will be critical to meeting our targets. Currently, more than 90% of energy used in our upstream operations is renewable, supplied mainly by biogas captured from palm oil mill effluent (POME) and by biomass such as palm shells. As a fully integrated palm oil Group spanning cultivation, refining, and manufacturing, we assess the pace and sequencing of this transition at each site against resource availability, technology readiness, and operational feasibility. While constraints vary by location, we are committed to minimising fossil-fuel use and progressively increasing the share of renewables across our operations.

(5.2.7) Mechanism by which feedback is collected from shareholders on your climate transition plan

Select from:

☑ Our climate transition plan is voted on at AGMs and we also have an additional feedback mechanism in place

(5.2.8) Description of feedback mechanism

Since 2014, Musim Mas' sustainability policy serves as the principal framework for our sustainability commitments including NDPE, traceability, climate change, and social commitments. Our Sustainability Policy is refreshed every five years following the latest and highest international sustainability standards covering our entire global operations including that of our third-party suppliers. The climate-related topic is integrated into our multi-disciplinary company-wide risk management process

where risk and opportunity assessments are discussed in the Board agenda. Feedback Mechanism - Risk Identification and Assessment: For each of our climate-related risks, we have a comprehensive risk management framework which outlines the various approaches and controls that are in place, as well as the responsibilities of management in addressing both the overall risk and the specific measures to mitigate it. To ensure that our risk management remains effective, we consider several factors, including business growth, environmental outlook, and the potential worst-case scenarios our operations may encounter in different timeframes (short-term, medium-term, and long-term). The Board regularly reviews these risk areas, determining the actions and responsibilities required for Musim Mas to achieve its strategic objectives while also taking into account Environmental, Social, and Governance (ESG) considerations. After the Board's review, the identified responsibilities and actions are shared and assigned to relevant departments. These departments then develop action plans and projects to address the risks. Before proceeding with any of these plans or projects, they are reported back to the Board for approval. The progress of these initiatives is reported to the Board to keep them informed about the ongoing efforts to manage climate risks effectively.

(5.2.9) Frequency of feedback collection

Select from:

☑ More frequently than annually

(5.2.10) Description of key assumptions and dependencies on which the transition plan relies

Following our transition toward the 1.5C pathway, Musim Mas is committing to set Net Zero targets following the SBTi framework. The SBTi framework uses GHG Protocol as the underlying GHG accounting guidelines. We are aware of the dynamic nature of these guidelines and will adapt accordingly. For instances, we anticipate the finalization of the GHG Protocol Land Sector and Removals Guidance in 2025. Moreover, with approximately 90% of our emissions is in Scope 3, our value chains such as our suppliers will also be one of the key aspects to decarbonize the whole supply chain.

(5.2.11) Description of progress against transition plan disclosed in current or previous reporting period

In December 2023, we submitted our Net Zero commitment letter to the SBTi. In January 2024, we have obtained official endorsement on our commitment from the SBTi. In October 2024, SBTi officially approved our near- and long-term emissions reduction targets under the SBTi Corporate Net-Zero Standard and the SBTi Forest, Land, and Agriculture Guidance (FLAG).

(5.2.12) Attach any relevant documents which detail your climate transition plan (optional)

Musim Mas Net Zero Targets Have been Approved by the SBTi.pdf

(5.2.13) Other environmental issues that your climate transition plan considers

Select all that apply

☑ Forests

☑ Water

☑ Biodiversity

(5.2.14) Explain how the other environmental issues are considered in your climate transition plan

Consistent with our Net Zero commitment, Musim Mas is developing and implementing a portfolio of emissions-reduction interventions to achieve our targets. Many of these measures deliver broader co-benefits, both direct and indirect. For example, replacing fossil fuels (e.g., coal) with renewable energy sources such as sustainably sourced biomass and solar which reduces operational emissions and reliance on coal, thereby helping to lessen pressures associated with coal extraction, including land-use change and biodiversity risks.
[Fixed row]

(5.3) Have environmental risks and opportunities affected your strategy and/or financial planning?

(5.3.1) Environmental risks and/or opportunities have affected your strategy and/or financial planning

Select from:
☑ Yes, both strategy and financial planning

(5.3.2) Business areas where environmental risks and/or opportunities have affected your strategy

Select all that apply
☑ Products and services
☑ Upstream/downstream value chain
☑ Investment in R&D
☑ Operations
[Fixed row]

(5.3.1) Describe where and how environmental risks and opportunities have affected your strategy.

Products and services

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Forests

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

With the growing international agreements concerning climate change and GHG emission reduction commitment, the implementation of stricter International and/or national regulations become inevitable. For example, the decision of the international market to pose stricter sustainability guidelines toward the import of palm oil has impacted the market. The changes in European market preferences toward sustainably sourced products have led us to further improve and promote our sustainability practices across our supply chain. Recognizing the dynamics of the market, we have publicly announced our sustainability commitment with the launch of our first sustainability policy in 2014. To track and evaluate our sustainability progress, we are independently audited annually against various sustainability certification and verification schemes such as RSPO, ISCC, ISPO. Furthermore, we also annually disclose our sustainability progress, targets, and achievements to our customers and relevant stakeholders through well-recognized bodies such as CDP, Ecovadis, SPOTT, and PROPER as well as our internal Sustainability Report (https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/). Furthermore, 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. Recognizing our role in supporting these needs, Musim Mas engaged a registered independent LCA consultant in 2022 to conduct LCAs adhering to the ISO 14040:2006 and ISO 14044:2006 international frameworks for selected downstream products. This comprehensive assessment covered the entire production system, from the cultivation of raw materials—specifically Fresh Fruit Bunches (FFB) at the plantation—to the final product (cradle-to-gate). The study 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.

Upstream/downstream value chain

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Forests

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Following our NDPE policy, we focus on eliminating deforestation, peatland development, and the slash-and-burn land-clearing method. This framework has led us to improve our monitoring tools such as satellites and drones, implement High Carbon Stock Assessment (HCSA), and develop a traceability mechanism to identify the FFB source area which aligns with our NDPE vision. As of 2024, 89.9% of our suppliers either have an NDPE policy or adopted the Musim Mas Sustainability Policy. Presently, we have achieved 100% traceability to mill since 2015 and 98% traceability to plantation per December 2024. We are on track to achieve full traceability to plantations by 2025. In recent years, suppliers are required to complete the Musim Mas Self-Assessment Tool (SAT) which is an exhaustive set of questions against our NDPE requirements. As of 2024, 78% of our suppliers have completed the Self-Assessment Tool. Recognizing the importance of smallholders, Musim Mas has developed programs to integrate independent smallholders into the palm oil supply chain since 2015. We engage smallholders and assist them in adopting efficient farming standards covering good agricultural practices and NDPE commitments. Since 2015, we have rolled out three main programs: the Musim Mas-IFC Program (2015-2020), the Extension Services Program, and Smallholders Hubs. Additionally, we take a landscape-level approach to our independent smallholder programs to address barriers faced by smallholders due to local geographic and environmental conditions. Some of our landscape priorities include Aceh, Riau, South Sumatra, and West Kalimantan.

Investment in R&D

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Forests

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Recognizing the need to address growing global demand, Musim Mas continues to maximize our oil palm yield while consciously mitigating environmental impacts. Musim Mas R&D team continues to optimize agriculture practices, including efficient usage of fertilizers and pesticides to reduce environmental impacts such as climate change and eutrophication. Our Genetic Research Center, situated at our Riau plantation comprises dedicated units that manage and optimize agronomy, crop protection, and peat to maintain consistent and high production. It aims to provide our operations with the most advanced and elite oil palm planting materials, individually tailored to suit different environments, ensuring we generate optimal yields across all the Group's plantations. We achieve these goals through intensive breeding programs, adopting high nursery management standards, and developing planting materials with desirable traits like earlier harvesting, higher extraction rates, and increased disease resistance. In addition, we also implement Integrated Pest Management (IPM) where we use barn owls to reduce rat population. This procedure is expected to reduce the usage of rodenticides.

Operations

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Forests

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

To ensure continued compliance to new regulations concerning sustainability aspects such as climate change, forests, and water, Musim Mas has implemented the following practices in our operations: (1) In alignment with the 1.5°C world, we announced our Net Zero commitment to the Science Based Targets Initiative (SBTi) which has been endorsed by SBTi since January 2024. (2) Following our Net Zero commitment, we have set near- and long-term emissions reduction targets which

have been approved by SBTi in October 2024. (3) Since 2023, we have successfully constructed and operated 17 methane capture plants in our palm oil mills. (4) We set a target to achieve water use intensity to be below 1.2 m3/MT FFB processed. In 2024, our mills' water use intensity is 1.13 m3/MT FFB processed in line with the set target. (5) We strictly manage BOD and COD levels and keep them below regulatory thresholds. We treat all POME before discharging them. On a monthly basis, we assess the BOD and COD levels of our mills through lab testing. To date, there were no instances of non-compliance regarding BOD and COD at our upstream operations. Moreover, we monitor the N & P levels in watercourses. (6) We are committed to protecting those areas especially HCV 4 in riparian areas. [Add row]

(5.3.2) Describe where and how environmental risks and opportunities have affected your financial planning.

Row 1

(5.3.2.1) Financial planning elements that have been affected

Select all that apply

☑ Assets
☑ Revenues
☑ Liabilities
☑ Direct costs
☑ Indirect costs
☑ Access to capital
☑ Capital allocation
☑ Capital expenditures
☑ Acquisitions and divestments

(5.3.2.2) Effect type

Select all that apply

☑ Risks
☑ Opportunities

(5.3.2.3) Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

Select all that apply

☑ Climate change
☑ Forests
☑ Water

(5.3.2.4) Describe how environmental risks and/or opportunities have affected these financial planning elements

The vision in our long-term business objectives and strategy has altered the way we budget and finance our operations. In line with our climate transition plan of 1.5°C to set near-term by 2030 and net-zero by 2050 targets following the SBTi framework, we have invested in new technologies such as methane capture plant to mitigate our GHG emissions. We also invest in resources and tools to ensure NDPE commitments and monitor hotspots across our supply chains such as satellite monitoring platforms (GFW, NOAA, MODIS), traceability exercises, and suppliers' workshops. Additionally, dedicated teams are established to ensure continual compliance and implementation of the respective certification's sustainable criteria into our supply chain including RSPO, ISCC, ITSNC, etc. In light of these, we plan and budget our finances accordingly. Beyond our own operations, we also participate in multiple multi-stakeholder platforms and develop working partnerships with key stakeholders on landscape and sector-wide levels to broaden our efforts towards a truly sustainable palm oil supply chain. For example, Aceh and Siak Pelalawan landscapes. Accordingly, financial planning will also be allocated to these projects. As Musim Mas is not a public company, thus, internal figures relating to budget, sales, and profits are not shared externally.
[Add row]

(5.4) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Methodology or framework used to assess alignment with your organization's climate transition
	Select from: ☑ Yes	*Select all that apply* ☑ Other methodology or framework

[Fixed row]

(5.4.1) Quantify the amount and percentage share of your spending/revenue that is aligned with your organization's climate transition.

Row 1

(5.4.1.1) Methodology or framework used to assess alignment

Select from:

☑ Other, please specify :Bespoke methodology

(5.4.1.5) Financial metric

Select from:
☑ OPEX

(5.4.1.6) Amount of selected financial metric that is aligned in the reporting year (currency)

50000000

(5.4.1.7) Percentage share of selected financial metric aligned in the reporting year (%)

23

(5.4.1.8) Percentage share of selected financial metric planned to align in 2025 (%)

24

(5.4.1.9) Percentage share of selected financial metric planned to align in 2030 (%)

25

(5.4.1.12) Details of the methodology or framework used to assess alignment with your organization's climate transition

Our sustainability policy serves as the framework for our climate transition. Our sustainability policy covers both our own operations and our supply chains. We have integrated several sustainability practices in our operations including management of conservation areas, installation of methane capture facilities, ensuring NDPE in our supply chain, monitoring of deforestation and fire, developing Net Zero transition plan following the SBTi framework, landscape initiatives beyond our value chain, and many more. The operational expenditure for these practices is estimated as they are aligned with our climate transition. Following increasing stakeholders' demand to reduce carbon emissions, we estimate the share of our spending to increase to 25% by 2030.
[Add row]

(5.9) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

(5.9.1) Water-related CAPEX (+/- % change)

0

(5.9.2) Anticipated forward trend for CAPEX (+/- % change)

0

(5.9.3) Water-related OPEX (+/- % change)

0

(5.9.4) Anticipated forward trend for OPEX (+/- % change)

0

(5.9.5) Please explain

Our average mills' water use intensity in 2024 is 1.13 m3/ton FFB processed. This is lower than the targeted water use intensity of 1.2 m3/ton FFB processed. Moreover, our upstream operations are located in water stress free location according to WRI aqueduct. Hence, we will continue to maintain our water management in line with our sustainability policy.
[Fixed row]

(5.10) Does your organization use an internal price on environmental externalities?

	Use of internal pricing of environmental externalities	Environmental externality priced
	Select from: ☑ Yes	*Select all that apply* ☑ Carbon

	Use of internal pricing of environmental externalities	Environmental externality priced
		☑ Water

[Fixed row]

(5.10.1) Provide details of your organization's internal price on carbon.

Row 1

(5.10.1.1) Type of pricing scheme

Select from:

☑ Internal trading

(5.10.1.2) Objectives for implementing internal price

Select all that apply

☑ Drive low-carbon investment

☑ Identify and seize low-carbon opportunities

☑ Influence strategy and/or financial planning

(5.10.1.3) Factors considered when determining the price

Select all that apply

☑ Alignment to international standards

☑ Alignment to scientific guidance

☑ Price/cost of renewable energy procurement

☑ Price/cost of voluntary carbon offset credits

(5.10.1.4) Calculation methodology and assumptions made in determining the price

Pricing methodology and assumption: As the facilities claiming RECs are located in Indonesia, we use the 2024 average market price of green electricity certificates (REC-equivalents) for the Indonesian national grid as the reference price.

(5.10.1.5) Scopes covered

Select all that apply

☑ Scope 2

(5.10.1.6) Pricing approach used – spatial variance

Select from:

☑ Differentiated

(5.10.1.7) Indicate how and why the price is differentiated

As the facilities claiming RECs are located in Indonesia, we use the 2024 average market price of green electricity certificates (REC-equivalents) for the Indonesian national grid as the reference price.

(5.10.1.8) Pricing approach used – temporal variance

Select from:

☑ Evolutionary

(5.10.1.9) Indicate how you expect the price to change over time

We will follow the national grid pricing for the green electricity certificate and adjust our internal pricing accordingly.

(5.10.1.10) Minimum actual price used (currency per metric ton CO2e)

4.12

(5.10.1.11) Maximum actual price used (currency per metric ton CO2e)

4.12

(5.10.1.12) Business decision-making processes the internal price is applied to

Select all that apply

☑ Operations

☑ Procurement

(5.10.1.13) Internal price is mandatory within business decision-making processes

Select from:

☑ Yes, for some decision-making processes, please specify

(5.10.1.14) % total emissions in the reporting year in selected scopes this internal price covers

3

(5.10.1.15) Pricing approach is monitored and evaluated to achieve objectives

Select from:

☑ Yes

(5.10.1.16) Details of how the pricing approach is monitored and evaluated to achieve your objectives

The pricing approach will follow the average green electricity tariff from the national grid. Our Team will monitor the pricing as well as evaluating its emissions reduction contribution and impact annually.
[Add row]

(5.10.2) Provide details of your organization's internal price on water.

Row 1

(5.10.2.1) Type of pricing scheme

Select from:

☑ Internal fee

(5.10.2.2) Objectives for implementing internal price

Select all that apply

☑ Drive water efficiency

(5.10.2.3) Factors beyond current market price are considered in the price

Select from:

☑ Yes

(5.10.2.4) Factors considered when determining the price

Select all that apply

☑ Existing water tariffs

(5.10.2.5) Calculation methodology and assumptions made in determining the price

To ensure that our operations are in line with our water savings commitment, we installed flow meter in our housing areas to monitor our water consumption. For those who exceeds the water quota, we have internal water pricing that is determined based on the existing water tariffs in each region.

(5.10.2.6) Stages of the value chain covered

Select all that apply

☑ Direct operations

(5.10.2.7) Pricing approach used – spatial variance

Select from:

☑ Differentiated

(5.10.2.8) Indicate how and why the price is differentiated

Each region has different water tariff depending on the local regulation. Our internal water tariff follows the local water tariff accordingly.

(5.10.2.9) Pricing approach used – temporal variance

Select from:

☑ Static

(5.10.2.11) Minimum actual price used (currency per cubic meter)

0.1

(5.10.2.12) Maximum actual price used (currency per cubic meter)

0.5

(5.10.2.13) Business decision-making processes the internal water price is applied to

Select all that apply

☑ Dependencies management

☑ Impact management

☑ Risk management

☑ Opportunity management

(5.10.2.14) Internal price is mandatory within business decision-making processes

Select from:

☑ Yes, for all decision-making processes

(5.10.2.15) Pricing approach is monitored and evaluated to achieve objectives

Select from:

☑ Yes

(5.10.2.16) Details of how the pricing approach is monitored and evaluated to achieve your objectives

Aligned with the sustainability policy and SDG 6, we provide adequate free clean water to all our employees and their households. Through our water allocation system, we ensure that every individual receives 120 litres of water per day (more than national and WHO's recommendations of 50-100 litres). We also partner with public health officials to monitor the quality of the water from wells to track the potential risk of contamination or other issues. We installed flow meter in our housing areas to monitor and evaluate our water consumption. Moreover, we conduct frequent education for all our employees on the importance of water efficiency.
[Add row]

(5.11) Do you engage with your value chain on environmental issues?

	Engaging with this stakeholder on environmental issues	Environmental issues covered
Suppliers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Forests ☑ Water
Smallholders	*Select from:* ☑ Yes	*Select all that apply*
Customers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Forests ☑ Water
Investors and shareholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Forests ☑ Water
Other value chain stakeholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Forests ☑ Water

[Fixed row]

(5.11.1) Does your organization assess and classify suppliers according to their dependencies and/or impacts on the environment?

Climate change

(5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment

Select from:

☑ Yes, we assess the dependencies and/or impacts of our suppliers

(5.11.1.2) Criteria for assessing supplier dependencies and/or impacts on the environment

Select all that apply

☑ Contribution to supplier-related Scope 3 emissions

☑ Impact on deforestation or conversion of other natural ecosystems

(5.11.1.3) % Tier 1 suppliers assessed

Select from:

☑ 100%

(5.11.1.4) Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment

Following our Group's baseline Scope 1,2,3 emissions assessment, approximately 90% of our emissions are coming from Scope 3. The majority of the scope 3 emissions is derived from the purchased of raw materials of CPO and PK. The threshold for classifying suppliers as having substantive impacts on the environment is considered if there is a breach in our NDPE commitment.

(5.11.1.5) % Tier 1 suppliers meeting the threshold for substantive dependencies and/or impacts on the environment

Select from:

☑ Less than 1%

(5.11.1.6) Number of Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

1

Forests

(5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment

Select from:

☑ Yes, we assess the dependencies and/or impacts of our suppliers

(5.11.1.2) Criteria for assessing supplier dependencies and/or impacts on the environment

Select all that apply

☑ Basin/landscape condition

☑ Contribution to supplier-related Scope 3 emissions

☑ Dependence on commodities

☑ Impact on deforestation or conversion of other natural ecosystems

(5.11.1.3) % Tier 1 suppliers assessed

Select from:

☑ 100%

(5.11.1.4) Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment

The majority of our raw materials (more than 80%) are sourced from third party suppliers. The production processes of these raw materials involve land management. The threshold for classifying suppliers as having substantive impacts on the environment is considered if there is a breach in our NDPE commitment.

(5.11.1.5) % Tier 1 suppliers meeting the threshold for substantive dependencies and/or impacts on the environment

Select from:

☑ Less than 1%

(5.11.1.6) Number of Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

1

Water

(5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment

Select from:

☑ Yes, we assess the dependencies and/or impacts of our suppliers

(5.11.1.2) Criteria for assessing supplier dependencies and/or impacts on the environment

Select all that apply

☑ Dependence on water

☑ Impact on water availability

☑ Impact on deforestation or conversion of other natural ecosystems

(5.11.1.3) % Tier 1 suppliers assessed

Select from:

☑ 100%

(5.11.1.4) Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment

More than 80% of our raw materials are sourced from third party suppliers. The production processes for these raw materials require water management. The threshold for classifying suppliers as having substantive impacts on the environment is considered if there is a breach in our NDPE commitment.

(5.11.1.5) % Tier 1 suppliers meeting the threshold for substantive dependencies and/or impacts on the environment

Select from:

☑ Less than 1%

(5.11.1.6) Number of Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

1
[Fixed row]

(5.11.2) Does your organization prioritize which suppliers to engage with on environmental issues?

Climate change

(5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:

☑ Yes, we prioritize which suppliers to engage with on this environmental issue

(5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue

Select all that apply

☑ In line with the criteria used to classify suppliers as having substantive dependencies and/or impacts relating to climate change

(5.11.2.4) Please explain

Following our Group's baseline Scope 1, 2, 3 emissions assessment, approximately 90% of our emissions are coming from Scope 3. The majority of the scope 3 emissions is derived from the purchased of raw materials of CPO and PK. Hence, the impact from these raw materials is considered to be substantive.

Forests

(5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:

☑ Yes, we prioritize which suppliers to engage with on this environmental issue

(5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue

Select all that apply

☑ In line with the criteria used to classify suppliers as having substantive dependencies and/or impacts relating to forests

(5.11.2.4) Please explain

The majority of our raw materials (more than 80%) are sourced from third party suppliers. The production processes of these raw materials involve land management. Hence, the forest impact from these raw materials is considered to be substantive.

Water

(5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:

☑ Yes, we prioritize which suppliers to engage with on this environmental issue

(5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue

Select all that apply

☑ In line with the criteria used to classify suppliers as having substantive dependencies and/or impacts relating to water

(5.11.2.4) Please explain

The majority of our raw materials (more than 80%) are sourced from third party suppliers. The production processes for these raw materials require water management. Hence, the water impact from these raw materials is considered to be substantive.
[Fixed row]

(5.11.5) Do your suppliers have to meet environmental requirements as part of your organization's purchasing process?

Climate change

(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

Select from:

☑ Yes, environmental requirements related to this environmental issue are included in our supplier contracts

(5.11.5.2) Policy in place for addressing supplier non-compliance

Select from:

☑ Yes, we have a policy in place for addressing non-compliance

(5.11.5.3) Comment

All of our suppliers are required to comply with our Sustainability Policy. To track suppliers' compliance against our Sustainability Policy, we developed an exhaustive set of questions namely Musim Mas Self-Assessment Tool (SAT). In terms of non-compliance, our Controlled Purchase Protocol (CPP) is available to resolve issues, secure remedy and remediation, and exclude errant suppliers as the last resort.

Forests

(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

Select from:

☑ Yes, environmental requirements related to this environmental issue are included in our supplier contracts

(5.11.5.2) Policy in place for addressing supplier non-compliance

Select from:

☑ Yes, we have a policy in place for addressing non-compliance

(5.11.5.3) Comment

All of our suppliers are required to comply with our Sustainability Policy. To track suppliers' compliance against our Sustainability Policy, we developed an exhaustive set of questions namely Musim Mas Self-Assessment Tool (SAT). In terms of non-compliance, our Controlled Purchase Protocol (CPP) is available to resolve issues, secure remedy and remediation, and exclude errant suppliers as the last resort.

Water

(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

Select from:

☑ Yes, environmental requirements related to this environmental issue are included in our supplier contracts

(5.11.5.2) Policy in place for addressing supplier non-compliance

Select from:

☑ Yes, we have a policy in place for addressing non-compliance

(5.11.5.3) Comment

All of our suppliers are required to comply with our Sustainability Policy. To track suppliers' compliance against our Sustainability Policy, we developed an exhaustive set of questions namely Musim Mas Self-Assessment Tool (SAT). In terms of non-compliance, our Controlled Purchase Protocol (CPP) is available to resolve issues, secure remedy and remediation, and exclude errant suppliers as the last resort.
[Fixed row]

(5.11.6) Provide details of the environmental requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Climate change

(5.11.6.1) Environmental requirement

Select from:

☑ Implementation of emissions reduction initiatives

(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement

Select all that apply

☑ Certification

☑ Geospatial monitoring tool
☑ Grievance mechanism/ Whistleblowing hotline
☑ Supplier self-assessment

(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement

Select from:
☑ 100%

(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement

Select from:
☑ 100%

(5.11.6.7) % tier 1 supplier-related scope 3 emissions attributable to the suppliers required to comply with this environmental requirement

Select from:
☑ 100%

(5.11.6.8) % tier 1 supplier-related scope 3 emissions attributable to the suppliers in compliance with this environmental requirement

Select from:
☑ 100%

(5.11.6.12) Comment

All of our suppliers are required to comply with our Sustainability Policy. To track suppliers' compliance against our Sustainability Policy, we developed an exhaustive set of questions namely Musim Mas Self-Assessment Tool (SAT). In terms of non-compliance, our Controlled Purchase Protocol (CPP) is available to resolve issues, secure remedy and remediation, and exclude errant suppliers as the last resort.

Forests

(5.11.6.1) Environmental requirement

Select from:

☑ No deforestation or conversion of other natural ecosystems

(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement

Select all that apply

☑ Certification

☑ Geospatial monitoring tool

☑ Grievance mechanism/ Whistleblowing hotline

☑ Supplier self-assessment

(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement

Select from:

☑ 100%

(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.5) % tier 1 suppliers with substantive environmental dependencies and/or impacts related to this environmental issue required to comply with this environmental requirement

Select from:

☑ 100%

(5.11.6.6) % tier 1 suppliers with substantive environmental dependencies and/or impacts related to this environmental issue that are in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.12) Comment

All of our suppliers are required to comply with our Sustainability Policy. To track suppliers' compliance against our Sustainability Policy, we developed an exhaustive set of questions namely Musim Mas Self-Assessment Tool (SAT). In terms of non-compliance, our Controlled Purchase Protocol (CPP) is available to resolve issues, secure remedy and remediation, and exclude errant suppliers as the last resort.

Water

(5.11.6.1) Environmental requirement

Select from:

☑ Setting and monitoring water pollution-related targets

(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement

Select all that apply

☑ Supplier self-assessment

(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement

Select from:

☑ 100%

(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.5) % tier 1 suppliers with substantive environmental dependencies and/or impacts related to this environmental issue required to comply with this environmental requirement

Select from:

☑ 100%

(5.11.6.6) % tier 1 suppliers with substantive environmental dependencies and/or impacts related to this environmental issue that are in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.12) Comment

All of our suppliers are required to comply with our Sustainability Policy. To track suppliers' compliance against our Sustainability Policy, we developed an exhaustive set of questions namely Musim Mas Self-Assessment Tool (SAT). In terms of non-compliance, our Controlled Purchase Protocol (CPP) is available to resolve issues, secure remedy and remediation, and exclude errant suppliers as the last resort.

Climate change

(5.11.6.1) Environmental requirement

Select from:

☑ Setting a science-based emissions reduction target

(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement

Select all that apply

☑ Supplier self-assessment

(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement

Select from:

☑ 100%

(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement

Select from:

☑ 1-25%

(5.11.6.7) % tier 1 supplier-related scope 3 emissions attributable to the suppliers required to comply with this environmental requirement

Select from:

☑ 100%

(5.11.6.8) % tier 1 supplier-related scope 3 emissions attributable to the suppliers in compliance with this environmental requirement

Select from:

☑ 1-25%

(5.11.6.9) Response to supplier non-compliance with this environmental requirement

Select from:

☑ Retain and engage

(5.11.6.10) % of non-compliant suppliers engaged

Select from:

☑ 100%

(5.11.6.11) Procedures to engage non-compliant suppliers

Select all that apply

☑ Providing information on appropriate actions that can be taken to address non-compliance

(5.11.6.12) Comment

Since 2023, we have included GHG aspects including Science-Based Target initiative (SBTi) targets in our Musim Mas Self-Assessment Tool (SAT). In line with our SBTi approved targets, we are committed to reduce our scope 3 emissions which related to our suppliers' emissions. Hence, we have conducted socialization on the importance to have emissions reduction targets as well as SBTi.
[Add row]

(5.11.7) Provide further details of your organization's supplier engagement on environmental issues.

Climate change

(5.11.7.2) Action driven by supplier engagement

Select from:

☑ Adaptation to climate change

(5.11.7.3) Type and details of engagement

Capacity building

☑ Provide training, support and best practices on how to measure GHG emissions

☑ Provide training, support and best practices on how to mitigate environmental impact

☑ Support suppliers to set their own environmental commitments across their operations

Information collection

☑ Collect climate transition plan information at least annually from suppliers

☑ Collect GHG emissions data at least annually from suppliers

☑ Collect targets information at least annually from suppliers

(5.11.7.4) Upstream value chain coverage

Select all that apply

☑ Tier 1 suppliers

(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

☑ 100%

(5.11.7.6) % of tier 1 supplier-related scope 3 emissions covered by engagement

Select from:

☑ 100%

(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

MEASURE OF SUCCESS: We require suppliers to complete the Musim Mas Self-Assessment Tool (SAT) to disclose their NDPE commitments and implementations. The SAT covers emissions reduction topics including setting of science-based targets. 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. In case of complaints concerning breaches to our NDPE guidelines, Grievance Channels and Controlled Purchase Protocol (CPP) are available to resolve issues, secure remedy and remediation, and exclude errant suppliers as the last resort. If there is an allegation of NDPE violation across our supply chain, we will study the allegation through internal tools as well as publicly available tools such as satellite monitoring, GRAS, GFW, etc. If a breach of the NDPE policy is confirmed, we will engage with the relevant suppliers in question. Moreover, Musim Mas collaborates with Earthqualizer to monitor deforestation in all of our suppliers and own concessions with bi-weekly reports available. IMPACT OF ENGAGEMENT: As of December 2024, 85.31% of our suppliers have attended an NDPE workshop, 89.9% have submitted their NDPE commitments, and 78% have completed SATs. In 2024, 98.80% of our supplier volumes were in the "Delivering" category for their No Deforestation commitments and 98.60% were in the "Delivering" category for their No Peat commitments.

(5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

Select from:

☑ Yes, please specify the environmental requirement :Calculation of Scope 1,2,3 emissions following GHG Protocol and setting a science-based emissions reduction target

(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

☑ Yes

Forests

(5.11.7.1) Commodity

Select from:

☑ Palm oil

(5.11.7.2) Action driven by supplier engagement

Select from:

☑ No deforestation and/or conversion of other natural ecosystems

(5.11.7.3) Type and details of engagement

Capacity building

☑ Provide training, support and best practices on how to measure GHG emissions

☑ Provide training, support and best practices on how to mitigate environmental impact

☑ Support suppliers to set their own environmental commitments across their operations

Information collection

☑ Collect climate transition plan information at least annually from suppliers

☑ Collect GHG emissions data at least annually from suppliers

☑ Collect targets information at least annually from suppliers

Innovation and collaboration

☑ Encourage collaborative work in landscapes or jurisdictions

(5.11.7.4) Upstream value chain coverage

Select all that apply

☑ Tier 1 suppliers

☑ Tier 2 suppliers

(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

☑ 100%

(5.11.7.7) % tier 1 suppliers with substantive impacts and/or dependencies related to this environmental issue covered by engagement

Select from:

☑ 100%

(5.11.7.8) Number of tier 2+ suppliers engaged

4159

(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

MEASURE OF SUCCESS: We require suppliers to complete the Musim Mas Self-Assessment Tool (SAT) to disclose their NDPE commitments and implementations. The SAT covers emissions reduction topics including setting of science-based targets. 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. The disclosed Tier 2 figure corresponds to the total number of smallholders under KKPA program. For reference, KKPA program is 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. In case of complaints concerning breaches to our NDPE guidelines, Grievance Channels and Controlled Purchase Protocol (CPP) are available to resolve issues, secure remedy and remediation, and exclude errant suppliers as the last resort. If there is an allegation of NDPE violation across our supply chain, we will study the allegation through internal tools as well as publicly available tools such as satellite monitoring, GRAS, GFW, etc. If a breach of the NDPE policy is confirmed, we will engage with the relevant suppliers in question. Moreover, Musim Mas collaborates with Earthqualizer to monitor deforestation in all of our suppliers and own concessions with bi-weekly reports available. IMPACT OF ENGAGEMENT: As of December 2024, 85.31% of our suppliers have attended an NDPE workshop, 89.9% have submitted their NDPE commitments, and 78% have completed SATs. In 2024, 98.80% of our supplier volumes were in the "Delivering" category for their No Deforestation commitments and 98.60% were in the "Delivering" category for their No Peat commitments.

(5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

Select from:

☑ Yes, please specify the environmental requirement :NDPE commitment

(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

☑ Yes

Water

(5.11.7.2) Action driven by supplier engagement

Select from:

☑ Adaptation to climate change

(5.11.7.3) Type and details of engagement

Capacity building

☑ Provide training, support and best practices on how to measure GHG emissions

☑ Provide training, support and best practices on how to mitigate environmental impact

☑ Support suppliers to set their own environmental commitments across their operations

Information collection

☑ Collect climate transition plan information at least annually from suppliers

☑ Collect GHG emissions data at least annually from suppliers

☑ Collect targets information at least annually from suppliers

☑ Collect WASH information at least annually from suppliers

☑ Collect water quality information at least annually from suppliers (e.g., discharge quality, pollution incidents, hazardous substances)

(5.11.7.4) Upstream value chain coverage

Select all that apply

☑ Tier 1 suppliers

(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

☑ 100%

(5.11.7.7) % tier 1 suppliers with substantive impacts and/or dependencies related to this environmental issue covered by engagement

Select from:

☑ 100%

(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

MEASURE OF SUCCESS: We require suppliers to complete the Musim Mas Self-Assessment Tool (SAT) to disclose their NDPE commitments and implementations. The SAT also covers water topics including monitoring of water quality and quantity as well as access to water, sanitation, and hygiene (WASH). 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. IMPACT OF ENGAGEMENT: As of December 2024, 85.31% of our suppliers have attended an NDPE workshop, 89.9% have submitted their NDPE commitments, and 78% have completed SATs. In 2024, 98.80% of our supplier volumes were in the "Delivering" category for their No Deforestation commitments and 98.60% were in the "Delivering" category for their No Peat commitments. Furthermore, 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.

(5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

Select from:

☑ Yes, please specify the environmental requirement :Water quality and quantity monitoring

(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

☑ Yes

[Add row]

(5.11.8) Provide details of any environmental smallholder engagement activity

Row 1

(5.11.8.1) Commodity

Select from:

☑ Palm oil

(5.11.8.2) Type and details of smallholder engagement approach

Capacity building

☑ Offer on-site technical assistance and extension services

☑ Organize capacity building events

☑ Prioritize support for smallholders in regions at high-risk of deforestation and conversion of other natural ecosystems

☑ Provide training, support and best practices on sustainable agriculture practices and nutrient management

☑ Support smallholders to clarify and secure land tenure rights

Innovation and collaboration

☑ Encourage smallholders to take part in landscape or jurisdictional initiatives

(5.11.8.3) Number of smallholders engaged

46915

(5.11.8.4) Effect of engagement and measures of success

MEASURE OF SUCCESS: As stipulated in our Sustainability Policy - Pillar 1, we provide training to our smallholders to enhance productivity, implement good agricultural practices and achieve compliance with standards, such as the RSPO. Engagement with smallholders can lead to an increase in yields, better access to national and international markets, improvement in livelihoods, reduction in the risk of land conversion and eventually mitigate environmental impact. IMPACT OF ENGAGEMENT: Driven by our commitment to improve the lives of smallholders, Musim Mas has been working closely with smallholders and collaborating with various partners. 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 Biodiverse and Inclusive Palm Oil Supply Chain (BIPOSC) project – a collaborative effort to promote regenerative agriculture among independent palm oil smallholders in Labuhanbatu, near to our PT Siringo-Ringo mill in North Sumatra. By promoting regenerative agricultural practices through collective trainings and intensive individual coaching, these smallholders can improve soil conditions, minimize soil erosion, reduce greenhouse gas emissions, support farm functional biodiversity, adopt other good agricultural practices and support on-farm diversification. Here are following have been achieved: (1) In 2024, the project had successfully enrolled 1,181 farmers, with 932 receiving RSPO certification and earning RSPO premiums in 2024. (2) Established seven demonstration plots showcasing regenerative agriculture in oil palm. (3) Developed 20 hectares of agroforestry demonstration plots. (4) Set up 7 nurseries to support on-farm diversification for smallholders. (5) Operated a sustainable composting unit with a monthly production capacity of 100-150 tons.
[Add row]

(5.11.9) Provide details of any environmental engagement activity with other stakeholders in the value chain.

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Run an engagement campaign to educate stakeholders about the environmental impacts about your products, goods and/or services

☑ Share information about your products and relevant certification schemes

☑ Share information on environmental initiatives, progress and achievements

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 100%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ 100%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

One of the key pillars of our sustainability policy is to maintain responsible and enduring relationships with suppliers, customers, and stakeholders. We maintain an open dialogue with all our customers and welcome constructive feedback to improve our operations. We strive to be transparent by keeping stakeholders informed on Group-wide matters. Information channels include our annual sustainability reports (https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/), website announcements (https://www.musimmas.com/resources/news-releases/), and the RSPO Annual Communication of Progress. We make information on all grievances publicly available and maintain an active social media presence to engage with our stakeholders online. We also continuously engage with our customers to support the identification and management of ESG topics, and their impacts, risks, and opportunities. Moreover, we also collaborate with multiple stakeholders including the government, customers (i.e. Unilever, AAK), local NGOs, etc to partner in various landscape approaches, for example, the Aceh and Siak Pelalawan landscapes (https://www.musimmas.com/sustainability/partnership-collaboration/landscape-approach-and-programs/). Additionally, Musim Mas participates in many public assessments and benchmarking programs including CDP, Ecovadis, SPOTT, and PROPER to rate and communicate our sustainability commitments and progress at the highest level. Musim Mas also adopts various certification schemes such as RSPO, ISCC, ISPO, etc where annual independent audits are conducted in our operations.

(5.11.9.6) Effect of engagement and measures of success

MEASURE OF SUCCESS: We measured the success of the engagement through customers' KPI scorecard. The KPI scorecard which includes various sustainability metrics such as NDPE commitments, traceability measures, and public assessment scorecard, and aim to achieve satisfactory predicates for all of our customers. IMPACT OF ENGAGEMENT: As the impact of engagement, we maintain an open dialogue with our stakeholders, welcome their constructive feedback, and strive to be transparent by keeping them well-informed on Group-wide matters. In addition to regular reports and communications on our website, and to assess our sustainability commitments and monitor our progress, we actively engage in various voluntary and mandatory benchmarking and public assessment programs, including EcoVadis, CDP, 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. In 2024, we retained our double 'A' scores for CDP Forests and Water Security Questionnaires, securing a spot on CDP prestigious 'A-List'. This achievement underscores Musim Mas' unwavering dedication to combatting deforestation and ensuring water security while advancing toward our ambitious goal of achieving net-zero emissions by 2050.

Forests

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Run an engagement campaign to educate stakeholders about the environmental impacts about your products, goods and/or services

☑ Share information about your products and relevant certification schemes

☑ Share information on environmental initiatives, progress and achievements

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 100%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

One of the key pillars of our sustainability policy is to maintain responsible and enduring relationships with suppliers, customers, and stakeholders. We maintain an open dialogue with all our customers and welcome constructive feedback to improve our operations. We strive to be transparent by keeping stakeholders informed on

Group-wide matters. Information channels include our annual sustainability reports (https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/), website announcements (https://www.musimmas.com/resources/news-releases/), and the RSPO Annual Communication of Progress. We make information on all grievances publicly available and maintain an active social media presence to engage with our stakeholders online. We also continuously engage with our customers to support the identification and management of ESG topics, and their impacts, risks, and opportunities. Moreover, we also collaborate with multiple stakeholders including the government, customers (i.e. Unilever, AAK), local NGOs, etc to partner in various landscape approaches, for example, the Aceh and Siak Pelalawan landscapes (https://www.musimmas.com/sustainability/partnership-collaboration/landscape-approach-and-programs/). Additionally, Musim Mas participates in many public assessments and benchmarking programs including CDP, Ecovadis, SPOTT, and PROPER to rate and communicate our sustainability commitments and progress at the highest level. Musim Mas also adopts various certification schemes such as RSPO, ISCC, ISPO, etc where annual independent audits are conducted in our operations.

(5.11.9.6) Effect of engagement and measures of success

MEASURE OF SUCCESS: We measured the success of the engagement through customers' KPI scorecard. The KPI scorecard which includes various sustainability metrics such as NDPE commitments, traceability measures, and public assessment scorecard, and aim to achieve satisfactory predicates for all of our customers. IMPACT OF ENGAGEMENT: As the impact of engagement, we maintain an open dialogue with our stakeholders, welcome their constructive feedback, and strive to be transparent by keeping them well-informed on Group-wide matters. In addition to regular reports and communications on our website, and to assess our sustainability commitments and monitor our progress, we actively engage in various voluntary and mandatory benchmarking and public assessment programs, including EcoVadis, CDP, 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. In 2024, we retained our double 'A' scores for CDP Forests and Water Security Questionnaires, securing a spot on CDP prestigious 'A-List'. This achievement underscores Musim Mas' unwavering dedication to combatting deforestation and ensuring water security while advancing toward our ambitious goal of achieving net-zero emissions by 2050.

Water

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Run an engagement campaign to educate stakeholders about the environmental impacts about your products, goods and/or services

☑ Share information about your products and relevant certification schemes

☑ Share information on environmental initiatives, progress and achievements

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 100%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

One of the key pillars of our sustainability policy is to maintain responsible and enduring relationships with suppliers, customers, and stakeholders. We maintain an open dialogue with all our customers and welcome constructive feedback to improve our operations. We strive to be transparent by keeping stakeholders informed on Group-wide matters. Information channels include our annual sustainability reports (https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/), website announcements (https://www.musimmas.com/resources/news-releases/), and the RSPO Annual Communication of Progress. We make information on all grievances publicly available and maintain an active social media presence to engage with our stakeholders online. We also continuously engage with our customers to support the identification and management of ESG topics, and their impacts, risks, and opportunities. Moreover, we also collaborate with multiple stakeholders including the government, customers (i.e. Unilever, AAK), local NGOs, etc to partner in various landscape approaches, for example, the Aceh and Siak Pelalawan landscapes (https://www.musimmas.com/sustainability/partnership-collaboration/landscape-approach-and-programs/). Additionally, Musim Mas participates in many public assessments and benchmarking programs including CDP, Ecovadis, SPOTT, and PROPER to rate and communicate our sustainability commitments and progress at the highest level. Musim Mas also adopts various certification schemes such as RSPO, ISCC, ISPO, etc where annual independent audits are conducted in our operations.

(5.11.9.6) Effect of engagement and measures of success

MEASURE OF SUCCESS: We measured the success of the engagement through customers' KPI scorecard. The KPI scorecard which includes various sustainability metrics such as NDPE commitments, traceability measures, and public assessment scorecard, and aim to achieve satisfactory predicates for all of our customers.
IMPACT OF ENGAGEMENT: As the impact of engagement, we maintain an open dialogue with our stakeholders, welcome their constructive feedback, and strive to be transparent by keeping them well-informed on Group-wide matters. In addition to regular reports and communications on our website, and to assess our sustainability commitments and monitor our progress, we actively engage in various voluntary and mandatory benchmarking and public assessment programs, including EcoVadis, CDP, 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. In 2024, we retained our double 'A' scores for CDP Forests and Water Security Questionnaires, securing a spot on CDP prestigious 'A-List'. This achievement underscores Musim Mas' unwavering dedication to combatting deforestation and ensuring water security while advancing toward our ambitious goal of achieving net-zero emissions by 2050.
[Add row]

C6. Environmental Performance - Consolidation Approach

(6.1) Provide details on your chosen consolidation approach for the calculation of environmental performance data.

	Consolidation approach used	Provide the rationale for the choice of consolidation approach
Climate change	*Select from:* ☑ Operational control	*System boundaries were defined by the operational control approach covering all entities where Musim Mas has operational control.*
Forests	*Select from:* ☑ Operational control	*System boundaries were defined by the operational control approach covering all entities where Musim Mas has operational control.*
Water	*Select from:* ☑ Operational control	*System boundaries were defined by the operational control approach covering all entities where Musim Mas has operational control.*
Plastics	*Select from:* ☑ Operational control	*System boundaries were defined by the operational control approach covering all entities where Musim Mas has operational control.*
Biodiversity	*Select from:* ☑ Operational control	*System boundaries were defined by the operational control approach covering all entities where Musim Mas has operational control.*

[Fixed row]

C7. Environmental performance - Climate Change

(7.1) Is this your first year of reporting emissions data to CDP?

Select from:

☑ No

(7.1.1) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

	Has there been a structural change?
	Select all that apply ☑ No

[Fixed row]

(7.1.2) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
	Select all that apply ☑ No

[Fixed row]

(7.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Select all that apply

☑ The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

☑ The Greenhouse Gas Protocol Agricultural Guidance: Interpreting the Corporate Accounting and Reporting Standard for the Agricultural Sector

☑ The Greenhouse Gas Protocol: Scope 2 Guidance

☑ The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

(7.3) Describe your organization's approach to reporting Scope 2 emissions.

(7.3.1) Scope 2, location-based

Select from:

☑ We are reporting a Scope 2, location-based figure

(7.3.2) Scope 2, market-based

Select from:

☑ We are reporting a Scope 2, market-based figure

(7.3.3) Comment

The Scope 2 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard and the operational control approach to include all sources of emissions from its industrial sites, warehouses, and distribution centers by applying emissions factors and global warming potentials to the activity data. The global warming potentials used to characterize the impact of the emissions correspond to data in the IPCC Fifth Assessment Report (AR5).
[Fixed row]

(7.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

Select from:

☑ No

(7.5) Provide your base year and base year emissions.

Scope 1

(7.5.1) Base year end

12/30/2021

(7.5.2) Base year emissions (metric tons CO2e)

4057004

(7.5.3) Methodological details

The Scope 1 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard and the operational control approach to include all emissions from its industrial sites, warehouses, distribution centers, and corporate vehicle fleet, by applying emissions factors and global warming potentials to the activity data. The global warming potentials used to characterize the impact of the emissions correspond to data in the IPCC Fifth Assessment Report (AR5).

Scope 2 (location-based)

(7.5.1) Base year end

12/30/2021

(7.5.2) Base year emissions (metric tons CO2e)

422112

(7.5.3) Methodological details

The Scope 2 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard and the operational control approach to include all emissions from its industrial sites, warehouses, and distribution centers by applying emissions factors and global warming potentials to the activity data. The global warming potentials used to characterize the impact of the emissions correspond to data in the IPCC Fifth Assessment Report (AR5).

Scope 2 (market-based)

(7.5.1) Base year end

12/30/2021

(7.5.2) Base year emissions (metric tons CO2e)

424774

(7.5.3) Methodological details

The Scope 2 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard and the operational control approach to include all emissions from its industrial sites, warehouses, and distribution centers by applying emissions factors and global warming potentials to the activity data. The global warming potentials used to characterize the impact of the emissions correspond to data in the IPCC Fifth Assessment Report (AR5).

Scope 3 category 1: Purchased goods and services

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

39704590

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. The emission calculated in this category includes the extraction, production, and transportation of goods and services purchased or acquired by Musim Mas. The emission is determined by gathering information on the mass or economic value of goods and services purchased and multiplying it by the appropriate secondary emission factor. The emission factors are derived from but are not limited to Ecoinvent 3.8, UK BEIS, and CEDA.

Scope 3 category 2: Capital goods

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

104776

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. The emission in this category is calculated by gathering information on the mass or economic value of goods purchased and multiplying it by the appropriate secondary emission factor. The emission factors are derived from but are not limited to Ecoinvent 3.8, UK BEIS, and CEDA.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

594295

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. The emission in this category is calculated using emission factors for upstream emissions per unit of consumption. The emission factors are derived from but are not limited to Ecoinvent 3.8, UK BEIS and IEA.

Scope 3 category 4: Upstream transportation and distribution

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

1194374

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. The emission in this category is determined using the mass, distance, and mode of transport, then applying the appropriate mass-distance emission factor.

Scope 3 category 5: Waste generated in operations

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

65621

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. The amount of waste per type and waste treatment is gathered across all Musim Mas operations to determine the emission in this category.

Scope 3 category 6: Business travel

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

609

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. This category covers the emissions related to business travel for all Musim Mas employees from all countries. A mix of spending data and unit data is used to calculate emissions in this category. The related emission factors from UK BEIS and CEDA databases are applied.

Scope 3 category 7: Employee commuting

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

12205

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. This category includes the emissions associated with commuting employees from their homes to their worksites.

Scope 3 category 8: Upstream leased assets

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

1385

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. A mix of spending data and unit data is used to calculate emissions in this category. The related emission factors from IEA and CEDA databases are applied.

Scope 3 category 9: Downstream transportation and distribution

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

211034

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. The emission in this category is determined using the mass, distance, and mode of transport, then applying the appropriate mass-distance emission factor.

Scope 3 category 10: Processing of sold products

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

1086632

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. The majority of Musim Mas's products are intermediate goods that will be further processed. The processing-related emissions are estimated by applying the relevant emission factor to each category of intermediate products sold.

Scope 3 category 11: Use of sold products

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

191440

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. This category includes the direct use-phase emissions of products sold by Musim Mas. The emissions are estimated by applying the relevant emission factor to each category of products sold.

Scope 3 category 12: End of life treatment of sold products

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

4776

(7.5.3) Methodological details

The Scope 3 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard. The emissions of this category are associated with the end-of-life treatment of sold products.

Scope 3 category 13: Downstream leased assets

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not relevant to our operations

Scope 3 category 14: Franchises

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not relevant to our operations

Scope 3 category 15: Investments

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not relevant to our operations

Scope 3: Other (upstream)

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not relevant to our operations

Scope 3: Other (downstream)

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not relevant to our operations
[Fixed row]

(7.6) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

4074220

(7.6.3) Methodological details

The Scope 1 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard and the operational control approach to include all sources of emissions from its industrial sites, warehouses, distribution centers, and corporate vehicle fleet, by applying emissions factors and global warming potentials to the activity data. The global warming potentials used to characterize the impact of the emissions correspond to data in the IPCC Fifth Assessment Report (AR5).
[Fixed row]

(7.7) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

428359

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e)

430564

(7.7.4) Methodological details

The Scope 2 emissions are calculated following the methodology set out in the GHG Protocol Corporate Standard and the operational control approach to include all sources of emissions from its industrial sites, warehouses, and distribution centers by applying emissions factors and global warming potentials to the activity data. The global warming potentials used to characterize the impact of the emissions correspond to data in the IPCC Fifth Assessment Report (AR5).
[Fixed row]

(7.8) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

(7.8.1) Evaluation status

Select from:
☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

33345315

(7.8.3) Emissions calculation methodology

Select all that apply
☑ Average data method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

The emission calculated in this category includes the extraction, production, and transportation of goods and services purchased or acquired by Musim Mas. The emission is determined by gathering information on the mass of goods and services purchased and multiplying it by the appropriate secondary emission factor. The emission factors are derived from but are not limited to Ecoinvent 3.8 and UK BEIS.

Capital goods

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

The emission in this category is calculated to be less than 1% of our total Scope 3 emissions, hence this is not relevant.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

526379

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

The emission in this category is calculated using emission factors for upstream emissions per unit of consumption. The emission factors are derived from but are not limited to Ecoinvent 3.8, UK BEIS and IEA.

Upstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

509235

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

19

(7.8.5) Please explain

The emission in this category is determined using the mass, distance, and mode of transport, then applying the appropriate mass-distance emission factor.

Waste generated in operations

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

219152

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Waste-type-specific method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

The amount of waste per type and waste treatment is gathered across all Musim Mas operations to determine the emission in this category.

Business travel

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

The emission in this category is calculated to be less than 1% of our total Scope 3 emissions, hence this is not relevant.

Employee commuting

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

The emission in this category is calculated to be less than 1% of our total Scope 3 emissions, hence this is not relevant.

Upstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

The emission in this category is calculated to be less than 1% of our total Scope 3 emissions, hence this is not relevant.

Downstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

307296

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

The emission in this category is determined using the mass, distance, and mode of transport, then applying the appropriate mass-distance emission factor.

Processing of sold products

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

985312

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

The majority of Musim Mas's products are intermediate goods that will be further processed. The processing-related emissions are estimated by applying the relevant emission factor to each category of intermediate products sold.

Use of sold products

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

The emission in this category is calculated to be less than 1% of our total Scope 3 emissions, hence this is not relevant.

End of life treatment of sold products

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

The emission in this category is calculated to be less than 1% of our total Scope 3 emissions, hence this is not relevant.

Downstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Not applicable as Musim Mas does not lease downstream assets.

Franchises

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Not applicable as Musim Mas does not own any franchises.

Investments

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Not applicable.

Other (upstream)

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Not applicable as all upstream emissions are already included in the Scope 3 upstream categories explained above.

Other (downstream)

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Not applicable as all downstream emissions are already included in the Scope 3 downstream categories explained above.
[Fixed row]

(7.9) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	*Select from:* ☑ Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	*Select from:* ☑ Third-party verification or assurance process in place
Scope 3	*Select from:* ☑ No third-party verification or assurance

[Fixed row]

(7.9.1) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Row 1

(7.9.1.1) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.1.2) Status in the current reporting year

Select from:
☑ Underway but not complete for current reporting year – first year it has taken place

(7.9.1.3) Type of verification or assurance

Select from:
☑ Limited assurance

(7.9.1.4) Attach the statement

Musim-Mas-SR2023.pdf

(7.9.1.5) Page/section reference

Consistent with the SBTi framework, the Group is progressing an independent third-party verification of its Scope 1 emissions. We will communicate the verified outcomes upon completion of the engagement. At the moment, please find the assurance statement of GHG emissions intensity across our upstream operations in 2023, please refer to our 2023 Sustainability Report pages 87–89.

(7.9.1.6) Relevant standard

Select from:

☑ ISAE3000

(7.9.1.7) Proportion of reported emissions verified (%)

0
[Add row]

(7.9.2) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Row 1

(7.9.2.1) Scope 2 approach

Select from:

☑ Scope 2 market-based

(7.9.2.2) Verification or assurance cycle in place

Select from:

☑ Annual process

(7.9.2.3) Status in the current reporting year

Select from:

☑ Underway but not complete for current reporting year – first year it has taken place

(7.9.2.4) Type of verification or assurance

Select from:

☑ Limited assurance

(7.9.2.5) Attach the statement

Musim-Mas-SR2023.pdf,Musim-Mas-SR2023.pdf

(7.9.2.6) Page/ section reference

Consistent with the SBTi framework, the Group is progressing an independent third-party verification of its Scope 2 emissions. We will communicate the verified outcomes upon completion of the engagement. At the moment, please find the assurance statement of GHG emissions intensity across our upstream operations in 2023, please refer to our 2023 Sustainability Report pages 87–89.

(7.9.2.7) Relevant standard

Select from:

☑ ISAE3000

(7.9.2.8) Proportion of reported emissions verified (%)

0
[Add row]

(7.10) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Select from:

☑ Decreased

(7.10.1) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

Change in renewable energy consumption

(7.10.1.1) Change in emissions (metric tons CO2e)

11147

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

0.2

(7.10.1.4) Please explain calculation

Musim Mas continues to advance renewable energy use, primarily through biomass from palm fibre and palm kernel shell. In addition, methane capture facilities have been installed to treat palm oil mill effluent, significantly reducing reliance on external electricity in our upstream operations.

Other emissions reduction activities

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Divestment

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Acquisitions

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Mergers

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Change in output

(7.10.1.1) Change in emissions (metric tons CO2e)

99765

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

2.2

(7.10.1.4) Please explain calculation

The modest reduction reflects routine operational variability where there were no significant changes to our operations, organizational boundaries, or accounting methodology. We will continue to integrate sustainability practices into our operations at the highest level.

Change in methodology

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Change in boundary

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Change in physical operating conditions

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Unidentified

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Other

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable
[Fixed row]

(7.10.2) Are your emissions performance calculations in 7.10 and 7.10.1 based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Select from:

☑ Market-based

(7.13) Is biogenic carbon pertaining to your direct operations relevant to your current CDP climate change disclosure?

Select from:

☑ Yes

(7.13.1) Account for biogenic carbon data pertaining to your direct operations and identify any exclusions.

CO2 emissions from land use management

(7.13.1.1) Emissions (metric tons CO2)

0

(7.13.1.2) Methodology

Select all that apply

☑ Default emissions factors

(7.13.1.3) Please explain

In line with the GHG Protocol Land Sector and Removals Guidance (draft), we have quantified emissions from Forest, Land and Agriculture (FLAG) sources and included the relevant amounts in our Scope 1 reporting.

CO2 removals from land use management

(7.13.1.1) Emissions (metric tons CO2)

0

(7.13.1.2) Methodology

Select all that apply

☑ Default emissions factors

(7.13.1.3) Please explain

In line with the GHG Protocol Land Sector and Removals Guidance (draft), we have quantified emissions from Forest, Land and Agriculture (FLAG) sources and included the relevant amounts in our Scope 1 reporting.

Sequestration during land use change

(7.13.1.1) Emissions (metric tons CO2)

0

(7.13.1.2) Methodology

Select all that apply

☑ Default emissions factors

(7.13.1.3) Please explain

In line with the GHG Protocol Land Sector and Removals Guidance (draft), we have quantified emissions from Forest, Land and Agriculture (FLAG) sources and included the relevant amounts in our Scope 1 reporting.

CO2 emissions from biofuel combustion (land machinery)

(7.13.1.1) Emissions (metric tons CO2)

7734

(7.13.1.2) Methodology

Select all that apply

☑ Default emissions factors

☑ Field measurements

(7.13.1.3) Please explain

These emissions relate to biofuel consumption within our plantation operations.

CO2 emissions from biofuel combustion (processing/manufacturing machinery)

(7.13.1.1) Emissions (metric tons CO2)

2486327

(7.13.1.2) Methodology

Select all that apply

☑ Default emissions factors

☑ Field measurements

(7.13.1.3) Please explain

These emissions relate to biofuel consumption within our processing operations (mills, refineries, and oleochemicals).

CO2 emissions from biofuel combustion (other)

(7.13.1.1) Emissions (metric tons CO2)

10175

(7.13.1.2) Methodology

Select all that apply

☑ Default emissions factors

☑ Field measurements

(7.13.1.3) Please explain

These emissions relate to biofuel consumption within our non-processing operations (office, shipping and warehouses).
[Fixed row]

(7.14) Do you calculate greenhouse gas emissions for each agricultural commodity reported as significant to your business?

Palm oil

(7.14.1) GHG emissions calculated for this commodity

Select from:
☑ Yes

(7.14.2) Reporting emissions by

Select from:
☑ Total

(7.14.3) Emissions (metric tons CO2e)

4504784

(7.14.5) Change from last reporting year

Select from:
☑ Lower

(7.14.6) Please explain

Commodity: Palm Oil. Following the GHG Protocol guideline in line with the Science-Based Targets Initiative (SBTi) framework, the 2024 Group's total Scope 1 and Scope 2 emissions are slightly reduced compared to the previous year as there were no significant changes to our operations, organizational boundaries, or accounting methodology.

Other commodity

(7.14.1) GHG emissions calculated for this commodity

Select from:

☑ Yes

(7.14.2) Reporting emissions by

Select from:

☑ Total

(7.14.3) Emissions (metric tons CO2e)

4504784

(7.14.5) Change from last reporting year

Select from:

☑ Lower

(7.14.6) Please explain

Commodity: Palm Oil. Following the GHG Protocol guideline in line with the Science-Based Targets Initiative (SBTi) framework, the 2024 Group's total Scope 1 and Scope 2 emissions are slightly reduced compared to the previous year since there were no significant changes to our operations, organizational boundaries, or accounting methodology.
[Fixed row]

(7.15) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Select from:

☑ Yes

(7.15.1) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used global warming potential (GWP).

Row 1

(7.15.1.1) Greenhouse gas

Select from:

☑ CO2

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

3853760

(7.15.1.3) GWP Reference

Select from:

☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 2

(7.15.1.1) Greenhouse gas

Select from:

☑ CH4

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

104419

(7.15.1.3) GWP Reference

Select from:

☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 3

(7.15.1.1) Greenhouse gas

Select from:

☑ N2O

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

113877

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 4

(7.15.1.1) Greenhouse gas

Select from:
☑ HFCs

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

3154

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 5

(7.15.1.1) Greenhouse gas

Select from:
☑ PFCs

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

0

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 6

(7.15.1.1) Greenhouse gas

Select from:
☑ SF6

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

0

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 7

(7.15.1.1) Greenhouse gas

Select from:
☑ NF3

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

0

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)
[Add row]

(7.16) Break down your total gross global Scope 1 and 2 emissions by country/area.

Brazil

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

0

(7.16.3) Scope 2, market-based (metric tons CO2e)

0

China

(7.16.1) Scope 1 emissions (metric tons CO2e)

36

(7.16.2) Scope 2, location-based (metric tons CO2e)

1225

(7.16.3) Scope 2, market-based (metric tons CO2e)

1225

Germany

(7.16.1) Scope 1 emissions (metric tons CO2e)

22

(7.16.2) Scope 2, location-based (metric tons CO2e)

11

(7.16.3) Scope 2, market-based (metric tons CO2e)

17

India

(7.16.1) Scope 1 emissions (metric tons CO2e)

65443

(7.16.2) Scope 2, location-based (metric tons CO2e)

10298

(7.16.3) Scope 2, market-based (metric tons CO2e)

10298

Indonesia

(7.16.1) Scope 1 emissions (metric tons CO2e)

3900390

(7.16.2) Scope 2, location-based (metric tons CO2e)

348283

(7.16.3) Scope 2, market-based (metric tons CO2e)

348283

Italy

(7.16.1) Scope 1 emissions (metric tons CO2e)

8614

(7.16.2) Scope 2, location-based (metric tons CO2e)

1430

(7.16.3) Scope 2, market-based (metric tons CO2e)

2312

Malaysia

(7.16.1) Scope 1 emissions (metric tons CO2e)

12539

(7.16.2) Scope 2, location-based (metric tons CO2e)

5383

(7.16.3) Scope 2, market-based (metric tons CO2e)

5383

Netherlands

(7.16.1) Scope 1 emissions (metric tons CO2e)

29

(7.16.2) Scope 2, location-based (metric tons CO2e)

52278

(7.16.3) Scope 2, market-based (metric tons CO2e)

50856

Singapore

(7.16.1) Scope 1 emissions (metric tons CO2e)

48761

(7.16.2) Scope 2, location-based (metric tons CO2e)

70

(7.16.3) Scope 2, market-based (metric tons CO2e)

70

Spain

(7.16.1) Scope 1 emissions (metric tons CO2e)

35028

(7.16.2) Scope 2, location-based (metric tons CO2e)

6743

(7.16.3) Scope 2, market-based (metric tons CO2e)

9480

United Kingdom of Great Britain and Northern Ireland

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

1

(7.16.3) Scope 2, market-based (metric tons CO2e)

2

United States of America

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

100

(7.16.3) Scope 2, market-based (metric tons CO2e)

100

Viet Nam

(7.16.1) Scope 1 emissions (metric tons CO2e)

3359

(7.16.2) Scope 2, location-based (metric tons CO2e)

2536

(7.16.3) Scope 2, market-based (metric tons CO2e)

2536
[Fixed row]

(7.17) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

Select all that apply

☑ By business division

☑ By facility

☑ By activity

(7.17.1) Break down your total gross global Scope 1 emissions by business division.

	Business division	Scope 1 emissions (metric ton CO2e)
Row 1	*Upstream*	*1673012*
Row 2	*Midstream and Downstream*	*2293532*
Row 3	*Other Supporting Facilities*	*107676*

[Add row]

(7.17.2) Break down your total gross global Scope 1 emissions by business facility.

Row 1

(7.17.2.1) Facility

Plantation

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

1617783

(7.17.2.3) Latitude

1.298565

(7.17.2.4) Longitude

103.858904

Row 2

(7.17.2.1) Facility

Palm Oil Mills

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

55230

(7.17.2.3) Latitude

1.298565

(7.17.2.4) Longitude

103.858904

Row 3

(7.17.2.1) Facility

Refineries and Oleochemicals

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

2293532

(7.17.2.3) Latitude

1.298565

(7.17.2.4) Longitude

103.858904

Row 4

(7.17.2.1) Facility

Offices

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

821

(7.17.2.3) Latitude

1.298565

(7.17.2.4) Longitude

103.858904

Row 5

(7.17.2.1) Facility

Shipping

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

104894

(7.17.2.3) Latitude

1.298565

(7.17.2.4) Longitude

103.858904

Row 6

(7.17.2.1) Facility

Warehouse, Ramp, and Jetty

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

1961

(7.17.2.3) Latitude

1.298565

(7.17.2.4) Longitude

103.858904
[Add row]

(7.17.3) Break down your total gross global Scope 1 emissions by business activity.

	Activity	Scope 1 emissions (metric tons CO2e)
Row 1	*FLAG (Forest, Land, and Agriculture): All emissions occurring on farm/estate level*	*1617783*
Row 2	*Non-FLAG: Emissions other than FLAG emissions*	*2456437*

[Add row]

(7.18) Do you include emissions pertaining to your business activity(ies) in your direct operations as part of your global gross Scope 1 figure?

Select from:

☑ Yes

(7.18.1) Select the form(s) in which you are reporting your agricultural/forestry emissions.

Select from:

☑ Emissions disaggregated by category (advised by the GHG Protocol)

(7.18.2) Report the Scope 1 emissions pertaining to your business activity(ies) and explain any exclusions. If applicable, disaggregate your agricultural/forestry by GHG emissions category.

Row 1

(7.18.2.1) Activity

Select from:

☑ Agriculture/Forestry

(7.18.2.2) Emissions category

Select from:
☑ Total

(7.18.2.3) Emissions (metric tons CO2e)

1617783

(7.18.2.4) Methodology

Select all that apply
☑ Default emissions factor

(7.18.2.5) Please explain

Following GHG protocol, the corresponding emissions refer to stationary combustion, mobile combustion, fertiliser application, land use change and peat oxidation.

Row 2

(7.18.2.1) Activity

Select from:
☑ Processing/Manufacturing

(7.18.2.2) Emissions category

Select from:
☑ Total

(7.18.2.3) Emissions (metric tons CO2e)

2348761

(7.18.2.4) Methodology

Select all that apply
☑ Default emissions factor

(7.18.2.5) Please explain

Following GHG protocol, the corresponding emissions refer to stationary combustion, mobile combustion, and wastewater from our processing facilities.

Row 3

(7.18.2.1) Activity

Select from:

☑ Distribution

(7.18.2.2) Emissions category

Select from:

☑ Total

(7.18.2.3) Emissions (metric tons CO2e)

107676

(7.18.2.4) Methodology

Select all that apply

☑ Default emissions factor

(7.18.2.5) Please explain

Following GHG protocol, the corresponding emissions refer to stationary and mobile combustions from our shipping facilities, warehouses, and offices.
[Add row]

(7.20) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

Select all that apply

☑ By business division

☑ By facility

☑ By activity

(7.20.1) Break down your total gross global Scope 2 emissions by business division.

	Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Row 1	*Upstream*	*0*	*0*
Row 2	*Midstream and Downstream*	*423748*	*425946*
Row 3	*Other Supporting Facilities*	*4610*	*4618*

[Add row]

(7.20.2) Break down your total gross global Scope 2 emissions by business facility.

	Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Row 1	*Plantation*	*0*	*0*
Row 2	*Palm Oil MIlls*	*0*	*0*
Row 3	*Refineries and Oleochemicals*	*423748*	*425946*
Row 4	*Offices*	*460*	*467*
Row 5	*Shipping*	*95*	*95*
Row 6	*Warehouse, Ramp, and Jetty*	*4056*	*4056*

[Add row]

(7.20.3) Break down your total gross global Scope 2 emissions by business activity.

	Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Row 1	*FLAG (Forest, Land, and Agriculture): All emissions occurring on farm/estate level*	*0*	*0*
Row 2	*Non-FLAG: Emissions other than FLAG emissions*	*428359*	*430564*

[Add row]

(7.22) Break down your gross Scope 1 and Scope 2 emissions between your consolidated accounting group and other entities included in your response.

Consolidated accounting group

(7.22.1) Scope 1 emissions (metric tons CO2e)

4074220

(7.22.2) Scope 2, location-based emissions (metric tons CO2e)

428359

(7.22.3) Scope 2, market-based emissions (metric tons CO2e)

430564

(7.22.4) Please explain

Emissions from all entities in Musim Mas have been calculated and consolidated as a group.

All other entities

(7.22.1) Scope 1 emissions (metric tons CO2e)

0

(7.22.2) Scope 2, location-based emissions (metric tons CO2e)

0

(7.22.3) Scope 2, market-based emissions (metric tons CO2e)

0

(7.22.4) Please explain

Emissions from all entities in Musim Mas have been calculated and consolidated as a group.
[Fixed row]

(7.23) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Select from:
☑ Yes

(7.23.1) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Row 1

(7.23.1.1) Subsidiary name

Facility 1

(7.23.1.2) Primary activity

Select from:
☑ Palm oil farming

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

543741

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

0

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

0

(7.23.1.15) Comment

No purchase of electricity from the national grid (Scope 2: 0) as the power generated for the plantation is sourced through the electricity produced from the biogas of our own mills.
[Add row]

(7.29) What percentage of your total operational spend in the reporting year was on energy?

Select from:

☑ More than 0% but less than or equal to 5%

(7.30) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	*Select from:* ☑ Yes
Consumption of purchased or acquired electricity	*Select from:* ☑ Yes
Consumption of purchased or acquired heat	*Select from:* ☑ No
Consumption of purchased or acquired steam	*Select from:* ☑ Yes
Consumption of purchased or acquired cooling	*Select from:* ☑ No
Generation of electricity, heat, steam, or cooling	*Select from:* ☑ Yes

[Fixed row]

(7.30.1) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

Consumption of fuel (excluding feedstock)

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

7660049

(7.30.1.3) MWh from non-renewable sources

6323233

(7.30.1.4) Total (renewable + non-renewable) MWh

13983282.00

Consumption of purchased or acquired electricity

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

3841

(7.30.1.3) MWh from non-renewable sources

579683

(7.30.1.4) Total (renewable + non-renewable) MWh

583524.00

Consumption of purchased or acquired steam

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

78568

(7.30.1.3) MWh from non-renewable sources

125498

(7.30.1.4) Total (renewable + non-renewable) MWh

204066.00

Consumption of self-generated non-fuel renewable energy

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

0

(7.30.1.4) Total (renewable + non-renewable) MWh

0.00

Total energy consumption

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

7742458

(7.30.1.3) MWh from non-renewable sources

7028413

(7.30.1.4) Total (renewable + non-renewable) MWh

14770871.00
[Fixed row]

(7.30.6) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	*Select from:* ☑ Yes
Consumption of fuel for the generation of heat	*Select from:* ☑ Yes
Consumption of fuel for the generation of steam	*Select from:* ☑ Yes
Consumption of fuel for the generation of cooling	*Select from:* ☑ Yes
Consumption of fuel for co-generation or tri-generation	*Select from:* ☑ Yes

[Fixed row]

(7.30.7) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

7805819

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

207735

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

7598084

(7.30.7.8) Comment

N/A

Other biomass

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

70

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

70

(7.30.7.8) Comment

N/A

Other renewable fuels (e.g. renewable hydrogen)

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

N/A

Coal

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

4364378

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

4364378

(7.30.7.8) Comment

N/A

Oil

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

411929

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

289433

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

122496

(7.30.7.8) Comment

N/A

Gas

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

1401085

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

19578

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

1381507

(7.30.7.8) Comment

N/A

Other non-renewable fuels (e.g. non-renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

N/A

Total fuel

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

13983281

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

516746

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

13466535

(7.30.7.8) Comment

N/A
[Fixed row]

(7.30.9) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

Electricity

(7.30.9.1) Total Gross generation (MWh)

4713287

(7.30.9.2) Generation that is consumed by the organization (MWh)

4635629

(7.30.9.3) Gross generation from renewable sources (MWh)

2655668

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

2578010

Heat

(7.30.9.1) Total Gross generation (MWh)

516746

(7.30.9.2) Generation that is consumed by the organization (MWh)

516746

(7.30.9.3) Gross generation from renewable sources (MWh)

72426

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

72426

Steam

(7.30.9.1) Total Gross generation (MWh)

6733268

(7.30.9.2) Generation that is consumed by the organization (MWh)

6733268

(7.30.9.3) Gross generation from renewable sources (MWh)

3793811

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

3793811

Cooling

(7.30.9.1) Total Gross generation (MWh)

2019980

(7.30.9.2) Generation that is consumed by the organization (MWh)

2019980

(7.30.9.3) Gross generation from renewable sources (MWh)

1138143

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

1138143
[Fixed row]

(7.30.14) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in 7.7.

Row 1

(7.30.14.1) Country/area

Select from:
☑ Netherlands

(7.30.14.2) Sourcing method

Select from:

☑ Financial (virtual) power purchase agreement (VPPA)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :wind, solar, water and biomass

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

3841

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Netherlands

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2015

(7.30.14.10) Comment

Purchase electricity sourced from renewable energy mix, i.e. wind, solar, water and biomass.

Row 2

(7.30.14.1) Country/area

Select from:

☑ Netherlands

(7.30.14.2) Sourcing method

Select from:

☑ Heat/steam/cooling supply agreement

(7.30.14.3) Energy carrier

Select from:

☑ Steam

(7.30.14.4) Low-carbon technology type

Select from:

☑ Sustainable biomass

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

78568

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Netherlands

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2010

(7.30.14.10) Comment

Purchase steam sourced from waste incineration
[Add row]

(7.30.16) Provide a breakdown by country/area of your electricity/heat/steam/cooling consumption in the reporting year.

Brazil

(7.30.16.1) Consumption of purchased electricity (MWh)

0

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

0.00

China

(7.30.16.1) Consumption of purchased electricity (MWh)

1646

(7.30.16.2) Consumption of self-generated electricity (MWh)

8

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

649

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

131

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

2434.00

Germany

(7.30.16.1) Consumption of purchased electricity (MWh)

32

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

79

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

111.00

India

(7.30.16.1) Consumption of purchased electricity (MWh)

15635

(7.30.16.2) Consumption of self-generated electricity (MWh)

55246

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

102886

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

173767.00

Indonesia

(7.30.16.1) Consumption of purchased electricity (MWh)

499019

(7.30.16.2) Consumption of self-generated electricity (MWh)

4556546

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

8804917

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

13860482.00

Italy

(7.30.16.1) Consumption of purchased electricity (MWh)

5510

(7.30.16.2) Consumption of self-generated electricity (MWh)

15046

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

27942

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

48498.00

Malaysia

(7.30.16.1) Consumption of purchased electricity (MWh)

8925

(7.30.16.2) Consumption of self-generated electricity (MWh)

21893

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

40676

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

71494.00

Netherlands

(7.30.16.1) Consumption of purchased electricity (MWh)

11597

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

203417

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

114

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

215128.00

Singapore

(7.30.16.1) Consumption of purchased electricity (MWh)

188

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

173059

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

173247.00

Spain

(7.30.16.1) Consumption of purchased electricity (MWh)

37318

(7.30.16.2) Consumption of self-generated electricity (MWh)

60953

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

113384

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

211655.00

United Kingdom of Great Britain and Northern Ireland

(7.30.16.1) Consumption of purchased electricity (MWh)

8

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

8.00

United States of America

(7.30.16.1) Consumption of purchased electricity (MWh)

183

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

183.00

Viet Nam

(7.30.16.1) Consumption of purchased electricity (MWh)

3462

(7.30.16.2) Consumption of self-generated electricity (MWh)

3596

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

6805

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

13863.00
[Fixed row]

(7.45) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Row 1

(7.45.1) Intensity figure

0.0036

(7.45.2) Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

4504784

(7.45.3) Metric denominator

Select from:
☑ square meter

(7.45.4) Metric denominator: Unit total

1244642200

(7.45.5) Scope 2 figure used

Select from:

☑ Market-based

(7.45.6) % change from previous year

2

(7.45.7) Direction of change

Select from:

☑ Decreased

(7.45.8) Reasons for change

Select all that apply

☑ Change in renewable energy consumption

(7.45.9) Please explain

Our emissions per planted area have decreased mainly due to increased renewable energy consumption. We continue to expand the use of renewable energy, primarily through biomass derived from palm fibre and palm kernel shells. In addition, methane capture facilities have been installed to treat palm oil mill effluent, significantly reducing reliance on grid electricity.

Row 2

(7.45.1) Intensity figure

0.00055

(7.45.2) Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

4504784

(7.45.3) Metric denominator

Select from:

☑ unit total revenue

(7.45.4) Metric denominator: Unit total

8200000000

(7.45.5) Scope 2 figure used

Select from:

☑ Market-based

(7.45.6) % change from previous year

6

(7.45.7) Direction of change

Select from:

☑ Increased

(7.45.8) Reasons for change

Select all that apply

☑ Change in revenue

(7.45.9) Please explain

Our emissions per revenue are higher than the previous year since there is a change in revenue. Moreover, our 2024 revenues were USD 8.2 billion, a USD 0.7 billion reduction from 2023.
[Add row]

(7.52) Provide any additional climate-related metrics relevant to your business.

Row 1

(7.52.1) Description

Select from:
☑ Other, please specify :n/a

(7.52.2) Metric value

0

(7.52.3) Metric numerator

N/A

(7.52.4) Metric denominator (intensity metric only)

N/A

(7.52.5) % change from previous year

0

(7.52.6) Direction of change

Select from:
☑ No change

(7.52.7) Please explain

N/A
[Add row]

(7.53) Did you have an emissions target that was active in the reporting year?

Select all that apply

☑ Absolute target

☑ Intensity target

(7.53.1) Provide details of your absolute emissions targets and progress made against those targets.

Row 1

(7.53.1.1) Target reference number

Select from:

☑ Abs 1

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.53.1.3) Science Based Targets initiative official validation letter

Musim Mas - FLAG Net-Zero Approval Letter.pdf

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

12/28/2023

(7.53.1.6) Target coverage

Select from:

☑ Organization-wide

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Carbon dioxide (CO2)

☑ Perfluorocarbons (PFCs)

☑ Hydrofluorocarbons (HFCs)

☑ Sulphur hexafluoride (SF6)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 3

(7.53.1.10) Scope 3 categories

Select all that apply

☑ Scope 3, Category 1 – Purchased goods and services

(7.53.1.11) End date of base year

12/30/2021

(7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)

1668989

(7.53.1.14) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

37181532

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

37181532.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

38850521.000

(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

(7.53.1.35) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

99.59

(7.53.1.52) Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

99.59

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

99.61

(7.53.1.54) End date of target

12/30/2030

(7.53.1.55) Targeted reduction from base year (%)

30.3

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

27078813.137

(7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

1617783

(7.53.1.59) Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

31402653

(7.53.1.76) Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

31402653.000

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

33020436.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ Yes, it covers land-related emissions only (e.g. FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

49.53

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

The figures represent the near-term FLAG science-based target of Musim Mas Group. This company-wide target covers more than 99% of all our FLAG emissions.

(7.53.1.83) Target objective

Musim Mas commits to achieve net-zero emissions by 2050, aligning with climate science as per the Science Based Targets Initiative (SBTi). The commitment resonates with the ambitious target outlined in the global goal set by the Paris Agreement, aiming to limit global warming to 1.5°C.

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

As one of the leading sustainable palm oil players, Musim Mas has long prioritized minimizing and mitigating environmental impacts throughout our supply chain. Since launching its No Deforestation, No Peat, and No Exploitation (NDPE) Policy in 2015, the Group has actively worked to reduce deforestation and carbon emissions across operations and the supply chain. While we achieved our ambitious target of reducing upstream greenhouse gas (GHG) emissions by 55% against a 2006 baseline, we recognize the imperative to push further. In addition to individual company efforts, there is a need for collective action. Recognizing this, Musim Mas and 13 other leading agribusiness companies set out to develop a shared roadmap in November 2022 for reducing emissions from land-use change: Agriculture Sector Roadmap to 1.5C. The action follows our COP26 commitments, hinges on existing No Deforestation, No Peat, and No Exploitation (NDPE) commitments, and accelerates the sector's deforestation actions to align with global climate goals in a way that contributes to food security, economic development, and smallholder livelihoods.

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

Row 2

(7.53.1.1) Target reference number

Select from:

☑ Abs 2

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.53.1.3) Science Based Targets initiative official validation letter

Musim Mas - FLAG Net-Zero Approval Letter.pdf

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

12/28/2023

(7.53.1.6) Target coverage

Select from:

☑ Organization-wide

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Carbon dioxide (CO2)

☑ Perfluorocarbons (PFCs)

☑ Hydrofluorocarbons (HFCs)

☑ Sulphur hexafluoride (SF6)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 3

(7.53.1.10) Scope 3 categories

Select all that apply

☑ Scope 3, Category 1 – Purchased goods and services

(7.53.1.11) End date of base year

12/30/2021

(7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)

1668989

(7.53.1.14) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

37181532

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

37181532.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

38850521.000

(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

(7.53.1.35) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

99.59

(7.53.1.52) Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

99.59

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

99.61

(7.53.1.54) End date of target

12/30/2050

(7.53.1.55) Targeted reduction from base year (%)

72

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

10878145.880

(7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

1617783

(7.53.1.59) Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

31402653

(7.53.1.76) Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

31402653.000

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

33020436.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ Yes, it covers land-related emissions only (e.g. FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

20.84

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

The figures represent the long-term FLAG (Net Zero) science-based target of Musim Mas Group. This company-wide target covers more than 99% of all our FLAG emissions.

(7.53.1.83) Target objective

Musim Mas commits to achieve net-zero emissions by 2050, aligning with climate science as per the Science Based Targets Initiative (SBTi). The commitment resonates with the ambitious target outlined in the global goal set by the Paris Agreement, aiming to limit global warming to 1.5°C

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

As one of the leading sustainable palm oil players, Musim Mas has long prioritized minimizing and mitigating environmental impacts throughout our supply chain. Since launching its No Deforestation, No Peat, and No Exploitation (NDPE) Policy in 2015, the Group has actively worked to reduce deforestation and carbon emissions across operations and the supply chain. While we achieved our ambitious target of reducing upstream greenhouse gas (GHG) emissions by 55% against a 2006 baseline, we recognize the imperative to push further. In addition to individual company efforts, there is a need for collective action. Recognizing this, Musim Mas and 13 other leading agribusiness companies set out to develop a shared roadmap in November 2022 for reducing emissions from land-use change: Agriculture Sector Roadmap to 1.5C. The action follows our COP26 commitments, hinges on existing No Deforestation, No Peat, and No Exploitation (NDPE) commitments, and accelerates the sector's deforestation actions to align with global climate goals in a way that contributes to food security, economic development, and smallholder livelihoods.

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

Row 3

(7.53.1.1) Target reference number

Select from:

☑ Abs 3

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.53.1.3) Science Based Targets initiative official validation letter

Musim Mas Holdings Pte. Ltd. - Net-Zero Approval Letter.pdf

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

12/28/2023

(7.53.1.6) Target coverage

Select from:

☑ Organization-wide

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Sulphur hexafluoride (SF6)

☑ Carbon dioxide (CO2)
☑ Perfluorocarbons (PFCs)
☑ Hydrofluorocarbons (HFCs)

(7.53.1.8) Scopes

Select all that apply
☑ Scope 1
☑ Scope 2
☑ Scope 3

(7.53.1.9) Scope 2 accounting method

Select from:
☑ Market-based

(7.53.1.10) Scope 3 categories

Select all that apply
☑ Scope 3, Category 1 – Purchased goods and services
☑ Scope 3, Category 3 – Fuel- and energy- related activities (not included in Scope 1 or 2)
☑ Scope 3, Category 10 – Processing of sold products
☑ Scope 3, Category 5 – Waste generated in operations
☑ Scope 3, Category 4 – Upstream transportation and distribution
☑ Scope 3, Category 9 – Downstream transportation and distribution

(7.53.1.11) End date of base year

12/30/2021

(7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)

2388015

(7.53.1.13) Base year Scope 2 emissions covered by target (metric tons CO2e)

424774

(7.53.1.14) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

2346461

(7.53.1.16) Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

594295

(7.53.1.17) Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

1194374

(7.53.1.18) Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

65621

(7.53.1.22) Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

211034

(7.53.1.23) Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

1086632

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

5498417.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

8311206.000

(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

(7.53.1.34) Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

(7.53.1.35) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

98.95

(7.53.1.37) Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

100

(7.53.1.38) Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

100

(7.53.1.39) Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

100

(7.53.1.43) Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

100

(7.53.1.44) Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

100

(7.53.1.52) Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

94.18

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

96.07

(7.53.1.54) End date of target

12/30/2030

(7.53.1.55) Targeted reduction from base year (%)

42

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

4820499.480

(7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

2456437

(7.53.1.58) Scope 2 emissions in reporting year covered by target (metric tons CO2e)

430564

(7.53.1.59) Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

1942662

(7.53.1.61) Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

526379

(7.53.1.62) Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

509235

(7.53.1.63) Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

219152

(7.53.1.67) Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

307296

(7.53.1.68) Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

985312

(7.53.1.76) Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

4490036.000

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

7377037.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ Yes, it covers land-related emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

(7.53.1.79) % of target achieved relative to base year

26.76

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

The figures represent the near-term Non-FLAG science-based target of Musim Mas Group. This company-wide target covers more than 96% of all our Non-FLAG emissions.

(7.53.1.83) Target objective

Musim Mas commits to achieve net-zero emissions by 2050, aligning with climate science as per the Science Based Targets Initiative (SBTi). The commitment resonates with the ambitious target outlined in the global goal set by the Paris Agreement, aiming to limit global warming to 1.5°C

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

As one of the leading sustainable palm oil players, Musim Mas has long prioritized minimizing and mitigating environmental impacts throughout our supply chain. Since launching its No Deforestation, No Peat, and No Exploitation (NDPE) Policy in 2015, the Group has actively worked to reduce deforestation and carbon emissions across operations and the supply chain. While we achieved our ambitious target of reducing upstream greenhouse gas (GHG) emissions by 55% against a

2006 baseline, we recognize the imperative to push further. In addition to individual company efforts, there is a need for collective action. Recognizing this, Musim Mas and 13 other leading agribusiness companies set out to develop a shared roadmap in November 2022 for reducing emissions from land-use change: Agriculture Sector Roadmap to 1.5C. The action follows our COP26 commitments, hinges on existing No Deforestation, No Peat, and No Exploitation (NDPE) commitments, and accelerates the sector's deforestation actions to align with global climate goals in a way that contributes to food security, economic development, and smallholder livelihoods.

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

Row 4

(7.53.1.1) Target reference number

Select from:

☑ Abs 4

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.53.1.3) Science Based Targets initiative official validation letter

Musim Mas Holdings Pte. Ltd. - Net-Zero Approval Letter.pdf

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

12/28/2023

(7.53.1.6) Target coverage

Select from:

☑ Organization-wide

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Carbon dioxide (CO2)

☑ Perfluorocarbons (PFCs)

☑ Hydrofluorocarbons (HFCs)

☑ Sulphur hexafluoride (SF6)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

☑ Scope 3

(7.53.1.9) Scope 2 accounting method

Select from:

☑ Market-based

(7.53.1.10) Scope 3 categories

Select all that apply

☑ Scope 3, Category 1 – Purchased goods and services

☑ Scope 3, Category 3 – Fuel- and energy- related activities (not included in Scope 1 or 2)

☑ Scope 3, Category 10 – Processing of sold products

☑ Scope 3, Category 5 – Waste generated in operations

☑ Scope 3, Category 4 – Upstream transportation and distribution
☑ Scope 3, Category 9 – Downstream transportation and distribution

(7.53.1.11) End date of base year

12/30/2021

(7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)

2388015

(7.53.1.13) Base year Scope 2 emissions covered by target (metric tons CO2e)

424774

(7.53.1.14) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

2346461

(7.53.1.16) Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

594295

(7.53.1.17) Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

1194374

(7.53.1.18) Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

65621

(7.53.1.22) Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

211034

(7.53.1.23) Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

1086632

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

5498417.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

8311206.000

(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

(7.53.1.34) Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

(7.53.1.35) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

98.95

(7.53.1.37) Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

100

(7.53.1.38) Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

100

(7.53.1.39) Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

100

(7.53.1.43) Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

100

(7.53.1.44) Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

100

(7.53.1.52) Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

94.18

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

96.07

(7.53.1.54) End date of target

12/30/2050

(7.53.1.55) Targeted reduction from base year (%)

90

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

831120.600

(7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

2456437

(7.53.1.58) Scope 2 emissions in reporting year covered by target (metric tons CO2e)

430564

(7.53.1.59) Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

1942662

(7.53.1.61) Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

526379

(7.53.1.62) Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

509235

(7.53.1.63) Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

219152

(7.53.1.67) Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

307296

(7.53.1.68) Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

985312

(7.53.1.76) Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

4490036.000

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

7377037.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ Yes, it covers land-related emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

(7.53.1.79) % of target achieved relative to base year

12.49

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

The figures represent the long-term Non-FLAG (Net Zero) science-based target of Musim Mas Group. This company-wide target covers more than 96% of all our Non-FLAG emissions.

(7.53.1.83) Target objective

Musim Mas commits to achieve net-zero emissions by 2050, aligning with climate science as per the Science Based Targets Initiative (SBTi). The commitment resonates with the ambitious target outlined in the global goal set by the Paris Agreement, aiming to limit global warming to 1.5°C

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

As one of the leading sustainable palm oil players, Musim Mas has long prioritized minimizing and mitigating environmental impacts throughout our supply chain. Since launching its No Deforestation, No Peat, and No Exploitation (NDPE) Policy in 2015, the Group has actively worked to reduce deforestation and carbon emissions across operations and the supply chain. While we achieved our ambitious target of reducing upstream greenhouse gas (GHG) emissions by 55% against a 2006 baseline, we recognize the imperative to push further. In addition to individual company efforts, there is a need for collective action. Recognizing this, Musim Mas and 13 other leading agribusiness companies set out to develop a shared roadmap in November 2022 for reducing emissions from land-use change: Agriculture Sector Roadmap to 1.5C. The action follows our COP26 commitments, hinges on existing No Deforestation, No Peat, and No Exploitation (NDPE) commitments, and accelerates the sector's deforestation actions to align with global climate goals in a way that contributes to food security, economic development, and smallholder livelihoods.

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

[Add row]

(7.53.2) Provide details of your emissions intensity targets and progress made against those targets.

Row 1

(7.53.2.1) Target reference number

Select from:

☑ Int 1

(7.53.2.2) Is this a science-based target?

Select from:

☑ No, but we are reporting another target that is science-based

(7.53.2.5) Date target was set

12/30/2016

(7.53.2.6) Target coverage

Select from:

☑ Product level

(7.53.2.7) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Carbon dioxide (CO2)

☑ Perfluorocarbons (PFCs)

☑ Hydrofluorocarbons (HFCs)

☑ Sulphur hexafluoride (SF6)

(7.53.2.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

(7.53.2.9) Scope 2 accounting method

Select from:

☑ Location-based

(7.53.2.11) Intensity metric

Select from:

☑ Metric tons CO2e per metric ton of product

(7.53.2.12) End date of base year

12/30/2006

(7.53.2.13) Intensity figure in base year for Scope 1

5.95

(7.53.2.14) Intensity figure in base year for Scope 2

0.01

(7.53.2.33) Intensity figure in base year for all selected Scopes

5.9600000000

(7.53.2.34) % of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

100

(7.53.2.35) % of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

100

(7.53.2.54) % of total base year emissions in all selected Scopes covered by this intensity figure

100

(7.53.2.55) End date of target

12/30/2025

(7.53.2.56) Targeted reduction from base year (%)

55

(7.53.2.57) Intensity figure at end date of target for all selected Scopes

2.6820000000

(7.53.2.58) % change anticipated in absolute Scope 1+2 emissions

0

(7.53.2.60) Intensity figure in reporting year for Scope 1

2.66

(7.53.2.61) Intensity figure in reporting year for Scope 2

0

(7.53.2.80) Intensity figure in reporting year for all selected Scopes

2.6600000000

(7.53.2.81) Land-related emissions covered by target

Select from:

☑ Yes, it covers land-related and non-land related emissions (e.g. SBT approved before the release of FLAG target-setting guidance)

(7.53.2.82) % of target achieved relative to base year

100.67

(7.53.2.83) Target status in reporting year

Select from:

☑ Achieved

(7.53.2.85) Explain target coverage and identify any exclusions

The calculation of the emission intensity follows the Roundtable Sustainable Palm Oil (RSPO) PalmGHG calculator and is audited annually and assured by independent third-party verification. The calculator includes emissions of land use change, peat oxidation, fertilizers, fuel consumption, POME as well as crop sequestration. Our target is a 55% reduction in emissions intensity by 2025, against our 2006 baseline covering all of our 15 integrated mills. The 15 integrated mills have obtained RSPO certification and are annually audited against RSPO Principles and Guidances including GHG emissions calculations.

(7.53.2.86) Target objective

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. In line with the 1.5°C pathway, we have set emissions reduction targets at Group level following the SBTi framework.

(7.53.2.88) Target derived using a sectoral decarbonization approach

Select from:

☑ No

(7.53.2.89) List the emissions reduction initiatives which contributed most to achieving this target

In line with our sustainability policy, we have implemented (among others) the following measures: 1. Installed methane-capture facilities at our mills to capture methane from palm oil mill effluent (POME) and generate electricity from the resulting biogas. 2. Enforced a strict NDPE policy (No Deforestation, No Peat, No Exploitation) and adopted Good Agricultural Practices (GAP). 3. Expanded renewable energy use, including biomass (e.g., shell) and B40 biodiesel; over 90% of our upstream operations now run on renewable sources. Collectively, these initiatives have materially contributed to progress toward our targets.
[Add row]

(7.54) Did you have any other climate-related targets that were active in the reporting year?

Select all that apply

☑ Net-zero targets

☑ Other climate-related targets

(7.54.2) Provide details of any other climate-related targets, including methane reduction targets.

Row 1

(7.54.2.1) Target reference number

Select from:
☑ Oth 1

(7.54.2.2) Date target was set

12/30/2021

(7.54.2.3) Target coverage

Select from:
☑ Organization-wide

(7.54.2.4) Target type: absolute or intensity

Select from:
☑ Absolute

(7.54.2.5) Target type: category & metric (target numerator if reporting an intensity target)

Engagement with suppliers
☑ Percentage of suppliers (by procurement spend) actively engaged on climate-related issues

(7.54.2.7) End date of base year

12/30/2021

(7.54.2.8) Figure or percentage in base year

0

(7.54.2.9) End date of target

03/18/2029

(7.54.2.10) Figure or percentage at end of date of target

100

(7.54.2.11) Figure or percentage in reporting year

55

(7.54.2.12) % of target achieved relative to base year

55.0000000000

(7.54.2.13) Target status in reporting year

Select from:

☑ Revised

(7.54.2.14) Explain the reasons for the revision, replacement, or retirement of the target

The target date was extended following Perpres No.16 Tahun 2025.

(7.54.2.15) Is this target part of an emissions target?

We actively engage our smallholders on climate-related issues and encourage them to pursue sustainability certification such as ISPO. This is part of our journey to reduce emissions.

(7.54.2.16) Is this target part of an overarching initiative?

Select all that apply

☑ Remove deforestation

(7.54.2.18) Please explain target coverage and identify any exclusions

The target covers the scheme smallholders supplying to our mills.

(7.54.2.19) Target objective

Musim Mas aims to achieve 100% ISPO certification for the scheme smallholders supplying to our mills by March 2029.

(7.54.2.20) Plan for achieving target, and progress made to the end of the reporting year

As of 2024, approximately 55% of smallholders have obtained ISPO certification. Musim Mas will continue to actively engage and socialize the importance of sustainability certification to smallholders.
[Add row]

(7.54.3) Provide details of your net-zero target(s).

Row 1

(7.54.3.1) Target reference number

Select from:
☑ NZ1

(7.54.3.2) Date target was set

12/28/2023

(7.54.3.3) Target Coverage

Select from:
☑ Organization-wide

(7.54.3.4) Targets linked to this net zero target

Select all that apply
☑ Abs2
☑ Abs4

(7.54.3.5) End date of target for achieving net zero

12/30/2050

(7.54.3.6) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.54.3.7) Science Based Targets initiative official validation letter

Musim Mas - FLAG Net-Zero Approval Letter.pdf

(7.54.3.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

☑ Scope 3

(7.54.3.9) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Carbon dioxide (CO2)

☑ Perfluorocarbons (PFCs)

☑ Hydrofluorocarbons (HFCs)

☑ Sulphur hexafluoride (SF6)

(7.54.3.10) Explain target coverage and identify any exclusions

The targets cover 100% of Scope 1 and 2 emissions and more than 90% of Scope 3 emissions of Musim Mas Group. For scope 3, Musim Mas commits to reduce absolute scope 3 GHG emissions from purchased goods and services, fuel-and-energy-related activities, upstream transportation and distribution, waste generated in operations, downstream transportation and distribution, and processing of sold products.

(7.54.3.11) Target objective

Musim Mas commits to achieve net-zero emissions by 2050, aligning with climate science as per the Science Based Targets Initiative (SBTi). The commitment resonates with the ambitious target outlined in the global goal set by the Paris Agreement, aiming to limit global warming to 1.5°C.

(7.54.3.12) Do you intend to neutralize any residual emissions with permanent carbon removals at the end of the target?

Select from:

☑ Yes

(7.54.3.13) Do you plan to mitigate emissions beyond your value chain?

Select from:

☑ Yes, and we have already acted on this in the reporting year

(7.54.3.14) Do you intend to purchase and cancel carbon credits for neutralization and/or beyond value chain mitigation?

Select all that apply

☑ Yes, we plan to purchase and cancel carbon credits for beyond value chain mitigation

(7.54.3.15) Planned milestones and/or near-term investments for neutralization at the end of the target

Our landscape approach is based on engaging with stakeholders outside our supply base, including smallholders, local communities, third-party suppliers, civil society organizations, local governments, industry peers, and various program implementation partners to achieve tangible, long-term impacts. For more information, please refer to https://www.musimmas.com/sustainability/partnership-collaboration/landscape-approach-and-programs/.

(7.54.3.16) Describe the actions to mitigate emissions beyond your value chain

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 multi-stakeholder collaborations that enable the effective implementation of our programs. For more information, please refer to https://www.musimmas.com/sustainability/partnership-collaboration/landscape-approach-and-programs/

(7.54.3.17) Target status in reporting year

Select from:

☑ Underway

(7.54.3.19) Process for reviewing target

We follow the SBTi framework where companies shall review all active targets, at a minimum, every 5 years to ensure consistency with the latest SBTi criteria.
[Add row]

(7.55) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Select from:
☑ Yes

(7.55.1) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e
Under investigation	*0*	*`Numeric input*
To be implemented	*0*	*0*
Implementation commenced	*0*	*0*
Implemented	*17*	*490885*
Not to be implemented	*0*	*`Numeric input*

[Fixed row]

(7.55.2) Provide details on the initiatives implemented in the reporting year in the table below.

Row 1

(7.55.2.1) Initiative category & Initiative type

Fugitive emissions reductions

☑ Agricultural methane capture

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

490885

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

☑ Scope 2 (location-based)

☑ Scope 2 (market-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in 1.2)

10000000

(7.55.2.6) Investment required (unit currency – as specified in 1.2)

60000000

(7.55.2.7) Payback period

Select from:

☑ 4-10 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ 21-30 years

(7.55.2.9) Comment

Conventionally, POME is stored in a large open pond where its treatment is dependent on anaerobic bacteria to break down the organic matter in the wastewater. To overcome the detrimental emission of methane gas, Musim Mas installs methane capture facilities with the purpose to capture the methane gas, thus, reducing the emission from mill operations. The methane capture plants utilize the captured methane gas as a gas engine feed to generate electricity. The generated electricity is then used for mill operation and workers' housing where the excess will be sent to the national grid in return for electricity credit. In 2024, this process has avoided 490,885 tCO2eq of GHG emissions through our 17 methane capture plants.
[Add row]

(7.55.3) What methods do you use to drive investment in emissions reduction activities?

Row 1

(7.55.3.1) Method

Select from:
☑ Compliance with regulatory requirements/standards

(7.55.3.2) Comment

To ensure continual adherence to local, national, and international regulations, Musim Mas strives to continuously reduce emissions from our operations. For this, we always provide a dedicated budget that will be used for emission reduction activities such as methane capture facilities for Palm Oil Mill Effluent (POME), research and development of fertilizers and pesticides, development of good agricultural practices (GAP), and training and workshops to improve GAP in our operations. For more information on our sustainability practices, please visit https://www.musimmas.com/sustainability-report/.
[Add row]

(7.67) Do you implement agriculture or forest management practices on your own land with a climate change mitigation and/or adaptation benefit?

Select from:
☑ Yes

(7.67.1) Specify the agricultural or forest management practice(s) implemented on your own land with climate change mitigation and/or adaptation benefits and provide a corresponding emissions figure, if known.

Row 1

(7.67.1.1) Management practice reference number

Select from:

☑ MP1

(7.67.1.2) Management practice

Select from:

☑ Land use change

(7.67.1.3) Description of management practice

Prior to any new planting, land-use planning is conducted following Musim Mas Sustainability Policy to identify whether the targeted land is under any category of High Carbon Stock (HCS). If the land is identified as a conservation area, the land will be set aside.

(7.67.1.4) Primary climate change-related benefit

Select from:

☑ Emission reductions (mitigation)

(7.67.1.5) Estimated CO2e savings (metric tons CO2e)

470000

(7.67.1.6) Please explain

The figure is quantified using the land carbon stock default value provided by the RSPO PalmGHG. Assuming our HCS areas of 2000 ha are disturbed forests and taking the difference between the emission factor of oil palm and disturbed forests of 235.29 tCO2e/ha, an emission savings of 470,000 tCO2e is estimated.

Row 2

(7.67.1.1) Management practice reference number

Select from:

☑ MP2

(7.67.1.2) Management practice

Select from:

☑ Fertilizer management

(7.67.1.3) Description of management practice

By-products from our processing processes, such as boiler ash and dry decanter solid are used as organic fertilizers in our plantations. These by-products contain N and P contents which can be used to substitute N-fertilizers and P-fertilizers. Consequently, the reduction in fertilizer usage leads to better environmental impacts (i.e. eutrophication) and healthier financial performance.

(7.67.1.4) Primary climate change-related benefit

Select from:

☑ Reduced demand for fertilizers (adaptation)

(7.67.1.5) Estimated CO2e savings (metric tons CO2e)

0

(7.67.1.6) Please explain

The savings from these practices have not been quantified.

Row 3

(7.67.1.1) Management practice reference number

Select from:

☑ MP3

(7.67.1.2) Management practice

Select from:

☑ Integrated pest management

(7.67.1.3) Description of management practice

In the effort to reduce the usage of synthetic pesticides, Musim Mas takes the approach of using integrated pest management practices. For example, the usage of barn owl programs to control the rat populations and the utilization of Cassia Cobanensis, Tunera Subulata, and Antigonon Leptopus to control the caterpillar populations.

(7.67.1.4) Primary climate change-related benefit

Select from:

☑ Reduced demand for pesticides (adaptation)

(7.67.1.5) Estimated CO2e savings (metric tons CO2e)

0

(7.67.1.6) Please explain

The savings from these practices have not been quantified.

Row 4

(7.67.1.1) Management practice reference number

Select from:

☑ MP4

(7.67.1.2) Management practice

Select from:

☑ Fire control

(7.67.1.3) Description of management practice

Musim Mas commits to adhere to our zero-burn policy in our plantations. For this, we actively engage with our smallholders to develop best agricultural practices (i.e. alternative methods for land clearance) while simultaneously encouraging them to pursue RSPO certification. Additionally, we also continue to improve our fire management practices to mitigate the fire risk. For instance, besides the RADD partnership and satellite monitoring, we also provide training and firefighting equipment to the villages along with monetary or non-monetary incentives if the villages remain to be fire-free. Recognising the risk of fire, as a member of the Fire Free Alliance, we launched our Fire Free Village Programme (FFVP) to engage and educate local communities including smallholders in protecting forests from fire. In 2024, we have launched the program in 76 villages, spanning over 498,000 hectares of land. Moreover, we conducted 140 training sessions and rewarded 33 villages for remaining fire-free.

(7.67.1.4) Primary climate change-related benefit

Select from:

☑ Emission reductions (mitigation)

(7.67.1.5) Estimated CO2e savings (metric tons CO2e)

0

(7.67.1.6) Please explain

The savings from these practices have not been quantified

Row 5

(7.67.1.1) Management practice reference number

Select from:

☑ MP5

(7.67.1.2) Management practice

Select from:

☑ Replacing fossil fuels by renewable energy sources

(7.67.1.3) Description of management practice

Musim Mas is proud to operate zero-waste mills, which means we reclaim 100% of the non-hazardous waste we produce and recycle it back into our processes. At our mills, we recover energy from palm kernel shells (PKS) and palm fiber (from mesocarp and EFB) by using them to fuel our boilers. In addition, our methane capture facilities harness methane from POME to generate electricity that powers our mills, estates, and workers' housing. Any surplus electricity we generate is exported to the national grid. Moreover, Empty fruit bunches (EFB) are mulched and applied back at our plantations as fertilizer.

(7.67.1.4) Primary climate change-related benefit

Select from:

☑ Reduced demand for fossil fuel (adaptation)

(7.67.1.5) Estimated CO2e savings (metric tons CO2e)

554090

(7.67.1.6) Please explain

In 2024, the total energy generated from the consumption of PKS and palm fiber as boiler fuel across all our mills is around 6.2 million GJ. Using the EF from Australian NGA Factors 2024 for coal and biomass (90.74 gCO2e/MJ and 1.80 gCO2e/MJ respectively), the estimated savings from using PKS and fiber instead of coal is 88.94 gCO2e/MJ.
[Add row]

(7.68) Do you encourage your suppliers to undertake any agricultural or forest management practices with climate change mitigation and/or adaptation benefits?

Select from:

☑ Yes

(7.68.1) Specify which agricultural or forest management practices with climate change mitigation and/or adaptation benefits you encourage your suppliers to undertake and describe your role in the implementation of each practice.

Row 1

(7.68.1.1) Management practice reference number

Select from:

☑ MP1

(7.68.1.2) Management practice

Select from:

☑ Knowledge sharing

(7.68.1.3) Description of management practice

We share Good Agricultural Practices (GAP) knowledge such as fertilizer application, maintenance and care of oil palm plants, integrated pest management (IPM), and harvesting techniques to our suppliers.

(7.68.1.4) Your role in the implementation

Select all that apply

☑ Knowledge sharing

☑ Operational

(7.68.1.5) Explanation of how you encourage implementation

We regularly hold socialization to our FFB suppliers where we share our knowledge on good agricultural practices as well as environmental awareness. The implementation of these GAP benefits the suppliers' financially as well as environmentally.

(7.68.1.6) Climate change related benefit

Select all that apply

☑ Emissions reductions (mitigation)

☑ Reduced demand for fossil fuel (adaptation)

☑ Reduced demand for fertilizers (adaptation)

☑ Reduced demand for pesticides (adaptation)

(7.68.1.7) Comment

Reduction of agricultural inputs will directly translate to lower GHG emission.

Row 2

(7.68.1.1) Management practice reference number

Select from:

☑ MP2

(7.68.1.2) Management practice

Select from:

☑ Diversifying farmer income

(7.68.1.3) Description of management practice

We encourage our FFB suppliers to be RSPO and ISPO certified. Certification could widen their market to reach big companies which require Sustainability Certification, such as RSPO and ISPO.

(7.68.1.4) Your role in the implementation

Select all that apply

☑ Procurement

(7.68.1.5) Explanation of how you encourage implementation

We support smallholders to obtain sustainability certification such as RSPO certification. This could directly increase their income as RSPO certified FFBs has premium price.

(7.68.1.6) Climate change related benefit

Select all that apply

☑ Emissions reductions (mitigation)

☑ Increasing resilience to climate change (adaptation)

☑ Reduced demand for fertilizers (adaptation)

☑ Reduced demand for pesticides (adaptation)

(7.68.1.7) Comment

To achieve RSPO certification, smallholders has to adhere to sustainability principle and standards such as NDPE commitment which help in reducing the land use change emissions.
[Add row]

(7.68.2) Do you collect information from your suppliers about the outcomes of any implemented agricultural/forest management practices you have encouraged?

Select from:
☑ Yes

(7.69) Do you know if any of the management practices implemented on your own land disclosed in 7.67.1 have other impacts besides climate change mitigation/adaptation?

Select from:
☑ Yes

(7.69.1) Provide details on those management practices that have other impacts besides climate change mitigation/adaptation and on your management response.

Row 1

(7.69.1.1) Management practice reference number

Select from:
☑ MP1

(7.69.1.2) Overall effect

Select from:
☑ Positive

(7.69.1.3) Which of the following has been impacted?

Select all that apply

☑ Biodiversity

(7.69.1.4) Description of impact

We 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. As of December 2024, we manage 29,000 hectares of conservation area. Moreover, 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 rights owners since 2008. These areas serve as important wildlife corridors that enhance connectivity for biodiversity.

(7.69.1.5) Have you implemented any response to these impacts?

Select from:

☑ No

(7.69.1.6) Description of the response

We have not implemented any response as we did not identify any negative impacts caused by this management practice.

Row 2

(7.69.1.1) Management practice reference number

Select from:

☑ MP2

(7.69.1.2) Overall effect

Select from:

☑ Positive

(7.69.1.3) Which of the following has been impacted?

Select all that apply

☑ Water

(7.69.1.4) Description of impact

Our usage of N-fertilizer is decreased due to usage of organic fertilizer substitute. Therefore, this would reduce the eutrophication impact. In all plantation and mill processes, we implement the '4Rs' to manage waste: reduce, reuse, recycle, and recover. At our plantations, old palm tree fronds and trunks are mulched and applied as organic fertilizer. Additionally, dried decanter solids and boiler ash are applied at plantations as organic fertilizer and POME is treated and applied to land as irrigation.

(7.69.1.5) Have you implemented any response to these impacts?

Select from:

☑ No

(7.69.1.6) Description of the response

We have not implemented any response as we did not identify any negative impacts caused by this management practice.

Row 3

(7.69.1.1) Management practice reference number

Select from:

☑ MP3

(7.69.1.2) Overall effect

Select from:

☑ Positive

(7.69.1.3) Which of the following has been impacted?

Select all that apply

☑ Soil

(7.69.1.4) Description of impact

The implementation of Integrated Pest Management (IPM) to reduce reliance on pesticides and herbicides, thus, contributes to a lower soil ecotoxicity.

(7.69.1.5) Have you implemented any response to these impacts?

Select from:

☑ No

(7.69.1.6) Description of the response

We have not implemented any response as we did not identify any negative impacts caused by this management practice.
[Add row]

(7.70) Do you know if any of the management practices mentioned in 7.68.1 that were implemented by your suppliers have other impacts besides climate change mitigation/adaptation?

Select from:

☑ Yes

(7.70.1) Provide details of those management practices implemented by your suppliers that have other impacts besides climate change mitigation/adaptation.

Row 1

(7.70.1.1) Management practice reference number

Select from:

☑ MP1

(7.70.1.2) Overall effect

Select from:

☑ Positive

(7.70.1.3) Which of the following has been impacted?

Select all that apply

☑ Soil

☑ Water

(7.70.1.4) Description of impacts

We are collecting data from our scheme smallholders. Through sharing knowledge of good agriculture practices (GAP), our suppliers become more efficient in the usage of agricultural inputs such as fertilizer, pesticides, etc. The reduction in both fertilizers and pesticides will not only benefits our suppliers financially, but also lower the eutrophication and ecotoxicity impact to surrounding environment.

(7.70.1.5) Have any response to these impacts been implemented?

Select from:

☑ No

(7.70.1.6) Description of the response(s)

We have not implemented any response as we did not identify any negative impacts caused by this management practice.
[Add row]

(7.73) Are you providing product level data for your organization's goods or services?

Select from:

☑ No, I am not providing data

(7.74) Do you classify any of your existing goods and/or services as low-carbon products?

Select from:

☑ Yes

(7.74.1) Provide details of your products and/or services that you classify as low-carbon products.

Row 1

(7.74.1.1) Level of aggregation

Select from:

☑ Product or service

(7.74.1.2) Taxonomy used to classify product(s) or service(s) as low-carbon

Select from:

☑ WBCSD Guidance on Avoided Emissions

(7.74.1.3) Type of product(s) or service(s)

Biofuels

☑ Fatty acid methyl ester (FAME)

(7.74.1.4) Description of product(s) or service(s)

Musim Mas produces fatty acid methyl ester (FAME) from palm oil which is an environmentally friendly biofuel used in the global transportation sector. Our FAME, so-called palm-based biodiesel, are viable alternatives to fossil fuels. FAME from palm oil can be used in internal combustion engines without any modification needed for said engines. Typically, it is known as methyl esters derived from palm oil by a process known as 'transesterification.' Unlike conventional diesel from petroleum, FAME from palm oil contains less soot and sulphur, which makes the vehicular emissions more environmentally friendly. Furthermore, our palm-based biodiesel has achieved various certifications for sustainability i.e. International Sustainability & Carbon Certification (ISCC) and Italian National Biofuels and Bioliquids Sustainability Certification System ("Sistema Nazionale di Certificazione della sostenibilità dei biocarburanti e dei bioliquidi").

(7.74.1.5) Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Select from:

☑ Yes

(7.74.1.6) Methodology used to calculate avoided emissions

Select from:

☑ The Avoided Emissions Framework (AEF)

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Cradle-to-gate

(7.74.1.8) Functional unit used

1 Terajoule fuel

(7.74.1.9) Reference product/service or baseline scenario used

Fossil fuel (diesel)

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:
☑ Cradle-to-gate

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

72

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

Based on The Avoided Emissions Framework (AEF) and using the emission factors that cover life cycle from well-to-tank (WTT) up to combustion (Cradle-to-Gate), the total primary and secondary avoided emissions is calculated to be 92 tCO2e/TJ and the direct solution emissions is 20 tCO2e/TJ. Hence, the estimated avoided emission is 72 tCO2e/TJ.

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

6

Row 2

(7.74.1.1) Level of aggregation

Select from:
☑ Product or service

(7.74.1.2) Taxonomy used to classify product(s) or service(s) as low-carbon

Select from:

☑ Other, please specify :ISCC & RSPO

(7.74.1.3) Type of product(s) or service(s)

Other

☑ Other, please specify :Palm oil and its derivatives

(7.74.1.4) Description of product(s) or service(s)

Musim Mas is a vertically integrated palm oil business offering an extensive portfolio of palm oil products and derivatives including Crude Palm Oil (CPO), Refined Bleach and Deodorized Palm Oil (RBDPO), and Palm Methyl Esther (PME). Our products are sold under the certification of RSPO and ISCC which set strict criteria for emission and sustainable practices. The ISCC certification scheme complies with the Renewable Energy Directive (RED) which is the legal framework for the implementation of renewable energy targets for the transport sector in the European Union. Following the requirements of the RED II, ISCC requires a minimum level of GHG savings for final biofuels of at least 50%. Additionally, RSPO requires the certification units to identify and assess their GHG emissions along with the implementation and monitoring plan to reduce and minimize the emissions.

(7.74.1.5) Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Select from:

☑ Yes

(7.74.1.6) Methodology used to calculate avoided emissions

Select from:

☑ Other, please specify :ISCC

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Cradle-to-gate

(7.74.1.8) Functional unit used

Megajoule biofuel

(7.74.1.9) Reference product/service or baseline scenario used

Following the ISCC EU 205 v4.1, a fossil fuel comparator of biofuels for transport is taken as the reference product.

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:

☑ Cradle-to-gate

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

0.000047

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

The figure corresponds to the emissions savings with the unit of tCO2e per MJ biofuel. The calculation is based on a life-cycle approach from upstream operations to our refineries (Cradle-to-Gate) calculated following the ISCC EU 205 guidance. Compared to the fossil fuel comparator (94 gCO2e/MJ), Musim Mas produces biofuel with emissions savings of approximately 50% (or ~47 gCO2e/MJ). Hence, the estimated avoided emission is 47 gCO2e/MJ.

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

5
[Add row]

(7.79) Has your organization retired any project-based carbon credits within the reporting year?

Select from:

☑ Yes

(7.79.1) Provide details of the project-based carbon credits retired by your organization in the reporting year.

Row 1

(7.79.1.1) Project type

Select from:

☑ Waste management

(7.79.1.2) Type of mitigation activity

Select from:

☑ Emissions reduction

(7.79.1.3) Project description

Our mills are operated in Indonesia. Under project ES730 (Biogas from organic waste digestion), methane from palm oil mill effluent that would otherwise be released is captured and used to generate electricity for mill operations. Surplus electricity is certified as Renewable Energy Certificates (RECs) through The Green Certificate Company (GCC) or I-REC/Evident.

(7.79.1.4) Credits retired by your organization from this project in the reporting year (metric tons CO2e)

12829

(7.79.1.5) Purpose of retirement

Select from:

☑ Voluntary offsetting

(7.79.1.6) Are you able to report the vintage of the credits at retirement?

Select from:

☑ Yes

(7.79.1.7) Vintage of credits at retirement

2024

(7.79.1.8) Were these credits issued to or purchased by your organization?

Select from:

☑ Issued

(7.79.1.9) Carbon-crediting program by which the credits were issued

Select from:

☑ Other private carbon crediting program, please specify :The Green Certificate Company (GCC)

(7.79.1.10) Method the program uses to assess additionality for this project

Select all that apply

☑ Standardized Approaches

(7.79.1.11) Approaches by which the selected program requires this project to address reversal risk

Select all that apply

☑ No risk of reversal

(7.79.1.12) Potential sources of leakage the selected program requires this project to have assessed

Select all that apply

☑ Upstream/downstream emissions

(7.79.1.13) Provide details of other issues the selected program requires projects to address

Our POME-biogas project generates onsite power while following recognized safeguards—mitigation hierarchy, legal compliance, and third-party verification. Moreover, our plants are installed within existing mill sites minimizing environmental, social, and economic impacts.

(7.79.1.14) Please explain

The project was selected for alignment with our Net Zero pathway, issuance and verification under GCC, strong additionality and safeguards, and methane-to-power co-benefits.
[Add row]

C8. Environmental performance - Forests

(8.1) Are there any exclusions from your disclosure of forests-related data?

	Exclusion from disclosure
Palm oil	*Select from:* ☑ No

[Fixed row]

(8.2) Provide a breakdown of your disclosure volume per commodity.

Palm oil

(8.2.1) Disclosure volume (metric tons)

5368929

(8.2.2) Volume type

Select all that apply

☑ Produced

☑ Sourced

(8.2.3) Produced volume (metric tons)

570054

(8.2.4) Sourced volume (metric tons)

4798875
[Fixed row]

(8.3) Provide details on the land you own, manage and/or control that is used to produce your disclosed commodities.

Palm oil

(8.3.1) Type of control

Select from:
☑ Concessions/lease

(8.3.2) Country/area

Select from:
☑ Indonesia

(8.3.3) First-level administrative division

Select from:
☑ States/equivalent jurisdictions

(8.3.4) Specify the states or equivalent jurisdictions

Sumatera and Kalimantan

(8.3.6) Area (hectares)

180014

(8.3.7) Indicate if you can provide the volume produced on land you own, manage and/or control

Select from:
☑ Yes

(8.3.8) Volume produced on land you own, manage and/or control (metric tons)

570054

(8.3.9) % area third-party certified

85

(8.3.10) Third-party certification scheme

Select all that apply

☑ RSPO producer/grower certification

(8.3.11) Attach a list of production facility names and locations (optional)

Musim-Mas-SR2024.pdf
[Add row]

(8.4) Indicate if any of the land you own, manage and/or control was not used to produce your disclosed commodities in the reporting year.

Select from:

☑ Some of the land we own, manage and/or control is not used for production

(8.4.1) Provide details on the land you own, manage and/or control that was not used to produce your disclosed commodities in the reporting year.

Row 1

(8.4.1.1) Country/area

Select from:

☑ Indonesia

(8.4.1.2) Type of control

Select from:

☑ Concessions/lease

(8.4.1.3) Land type

Select from:

☑ Set-aside land for conservation

(8.4.1.4) Area (hectares)

29000

(8.4.1.5) % covered by natural forests and other natural ecosystems

0

(8.4.1.6) Please explain

In accordance with our Sustainability Policy, Musim Mas pledges to No Deforestation of High Carbon Stock (HCS) forests, No Conversion of High Conservation Value (HCV) areas, and No New Developments on Peatlands after 31 December 2015. Musim Mas conducts HCV and HCS assessments prior to all new land development following the requirements and definitions set out by the HCS Approach (HCSA) and the HCV Resource Network Assessor Licensing Scheme (ALS). We engage with HCV ALS accredited assessors for HCV assessments and have engaged with approved external assessors such as HCS Approach Registered Practitioner Organizations to lead our HCS evaluations, further ensuring the credibility of our HCV and HCS assessments. The list of our companies that have completed the HCV/HCS assessments can be found on these websites https://hcvnetwork.org/find-report/ and https://highcarbonstock.org/forest-conservation-monitoring/assessment-reports/. Further information on conservation can be found at https://www.musimmas.com/sustainability/positive-environmental-impacts/conservation-and-restoration/.
[Add row]

(8.5) Provide details on the origins of your sourced volumes.

Palm oil

(8.5.1) Country/area of origin

Select from:

☑ Indonesia

(8.5.2) First level administrative division

Select from:

☑ States/equivalent jurisdictions

(8.5.3) Specify the states or equivalent jurisdictions

Sumatra, Kalimantan, Java, Sulawesi

(8.5.4) Volume sourced from country/area of origin (metric tons)

4798875

(8.5.5) Source

Select all that apply

☑ Single contracted producer

☑ Contracted suppliers (processors)

(8.5.6) List of supplier production and primary processing sites: names and locations (optional)

Musim-Mas-SR2024.pdf

(8.5.7) Please explain

Our palm oil operations comprise a complex supply chain with multiple players contributing large- and small-scale volumes. We source most of our crude palm oil (CPO) from third-party supplier mills, where we actively engage suppliers and have established landscape initiatives. Majority of our sourced volume comes from Indonesia with small portion comes from other country such as Malaysia and Thailand.
[Add row]

(8.6) Does your organization produce or source palm oil derived biofuel?

Select from:
☑ Yes

(8.6.1) Provide details of how your organization produces or sources palm oil derived biofuel.

Row 1

(8.6.1.1) Volume type

Select from:
☑ Sourced

(8.6.1.2) Palm oil derived biofuel volume

10270467

(8.6.1.3) Metric

Select from:
☑ Liters

(8.6.1.4) Country/area of origin

Select from:
☑ Indonesia

(8.6.1.5) First-level administrative division

Select from:
☑ State/equivalent jurisdiction, please specify :Sumatra and Kalimantan

(8.6.1.6) % of disclosure volume

Select from:
☑ 100%

(8.6.1.7) Biofuel material is sourced from smallholders

Select from:

☑ Yes

(8.6.1.8) Comment (optional)

Since 2020, our plantations and mills have used biofuel as our fuel option.
[Add row]

(8.7) Did your organization have a no-deforestation or no-conversion target, or any other targets for sustainable production/ sourcing of your disclosed commodities, active in the reporting year?

Palm oil

(8.7.1) Active no-deforestation or no-conversion target

Select from:

☑ Yes, we have a no-conversion target

(8.7.2) No-deforestation or no-conversion target coverage

Select from:

☑ Organization-wide (including suppliers)

(8.7.5) Other active targets related to this commodity, including any which contribute to your no-deforestation or no-conversion target

Select from:

☑ Yes, we have other targets related to this commodity
[Fixed row]

(8.7.1) Provide details on your no-deforestation or no-conversion target that was active during the reporting year.

Palm oil

(8.7.1.1) No-deforestation or no-conversion target

Select from:

☑ No-conversion

(8.7.1.2) Your organization's definition of "no-deforestation" or "no-conversion"

In accordance with our Sustainability Policy, Musim Mas pledges to No deforestation of High Carbon Stock (HCS) forests, no conversion of High Conservation Value (HCV) areas and no new developments on peatlands (regardless of depth) after 31 December 2015 (no development on peat since 2014 for our own operations).

(8.7.1.3) Cutoff date

Select from:

☑ 2015

(8.7.1.4) Geographic scope of cutoff date

Select from:

☑ Applied globally

(8.7.1.5) Rationale for selecting cutoff date

Select from:

☑ Compliance with initiative, please specify :Compliance with NDPE cut off date

(8.7.1.6) Target date for achieving no-deforestation or no-conversion

Select from:

☑ <2017

[Add row]

(8.7.2) Provide details of other targets related to your commodities, including any which contribute to your no-deforestation or no-conversion target, and progress made against them.

Palm oil

(8.7.2.1) Target reference number

Select from:

☑ Target 1

(8.7.2.2) Target contributes to no-deforestation or no-conversion target reported in 8.7

Select from:

☑ Yes, this target contributes to our no-conversion target

(8.7.2.3) Target coverage

Select from:

☑ Organization-wide (including suppliers)

(8.7.2.4) Commodity volume covered by target (metric tons)

Select from:

☑ Disclosure volume

(8.7.2.5) Category of target & Quantitative metric

Traceability

☑ % of volume traceable to traceability point

(8.7.2.6) Traceability point

Select from:

☑ Production unit

(8.7.2.8) Date target was set

12/30/2018

(8.7.2.9) End date of base year

12/30/2015

(8.7.2.10) Base year figure

0

(8.7.2.11) End date of target

12/30/2025

(8.7.2.12) Target year figure

100

(8.7.2.13) Reporting year figure

98

(8.7.2.14) Target status in reporting year

Select from:
☑ Underway

(8.7.2.15) % of target achieved relative to base year

98.00

(8.7.2.16) Global environmental treaties/ initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Kunming-Montreal Global Biodiversity Framework

☑ Paris Agreement

☑ Sustainable Development Goals

(8.7.2.17) Explain target coverage and identify any exclusions

Musim Mas pursues traceability as a means to enhance palm oil sustainability, creating a fully transparent supply chain that also helps identify environmental and social risks. Traceability to plantation (TTP) refers to the traceability level of palm oil products right down to plantation. For a plantation to be considered traceable, we require our supplier to provide company name, plantation name, the plantation map, and the size of the concessions. For smallholders to be considered traceable, we require the information of the farm location with the size of the farm or the village name where the farm is located.

(8.7.2.18) Plan for achieving target, and progress made to the end of the reporting year

We are pursuing our target of 100% TTP across our entire supply chain, including third-party CPO and palm kernel (PK) supplying mills. Although CPO and PK sourced from Roundtable on Sustainable Palm Oil (RPSO)-certified 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. In order to achieve our target and maintaining our score, we analyze our potential supplier before they enter our supply chain. We require our potential supplier to filled in supplier questionnaire about their sustainability, legality and their source of FFB supply sheds. It is essential for our supplier to attend our NDPE workshop and commit to our NDPE policy. Additionally, we obligate our supplier to update their source of FFB supply sheds annually to keep the data up to date.

(8.7.2.20) Further details of target

To fully address deforestation and peat development risks, we require detailed knowledge of the supply sheds of our independent mills and third-party suppliers in addition to our own mills. Therefore, we have focused our efforts on achieving traceability to plantation (TTP) or place of production as part of our NDPE Roadmap and have arrived at full visibility across our plantations. We achieved 98% TTP for third-party supplier mills and our overall TTP for reporting year 2024 and are on track to reach 100% TTP by 2025. Additionally, to ensure top-down NDPE compliance, suppliers are to complete Musim Mas Self Assessment Tool (SAT) which is an exhaustive set of questions against our NDPE requirements. This evaluation enables suppliers to self-declare information about their operations, thus, allowing us to identify potential risk areas at the mill level. As of December 2024, 78% of our suppliers have completed the assessment. In 2024, 90% of our suppliers have either an NDPE policy or adopted Musim Mas Sustainability Policy. Moreover, we also use a combination of approaches to manage NDP risks in applying our NDPE policy, as outlined in our 2021 NDP Risk Management Framework (RMF). 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 2024, as per our RMF methodology, we incorporated updated maps and information on palm planted area to ensure that our assessment remained stringent and is based on the latest available data. As a result, we identified two supplier mills as high-risk and 37 as medium-risk. Nevertheless, 94% of the total 701 CPO and PK suppliers assessed were identified as low-risk. We are working closely with the two high-risk mills to develop time-bound action plans to reduce their risk.

Palm oil

(8.7.2.1) Target reference number

Select from:

☑ Target 2

(8.7.2.2) Target contributes to no-deforestation or no-conversion target reported in 8.7

Select from:

☑ Yes, this target contributes to our no-conversion target

(8.7.2.3) Target coverage

Select from:

☑ Organization-wide (direct operations only)

(8.7.2.4) Commodity volume covered by target (metric tons)

Select from:

☑ Disclosure volume

(8.7.2.5) Category of target & Quantitative metric

Engagement with smallholders

☑ % of smallholders engaged

(8.7.2.8) Date target was set

12/30/2021

(8.7.2.9) End date of base year

12/30/2021

(8.7.2.10) Base year figure

0

(8.7.2.11) End date of target

12/30/2025

(8.7.2.12) Target year figure

100

(8.7.2.13) Reporting year figure

90

(8.7.2.14) Target status in reporting year

Select from:

☑ Underway

(8.7.2.15) % of target achieved relative to base year

90.00

(8.7.2.16) Global environmental treaties/ initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Kunming-Montreal Global Biodiversity Framework

☑ Paris Agreement

☑ Sustainable Development Goals

(8.7.2.17) Explain target coverage and identify any exclusions

Musim Mas realizes that engagement with smallholders can lead to an increase in yields (i.e. socialization on good agricultural practices), better access to national and international markets, improvement in livelihoods, and a reduction in the risk of land conversion. Hence, we conduct training for trainers through Smallholders Hubs which is indirectly providing extended coaching to independent smallholders by 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. Our collaborative, pre-competitive approach enables palm oil companies operating in the region to share knowledge, irrespective of a smallholder's buyer. Hence, we set a target to achieve 100% independent smallholders trained by VEO's in Subulussalam by 2025. The target covers the smallholders trained in Subulussalam.

(8.7.2.18) Plan for achieving target, and progress made to the end of the reporting year

Together with our industry and civil society partners, we aim to train 1,750 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 1.5C. 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. This is achieved through the direct training we provide for smallholders. We have historically supported many smallholders that are not necessarily supplying to Musim Mas. As of 2024, approximately 89.9% of independent smallholders have been trained through our Training for Trainers program through our Smallholders Hubs in Subulussalam. We are on track to achieve 100% independent smallholders trained by 2025.

(8.7.2.20) Further details of target

Beyond its own operations, Musim Mas also supports independent smallholders. To support them, Musim Mas leads Indonesia's largest independent Smallholder Program to provide training on sustainable agricultural practices and encourage certification, helping them keep pace with local regulations and global standards. We will continue to grow our smallholder outreach programs and training for trainers through our Smallholders Hubs in Subulussalam. We will continue to engage and socialize the importance of sustainable palm oil production to relevant smallholders. For more information, please refer to https://www.musimmas.com/sustainability/smallholders/independent-smallholders/.
[Add row]

(8.8) Indicate if your organization has a traceability system to determine the origins of your sourced volumes and provide details of the methods and tools used.

Palm oil

(8.8.1) Traceability system

Select from:
☑ Yes

(8.8.2) Methods/tools used in traceability system

Select all that apply

☑ Internal traceability system

(8.8.3) Description of methods/tools used in traceability system

Our traceability systems include traceability to mill (TTM) and traceability to plantation (TTP). We currently use three approaches, depending upon the availability of TTP data and mapping of oil palm-planted areas: (1) Village-based risk traceability approach, village boundaries are overlayed with the conservation area and peat moratorium maps. Villages that have overlapping boundaries are considered high risk. If detailed mapping indicates that FFB is produced within no-go areas, the respective supplier must exclude these sources of FFB from the supply chain. (2) Augmented village-based risk traceability approach, similar to the village-based approach, the village boundary data is overlayed with previous data sources on peat and conservation areas and then augmented with maps of palm-planted areas derived from official or open access sources, as well as national forest cover maps of MoEF. Moreover, we will integrate recognized HCV/HCS maps into our risk screening. This approach is very precise but requires the development of dedicated maps of planted palms. (3) Fixed radius approach, this approach is used if (1) and (2) are not applicable. We map overlap between conservation and peat areas within a 50-km radius of the mill. Depending upon the extent of overlaps, mills are classified as low, medium or high risk. This approach is very coarse and only serves as a proxy for potential risk. Once we obtain TTP data, we re-classify risks based on the other two methodologies. We use various methods and tools to continuously monitor our supply chain including satellite monitoring, ground-truthing, Integrated Deforestation Alert (IDA), NDPE Implementation Reporting Framework (IRF), Musim Mas's Risk Management Framework (RMF), and Musim Mas's SAT. In 2024, we have achieved 100% traceability to mill with 98% of the total supply is traceable to plantation and independently verified by Control Union. We are on track to achieving 100% traceability to plantation by 2025. In addition, we also use the industry-leading NDPE Implementation Reporting Framework (IRF) reporting tool to systematically assess our supplying mills' progress on implementing industry NDPE commitments to monitor their progress, identify gaps, and drive these various approaches. In 2024, 98.80% of our supplier volumes were in the "Delivering" category.

[Fixed row]

(8.8.1) Provide details of the point to which your organization can trace its sourced volumes.

Palm oil

(8.8.1.1) % of sourced volume traceable to production unit

98

(8.8.1.2) % of sourced volume traceable to sourcing area and not to production unit

0

(8.8.1.3) % sourced volume traceable to country/area of origin and not to sourcing area or production unit

0

(8.8.1.4) % of sourced volume traceable to other point (i.e., processing facility/first importer) not in the country/area of origin

2

(8.8.1.5) % of sourced volume from unknown origin

0

(8.8.1.6) % of sourced volume reported

100.00
[Fixed row]

(8.9) Provide details of your organization's assessment of the deforestation-free (DF) or deforestation- and conversion-free (DCF) status of its disclosed commodities.

Palm oil

(8.9.1) DF/DCF status assessed for this commodity

Select from:
☑ Yes, deforestation- and conversion-free (DCF) status assessed

(8.9.2) % of disclosure volume determined as DF/DCF in the reporting year

100

(8.9.3) % of disclosure volume determined as DF/DCF through a third-party certification scheme providing full DF/DCF assurance

7

(8.9.4) % of disclosure volume determined as DF/DCF through monitoring of production unit

0

(8.9.5) % of disclosure volume determined as DF/DCF through monitoring of sourcing area

93

(8.9.6) Is a proportion of your disclosure volume certified through a scheme not providing full DF/DCF assurance?

Select from:
☑ No
[Fixed row]

(8.9.1) Provide details of third-party certification schemes used to determine the deforestation-free (DF) or deforestation- and conversion-free (DCF) status of the disclosure volume, since specified cutoff date.

Palm oil

(8.9.1.1) Third-party certification scheme providing full DF/DCF assurance

Chain-of-custody certification
☑ RSPO supply chain certification – Segregated

(8.9.1.2) % of disclosure volume determined as DF/DCF through certification scheme providing full DF/DCF assurance

7

(8.9.1.3) Comment

Musim Mas strictly complies with national, regional, and local regulations in the countries where we operate. We subscribe to and comply with voluntary industry leading sustainability certification and verification schemes. Our certification efforts extend across our entire value chain. All our midstream and downstream palm processing facilities, which include our refineries in Indonesia are certified under the RSPO SCCS (Supply Chain Certification System). The attached certification

documentation refers to the certificate from one of our subsidiaries. For more information about our RSPO certification, please type Musim Mas in the search box through the following link https://rspo.org/search-members/supply-chain-certificate-holders/

(8.9.1.4) Certification documentation

RSPO Certificate KIM 2_08.12.2027.pdf
[Add row]

(8.9.4) Provide details of the sourcing area monitoring used to determine deforestation-free (DF) or deforestation- and conversion-free (DCF) status of volumes since specified cutoff date.

Palm oil

(8.9.4.1) % of disclosure volume determined as DF/DCF through monitoring of deforestation and conversion within the sourcing area

93.00

(8.9.4.2) Monitoring approach used for determining that sourcing areas have no or negligible risk of deforestation or conversion

Select all that apply

☑ Remote sensing or other geospatial data

(8.9.4.3) Description of approach, including frequency of assessment

In 2021, Musim Mas developed NDP Risk Management Framework (RMF). The framework details out approaches to identify, assess, mitigate, and monitor risks. Musim Mas defines risk as any activity related to CPO and PK production or procurement that might violate its NDPE policy. The RMF is instrumental in evaluating No Deforestation and No Peat (NDP) risks, establishing engagement priorities, and mitigating them. The RMF covers Musim Mas-owned operations as well as third-party suppliers, including mills, concessions, smallholders, and outgrowers. Musim Mas uses Traceability to Plantation (TTP) data, and overlay supply shed maps with locations of conservation and peat areas, and depending on the extent of overlaps, they categorize the mills in their supply chain as low, medium, or high-risk.

(8.9.4.4) Countries/areas of origin

Select all that apply

☑ Indonesia

☑ Malaysia

☑ Thailand

(8.9.4.5) Sourcing areas

Our palm oil operations comprise a complex supply chain with multiple players contributing large- and small-scale volumes. We source most of our crude palm oil (CPO) from third-party supplier mills, where we actively engage suppliers and have established landscape initiatives. Majority of our sourced volume comes from Indonesia with small portion comes from other country such as Malaysia and Thailand.

(8.9.4.6) DF/DCF status is verified

Select from:

☑ Yes

(8.9.4.7) Type of verification

Select all that apply

☑ Third party

(8.9.4.8) % of your disclosure volume that is both determined as DF/DCF through sourcing area monitoring and is verified as DF/DCF

93

(8.9.4.9) Explain the process of verifying DF/DCF status

Musim Mas uses the collected TTP data to overlay the FFB supply sheds with conservation areas and peat layers which were obtained from government authorities and other official sources. Musim Mas applies 1 of 3 TTP approaches depending on the availability of the TTP data. Once the spatial analysis has been done, Musim Mas will allocate the risk to each FFB supply base which ultimately makes up the overall risk of each mill in Musim Mas's supply chain. Risk allocation will be influenced by the total percentage of area that overlaps with forest, peat and other conservation areas. Musim Mas Volume Deforestation Free has been verified by Control Union.

(8.9.4.10) Attachment of verification (optional)

Verification-Statement-RMF-and-VDF-Musim-Mas-2024.pdf

(8.9.4.11) Use of risk classification

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 deforestation free 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.

(8.9.4.12) Attachment indicating risk classification for each sourcing area (optional)

Musim Mas-Risk-Management-Framework-Report-2021.pdf
[Fixed row]

(8.10) Indicate whether you have monitored or estimated the deforestation and conversion of other natural ecosystems footprint for your disclosed commodities.

	Monitoring or estimating your deforestation and conversion footprint
Palm oil	*Select from:* ☑ Yes

[Fixed row]

(8.10.1) Provide details on the monitoring or estimating of your deforestation and conversion footprint.

Palm oil

(8.10.1.1) Monitoring and estimating your deforestation and conversion footprint

Select from:
☑ We monitor the deforestation and conversion footprint on the land we own, manage or control

(8.10.1.2) % of disclosure volume monitored or estimated

100

(8.10.1.3) Reporting of deforestation and conversion footprint

Select all that apply

☑ Since a specified cutoff date

(8.10.1.4) Year of cutoff date

2007

(8.10.1.6) Known or estimated deforestation and conversion footprint since the specified cutoff date (hectares)

0

(8.10.1.9) Describe the methods and data sources used to monitor or estimate your deforestation and conversion footprint

In accordance with our Sustainability Policy, Musim Mas pledges to No Deforestation of High Carbon Stock (HCS) forests, No Conversion of High Conservation Value (HCV) areas, and No New Developments on Peatlands after 31 December 2015. Musim Mas conducts HCV and HCS assessments prior to all new land development following the requirements and definitions set out by the HCS Approach (HCSA) and the HCV Resource Network Assessor Licensing Scheme (ALS). We engage with HCV ALS accredited assessors for HCV assessments and have engaged with approved external assessors such as HCS Approach Registered Practitioner Organizations to lead our HCS evaluations, further ensuring the credibility of our HCV and HCS assessments. The list of our companies that have completed the HCV/HCS assessments can be found on these websites https://hcvnetwork.org/find-report/ and https://highcarbonstock.org/forest-conservation-monitoring/assessment-reports/.

Palm oil

(8.10.1.1) Monitoring and estimating your deforestation and conversion footprint

Select from:

☑ We estimate the deforestation and conversion footprint based on sourcing area

(8.10.1.2) % of disclosure volume monitored or estimated

100

(8.10.1.3) Reporting of deforestation and conversion footprint

Select all that apply

☑ Since a specified cutoff date

(8.10.1.4) Year of cutoff date

2007

(8.10.1.6) Known or estimated deforestation and conversion footprint since the specified cutoff date (hectares)

0

(8.10.1.9) Describe the methods and data sources used to monitor or estimate your deforestation and conversion footprint

In the NDPE policy, Musim Mas has publicly committed to No Deforestation of High Carbon Stock (HCS) forests, no conversion of High Conservation Value (HCV) areas, and no new developments on peatlands (regardless of depth) after 31 December 2015 (no development on peat since 2014 for our own operations). Musim Mas conducted HCS and HCV assessments through verified external parties to identify the HCV and HCS areas. To monitor deforestation, Musim Mas also uses tools such as RADD, Earthqualizer platform, Satellite Images as well as on-site observation such as daily patrol. Monthly reports from both Satellite Images and onsite patrol are available to ensure proper documentation and no deforestation. Moreover, Earthqualizer also provides bi-weekly reports. For more information, please refer to https://www.musimmas.com/sustainability/responsible-sourcing/.
[Add row]

(8.12) Indicate if certification details are available for the commodity volumes sold to requesting CDP Supply Chain members.

Palm oil

(8.12.1) Third-party certification scheme adopted

Select from:

☑ Yes

(8.12.2) Certification details are available for the volumes sold to any requesting CDP Supply Chain members

Select from:

☑ No

(8.12.3) Primary reason certification details are not available for the volumes sold to any requesting CDP Supply Chain members

Select from:

☑ Data is confidential

(8.12.4) Explain why certification details are not available for the volumes sold to any requesting CDP Supply Chain members

Data is confidential.
[Fixed row]

(8.13) Does your organization calculate the GHG emission reductions and/or removals from land use management and land use change that have occurred in your direct operations and/or upstream value chain?

	GHG emissions reductions and removals from land use management and land use change calculated
Palm oil	*Select from:* ☑ Yes, but not willing to share details with requesting CDP Supply Chain members

[Fixed row]

(8.14) Indicate if you assess your own compliance and/or the compliance of your suppliers with forest regulations and/or mandatory standards, and provide details.

(8.14.1) Assess legal compliance with forest regulations

Select from:

☑ Yes, from both suppliers and owned/managed/controlled land

(8.14.2) Aspects of legislation considered

Select all that apply

☑ Labor rights

☑ Land use rights

☑ Environmental protection

☑ Human rights protected under international law

☑ Tax, anti-corruption, trade and customs regulations

☑ Forest-related rules, including forest management and biodiversity conservation, where directly related to wood harvesting

☑ The principle of free, prior and informed consent (FPIC), including as set out in the UN Declaration on the Rights of Indigenous Peoples

(8.14.3) Procedure to ensure legal compliance

Select all that apply

☑ Certification

☑ Remote sensing or other geospatial monitoring

☑ Third party audits

(8.14.5) Please explain

We adhere to Indonesia's national certification scheme for sustainable palm oil – the Indonesian Sustainable Palm Oil (ISPO) standard. Since August 2023, Musim Mas has achieved 100% ISPO certification across all 17 of its upstream entities (PTs). Our corporate affairs team constantly monitors our compliance with the relevant local and national regulations. In support, the Sustainability team constantly monitors our compliance with our NDPE policy including maintaining recognized third-party certifications schemes including RSPO, ISCC, POIG, and ISPO in our operations. Since annual audits are conducted to achieve these certification schemes, they are used to track and monitor legal adherence to our sustainability practices and standards of the highest level. In complementary, our GIS and biodiversity teams perform monitoring of deforestation and peat development in our own and supplier's concessions using remote sensing methods and site patrol. Align with our 2020 NDPE policy vision, we also conduct quarterly checks on suppliers' RSPO certification status, which is renewed annually, to ensure that they continue to be compliant with legal requirements set out in the RSPO framework.
[Fixed row]

(8.15) Do you engage in landscape (including jurisdictional) initiatives to progress shared sustainable land use goals?

	Engagement in landscape/jurisdictional initiatives
	Select from: ☑ Yes, we engage in landscape/jurisdictional initiatives

[Fixed row]

(8.15.1) Indicate the criteria you consider when prioritizing landscapes and jurisdictions for engagement in collaborative approaches to sustainable land use and provide an explanation.

(8.15.1.1) Criteria for prioritizing landscapes/jurisdictions for engagement

Select all that apply

☑ Opportunity for increased human well-being in area

☑ Risk of deforestation, forests/land degradation, or conversion of other natural ecosystems

☑ Risk of issues related to land tenure rights

☑ Supply of commodities strategically important

(8.15.1.2) Explain your process for prioritizing landscapes/jurisdictions for engagement

Since our policy was established in 2014, we recognize that sustainability issues such as the well-being of forests, food security, biodiversity, and livelihoods are interconnected. The best chance for maximizing impact is to integrate these themes in the same communities or geographical areas. As we aspire to be the leading sustainable palm oil company, we want to show leadership through the landscape approach and our commitment to our roadmap towards a responsible supply chain, including setting targets for supplier engagement and independent smallholders. 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 multi-stakeholder collaborations that enable the effective implementation of our programs. For more information, please visit https://www.musimmas.com/sustainability/partnership-collaboration/landscape-approach-and-programs/
[Fixed row]

(8.15.2) Provide details of your engagement with landscape/jurisdictional initiatives to sustainable land use during the reporting year.

Row 1

(8.15.2.1) Landscape/jurisdiction ID

Select from:

☑ LJ1

(8.15.2.2) Name of initiative

Aceh Landscape Project

(8.15.2.3) Country/area

Select from:

☑ Indonesia

(8.15.2.4) Name of landscape or jurisdiction area

Aceh Landscape

(8.15.2.5) Attach public information about the initiative (optional)

Musim-Mas-Priority-Landscapes-Strategy-Document-2024-LATEST.pdf

(8.15.2.6) Indicate if you can provide the size of the area covered by the initiative

Select from:

☑ Yes

(8.15.2.7) Area covered by the initiative (ha)

1008.841

(8.15.2.8) Type of engagement

Select all that apply

☑ Partner: Shares responsibility with other stakeholders to manage and implement actions.

☑ Implementer: Executes actions based on the collective goals

☑ Funder: Provides full or partial financial resources

(8.15.2.9) Engagement start year

2020

(8.15.2.10) Engagement end year

Select from:

☑ Please specify :2027

(8.15.2.11) Estimated investment over the project period

0

(8.15.2.12) Landscape goals supported by engagement

Environmental

☑ Forest fires monitored and prevented

☑ Biodiversity protected and/or restored

☑ Increased and/or maintained protected areas

☑ Natural ecosystems conserved and/or restored

☑ Ecosystem services maintained and/or enhanced

☑ Avoided deforestation/conversion of other natural ecosystems and/or decreased degradation rate

Governance

☑ Governance forums that represent all relevant stakeholders in place and maintained

☑ Promotion of transparency, participation, inclusion, and coordination in landscape policy, planning, and management

Social

☑ Respect, protect, and fulfil human rights

☑ Income diversification amongst producers in area

☑ Improved business models that enable inclusion (including smallholders)

☑ Improved capacity for community engagement in multi-stakeholder processes

☑ Implementation of livelihood activities/practices that reduce pressure on forests

☑ Rights to land and resources recognized and protected, and related conflicts reduced

☑ Ensuring local communities and smallholders benefit from the outcomes of landscape/jurisdictional initiative

Production

☑ Increased adoption of sustainable production practices (e.g., input use efficiency and water management practices)

☑ Reliable commodity traceability and landscape monitoring/data collection system

(8.15.2.13) Organization actions supporting initiative

Participate in planning and multi-stakeholder alignment

☑ Collaborate on establishing and managing monitoring system for deforestation, natural ecosystem conversion and/or degradation

☑ Collaborate on landscape sustainability assessments through participatory mapping

☑ Collaborate on management/land use planning in the landscape/jurisdiction

☑ Collaborate to maintain representation from all relevant stakeholders within governance structure of initiative

☑ Share spatial data and land management plans with other stakeholders in the landscape/jurisdiction

Build community and multi-stakeholder capacities

☑ Share information on supplier non-compliance, value chain mapping and traceability with other stakeholders in the landscape/jurisdiction

Support and incentivize sustainable production and community land use practices

☑ Capacity building for farmers, smallholders and local communities to implement good agricultural practices (including improved efficiency, crop diversification and adoption of certification)

☑ Support Indigenous peoples and local communities to clarify and secure land tenure rights

Link value chain action to landscape/jurisdictional initiative through private sector collaboration

☑ Collaborate on commodity traceability

(8.15.2.14) Type of partners engaged in the initiative design and implementation

Select all that apply

☑ Sub-national government

☑ Local communities

☑ NGO and/or civil society

☑ Private sector

(8.15.2.15) Description of engagement

In 2020, Musim Mas launched its first landscape strategy and roadmap for Aceh Landscape, which details the objectives and targets for implementing our No Deforestation, No Peat, and No Exploitation (NDPE) policy in the landscape. Through collaboration with Aceh Singkil Government, General Mills, Academic Instituition (University of Cambridge & Eidgenössische Technische Hochschule Zürich) and local civil society organization – Earthqualizer Foundation (EQ) in Aceh Singkil, Musim Mas has been running a program targeting independent smallholders in villages neighboring the Leuser Ecosystem to integrate them into the sustainable palm oil supply chain and reduce deforestation. We're working with ETHZ and Cambridge University on a research project to assess the extent of the impact of Musim Mas' GAP and NDPE training on the deforestation rate in Aceh Singkil. The program started in 2021 and will run for five years. Subulussalam Smallholders Hub Project has a collaboration with AAK, Nestle which also involved Earthworm Foundation (EF) to help on monitoring deforestation in high priority villages in Subulussalam. Musim Mas has developed and implemented various programs to integrate independent smallholders into the palm oil supply chain by assisting them in adopting efficient farming standards and complete training modules covering GAP and NDPE commitments. By adopting sustainable farming practices, smallholders can increase their yields and reduce their dependence on expanding into forested areas. In 2023, Musim Mas started engagement in smallholders' hub landscape area in Aceh Selatan and Aceh Timur. The program in Aceh Selatan is collaborating with Earthqualizer and Local Government. Our field team has been done engagement with local government to socialize the training program to increase smallholders' capacity in implementing GAP. The project in Aceh Timur aims to improve the productivity of smallholders through a series of capacity building activities that will be led by Musim Mas smallholders hub program in collaboration with Forum Konservasi Leuser (FKL). The project targeted to provide training for Village Extension Officers (VEOs) and smallholders in Aceh Timur. After the project ends, the smallholders expected to receive further support through the Centre id Excellent that is currently being developed in Aceh Timur by Inisiatif Dagang Hijau (IDH) as partner collaboration project.

(8.15.2.16) Collective monitoring framework used to measure progress towards landscape goals and actions

Select from:

☑ Yes, progress is collectively monitored using a shared external framework, please specify :IDH SourceUp

(8.15.2.17) State the achievements of your engagement so far and how progress is monitored

Through the Aceh landscape project, Musim Mas has contributed not only toward natural ecosystems and biodiversity, but also farmers and communities. Below are some of the progress and achievements of the project in 2024: (1) Train Village Extension Officers (VEOs) to train independent smallholders across our Smallholders Hubs. (2) Field team training assisting on smallholders in Smallholders hub and provide onsite visits to check implementation of skills learnt and offer agronomic advice. (3) Smallholders hubs training in GAP, NDPE and financial literacy training which also trained through research project in collaboration with Cambridge University and ETH Zurich University with the same materials. (4) Through collaboration with EQ ongoing submitted STDB applications. (5) Advanced training of Financial Literacy, aims to increase smallholders' awareness and knowledge in managing house hold economy and enhance the home-based business as the alternative income. (6) Involvement progress in Multi Stakeholders Forum (MSF) in Aceh Singkil. (7) Advanced training of Trainers for Villages Extension Officers (VEOs). (8). Workshop multi-stakeholder. For more information, please refer to https://www.musimmas.com/sustainability/partnership-collaboration/landscape-approach-and-programs/aceh-province

(8.15.2.18) Claims made

Select from:

☑ Yes, we are making a claim

(8.15.2.19) Type of claim made

Select from:

☑ Both individual and collective

(8.15.2.20) Provide further details on your claim

(1) We trained 290 village extension officers and 8,126 independent smallholders across our Smallholders Hubs with the specific: - 2,605 smallholders in Aceh Tamiang; - 2,620 smallholders from Aceh Singkil, - 1,581 smallholders trained in Subulussalam, - 222 smallholders trained in Aceh Selatan and - 918 smallholders trained in Aceh Timur. (2) Field team still ongoing the training assisting on smallholders in Aceh Tamiang. (3) 30 villages have successfully completed their GAP and financial literacy training through research project in Aceh Singkil collaboration with Cambridge University and ETH Zurich University. (4) Total number of 2,944 smallholders have been trained by NDPE Policy material in Aceh Tamiang, Aceh Singkil and Subulussalam. (5) Through collaboration with EQ, a total of 326 smallholders submitted STDB applications to the Aceh Singkil Regency Government. These applications covered 582 land parcels with a total area of 555.01 hectares across 6 villages. (6) Advanced training of Financial Literacy has been delivered to 99 participants through 5 villages in Aceh Singkil. This training is aims to increase smallholders' awareness and knowledge in managing house hold economy and enhance the home-based business as the alternative income. (7) Memorandum of Understanding (Mou) has been signed by July 2024 and Training dashboard of Multi Stakeholders Forum (MSF) in Aceh Singkil. (8) Advanced training of Trainers for 20 Villages Extension Officers (VEOs) in Aceh Singkil and Subulussalam was conducted covering some topics as follow, ISPO certification, Soil Health & Home Composting Unit. (9) Stakeholder workshop multi-stakeholder already conducted in February 2024. The workshop was attended by representatives from the Regional Apparatus Organizations (OPD) of South Aceh Regency, the Secretariat of the Regional House of Representatives (DPRK) of South Aceh, the Gunung Leuser National Park Authority, subdistrict heads (Camat), village heads, and NGOs as listed in the attachment. The objective was discussed through this workshop was implementation of social forestry and management opportunity also cover NDPE commitment in palm oil to support sustainability landscape. (10) Training of trainers for Village Extension Officers (VEOs) in Aceh Timur was attended by 25 participants in August 2024.

Row 2

(8.15.2.1) Landscape/jurisdiction ID

Select from:

☑ LJ2

(8.15.2.2) Name of initiative

Siak Pelalawan Landscape Programme (SPLP)

(8.15.2.3) Country/area

Select from:

☑ Indonesia

(8.15.2.4) Name of landscape or jurisdiction area

Siak & Pelalawan

(8.15.2.5) Attach public information about the initiative (optional)

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(8.15.2.6) Indicate if you can provide the size of the area covered by the initiative

Select from:

☑ Yes

(8.15.2.7) Area covered by the initiative (ha)

2248103

(8.15.2.8) Type of engagement

Select all that apply

☑ Partner: Shares responsibility with other stakeholders to manage and implement actions.
☑ Implementer: Executes actions based on the collective goals
☑ Funder: Provides full or partial financial resources

(8.15.2.9) Engagement start year

2019

(8.15.2.10) Engagement end year

Select from:
☑ Please specify :2026

(8.15.2.11) Estimated investment over the project period

0

(8.15.2.12) Landscape goals supported by engagement

Environmental
☑ Forest fires monitored and prevented
☑ Biodiversity protected and/or restored
☑ Increased and/or maintained protected areas
☑ Natural ecosystems conserved and/or restored
☑ Ecosystem services maintained and/or enhanced
☑ Avoided deforestation/conversion of other natural ecosystems and/or decreased degradation rate

Governance
☑ Governance forums that represent all relevant stakeholders in place and maintained
☑ Promotion of transparency, participation, inclusion, and coordination in landscape policy, planning, and management

Social
☑ Respect, protect, and fulfil human rights
☑ Income diversification amongst producers in area

☑ Improved business models that enable inclusion (including smallholders)
☑ Improved capacity for community engagement in multi-stakeholder processes
☑ Implementation of livelihood activities/practices that reduce pressure on forests
☑ Rights to land and resources recognized and protected, and related conflicts reduced
☑ Ensuring local communities and smallholders benefit from the outcomes of landscape/jurisdictional initiative

Production
☑ Increased adoption of sustainable production practices (e.g., input use efficiency and water management practices)
☑ Reliable commodity traceability and landscape monitoring/data collection system

(8.15.2.13) Organization actions supporting initiative

Participate in planning and multi-stakeholder alignment
☑ Collaborate on establishing and managing monitoring system for deforestation, natural ecosystem conversion and/or degradation
☑ Collaborate on landscape sustainability assessments through participatory mapping
☑ Collaborate on management/land use planning in the landscape/jurisdiction
☑ Collaborate to maintain representation from all relevant stakeholders within governance structure of initiative
☑ Share spatial data and land management plans with other stakeholders in the landscape/jurisdiction

Build community and multi-stakeholder capacities
☑ Share information on supplier non-compliance, value chain mapping and traceability with other stakeholders in the landscape/jurisdiction

Support and incentivize sustainable production and community land use practices
☑ Capacity building for farmers, smallholders and local communities to implement good agricultural practices (including improved efficiency, crop diversification and adoption of certification)
☑ Support Indigenous peoples and local communities to clarify and secure land tenure rights

Link value chain action to landscape/jurisdictional initiative through private sector collaboration
☑ Collaborate on commodity traceability

(8.15.2.14) Type of partners engaged in the initiative design and implementation

Select all that apply

☑ Sub-national government

☑ Local communities

☑ NGO and/or civil society

☑ Private sector

(8.15.2.15) Description of engagement

Riau province is also a long-established palm oil production area, with significant numbers of independent smallholder producers who need counselling and assistance with various agricultural challenges. In 2020, Musim Mas joined the Siak Pelalawan Landscape Programme, a private sector-driven initiative in the districts of Siak and Pelalawan in Riau province, Indonesia, supported by CORE (Consortium of Resource Expert) in this case, consisting of Proforest and Daemeter. The programme supports and builds on existing government led initiatives including the Green Siak Green Growth District plan and the Pelalawan District Action Plan for Sustainable Palm Oil, and has 4 long term goals: 1) Protect and enhance forests, peatlands and natural ecosystems; 2) Empower palm oil smallholders to achieve improved livelihoods; 3) Respect of labour and community rights within the palm oil sector and; 4) Pursue sustainable palm oil production. The vision of the Coalition of Companies is that SPLP should build on and contribute to the already existing district government's objectives as stipulated in the Green Siak roadmap and the District Action Plan for Sustainable Palm Oil in Pelalawan. In addition, it contributes to the objectives of the Peatland Restoration Agency BRGM and the village-based approach of the BRGM, demonstrated by the fact that the BRGMs village-based program serves as the foundation and spirit of SPLP. The project is working with the district governments to improve the STDB issuance systematically has mapped priority areas for conservation and for palm oil smallholders have mapped and surveyed as part of the process to obtain business permits (STDB). In addition to the measurable achievements that SPLP Coalition members and supporters contributed to, less tangible, but equally important are the achievements made in terms of stakeholder engagement, government support and mill engagement. Through the support of SPLP, the Siak district government is strengthened in the coordination and execution of the Green Siak Roadmap and the Pelalawan district government is supported in formulating a roadmap for sustainable palm oil.

(8.15.2.16) Collective monitoring framework used to measure progress towards landscape goals and actions

Select from:

☑ Yes, progress is collectively monitored using a shared external framework, please specify :Siak Pelalawan Landscape Programme

(8.15.2.17) State the achievements of your engagement so far and how progress is monitored

As one of the eight companies supporting the collective goals of the Siak Pelalawan Landscape Programme, Musim Mas outlines the following key progress achievements from the project: (1) Provide progress of Villages Support Programs (VSP) including delivery process of land tenure security of STDB of smallholders through the SPLP collaboration. (2) Village off-take model that aim to support sustainable land use and responsible production. (3) Mill engagement and TTP to help the progress along the IRF mill categories and move towards delivering SPLP member's NDPE commitment. (4) Deforestation monitoring and rapid response. (5) Multi-Stakeholders platform and government engagement. (6) Conservation and rehabilitation that aims to address conservation and rehabilitation efforts at large scale, involving government and other stakeholders. (7) Improved social dialogue with workers to respect labors and raise awareness amongst workers about the

rights as worker and as humans. (8) Engagement, Management and Monitoring (EMM) to coordinate of all activities for SPLP. For more information, please refer to https://www.musimmas.com/sustainability/partnership-collaboration/landscape-approach-and-programs/riau-province/

(8.15.2.18) Claims made

Select from:

☑ Yes, we are making a claim

(8.15.2.19) Type of claim made

Select from:

☑ Collective claim

(8.15.2.20) Provide further details on your claim

Through its participation to the Siak Pelalawan landscape programme below, are several points of the progress achievements of the project that can be stated by Musim Mas as one of eight companies supporting these collective goals: (1) 4,012 smallholders have supported to receive GAP training. (2) Through the Musim Mas support in SPLP, 92 people increased land tenure security through STDB registration with total area 156 ha. (3) 52 villages in Siak and Pelalawan engaged in SPLP. (4) Piloted Regerative Agricultural (Reg-Ag) has been improved by 233 smallholders with 396 ha through SPLP program. (5) At the end of 2024, SPLP team has supported 1,315 smallholders with total land 2,024 ha that divided become 5 cooperatives to RSPO and ISPO certified. The certified audit is process on going to be held. (6) SPLP supported the construction of nursery to help with replanting the villages forest area to promote agroforestry practices in Rawa Mekar Jaya and supported the mangrove conservation, field school and construction of 150m long track to boost tourism area in Kayu Ara Permai. (7) CNVi and SPLP have conducted two studies on daily casual workers and gender committee in oil palm sector that intended to be published for public to promote the role of labour union and gender committee in the sector.

Row 3

(8.15.2.1) Landscape/jurisdiction ID

Select from:

☑ LJ3

(8.15.2.2) Name of initiative

Biodiverse & Inclusive Palm Oil Supply Chain (BIPOSC) Project

(8.15.2.3) Country/area

Select from:

☑ Indonesia

(8.15.2.4) Name of landscape or jurisdiction area

Labuhanbatu, North Sumatera

(8.15.2.5) Attach public information about the initiative (optional)

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(8.15.2.6) Indicate if you can provide the size of the area covered by the initiative

Select from:

☑ Yes

(8.15.2.7) Area covered by the initiative (ha)

256100

(8.15.2.8) Type of engagement

Select all that apply

☑ Partner: Shares responsibility with other stakeholders to manage and implement actions.

☑ Implementer: Executes actions based on the collective goals

☑ Funder: Provides full or partial financial resources

(8.15.2.9) Engagement start year

2021

(8.15.2.10) Engagement end year

Select from:

☑ Please specify :2027

(8.15.2.11) Estimated investment over the project period

0

(8.15.2.12) Landscape goals supported by engagement

Environmental

☑ Forest fires monitored and prevented

☑ Biodiversity protected and/or restored

☑ Increased and/or maintained protected areas

☑ Ecosystem services maintained and/or enhanced

☑ Improved community resilience from climate adaptation plans or mitigation efforts

☑ Avoided deforestation/conversion of other natural ecosystems and/or decreased degradation rate

Governance

☑ Governance forums that represent all relevant stakeholders in place and maintained

☑ Promotion of transparency, participation, inclusion, and coordination in landscape policy, planning, and management

Social

☑ Respect, protect, and fulfil human rights

☑ Income diversification amongst producers in area

☑ Increased rate of employment in the rural economy

☑ Credit available to family farms and/or local communities

☑ Improved business models that enable inclusion (including smallholders)

☑ Improved capacity for community engagement in multi-stakeholder processes

☑ Implementation of livelihood activities/practices that reduce pressure on forests

☑ Improved standard of living, especially for vulnerable and/or marginalized groups

☑ Rights to land and resources recognized and protected, and related conflicts reduced

☑ Ensuring local communities and smallholders benefit from the outcomes of landscape/jurisdictional initiative

Production

☑ Improved and/or maintained soil health

☑ Increased adoption of sustainable production practices (e.g., input use efficiency and water management practices)
☑ Increased uptake of certification
☑ Uptake of regenerative agriculture (e.g., agroforestry) practices

(8.15.2.13) Organization actions supporting initiative

Participate in planning and multi-stakeholder alignment
☑ Collaborate on management/land use planning in the landscape/jurisdiction
☑ Collaborate on landscape sustainability assessments through participatory mapping
☑ Collaborate on establishing and managing monitoring system for livelihoods and human well-being
☑ Collaborate to maintain representation from all relevant stakeholders within governance structure of initiative
☑ Co-design and develop goals, strategies and an action plan with timebound targets and milestones for the initiative
☑ Collaborate on establishing and managing monitoring system for deforestation, natural ecosystem conversion and/or degradation

Build community and multi-stakeholder capacities
☑ Communicate externally the business case for investing in landscapes/jurisdiction
☑ Engage stakeholders on importance of conservation, restoration and/or rehabilitation
☑ Support communities and smallholders in gaining access to incentives (e.g. support achieving certification, group formation, getting land title, packaging access to loans, preferential sourcing etc.)

Enhance government and capacity
☑ Support local governments (or equivalent) to enhance landscape governance structure, and provide them with resources to develop and implement sustainable landscape policies and/or management plan

Support and incentivize sustainable production and community land use practices
☑ Capacity building for farmers, smallholders and local communities to implement good agricultural practices (including improved efficiency, crop diversification and adoption of certification)
☑ Support Indigenous peoples and local communities to clarify and secure land tenure rights

Link value chain action to landscape/jurisdictional initiative through private sector collaboration
☑ Collaborate on commodity traceability

(8.15.2.14) Type of partners engaged in the initiative design and implementation

Select all that apply

☑ Producers

☑ Private sector

☑ Local communities

☑ National government

☑ Sub-national government

☑ NGO and/or civil society

(8.15.2.15) Description of engagement

Launched in 2021, BIPOSC as part of the Livelihoods Fund for Family Farming (L3F) to help 2,500 smallholder palm oil farmers achieve sustainable livelihoods in North Sumatra, Indonesia. The project aims to build a transparent and deforestation-free supply chain thanks to locally adapted agroforestry models, regenerative agriculture, and biodiversity enhancement. Mars, Danone and L'Oréal will be off-takers, with the program implemented and building on Musim Mas' smallholder program supported by implementing NGO partner SNV.

(8.15.2.16) Collective monitoring framework used to measure progress towards landscape goals and actions

Select from:

☑ Yes, progress is monitored using an internally defined framework

(8.15.2.17) State the achievements of your engagement so far and how progress is monitored

In 2021 the Project was officially launched, conducting baseline studies and initiating efforts on training in regenerative agriculture. By the end of 2024, several points have been achieved through this program: (1) Farmers have been successfully enrolled receiving certification and earning RSPO premiums. (2) Farmers have been transitioned to regenerative agriculture practices. (3) Smallholders palm farms have adopted mix agroforestry management systems. (4) Smallholders are being adopted prescribed project that including cover cropping, mulching, organic fertilization and integrated pest and disease management. (5) Landscape conservation efforts have expanded to cover at total forestland areas of circa- under community-based conservation efforts.

(8.15.2.18) Claims made

Select from:

☑ Yes, we are making a claim

(8.15.2.19) Type of claim made

Select from:

☑ Collective claim

(8.15.2.20) Provide further details on your claim

In 2021, the project was officially launched, conducting baseline studies and initiating efforts on training in regenerative agriculture. By the end of 2024, below are the achievements through this program: (1) 1,181 farmers have been successfully enrolled with 932 receiving certification and earning RSPO premiums in 2024. (2) These farmers cover 2,140 hectares (ha) of which 2,031 ha have been transitioned to regenerative agriculture practices. (3) 134 ha of smallholder palm farms have adopted mix agroforestry management systems. (4) An average of 80 percent of prescribed project practices are being adopted by smallholders, including cover cropping, mulching, organic fertilization and integrated pest and disease management. (5) Landscape conservation efforts have expanded to cover at total forestland areas of circa- 8,000 ha under community-based conservation efforts.

Row 4

(8.15.2.1) Landscape/jurisdiction ID

Select from:

☑ LJ4

(8.15.2.2) Name of initiative

Smallholders Hub Program

(8.15.2.3) Country/area

Select from:

☑ Indonesia

(8.15.2.4) Name of landscape or jurisdiction area

Sambas, West Kalimantan

(8.15.2.5) Attach public information about the initiative (optional)

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(8.15.2.6) Indicate if you can provide the size of the area covered by the initiative

Select from:

☑ Yes

(8.15.2.7) Area covered by the initiative (ha)

639570

(8.15.2.8) Type of engagement

Select all that apply

☑ Partner: Shares responsibility with other stakeholders to manage and implement actions.

☑ Implementer: Executes actions based on the collective goals

☑ Funder: Provides full or partial financial resources

(8.15.2.9) Engagement start year

2022

(8.15.2.10) Engagement end year

Select from:

☑ Not defined

(8.15.2.11) Estimated investment over the project period

0

(8.15.2.12) Landscape goals supported by engagement

Environmental

☑ Avoided deforestation/conversion of other natural ecosystems and/or decreased degradation rate

☑ Biodiversity protected and/or restored

☑ Increased and/or maintained protected areas

Governance

☑ Governance forums that represent all relevant stakeholders in place and maintained

☑ Promotion of transparency, participation, inclusion, and coordination in landscape policy, planning, and management

Social

☑ Credit available to family farms and/or local communities

☑ Ensuring local communities and smallholders benefit from the outcomes of landscape/jurisdictional initiative

☑ Improved capacity for community engagement in multi-stakeholder processes

☑ Improved standard of living, especially for vulnerable and/or marginalized groups

☑ Respect, protect, and fulfil human rights

(8.15.2.13) Organization actions supporting initiative

Participate in planning and multi-stakeholder alignment

☑ Co-design and develop goals, strategies and an action plan with timebound targets and milestones for the initiative

☑ Collaborate on establishing and managing monitoring system for livelihoods and human well-being

☑ Help establish a transparent governance platform responsible for managing the initiative and its activities with clear roles, responsibilities and balanced decision-making

Build community and multi-stakeholder capacities

☑ Support communities and smallholders in gaining access to incentives (e.g. support achieving certification, group formation, getting land title, packaging access to loans, preferential sourcing etc.)

Enhance government and capacity

☑ Support local governments (or equivalent) to enhance landscape governance structure, and provide them with resources to develop and implement sustainable landscape policies and/or management plan

Support and incentivize sustainable production and community land use practices

☑ Capacity building for farmers, smallholders and local communities to implement good agricultural practices (including improved efficiency, crop diversification and adoption of certification)

☑ Support Indigenous peoples and local communities to clarify and secure land tenure rights

(8.15.2.14) Type of partners engaged in the initiative design and implementation

Select all that apply

☑ Sub-national government

☑ Local communities

☑ NGO and/or civil society

☑ Private sector

(8.15.2.15) Description of engagement

At COP27, 14 of the world's leading Agri-Commodity companies set out a shared roadmap outlining how they will work towards reducing emissions from land-use change. This follows the commitment made at COP26 where major agricultural trading and processing companies made a joint statement to commit to a shared roadmap for accelerated action within their supply to halts commodity linked deforestation in line with a 1.5C pathway. As signatories of the Agriculture Sector Roadmap to 1.5C, Bunge and Musim Mas are keen to collaborate together by focusing on critical landscapes. With Bunge's commitment to finding solutions to address climate change in regions where they source from, Musim Mas is please to propose Sambas, West Kalimantan as a priority landscape for both Musim Mas and Bunge under the Agriculture Sector Roadmap launched during COP27.

(8.15.2.16) Collective monitoring framework used to measure progress towards landscape goals and actions

Select from:

☑ Yes, progress is monitored using an internally defined framework

(8.15.2.17) State the achievements of your engagement so far and how progress is monitored

Through our collaboration between Musim Mas and Bunge in supporting Smallholder's Hub program in Sambas, West Kalimantan. Below, are several points of achievements of the project: (1) Assisting Village Extension Officers (VEOs) to train smallholders with training focused in deforestation risk villages. (2) Extension activities in high priority villages with also provided satellite tracking reports on deforestation. (3) Hold smallholders training on all of the materials and the provide refreshed training with an aim of including 2 new modules targeted at business management and gender inclusion. (4) Provide onsite visits to check implementation of skills learnt and offer agronomic advice.

(8.15.2.18) Claims made

Select from:

☑ Yes, we are making a claim

(8.15.2.19) Type of claim made

Select from:

☑ Collective claim

(8.15.2.20) Provide further details on your claim

Through our collaboration between Musim Mas and Bunge in supporting Smallholder's Hub program in Sambas, West Kalimantan. Below, are several points of achievements claimed of the project as 2024: (1) Assisting 139 Village Extension Officers (VEOs) to train smallholders with training focused in deforestation risk villages. (2) As 2024, a number of 913 smallholders have been trained in Good Agricultural Practices (GAP) and NDPE policy training material. (3) Extension activities in high priority villages with also provided satellite tracking reports on deforestation for 6 high priority villages. (4) Gender inclusion on health and nutrition training was conducted through 4 villages selected with total 101 participants that including women smallholders and wives of smallholders. (5) Provide onsite visits to check implementation of skills learnt and offer agronomic advice. (6) EQ supported the Village Forest Management Institutions (LPHDs) in developing business plans based on the potential of each location. These plans were designed to be linked with business actors for possible collaboration with the LPHDs—from the preparation phase to market access.

Row 5

(8.15.2.1) Landscape/jurisdiction ID

Select from:

☑ LJ5

(8.15.2.2) Name of initiative

Sungai Linau Conservation and Livelihood Landscape Programme

(8.15.2.3) Country/area

Select from:

☑ Indonesia

(8.15.2.4) Name of landscape or jurisdiction area

Sungai Linau

(8.15.2.5) Attach public information about the initiative (optional)

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(8.15.2.6) Indicate if you can provide the size of the area covered by the initiative

Select from:

☑ Yes

(8.15.2.7) Area covered by the initiative (ha)

5854.86

(8.15.2.8) Type of engagement

Select all that apply

☑ Partner: Shares responsibility with other stakeholders to manage and implement actions.

☑ Implementer: Executes actions based on the collective goals

☑ Funder: Provides full or partial financial resources

(8.15.2.9) Engagement start year

2022

(8.15.2.10) Engagement end year

Select from:

☑ Please specify :2025

(8.15.2.11) Estimated investment over the project period

0

(8.15.2.12) Landscape goals supported by engagement

Environmental

☑ Avoided deforestation/conversion of other natural ecosystems and/or decreased degradation rate

☑ Forest fires monitored and prevented

☑ Improved community resilience from climate adaptation plans or mitigation efforts

Governance

☑ Governance forums that represent all relevant stakeholders in place and maintained

Social

☑ Ensuring local communities and smallholders benefit from the outcomes of landscape/jurisdictional initiative

☑ Improved business models that enable inclusion (including smallholders)

☑ Improved capacity for community engagement in multi-stakeholder processes

☑ Improved standard of living, especially for vulnerable and/or marginalized groups

☑ Respect, protect, and fulfil human rights

Production

☑ Reliable commodity traceability and landscape monitoring/data collection system

(8.15.2.13) Organization actions supporting initiative

Participate in planning and multi-stakeholder alignment

☑ Collaborate on management/land use planning in the landscape/jurisdiction

☑ Collaborate on landscape sustainability assessments through participatory mapping

☑ Collaborate on establishing and managing monitoring system for livelihoods and human well-being

☑ Share spatial data and land management plans with other stakeholders in the landscape/jurisdiction

☑ Collaborate to maintain representation from all relevant stakeholders within governance structure of initiative

☑ Collaborate on establishing and managing monitoring system for deforestation, natural ecosystem conversion and/or degradation

☑ Identify and map stakeholders (including vulnerable and/or marginalized groups) and encourage their engagement in multi-stakeholder processes

Build community and multi-stakeholder capacities

☑ Communicate externally the business case for investing in landscapes/jurisdiction

☑ Engage stakeholders on importance of conservation, restoration and/or rehabilitation

☑ Support communities and smallholders in gaining access to incentives (e.g. support achieving certification, group formation, getting land title, packaging access to loans, preferential sourcing etc.)

Enhance government and capacity

☑ Support local governments (or equivalent) to enhance landscape governance structure, and provide them with resources to develop and implement sustainable landscape policies and/or management plan

Support and incentivize sustainable production and community land use practices

☑ Support Indigenous peoples and local communities to clarify and secure land tenure rights

Link value chain action to landscape/jurisdictional initiative through private sector collaboration

☑ Use preferential sourcing to support landscape/jurisdictional initiatives that are demonstrating progress

(8.15.2.14) Type of partners engaged in the initiative design and implementation

Select all that apply

☑ National government

☑ Sub-national government

☑ Local communities

☑ NGO and/or civil society

☑ Private sector

(8.15.2.15) Description of engagement

The Sungai Linau Conservation and Livelihood Landscape Programme, hereafter referred to as the program, was initially brought together in 2017 by Cargill and Musim Mas with the support of the Indonesian Government's Peat and Mangrove Restoration Agency (BRGM). The programme was set around a common goal to adapt High Conservation Value (HCV) and High Carbon Stock (HCS) tools for smallholders to protect the forest while supporting smallholder livelihoods in the village area. The program's initial phase produced a comprehensive baseline assessment of the social and environmental context in Sungai Linau village and a potential village land use plan developed through participatory mapping exercise with community members. Since 2021 the work in the landscape was funded by the public and private sector. After three years of implementation programmed has defined 5 main targets to support community-based land use development and support and strengthen Sungai Linau's communities' livelihoods, protecting HCV and HCS forest and reducing Green House Gas (GHG) emissions through forest and peat protection.

(8.15.2.16) Collective monitoring framework used to measure progress towards landscape goals and actions

Select from:

☑ Yes, progress is monitored using an internally defined framework

(8.15.2.17) State the achievements of your engagement so far and how progress is monitored

Through participation in the Sungai Linau Landscape Program, below are several collective goals for the 2021 – 2027 period with Musim Mas as one of the supporting companies: (1) 45,000 ha of peat forest with an effective monitoring and response system. (2) 10,000 ha of peat forest within Giam Siak Kecil-Bukit Batu Biosphere Reserve area effectively protected. (3) 20,000 ha of peatland restored with rewetting techniques. (4) Sungai Linau Landscape Programme will have avoided >500,000 tCO_2e emissions. The programme will also contribute to 80,000 tCO_2e emissions reduction on peatland and surrounding area by 2025 and further 80,000 tCO_2e. (5) 50% of households joining the programme improving their livelihoods or benefitting from alternative sources of income.

(8.15.2.18) Claims made

Select from:

☑ Yes, we are making a claim

(8.15.2.19) Type of claim made

Select from:

☑ Collective claim

(8.15.2.20) Provide further details on your claim

Through its participation to the Sungai Linau Landscape Program and below, are several points of the progress achievements in 2024: (1) Participatory mapping completed and approved in Tanjung Damai and Sumber Jaya and Participatory Mapping and PLUP initiated in Bandar Jaya. (2) Monitoring tower construction completed in Bandar Jaya and Sungai Linau and handover to community. (3) Initial engagement with WRI to expand the use of RADD forest monitoring alerts to include Bengkalis district, building on the existing system in Siak and Pelalawan. (4) Key dialogues conducted with Giam Siak Kecil–Bukit Batu Biosphere Reserve stakeholders and district government to align forest protection priorities. (5) Agreement signed with WRI to expand the use of the Landscape Monitoring Platform from Siak and Pelalawan district. This development will enable village-level alert analysis. (6) Community agreement reached to construct two concrete canal block in Sungai Linau and three wooden canal blocks in Bandar Jaya and draft monitoring procedure for water level and water table developed. (7) Facilitated the registration of the GoKUPS forest farmer group under the LPHD to support the management of the coffee agroforestry site and completed the planting of coffee seedlings within the designated plot (10 Ha) in Sungai Linau with 10,000 seedlings. (8) Collaborated with PPSW to develop a work plan for capacity building on palm stick production in Sumber Jaya and Bandar Jaya and a total of 47 women from Tanjung Damai and Sungai Linau have participated in palm stick production activities.

Row 6

(8.15.2.1) Landscape/jurisdiction ID

Select from:

☑ LJ6

(8.15.2.2) Name of initiative

Women Smallholders Program

(8.15.2.3) Country/area

Select from:

☑ Indonesia

(8.15.2.4) Name of landscape or jurisdiction area

Rokan Hilir, Rokan Hulu, Pelalawan, Aceh Singkil, Subulussalam and Sambas

(8.15.2.5) Attach public information about the initiative (optional)

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(8.15.2.6) Indicate if you can provide the size of the area covered by the initiative

Select from:

☑ Yes

(8.15.2.7) Area covered by the initiative (ha)

764238

(8.15.2.8) Type of engagement

Select all that apply

☑ Convener: Leads or facilitates the design, set-up, and high-level management of the initiative

☑ Implementer: Executes actions based on the collective goals

☑ Funder: Provides full or partial financial resources

(8.15.2.9) Engagement start year

2022

(8.15.2.10) Engagement end year

Select from:

☑ Please specify :2025

(8.15.2.11) Estimated investment over the project period

0

(8.15.2.12) Landscape goals supported by engagement

Governance

☑ Other governance landscape goal supported by engagement, please specify :Suppot Government program through SDGs of gender equality and empowering women.

Social

☑ Ensuring local communities and smallholders benefit from the outcomes of landscape/jurisdictional initiative

☑ Improved business models that enable inclusion (including smallholders)

☑ Improved standard of living, especially for vulnerable and/or marginalized groups

☑ Respect, protect, and fulfil human rights

☑ Other social landscape goal supported by engagement, please specify :(1) Improved knowledge of health and nutrition as support to smallholders' productivity, management economy and build a alternative income of smallholders. (2) Improved women's capability to make a decision making as the gender awareness.

(8.15.2.13) Organization actions supporting initiative

Participate in planning and multi-stakeholder alignment

☑ Co-design and develop goals, strategies and an action plan with timebound targets and milestones for the initiative

☑ Collaborate on establishing and managing monitoring system for livelihoods and human well-being

☑ Identify and act on opportunities for pre-competitive collaboration with your sector

(8.15.2.14) Type of partners engaged in the initiative design and implementation

Select all that apply

☑ Financial institution

☑ Sub-national government

☑ Local communities

☑ Private sector

☑ Other, please specify :(1) Local Health Officers. (2) An academic.

(8.15.2.15) Description of engagement

As an extension program from training for smallholders, Musim Mas has developed a program that targets women smallholders and the wives of smallholders as known by Women Smallholders Program. Through the program, Musim Mas will provide training in family nutrition and child development, financial literacy, and women-led-owned businesses that aims to educate them on preparing appropriate meals for their families, assist in managing household finances and setting up businesses, and manage entrepreneurial activities for women smallholders or wives of smallholders. Musim Mas also involved the cadres' capacity to deliver training to other women participants as local empowerment and sustainability. This expanding initiative begun with conducting a Training of Trainers for cadres who consisting of previous participant from the firs training in Rokan Hilir, Rokan Hulu, and Pelalawan. Training was attended by 30 cadres and lead by our consultant who was an academy from University of Sumatera Utara.

(8.15.2.16) Collective monitoring framework used to measure progress towards landscape goals and actions

Select from:

☑ Yes, progress is monitored using an internally defined framework

(8.15.2.17) State the achievements of your engagement so far and how progress is monitored

(1) Track the total of women palm oil smallholders and wives of palm oil smallholders trained in landscape area. (2) Health and nutrition training will be tracking by a simple health medical check – up by local health officers and health calendar monitoring. (3) Train and monitor the result training of financial literacy that collaboration with local bank to see the behavior and knowledge increasing of financial management. (4) Assisting women palm oil smallholders to establish home-based business to increase the alternative income of smallholder's family.

(8.15.2.18) Claims made

Select from:

☑ Yes, we are making a claim

(8.15.2.19) Type of claim made

Select from:

☑ Both individual and collective

(8.15.2.20) Provide further details on your claim

Through women smallholders' program initiative that started the training in 2023, Musim Mas has conducted health and nutrition training, financial literacy and home-based business initiative and during 2024 some achievements have been gained as follows: (1) As 2024, we have trained for 2,211 smallholders in total. (2) 1,387 women and 492 men as the first phase training on health and nutrition in 3 locations Rokan Hilir, Rokan Hulu and Pelalawan. (3) This program also expanded to Aceh Singkil, Subulussalam and Sambas by trained 332 women. (4) As part of the Women Smallholders Program, Musim Mas also has initiated to enhance the training in Financial Literacy that collaboration with local Bank (Bank Syariah Indonesia) – Bank BSI with total participants 797 in previous participants and location in Riau Province and Aceh while Sambas will start the training in 2025. (5) Home based business program also proceeding of established in Riau Province through 3 districts (Rokan Hilir, Rokan Hulu and Pelalawan) that focused on Groceries business that participated by 15 member each location.
[Add row]

(8.15.3) For each of your disclosed commodities, provide details on the disclosure volume from each of the landscapes/jurisdictions you engage in.

Row 1

(8.15.3.1) Landscape/jurisdiction ID

Select from:

☑ LJ1

(8.15.3.2) Does any of your produced and/or sourced commodity volume originate from this landscape/jurisdiction, and are you able/willing to disclose information on this volume?

Select from:

☑ Yes, we do produce/source from this landscape/jurisdiction, and we are able/willing to disclose volume data

(8.15.3.3) Commodity

Select from:

☑ Palm oil

(8.15.3.4) % of disclosure volume from this landscape/jurisdiction

7

Row 2

(8.15.3.1) Landscape/jurisdiction ID

Select from:

☑ LJ2

(8.15.3.2) Does any of your produced and/or sourced commodity volume originate from this landscape/jurisdiction, and are you able/willing to disclose information on this volume?

Select from:

☑ Yes, we do produce/source from this landscape/jurisdiction, and we are able/willing to disclose volume data

(8.15.3.3) Commodity

Select from:

☑ Palm oil

(8.15.3.4) % of disclosure volume from this landscape/jurisdiction

8

Row 3

(8.15.3.1) Landscape/jurisdiction ID

Select from:

☑ LJ3

(8.15.3.2) Does any of your produced and/or sourced commodity volume originate from this landscape/jurisdiction, and are you able/willing to disclose information on this volume?

Select from:

☑ Yes, we do produce/source from this landscape/jurisdiction, and we are able/willing to disclose volume data

(8.15.3.3) Commodity

Select from:

☑ Palm oil

(8.15.3.4) % of disclosure volume from this landscape/jurisdiction

2

Row 4

(8.15.3.1) Landscape/jurisdiction ID

Select from:

☑ LJ4

(8.15.3.2) Does any of your produced and/or sourced commodity volume originate from this landscape/jurisdiction, and are you able/willing to disclose information on this volume?

Select from:

☑ Yes, we do produce/source from this landscape/jurisdiction, and we are able/willing to disclose volume data

(8.15.3.3) Commodity

Select from:

☑ Palm oil

(8.15.3.4) % of disclosure volume from this landscape/jurisdiction

1

Row 5

(8.15.3.1) Landscape/jurisdiction ID

Select from:

☑ LJ5

(8.15.3.2) Does any of your produced and/or sourced commodity volume originate from this landscape/jurisdiction, and are you able/willing to disclose information on this volume?

Select from:

☑ Yes, we do produce/source from this landscape/jurisdiction, and we are able/willing to disclose volume data

(8.15.3.3) Commodity

Select from:

☑ Palm oil

(8.15.3.4) % of disclosure volume from this landscape/jurisdiction

2

Row 6

(8.15.3.1) Landscape/jurisdiction ID

Select from:

☑ LJ6

(8.15.3.2) Does any of your produced and/or sourced commodity volume originate from this landscape/jurisdiction, and are you able/willing to disclose information on this volume?

Select from:

☑ No, we do not produce/source from this landscape/jurisdiction

[Add row]

(8.16) Do you participate in any other external activities to support the implementation of policies and commitments related to deforestation, ecosystem conversion, or human rights issues in commodity value chains?

Select from:

☑ Yes

(8.16.1) Provide details of the external activities to support the implementation of your policies and commitments related to deforestation, ecosystem conversion, or human rights issues in commodity value chains

Row 1

(8.16.1.1) Commodity

Select all that apply

☑ Palm oil

(8.16.1.2) Activities

Select all that apply

☑ Engaging with communities

☑ Engaging with non-governmental organizations

(8.16.1.3) Country/area

Select from:

☑ Indonesia

(8.16.1.4) Subnational area

Select from:

☑ Please specify :Aceh

(8.16.1.5) Provide further details of the activity

In 2020, Musim Mas launched its first landscape strategy and roadmap for Aceh Landscape, which details the objectives and targets for implementing our No Deforestation, No Peat, and No Exploitation (NDPE) policy in the landscape. Through collaboration with Aceh Singkil Government, General Mills, Academic Instituition (University of Cambridge & Eidgenössische Technische Hochschule Zürich) and local civil society organization – Earthqualizer Foundation (EQ) in Aceh Singkil, Musim Mas has been running a program targeting independent smallholders in villages neighboring the Leuser Ecosystem to integrate them into the sustainable palm oil supply chain and reduce deforestation. We're working with ETHZ and Cambridge University on a research project to assess the extent of the impact of Musim Mas' GAP and NDPE training on the deforestation rate in Aceh Singkil. The program started in 2021 and will run for five years. Subulussalam Smallholders Hub Project has a collaboration with AAK, Nestle which also involved Earthworm Foundation (EF) to help on monitoring deforestation in high priority villages in Subulussalam. Musim Mas has developed and implemented various programs to integrate independent smallholders into the palm oil supply chain by assisting them in adopting efficient farming standards and complete training modules covering GAP and NDPE commitments. By adopting sustainable farming practices, smallholders can increase their yields and reduce their dependence on expanding into forested areas. In 2023, Musim Mas started engagement in smallholders' hub landscape area in Aceh Selatan and Aceh Timur. The program in Aceh Selatan is collaborating with Earthqualizer and Local Government. Our field team has been done engagement with local government to socialize the training program to increase smallholders' capacity in implementing GAP. The project in Aceh Timur aims to improve the productivity of smallholders through a series of capacity building activities that will be led by Musim Mas smallholders hub program in collaboration with Forum Konservasi Leuser (FKL). The project targeted to provide training for Village Extension Officers (VEOs) and smallholders in Aceh Timur. After the project ends, the smallholders expected to receive further support through the Centre id Excellent that is currently being developed in Aceh Timur by Inisiatif Dagang Hijau (IDH) as partner collaboration project.

Row 2

(8.16.1.1) Commodity

Select all that apply

☑ Palm oil

(8.16.1.2) Activities

Select all that apply

☑ Engaging with communities

☑ Engaging with non-governmental organizations

(8.16.1.3) Country/area

Select from:

☑ Indonesia

(8.16.1.4) Subnational area

Select from:

☑ Please specify :Siak Pelalawan

(8.16.1.5) Provide further details of the activity

Riau province is also a long-established palm oil production area, with significant numbers of independent smallholder producers who need counselling and assistance with various agricultural challenges. In 2020, Musim Mas joined the Siak Pelalawan Landscape Programme, a private sector-driven initiative in the districts of Siak and Pelalawan in Riau province, Indonesia, supported by CORE (Consortium of Resource Expert) in this case, consisting of Proforest and Daemeter. The programme supports and builds on existing government led initiatives including the Green Siak Green Growth District plan and the Pelalawan District Action Plan for Sustainable Palm Oil, and has 4 long term goals: 1) Protect and enhance forests, peatlands and natural ecosystems; 2) Empower palm oil smallholders to achieve improved livelihoods; 3) Respect of labour and community rights within the palm oil sector and; 4) Pursue sustainable palm oil production. The vision of the Coalition of Companies is that SPLP should build on and contribute to the already existing district government's objectives as stipulated in the Green Siak roadmap and the District Action Plan for Sustainable Palm Oil in Pelalawan. In addition, it contributes to the objectives of the Peatland Restoration Agency BRGM and the village-based approach of the BRGM, demonstrated by the fact that the BRGMs village-based program serves as the foundation and spirit of SPLP. The project is working with the district governments to improve the STDB issuance systematically has mapped priority areas for conservation and for palm oil smallholders have mapped and surveyed as part of the process to obtain business permits (STDB). In addition to the measurable achievements that SPLP Coalition members and supporters contributed to, less tangible, but equally important are the achievements made in terms of stakeholder engagement, government support and mill engagement. Through the support of SPLP, the Siak district government is strengthened in the coordination and execution of the Green Siak Roadmap and the Pelalawan district government is supported in formulating a roadmap for sustainable palm oil.

Row 3

(8.16.1.1) Commodity

Select all that apply

☑ Palm oil

(8.16.1.2) Activities

Select all that apply

☑ Engaging with communities

☑ Engaging with non-governmental organizations

(8.16.1.3) Country/area

Select from:

☑ Indonesia

(8.16.1.4) Subnational area

Select from:

☑ Please specify :North Sumatera

(8.16.1.5) Provide further details of the activity

Launched in 2021, BIPOSC as part of the Livelihoods Fund for Family Farming (L3F) to help 2,500 smallholder palm oil farmers achieve sustainable livelihoods in North Sumatra, Indonesia. The project aims to build a transparent and deforestation-free supply chain thanks to locally adapted agroforestry models, regenerative agriculture, and biodiversity enhancement. Mars, Danone and L'Oréal will be off-takers, with the program implemented and building on Musim Mas' smallholder program supported by implementing NGO partner SNV.

Row 4

(8.16.1.1) Commodity

Select all that apply

☑ Palm oil

(8.16.1.2) Activities

Select all that apply

☑ Engaging with communities

☑ Engaging with non-governmental organizations

(8.16.1.3) Country/area

Select from:

☑ Indonesia

(8.16.1.4) Subnational area

Select from:

☑ Please specify :West Kalimantan

(8.16.1.5) Provide further details of the activity

At COP27, 14 of the world's leading Agri-Commodity companies set out a shared roadmap outlining how they will work towards reducing emissions from land-use change. This follows the commitment made at COP26 where major agricultural trading and processing companies made a joint statement to commit to a shared roadmap for accelerated action within their supply to halts commodity linked deforestation in line with a 1.5C pathway. As signatories of the Agriculture Sector Roadmap to 1.5C, Bunge and Musim Mas are keen to collaborate together by focusing on critical landscapes. With Bunge's commitment to finding solutions to address climate change in regions where they source from, Musim Mas is please to propose Sambas, West Kalimantan as a priority landscape for both Musim Mas and Bunge under the Agriculture Sector Roadmap launched during COP27.

Row 5

(8.16.1.1) Commodity

Select all that apply

☑ Palm oil

(8.16.1.2) Activities

Select all that apply

☑ Engaging with communities

☑ Engaging with non-governmental organizations

(8.16.1.3) Country/area

Select from:

☑ Indonesia

(8.16.1.4) Subnational area

Select from:

☑ Please specify :Sungai Linau

(8.16.1.5) Provide further details of the activity

The Sungai Linau Conservation and Livelihood Landscape Programme, hereafter referred to as the program, was initially brought together in 2017 by Cargill and Musim Mas with the support of the Indonesian Government's Peat and Mangrove Restoration Agency (BRGM). The programme was set around a common goal to adapt High Conservation Value (HCV) and High Carbon Stock (HCS) tools for smallholders to protect the forest while supporting smallholder livelihoods in the village area. The program's initial phase produced a comprehensive baseline assessment of the social and environmental context in Sungai Linau village and a potential village land use plan developed through participatory mapping exercise with community members. Since 2021 the work in the landscape was funded by the public and private sector. After three years of implementation programmed has defined 5 main targets to support community-based land use development and support and strengthen Sungai Linau's communities' livelihoods, protecting HCV and HCS forest and reducing Green House Gas (GHG) emissions through forest and peat protection.
[Add row]

(8.17) Is your organization supporting or implementing project(s) focused on ecosystem restoration and long-term protection?

Select from:
☑ Yes

(8.17.1) Provide details on your project(s), including the extent, duration, and monitoring frequency. Please specify any measured outcome(s).

Row 1

(8.17.1.1) Project reference

Select from:
☑ Project 1

(8.17.1.2) Project type

Select from:
☑ Agriculture

(8.17.1.3) Expected benefits of project

Select all that apply
☑ Protection of land tenure

☑ Improvement to soil health

☑ Net gain in biodiversity and ecosystem integrity

☑ Improvement to sustainability of production practices

☑ Improvement of standard of living, especially for vulnerable and/or marginalized groups

☑ Further transformative change through sharing of project design, implementation and lessons learnt

(8.17.1.4) Is this project originating any carbon credits?

Select from:

☑ No

(8.17.1.5) Description of project

In 2020, Musim Mas launched its first landscape strategy and roadmap for Aceh Landscape, outlining objectives and targets to implement our NDPE policy in the landscape. Through collaboration with Aceh Singkil Government, General Mills, Academic Institution (University of Cambridge & ETH Zürich) and local civil society organization (Earthqualizer Foundation) in Aceh Singkil, Musim Mas runs a program targeting independent smallholders in villages neighboring the Leuser Ecosystem to integrate them into the sustainable palm oil supply chain and reduce deforestation. Since 2021, we have also partnered with Cambridge and ETH Zürich on research project to assess the impact of our GAP and NDPE training on deforestation rates in Aceh Singkil. The program runs for five years. Subulussalam Smallholders Hub Project has a collaboration with AAK, Nestle, and Earthworm Foundation to help on monitoring deforestation in high priority villages in Subulussalam. Musim Mas has developed and implemented various programs to integrate independent smallholders into the palm oil supply chain by assisting them in adopting efficient farming standards and complete training modules covering GAP and NDPE commitments. By adopting sustainable farming practices, smallholders can increase their yields and reduce their dependence on expanding into forested areas. In 2023, Musim Mas started engagement in smallholders' hub landscape area in Aceh Selatan and Aceh Timur. In Aceh Selatan, Musim Mas collaborates with Earthqualizer and the local government to socialize the training program and increase smallholders' capacity in implementing GAP. In Aceh Timur, Musim Mas smallholders hub program collaborates with Forum Konservasi Leuser (FKL) to improve smallholders productivity through a series of capacity building activities, including training for Village Extension Officers (VEOs) and smallholders. After the project ends, smallholders are expected to receive further support through the Center of Excellence that is currently being developed in Aceh Timur by Inisiatif Dagang Hijau (IDH) as a partner collaboration project. Annually, we publicly disclose our sustainability progress, milestones, and targets, including landscape and jurisdictional approaches, through our sustainability report. (https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/).

(8.17.1.6) Where is the project taking place in relation to your value chain?

Select all that apply

☑ Project based in sourcing area(s)

(8.17.1.7) Start year

2020

(8.17.1.8) Target year

Select from:
☑ 2027

(8.17.1.9) Project area to date (Hectares)

1008.84

(8.17.1.10) Project area in the target year (Hectares)

1008.84

(8.17.1.11) Country/Area

Select from:
☑ Indonesia

(8.17.1.12) Latitude

4.2333

(8.17.1.13) Longitude

102.089141

(8.17.1.14) Monitoring frequency

Select from:
☑ Six-monthly or more frequently

(8.17.1.15) Total investment over the project period (currency)

0

(8.17.1.16) For which of your expected benefits are you monitoring progress?

Select all that apply

☑ Further transformative change through sharing of project design, implementation and lessons learnt

☑ Improvement of standard of living, especially for vulnerable and/or marginalized groups

☑ Net gain in biodiversity and ecosystem integrity

☑ Protection of land tenure

(8.17.1.17) Please explain

(1) We trained 290 village extension officers and 8,126 independent smallholders across our Smallholders Hubs with the specific: 2,605 smallholders in Aceh Tamiang; 2,620 smallholders from Aceh Singkil; 1,581 smallholders trained in Subulussalam; 222 smallholders trained in Aceh Selatan; and 918 smallholders trained in Aceh Timur. (2) 30 villages have successfully completed their GAP and financial literacy training through research project in Aceh Singkil collaboration with Cambridge University and ETH Zurich University. (3) Total number of 2,944 smallholders have been trained by NDPE Policy material in Aceh Tamiang, Aceh Singkil and Subulussalam. (4) Through collaboration with EQ, a total of 326 smallholders submitted STDB applications to the Aceh Singkil Regency Government. These applications covered 582 land parcels across 6 villages. (5) Advanced training of Financial Literacy has been delivered to 99 participants through 5 villages in Aceh Singkil. This training is aims to increase smallholders' awareness and knowledge in managing house hold economy and enhance the home-based business as the alternative income. (6) Memorandum of Understanding (Mou) has been signed by July 2024 and Training dashboard of Multi Stakeholders Forum (MSF) in Aceh Singkil. (7) Advanced training of Trainers for 20 Villages Extension Officers (VEOs) in Aceh Singkil and Subulussalam was conducted covering some topics as follow, ISPO certification, Soil Health & Home Composting Unit. (8) Stakeholder workshop multi-stakeholder already conducted in February 2024. The workshop was attended by representatives from the Regional Apparatus Organizations (OPD) of South Aceh Regency, the Secretariat of the Regional House of Representatives (DPRK) of South Aceh, the Gunung Leuser National Park Authority, subdistrict heads (Camat), village heads, and NGOs as listed in the attachment. The objective was discussed through this workshop was implementation of social forestry and management opportunity also cover NDPE commitment in palm oil to support sustainability landscape. (9) Training of trainers for Village Extension Officers (VEOs) in Aceh Timur was attended by 25 participants in August 2024.

Row 2

(8.17.1.1) Project reference

Select from:

☑ Project 2

(8.17.1.2) Project type

Select from:

☑ Agriculture

(8.17.1.3) Expected benefits of project

Select all that apply

☑ Protection of land tenure

☑ Protection of human rights

☑ Improvement to environmental regulation

☑ Net gain in biodiversity and ecosystem integrity

☑ Improvement of standard of living, especially for vulnerable and/or marginalized groups

☑ Further transformative change through sharing of project design, implementation and lessons learnt

(8.17.1.4) Is this project originating any carbon credits?

Select from:

☑ No

(8.17.1.5) Description of project

Riau province is also a long-established palm oil production area, with significant numbers of independent smallholder producers who need counselling and assistance with various agricultural challenges. In 2020, Musim Mas joined the Siak Pelalawan Landscape Programme, a private sector-driven initiative in the districts of Siak and Pelalawan in Riau province, Indonesia, supported by CORE (Consortium of Resource Expert) in this case, consisting of Proforest and Daemeter. The programme supports and builds on existing government led initiatives including the Green Siak Green Growth District plan and the Pelalawan District Action Plan for Sustainable Palm Oil, and has 4 long term goals: 1) Protect and enhance forests, peatlands and natural ecosystems; 2) Empower palm oil smallholders to achieve improved livelihoods; 3) Respect of labour and community rights within the palm oil sector and; 4) Pursue sustainable palm oil production. The vision of the Coalition of Companies is that SPLP should build on and contribute to the already existing district government's objectives as stipulated in the Green Siak roadmap and the District Action Plan for Sustainable Palm Oil in Pelalawan. In addition, it contributes to the objectives of the Peatland Restoration Agency BRGM and the village-based approach of the BRGM, demonstrated by the fact that the BRGMs village-based program serves as the foundation and spirit of SPLP. The project is working with the district governments to improve the STDB issuance systematically has mapped priority areas for conservation and for palm oil smallholders have mapped and surveyed as part of the process to obtain business permits (STDB). In addition to the measurable achievements that SPLP Coalition members and supporters contributed to, less tangible, but equally important are the achievements made in terms of stakeholder engagement, government support and mill engagement. Through the support of SPLP, the Siak district government is strengthened in the coordination and execution of the Green Siak Roadmap and the Pelalawan district government is supported in formulating a roadmap for sustainable palm oil.

(8.17.1.6) Where is the project taking place in relation to your value chain?

Select all that apply

☑ Project based in sourcing area(s)

(8.17.1.7) Start year

2019

(8.17.1.8) Target year

Select from:

☑ 2026

(8.17.1.9) Project area to date (Hectares)

2248.1

(8.17.1.10) Project area in the target year (Hectares)

2248.1

(8.17.1.11) Country/Area

Select from:

☑ Indonesia

(8.17.1.12) Latitude

0.5139

(8.17.1.13) Longitude

102.1632

(8.17.1.14) Monitoring frequency

Select from:

☑ Six-monthly or more frequently

(8.17.1.15) Total investment over the project period (currency)

0

(8.17.1.16) For which of your expected benefits are you monitoring progress?

Select all that apply

☑ Protection of land tenure

☑ Protection of human rights

☑ Improvement to environmental regulation

☑ Net gain in biodiversity and ecosystem integrity

☑ Improvement of standard of living, especially for vulnerable and/or marginalized groups

☑ Further transformative change through sharing of project design, implementation and lessons learnt

(8.17.1.17) Please explain

As one of the eight companies supporting the collective goals of the Siak Pelalawan Landscape Programme, Musim Mas outlines the following key progress achievements from the project: (1) 4,012 smallholders have supported to receive GAP training. (2) Through the Musim Mas support in SPLP, 92 people increased land tenure security through STDB registration with total area 156 ha. (3) 52 villages in Siak and Pelalawan engaged in SPLP. (4) Piloted Regerative Agricultural (Reg-Ag) has been improved by 233 smallholders with 396 ha through SPLP program. (5) At the end of 2024, SPLP team has supported 1,315 smallholders that divided become 5 cooperatives to RSPO and ISPO certified. The certified audit is process on going to be held. (6) SPLP supported the construction of nursery to help with replanting the villages forest area to promote agroforestry practices in Rawa Mekar Jaya and supported the mangrove conservation, field school and construction of 150m long track to boost tourism area in Kayu Ara Permai. (7) CNVi and SPLP have conducted two studies on daily casual workers and gender committee in oil palm sector that intended to be published for public to promote the role of labour union and gender committee in the sector.

Row 3

(8.17.1.1) Project reference

Select from:

☑ Project 3

(8.17.1.2) Project type

Select from:

☑ Agriculture

(8.17.1.3) Expected benefits of project

Select all that apply

☑ Improvement to sustainability of production practices

☑ Protection of human rights

☑ Protection of land tenure

(8.17.1.4) Is this project originating any carbon credits?

Select from:

☑ No

(8.17.1.5) Description of project

At COP27, 14 of the world's leading Agri-Commodity companies set out a shared roadmap outlining how they will work towards reducing emissions from land-use change. This follows the commitment made at COP26 where major agricultural trading and processing companies made a joint statement to commit to a shared roadmap for accelerated action within their supply to halts commodity linked deforestation in line with a 1.5C pathway. As signatories of the Agriculture Sector Roadmap to 1.5C, Bunge and Musim Mas are keen to collaborate together by focusing on critical landscapes. With Bunge's commitment to finding solutions to address climate change in regions where they source from, Musim Mas is please to propose Sambas, West Kalimantan as a priority landscape for both Musim Mas and Bunge under the Agriculture Sector Roadmap launched during COP27.

(8.17.1.6) Where is the project taking place in relation to your value chain?

Select all that apply

☑ Project based in sourcing area(s)

(8.17.1.7) Start year

2022

(8.17.1.8) Target year

Select from:

☑ Other, please specify :Not defined

(8.17.1.9) Project area to date (Hectares)

639570

(8.17.1.10) Project area in the target year (Hectares)

639570

(8.17.1.11) Country/Area

Select from:

☑ Indonesia

(8.17.1.12) Latitude

1.3333

(8.17.1.13) Longitude

109.25

(8.17.1.14) Monitoring frequency

Select from:

☑ Six-monthly or more frequently

(8.17.1.15) Total investment over the project period (currency)

0

(8.17.1.16) For which of your expected benefits are you monitoring progress?

Select all that apply

☑ Improvement to sustainability of production practice

☑ Protection of human rights

☑ Protection of land tenure

(8.17.1.17) Please explain

(1) Assisting 139 Village Extension Officers (VEOs) to train smallholders with training focused in deforestation risk villages. (2) As 2024, a number of 913 smallholders have been trained in Good Agricultural Practices (GAP) and NDPE policy training material. (3) Extension activities in high priority villages with also provided satellite tracking reports on deforestation for 6 high priority villages. (4) Gender inclusion on health and nutrition training was conducted through 4 villages selected with total 101 participants that including women smallholders and wives of smallholders. (5) Provide onsite visits to check implementation of skills learnt and offer agronomic advice. (6) EQ supported the Village Forest Management Institutions (LPHDs) in developing business plans based on the potential of each location. These plans were designed to be linked with business actors for possible collaboration with the LPHDs—from the preparation phase to market access.

Row 4

(8.17.1.1) Project reference

Select from:

☑ Project 4

(8.17.1.2) Project type

Select from:

☑ Agriculture

(8.17.1.3) Expected benefits of project

Select all that apply

☑ Improvement to sustainability of production practices

☑ Protection of human rights

☑ Protection of land tenure

(8.17.1.4) Is this project originating any carbon credits?

Select from:

☑ No

(8.17.1.5) Description of project

The Sungai Linau Conservation and Livelihood Landscape Programme, hereafter referred to as the program, was initially brought together in 2017 by Cargill and Musim Mas with the support of the Indonesian Government's Peat and Mangrove Restoration Agency (BRGM). The programme was set around a common goal to adapt High Conservation Value (HCV) and High Carbon Stock (HCS) tools for smallholders to protect the forest while supporting smallholder livelihoods in the village

area. The program's initial phase produced a comprehensive baseline assessment of the social and environmental context in Sungai Linau village and a potential village land use plan developed through participatory mapping exercise with community members. Since 2021 the work in the landscape was funded by the public and private sector. After three years of implementation programmed has defined 5 main targets to support community-based land use development and support and strengthen Sungai Linau's communities' livelihoods, protecting HCV and HCS forest and reducing Green House Gas (GHG) emissions through forest and peat protection.

(8.17.1.6) Where is the project taking place in relation to your value chain?

Select all that apply

☑ Project based elsewhere

(8.17.1.7) Start year

2022

(8.17.1.8) Target year

Select from:

☑ 2025

(8.17.1.9) Project area to date (Hectares)

5854.86

(8.17.1.10) Project area in the target year (Hectares)

5854.86

(8.17.1.11) Country/Area

Select from:

☑ Indonesia

(8.17.1.12) Latitude

3.4667

(8.17.1.13) Longitude

113.767

(8.17.1.14) Monitoring frequency

Select from:

☑ Six-monthly or more frequently

(8.17.1.15) Total investment over the project period (currency)

0

(8.17.1.16) For which of your expected benefits are you monitoring progress?

Select all that apply

☑ Improvement to sustainability of production practice

☑ Protection of human rights

☑ Protection of land tenure

(8.17.1.17) Please explain

As one of the eight companies supporting the collective goals of the Siak Pelalawan Landscape Programme, Musim Mas outlines the key progress achievements in 2024 from the project: (1) Participatory mapping completed and approved in Tanjung Damai and Sumber Jaya and Participatory Mapping and PLUP initiated in Bandar Jaya. (2) Monitoring tower construction completed in Bandar Jaya and Sungai Linau and handover to community. (3) Initial engagement with WRI to expand the use of RADD forest monitoring alerts to include Bengkalis district, building on the existing system in Siak and Pelalawan. (4) Key dialogues conducted with Giam Siak Kecil–Bukit Batu Biosphere Reserve stakeholders and district government to align forest protection priorities. (5) Agreement signed with WRI to expand the use of the Landscape Monitoring Platform from Siak and Pelalawan district. This development will enable village-level alert analysis. (6) Community agreement reached to construct two concrete canal block in Sungai Linau and three wooden canal blocks in Bandar Jaya and draft monitoring procedure for water level and water table developed. (7) Facilitated the registration of the GoKUPS forest farmer group under the LPHD to support the management of the coffee agroforestry site and completed the planting of coffee seedlings within the designated plot (10 Ha) in Sungai Linau with 10,000 seedlings. (8) Collaborated with PPSW to develop a work plan for capacity building on palm stick production in Sumber Jaya and Bandar Jaya and a total of 47 women from Tanjung Damai and Sungai Linau have participated in palm stick production activities.
[Add row]

C9. Environmental performance - Water security

(9.1) Are there any exclusions from your disclosure of water-related data?

Select from:

☑ Yes

(9.1.1) Provide details on these exclusions.

Row 1

(9.1.1.1) Exclusion

Select from:

☑ Facilities

(9.1.1.2) Description of exclusion

Water usage in offices, warehouses, and shipping

(9.1.1.3) Reason for exclusion

Select from:

☑ Other, please specify :Not significant

(9.1.1.7) Percentage of water volume the exclusion represents

Select from:

☑ Less than 1%

(9.1.1.8) Please explain

We exclude water used at offices, warehouses, and shipping because the exclusion is insignificant with (combined) less than 1% of total group water use. The water is primarily used for internal WASH with a negligible pollution load relative to industrial effluent, hence, it is not significant. Moreover, WRI Aqueduct screening

indicates these sites, located in Indonesia (i.e. Sumatra and Kalimantan regions), are free from water-stress. We review this boundary annually and will include these uses if volumes become material or local risk status changes.
[Add row]

(9.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

Water withdrawals – total volumes

(9.2.1) % of sites/facilities/operations

Select from:
☑ 100%

(9.2.2) Frequency of measurement

Select from:
☑ Continuously

(9.2.3) Method of measurement

Water withdrawn is measured in real-time using flow meters set in each processing unit.

(9.2.4) Please explain

Water is an important input for our operations. Monitoring of water use is regularly conducted in all of our operations which refer to our processing units starting from plantations, mills, refineries, to downstream units such as biodiesel plants, oleochemicals and specialty fats, etc.

Water withdrawals – volumes by source

(9.2.1) % of sites/facilities/operations

Select from:
☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Continuously

(9.2.3) Method of measurement

In our operations, water withdrawals data are divided based on its source, e.g. river basin, groundwater, third party, etc. Water withdrawn is measured continuously using flow meters.

(9.2.4) Please explain

Monitoring of water use per withdrawal source is regularly conducted to assess and review our water management in all of our operations.

Water withdrawals quality

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

Good quality water is demanded by our operations. For this, water withdrawals quality such as pH and turbidity is directly measured on a daily basis using various tools such as pH meter, turbidity meter, etc

(9.2.4) Please explain

In our operations, we performed water withdrawals quality tests regularly. For instance, the water withdrawn in our mills is stored in a water pond to sediment any unwanted impurities and solid particles. The water stored in the pond is then sent to a water treatment plant where the water quality is improved to achieve the

standard to be used for mill processing (e.g. for boiler, cleaning, etc). Water quality parameters such as pH, turbidity, and total dissolved solids (TDS) are monitored daily by our quality control team.

Water discharges – total volumes

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Continuously

(9.2.3) Method of measurement

Water discharge volume is measured in real-time using flow meters set in each processing units.

(9.2.4) Please explain

100% of our processing units monitor the water discharged from their operations. This figure is used to monitor our water consumption in our operations.

Water discharges – volumes by destination

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Continuously

(9.2.3) Method of measurement

Flow meter is used to continuously measure the volume of water discharge.

(9.2.4) Please explain

All of our operations measure the volume of water discharged by destination including to third party, groundwater, etc. This figure is used to assess and review our water management in our operations.

Water discharges – volumes by treatment method

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Continuously

(9.2.3) Method of measurement

Flow meter is used to continuously measure the volume of water discharge.

(9.2.4) Please explain

Each of our operations could have a different treatment methodology depending on the processes involved. The water discharges by treatment method are monitored in all of our operations. This figure is used to assess and review our water management in our operations.

Water discharge quality – by standard effluent parameters

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Water discharge quality is evaluated regularly using accredited and independent lab testing.

(9.2.4) Please explain

Our production facilities are required by law to measure the quality of the effluent discharged to municipal treatment plants. Following the applicable regulations, our palm oil mills monthly evaluate the wastewater quality using external lab testing to ensure that the biological oxygen demand (BOD) and chemical oxygen demand (COD) levels do not exceed the threshold set by the regulation and to avoid any adverse impact on the environment.

Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Water pollutants such as nitrates, phosphate, BOD, and COD are measured regularly through accredited and independent lab testing to ensure compliance to environmental standards.

(9.2.4) Please explain

In line with our Sustainability Policy, Musim Mas complies with regulations related to emissions to water and establishes procedures in monitoring and managing water discharge quality. For example, our mills operations conduct BOD and COD testing every month whereas our plantation units annually conduct phosphate and nitrates testing in both the inlet and outlet of relevant freshwater ensuring the quality of the freshwater.

Water discharge quality – temperature

(9.2.1) % of sites/facilities/operations

Select from:

☑ Not relevant

(9.2.4) Please explain

Not relevant since the water discharge temperature is already the same temperature as the ambient temperature. This aspect is considered not relevant in the future as the setting of our mills operations have matured

Water consumption – total volume

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Continuously

(9.2.3) Method of measurement

Water consumption is measured for all of our operations by subtracting water withdrawn with water discharge.

(9.2.4) Please explain

Regular monitoring of water consumption is conducted following our continuous measurement of water withdrawal and discharge.

Water recycled/reused

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Continuously

(9.2.3) Method of measurement

Our plantations reuse water from our palm oil mills as land application. Flow meter is set to measure the volume of water reused continuously.

(9.2.4) Please explain

Wastewater from the palm oil mill namely Palm Oil Mill Effluent (POME) is reused for land application to the plantations. Before being reused for land application, the wastewater is treated to reduce the biological oxygen demand (BOD) and chemical oxygen demand (COD) levels below the regulatory threshold.

The provision of fully-functioning, safely managed WASH services to all workers

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Continuously

(9.2.3) Method of measurement

We use an Excel tool to properly document our WASH services for employees.

(9.2.4) Please explain

We provide free clean water to all our employees and their households. Through our water allocation system, we ensure that every individual receives 120 litres of water per day which – goes beyond recommended requirements by the Indonesian government and the World Health Organization (of 50-100 litres). We also have drilled wells for communities to gain access to water in their vicinity for general-purpose use and not for consumption because drinking water has been provided by the government through a public company. We partner with public health officials to monitor the quality of the water from wells to track the potential risk of contamination or other issues. There have been no cases of contamination. We have also built toilets for communities and conducted 'socialization workshops' to raise the importance of hygiene and proper sanitation.
[Fixed row]

(9.2.2) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, how do they compare to the previous reporting year, and how are they forecasted to change?

Total withdrawals

(9.2.2.1) Volume (megaliters/year)

29842

(9.2.2.2) Comparison with previous reporting year

Select from:
☑ About the same

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:
☑ Other, please specify :No significant changes in operations

(9.2.2.4) Five-year forecast

Select from:
☑ Lower

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

METHODOLOGY: To obtain the total water withdrawal volume, we add up the water usage from all of our operations. The data was collected from flow meter readings installed in each processing unit. CHANGES: The volume of water remains stable as the activities do not differ from the past year. FUTURE TREND: Following our sustainability policy which outlines our commitment to managing water efficiently, the water withdrawal from our operations should reduce over time (five-year forecast). On that note, the figure may also fluctuate depending on the upstream activities such as replanting and seedling.

Total discharges

(9.2.2.1) Volume (megaliters/year)

10498

(9.2.2.2) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.2.4) Five-year forecast

Select from:

☑ Lower

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

METHODOLOGY: To obtain the total water discharge volume, we add up the water discharge from all of our operations. The data was collected from flow meter readings installed in each processing unit. CHANGES: The volume of water remains stable as the activities do not differ from the past year. FUTURE TREND: Following our sustainability policy which outlines our commitment to managing water efficiently, the water discharge from our operations should reduce over time (five-year forecast) following the anticipation of installing a closed-loop recycling system.

Total consumption

(9.2.2.1) Volume (megaliters/year)

19345

(9.2.2.2) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.2.4) Five-year forecast

Select from:

☑ Lower

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

METHODOLOGY: Following the guidance, the figure is derived from Withdrawal (W) minus Discharge (D). CHANGES: The volume of water remains stable as the activities do not differ from the past year. FUTURE TREND: Through our sustainability policy which outlines our commitment to managing water efficiently, we expect to reduce our water consumption over time (five-year forecast).

[Fixed row]

(9.2.4) Indicate whether water is withdrawn from areas with water stress, provide the volume, how it compares with the previous reporting year, and how it is forecasted to change.

(9.2.4.1) Withdrawals are from areas with water stress

Select from:

☑ No

(9.2.4.8) Identification tool

Select all that apply

☑ WRI Aqueduct

(9.2.4.9) Please explain

DESCRIPTION OF THE TOOL USED: WRI Aqueduct is used to determine whether the commodity produced is from water-stressed countries. WRI Aqueduct provides a Water Risk Atlas which maps water risks such as water stress, floods, and droughts using open-source and peer-reviewed data. DEFINITION AND IDENTIFICATION OF WATER STRESS: Water stress is defined as the ratio of total water demand to the available renewable surface and groundwater supplies (WRI Aqueduct 4.0). Areas with a ratio of more than 40% are classified as high-water stress. All Musim Mas upstream operations are located in the Sumatra and Kalimantan regions of Indonesia. Using the Water Risk Atlas provided by the WRI Aqueduct, it can be seen that the water withdrawn for our upstream operations is sourced from areas free from water stress.
[Fixed row]

(9.2.5) What proportion of the produced agricultural commodities that are significant to your organization originate from areas with water stress?

Palm oil

(9.2.5.1) The proportion of this commodity produced in areas with water stress is known

Select from:

☑ Yes

(9.2.5.2) % of total agricultural commodity produced in areas with water stress

Select from:

☑ 0%

(9.2.5.3) Please explain

Our upstream operations and suppliers are located in Indonesia, especially in Sumatra and Kalimantan. Using the WRI Aqueduct Water Risk Atlas tool, we assess our production and sourcing area to check whether they are located in water stress areas. From our assessment, these locations are free from water stress. ANTICIPATED FUTURE TREND: Taking the business-as-usual scenario, the WRI Aqueduct Water Risk Atlas estimated that the water stress in our upstream operations and suppliers regions are medium to high in 2030. HOW THE METRIC IS USED: To anticipate this future trend, Musim Mas has developed a Sustainability Policy which encompasses our commitment to safeguarding water quality and quantity in all of our operations. Moreover, we also set a target to reduce our mills' water use intensity to be below 1.2 m3/MT FFB processed. In 2024, we have achieved our target of 1.13 m3/MT FFB processed. We will continue to meet our annual target of maintaining water use intensity at a maximum of 1.2 m3/MT FFB processed or below.

Other commodity

(9.2.5.1) The proportion of this commodity produced in areas with water stress is known

Select from:

☑ Yes

(9.2.5.2) % of total agricultural commodity produced in areas with water stress

Select from:

☑ 0%

(9.2.5.3) Please explain

Our upstream operations and suppliers are located in Indonesia, especially in Sumatra and Kalimantan. Using the WRI Aqueduct Water Risk Atlas tool, we assess our production and sourcing area to check whether they are located in water stress areas. From our assessment, these locations are free from water stress. ANTICIPATED FUTURE TREND: Taking the business-as-usual scenario, the WRI Aqueduct Water Risk Atlas estimated that the water stress in our upstream operations and suppliers regions are medium to high in 2030. HOW THE METRIC IS USED: To anticipate this future trend, Musim Mas has developed a

Sustainability Policy which encompasses our commitment to safeguarding water quality and quantity in all of our operations. Moreover, we also set a target to reduce our mills' water use intensity to be below 1.2 m3/MT FFB processed. In 2024, we have achieved our target of 1.13 m3/MT FFB processed. We will continue to meet our annual target of maintaining water use intensity at a maximum of 1.2 m3/MT FFB processed or below.
[Fixed row]

(9.2.6) What proportion of the sourced agricultural commodities that are significant to your organization originate from areas with water stress?

Palm oil

(9.2.6.1) The proportion of this commodity sourced from areas with water stress is known

Select from:
☑ Yes

(9.2.6.2) % of total agricultural commodity sourced from areas with water stress

Select from:
☑ 0%

(9.2.6.3) Please explain

Our upstream operations and suppliers are located in Indonesia, especially in Sumatra and Kalimantan. Using the WRI Aqueduct Water Risk Atlas tool, we assess our production and sourcing area to check whether they are located in water stress areas. From our assessment, these locations are free from water stress. ANTICIPATED FUTURE TREND: Taking the business-as-usual scenario, the WRI Aqueduct Water Risk Atlas estimated that the water stress in our upstream operations and suppliers regions are medium to high in 2030. HOW THE METRIC IS USED: To anticipate the future trend, Musim Mas sets several measures such as socialization of our Sustainability Policy to our suppliers, and providing training on good agricultural practices to suppliers. We also encourage and support smallholders to obtain sustainability certification schemes such as ISPO and RSPO which cover water aspects in their sustainability standards. As of 2024, we have trained more than 46,500 independent smallholders with 4,654 and 2,961 smallholders achieving RSPO and ISPO certifications respectively in 2024.

Other commodity

(9.2.6.1) The proportion of this commodity sourced from areas with water stress is known

Select from:

☑ Yes

(9.2.6.2) % of total agricultural commodity sourced from areas with water stress

Select from:

☑ 0%

(9.2.6.3) Please explain

Our upstream operations and suppliers are located in Indonesia, especially in Sumatra and Kalimantan. Using the WRI Aqueduct Water Risk Atlas tool, we assess our production and sourcing area to check whether they are located in water stress areas. From our assessment, these locations are free from water stress. ANTICIPATED FUTURE TREND: Taking the business-as-usual scenario, the WRI Aqueduct Water Risk Atlas estimated that the water stress in our upstream operations and suppliers regions are medium to high in 2030. HOW THE METRIC IS USED: To anticipate the future trend, Musim Mas sets several measures such as socialization of our Sustainability Policy to our suppliers, and providing training on good agricultural practices to suppliers. We also encourage and support smallholders to obtain sustainability certification schemes such as ISPO and RSPO which cover water aspects in their sustainability standards. As of 2024, we have trained more than 46,500 independent smallholders with 4,654 and 2,961 smallholders achieving RSPO and ISPO certifications respectively in 2024.
[Fixed row]

(9.2.7) Provide total water withdrawal data by source.

Fresh surface water, including rainwater, water from wetlands, rivers, and lakes

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

10016

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.7.5) Please explain

The total water withdrawal from fresh surface water is about the same as last year's reporting due to no significant changes in our operations. The withdrawal figures were collected from direct measurements of flowmeter readings in 2024.

Brackish surface water/Seawater

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

10855

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.7.5) Please explain

The total water withdrawal from brackish surface water/seawater is about the same as last year's reporting due to no significant changes in our operations. The withdrawal figures were collected from direct measurements of flowmeter readings in 2024.

Groundwater – renewable

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

1458

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.7.5) Please explain

Some of our operations are using groundwater for daily operations. In 2024, the figure is about the same as last year's reporting due to no significant changes in our operations. The withdrawal figures were collected from direct measurements of flowmeter readings in 2024.

Groundwater – non-renewable

(9.2.7.1) Relevance

Select from:

☑ Not relevant

(9.2.7.5) Please explain

We do not use non-renewable groundwater for our operations.

Produced/Entrained water

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

1157

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.7.5) Please explain

The volume of produced/entrained water is calculated from the water content of our raw materials. The productions remained stable in 2024, thus the volume is about the same as the previous reporting year.

Third party sources

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

6355

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.7.5) Please explain

Our operations sourced water from third party and the volume is measured. In 2024, the volume is about the same as last year's reporting due to no significant changes in our operations where the total water withdrawn is directly measured using flow meters.
[Fixed row]

(9.2.8) Provide total water discharge data by destination.

Fresh surface water

(9.2.8.1) Relevance

Select from:

☑ Relevant

(9.2.8.2) Volume (megaliters/year)

1875

(9.2.8.3) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.8.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.8.5) Please explain

The total water discharge to fresh surface water is about the same as last year's reporting due to no significant changes in our operations. The discharge figures were collected from direct measurements of flowmeter readings in 2024.

Brackish surface water/seawater

(9.2.8.1) Relevance

Select from:

☑ Relevant

(9.2.8.2) Volume (megaliters/year)

3659

(9.2.8.3) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.8.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.8.5) Please explain

The total water discharge to brackish surface water/seawater is about the same as last year's reporting due to no significant changes in our operations. The discharge figures were collected from direct measurements of flowmeter readings in 2024.

Groundwater

(9.2.8.1) Relevance

Select from:
☑ Relevant

(9.2.8.2) Volume (megaliters/year)

4159

(9.2.8.3) Comparison with previous reporting year

Select from:
☑ Higher

(9.2.8.4) Primary reason for comparison with previous reporting year

Select from:
☑ Other, please specify :Improvement in data collection

(9.2.8.5) Please explain

In 2024, the figure is higher due to improvement in our data collection. The discharge figures were collected from direct measurements of flowmeter readings.

Third-party destinations

(9.2.8.1) Relevance

Select from:
☑ Relevant

(9.2.8.2) Volume (megaliters/year)

805

(9.2.8.3) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.8.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.8.5) Please explain

In 2024, the total water discharge to third-party is about the same as last year's reporting due to no significant changes in our operations. The discharge figures were collected from direct measurements of flowmeter readings.
[Fixed row]

(9.2.9) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

Tertiary treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Relevant

(9.2.9.2) Volume (megaliters/year)

392

(9.2.9.3) Comparison of treated volume with previous reporting year

Select from:

☑ About the same

(9.2.9.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.9.5) % of your sites/facilities/operations this volume applies to

Select from:

☑ 11-20

(9.2.9.6) Please explain

RATIONALE: We add chemicals such as chlorine in our wastewater treatment plant (WWTP) to remove harmful contaminants/chemicals/germs/bacteria, along with other dissolved inorganic substances from the discharge water. The treated water is then discharged for domestic use. COMPLIANCE: All discharge volumes were subject to strict water quality controls before being released to receiving water bodies to ensure compliance with the relevant regulatory standards. In 2024, there are no cases of non-compliance.

Secondary treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Relevant

(9.2.9.2) Volume (megaliters/year)

3756

(9.2.9.3) Comparison of treated volume with previous reporting year

Select from:

☑ About the same

(9.2.9.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.9.5) % of your sites/facilities/operations this volume applies to

Select from:

☑ 31-40

(9.2.9.6) Please explain

RATIONALE: Our mills' facilities treat wastewater, namely palm oil mill effluent (POME), through a series of anaerobic digestion systems to reduce the biological oxygen demand (BOD) and chemical oxygen demand (COD) levels. COMPLIANCE: Regular monitoring is conducted internally and externally to ensure the discharged water is well below the regulatory threshold. In 2024, there are no cases of non-compliance.

Primary treatment only

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Relevant

(9.2.9.2) Volume (megaliters/year)

1078

(9.2.9.3) Comparison of treated volume with previous reporting year

Select from:

☑ About the same

(9.2.9.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.9.5) % of your sites/facilities/operations this volume applies to

Select from:

☑ 1-10

(9.2.9.6) Please explain

RATIONALE: Primary treatment is carried out in a clarifier tank so that there is less contamination/suspended solid from the water discharged. COMPLIANCE: Through primary treatment, the treated water discharge is discharged within the regulatory standards. In 2024, there are no cases of non-compliance.

Discharge to the natural environment without treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Relevant

(9.2.9.2) Volume (megaliters/year)

4625

(9.2.9.3) Comparison of treated volume with previous reporting year

Select from:

☑ About the same

(9.2.9.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.9.5) % of your sites/facilities/operations this volume applies to

Select from:

☑ 31-40

(9.2.9.6) Please explain

RATIONALE: The figure is referring to water used for backwash. COMPLIANCE: The quality of discharge water is considered to be non-polluting since no significant pollutants and contaminants are present in the process of backwashing.

Discharge to a third party without treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Relevant

(9.2.9.2) Volume (megaliters/year)

647

(9.2.9.3) Comparison of treated volume with previous reporting year

Select from:

☑ About the same

(9.2.9.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify :No significant changes in operations

(9.2.9.5) % of your sites/facilities/operations this volume applies to

Select from:

☑ 11-20

(9.2.9.6) Please explain

RATIONALE: Some of our facilities discharge water to a third party. COMPLIANCE: The discharge water is then treated by a third party before being discharged to the final destination within regulatory compliance.

Other

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

(9.2.9.6) Please explain

There are no other treatment types considered.
[Fixed row]

(9.2.10) Provide details of your organization's emissions of nitrates, phosphates, pesticides, and other priority substances to water in the reporting year.

(9.2.10.1) Emissions to water in the reporting year (metric tons)

5.55

(9.2.10.2) Categories of substances included

Select all that apply

☑ Nitrates

☑ Phosphates

(9.2.10.4) Please explain

Oil palms require mineral fertilizers to support their growth and fresh fruit bunch yields. Both phosphates and nitrogen are the most potent pollutants elements in fertilizer. Phosphate is extremely reactive and binds strongly with aluminum, iron, manganese, calcium, and other elements present in soils. Nitrogen fertilizers are water-soluble and a significant portion is lost through leaching. Hence, we monitor phosphate and total nitrogen levels in watercourses. The total nitrogen includes nitrate because, in water, nitrogen can be both inorganic nitrogen (nitrate (NO3), nitrite (NO2), and ammonia (NH3)) and organic nitrogen (proteins, amino acids, and urea). In line with regulatory standards, the phosphate and total nitrogen levels are monitored on a concentration basis (milligrams per liter). Based on the 2024 monitoring, a maximum of 0.06 mg/liter of phosphate and 5.49 mg/liter of total nitrogen in the rivers were passing by our oil palm plantations located in Indonesia. Following the environmental quality standards set by the Indonesian Government (PP No. 22 Tahun 2021), the threshold limit for phosphate and total nitrogen in water are 0.2 and 15 mg/liter respectively. Hence, there is no adverse impact on watercourses from our oil palm plantations. For the purpose of this reporting, a sample of one billion cubic meters of water is taken as the assumption to convert the value from mg/liter into metric tonnes.
[Fixed row]

(9.3) In your direct operations and upstream value chain, what is the number of facilities where you have identified substantive water-related dependencies, impacts, risks, and opportunities?

Direct operations

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ Yes, we have assessed this value chain stage and identified facilities with water-related dependencies, impacts, risks, and opportunities

(9.3.2) Total number of facilities identified

1

(9.3.3) % of facilities in direct operations that this represents

Select from:

☑ 26-50

(9.3.4) Please explain

The number of facilities filled represents aggregated own mills' activities.

Upstream value chain

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ Yes, we have assessed this value chain stage and identified facilities with water-related dependencies, impacts, risks, and opportunities

(9.3.2) Total number of facilities identified

1

(9.3.4) Please explain

The number of facilities filled represents aggregated supplier in our upstream value chain.
[Fixed row]

(9.3.1) For each facility referenced in 9.3, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Row 1

(9.3.1.1) Facility reference number

Select from:
☑ Facility 1

(9.3.1.2) Facility name (optional)

N/A

(9.3.1.3) Value chain stage

Select from:
☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply
☑ Dependencies
☑ Impacts
☑ Risks
☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:
☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Indonesia

☑ Other, please specify :Sumatra and Kalimantan

(9.3.1.8) Latitude

-0.056

(9.3.1.9) Longitude

102.08

(9.3.1.10) Located in area with water stress

Select from:

☑ No

(9.3.1.13) Total water withdrawals at this facility (megaliters)

3241

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ About the same

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

3241

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

0

(9.3.1.21) Total water discharges at this facility (megaliters)

2620

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ About the same

(9.3.1.23) Discharges to fresh surface water

89

(9.3.1.24) Discharges to brackish surface water/seawater

0

(9.3.1.25) Discharges to groundwater

2531

(9.3.1.26) Discharges to third party destinations

0

(9.3.1.27) Total water consumption at this facility (megaliters)

621

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ About the same

(9.3.1.29) Please explain

Water stress: Using the Water Risk Atlas provided by the WRI Aqueduct, it can be seen that the water withdrawn for this facility is sourced from areas free from water stress. Method of measurement: Water consumption is calculated using withdrawals (W) minus discharges (D). Changes from last year: In 2024, the water consumption is about the same as last year's reporting due to no significant changes in our operations.
[Add row]

(9.3.2) For the facilities in your direct operations referenced in 9.3.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

ISAE 3000 is used as the standard verification for the water withdrawals and water discharge volume and quality. The verification indicators include but are not limited to the volume of water withdrawal and water discharge as well as water quality such as BOD and COD level. Furthermore, parameters such as sources and quality of the river basin of the water withdrawn are verified by the Environmental Impact Assessment for each unit facility.

Water withdrawals – volume by source

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

ISAE 3000 is used as the standard verification for the water withdrawals and water discharge volume and quality. The verification indicators include but are not limited to the volume of water withdrawal and water discharge as well as water quality such as BOD and COD level. Furthermore, parameters such as sources and quality of the river basin of the water withdrawn are verified by the Environmental Impact Assessment for each unit facility.

Water withdrawals – quality by standard water quality parameters

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

ISAE 3000 is used as the standard verification for the water withdrawals and water discharge volume and quality. The verification indicators include but are not limited to the volume of water withdrawal and water discharge as well as water quality such as BOD and COD level. Furthermore, parameters such as sources and quality of the river basin of the water withdrawn are verified by the Environmental Impact Assessment for each unit facility.

Water discharges – total volumes

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

ISAE 3000 is used as the standard verification for the water withdrawals and water discharge volume and quality. The verification indicators include but are not limited to the volume of water withdrawal and water discharge as well as water quality such as BOD and COD level. Furthermore, parameters such as sources and quality of the river basin of the water withdrawn are verified by the Environmental Impact Assessment for each unit facility.

Water discharges – volume by destination

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

ISAE 3000 is used as the standard verification for the water withdrawals and water discharge volume and quality. The verification indicators include but are not limited to the volume of water withdrawal and water discharge as well as water quality such as BOD and COD level. Furthermore, parameters such as sources and quality of the river basin of the water withdrawn are verified by the Environmental Impact Assessment for each unit facility.

Water discharges – volume by final treatment level

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

ISAE 3000 is used as the standard verification for the water withdrawals and water discharge volume and quality. The verification indicators include but are not limited to the volume of water withdrawal and water discharge as well as water quality such as BOD and COD level. Furthermore, parameters such as sources and quality of the river basin of the water withdrawn are verified by the Environmental Impact Assessment for each unit facility.

Water discharges – quality by standard water quality parameters

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

ISAE 3000 is used as the standard verification for the water withdrawals and water discharge volume and quality. The verification indicators include but are not limited to the volume of water withdrawal and water discharge as well as water quality such as BOD and COD level. Furthermore, parameters such as sources and quality of the river basin of the water withdrawn are verified by the Environmental Impact Assessment for each unit facility.

Water consumption – total volume

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

ISAE 3000 is used as the standard verification for the water withdrawals and water discharge volume and quality. The verification indicators include but are not limited to the volume of water withdrawal and water discharge as well as water quality such as BOD and COD level. Furthermore, parameters such as sources and quality of the river basin of the water withdrawn are verified by the Environmental Impact Assessment for each unit facility.
[Fixed row]

(9.4) Could any of your facilities reported in 9.3.1 have an impact on a requesting CDP supply chain member?

Select from:

☑ This is confidential

(9.5) Provide a figure for your organization's total water withdrawal efficiency.

(9.5.1) Revenue (currency)

8200000000

(9.5.2) Total water withdrawal efficiency

274780.51

(9.5.3) Anticipated forward trend

For the past three years, our revenues are ranging between 8-10 billion with water withdrawal volume fluctuating between 25,000-30,000 megaliters. Hence, we expect the water withdrawal efficiency to be similar in the upcoming years given that no other condition arises.
[Fixed row]

(9.8) Provide water intensity information for each of the agricultural commodities significant to your organization that you produce.

Palm oil

(9.8.1) Water intensity information for this produced commodity is collected/calculated

Select from:
☑ Yes

(9.8.2) Water intensity value (m3/denominator)

1.13

(9.8.3) Numerator: water aspect

Select from:
☑ Total water withdrawals

(9.8.4) Denominator

Select from:
☑ Metric tons

(9.8.5) Comparison with previous reporting year

Select from:
☑ About the same

(9.8.6) Please explain

CHANGES FROM PREVIOUS YEAR: In 2024, the water intensity value is about the same as in 2023 which was 1.13 m3/MT FFB processed (1% difference). The water intensity is about the same considering our processing mills have reached maturity stage. HOW THE METRIC IS USED: In our mills' operations, we monitor and compile our daily water usage and processed Fresh Fruit Bunch (FFB) data into our in-house program. The water usage is continuously measured using flow meters while the processed FFB data is continuously measured using weighbridges. Through these collected data, we can calculate the water use intensity (m3 water use/ton of fresh fruit bunch). The water intensity value is monitored year-on-year and used internally to set a mill water usage intensity target. FUTURE TREND: We expect the trend will be about the same as we have set the target to maintain water usage intensity at a maximum of 1.2 m3/MT FFB processed. STRATEGY IN PLACE: To manage water intensity, we conduct routine checks to ensure there is no leakage or flow meter error as well as implement and socialize water-saving campaigns to the workers. We will continue to explore best practices to improve mills' efficiency further. Note: The numerator corresponds to the total water withdrawals for processing in our palm oil mills and it is measured using flow meters. The denominator corresponds to the total FFB processed by our palm oil mills. Hence, the inputted water intensity value is calculated by dividing the total water withdrawal volume by the total FFB processed.

Other commodity

(9.8.1) Water intensity information for this produced commodity is collected/calculated

Select from:

☑ Yes

(9.8.2) Water intensity value (m3/denominator)

1.13

(9.8.3) Numerator: water aspect

Select from:

☑ Total water withdrawals

(9.8.4) Denominator

Select from:

☑ Metric tons

(9.8.5) Comparison with previous reporting year

Select from:

☑ About the same

(9.8.6) Please explain

CHANGES FROM PREVIOUS YEAR: In 2024, the water intensity value is about the same as in 2023 which was 1.13 m3/MT FFB processed (1% difference). The water intensity is about the same considering our processing mills have reached maturity stage. HOW THE METRIC IS USED: In our mills' operations, we monitor and compile our daily water usage and processed Fresh Fruit Bunch (FFB) data into our in-house program. The water usage is continuously measured using flow meters while the processed FFB data is continuously measured using weighbridges. Through these collected data, we can calculate the water use intensity (m3 water use/ton of fresh fruit bunch). The water intensity value is monitored year-on-year and used internally to set a mill water usage intensity target. FUTURE TREND: We expect the trend will be about the same as we have set the target to maintain water usage intensity at a maximum of 1.2 m3/MT FFB processed. STRATEGY IN PLACE: To manage water intensity, we conduct routine checks to ensure there is no leakage or flow meter error as well as implement and socialize water-saving campaigns to the workers. We will continue to explore best practices to improve mills' efficiency further. Note: The numerator corresponds to the total water withdrawals for processing in our palm oil mills and it is measured using flow meters. The denominator corresponds to the total FFB processed by our palm oil mills. Hence, the inputted water intensity value is calculated by dividing the total water withdrawal volume by the total FFB processed.
[Fixed row]

(9.9) Provide water intensity information for each of the agricultural commodities significant to your organization that you source.

Palm oil

(9.9.1) Water intensity information for this sourced commodity is collected/calculated

Select from:

☑ Yes

(9.9.2) Water intensity value (m3/denominator)

1.5

(9.9.3) Numerator: Water aspect

Select from:

☑ Total water withdrawals

(9.9.4) Denominator

Select from:

☑ Metric tons

(9.9.5) Comparison with previous reporting year

Select from:

☑ This is our first year of measurement

(9.9.6) Please explain

CHANGES FROM THE PREVIOUS YEAR: For the first time, we disclosed a water-intensity figure for third-party suppliers: 1.5 m3 per metric ton (MT) of FFB processed. This establishes a baseline and marks the start of strengthening supplier-level water data. HOW THE METRIC IS USED: Through the Musim Mas Self-Assessment Tool (SAT), we gather information on suppliers' compliance with our Sustainability Policy—including water management—so the metric can inform risk screening, engagement priorities, and target setting. STRATEGY IN PLACE: (1) Annual data collection: Gather suppliers' water-use data and targets via SAT. (2) Analysis: Identify hotspots (e.g., high-intensity mills or regions) and key drivers. (3) Engagement: Work with suppliers to implement efficiency measures and reduce use. (4) Monitoring: Track progress on water-reduction initiatives and outcomes. (5) Disclosure: Report progress through CDP.

Other commodity

(9.9.1) Water intensity information for this sourced commodity is collected/calculated

Select from:

☑ Yes

(9.9.2) Water intensity value (m3/denominator)

1.5

(9.9.3) Numerator: Water aspect

Select from:

☑ Total water withdrawals

(9.9.4) Denominator

Select from:

☑ Metric tons

(9.9.5) Comparison with previous reporting year

Select from:

☑ This is our first year of measurement

(9.9.6) Please explain

CHANGES FROM THE PREVIOUS YEAR: For the first time, we disclosed a water-intensity figure for third-party suppliers: 1.5 m3 per metric ton (MT) of FFB processed. This establishes a baseline and marks the start of strengthening supplier-level water data. HOW THE METRIC IS USED: Through the Musim Mas Self-Assessment Tool (SAT), we gather information on suppliers' compliance with our Sustainability Policy—including water management—so the metric can inform risk screening, engagement priorities, and target setting. STRATEGY IN PLACE: (1) Annual data collection: Gather suppliers' water-use data and targets via SAT. (2) Analysis: Identify hotspots (e.g., high-intensity mills or regions) and key drivers. (3) Engagement: Work with suppliers to implement efficiency measures and reduce use. (4) Monitoring: Track progress on water-reduction initiatives and outcomes. (5) Disclosure: Report progress through CDP.
[Add row]

(9.12) Provide any available water intensity values for your organization's products or services.

Row 1

(9.12.1) Product name

Crude Palm Oil (CPO)

(9.12.2) Water intensity value

1.13

(9.12.3) Numerator: Water aspect

Select from:

☑ Water withdrawn

(9.12.4) Denominator

Amount of FFB processed

(9.12.5) Comment

N/A
[Add row]

(9.13) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
	Select from: ☑ No	*Musim Mas is fully compliance with relevant regulations.*

[Fixed row]

(9.14) Do you classify any of your current products and/or services as low water impact?

(9.14.1) Products and/or services classified as low water impact

Select from:
☑ Yes

(9.14.2) Definition used to classify low water impact

- Product: CPO. - Value chain stage: Production. - Water aspects considered: Water intensity and quality. IMPACT INDICATORS: 1. Water use (m3) per ton FFB processed. 2. BOD and COD levels of the POME from CPO production. THRESHOLD AND CRITERIA USED TO DEFINE AS LOW WATER IMPACT: 1. Below 1.2 m3/MT FFB processed. 2. BOD below 100 mg/liter and COD below 350 mg/liter. STANDARDS CONSIDERED: 1. SDG 12-15: Responsible consumption and

production, Climate action, Life below water, Life on land. 2. Regulation of The Minister of Environment of the Republic of Indonesia No. 5 2014 where sectoral standards for wastewater quality are regulated.

(9.14.4) Please explain

Crude palm oil (CPO) is one of Musim Mas key products. The waste from CPO production namely Palm Oil Mill Effluent (POME) contains a high amount of biological oxygen demand (BOD) levels and chemical oxygen demand (COD) levels which will negatively impact the watercourses if discharged without treatment. Hence, Musim Mas treats all POME prior to discharging it. The BOD and COD levels are strictly managed and kept below regulatory thresholds to avoid any adverse impact on groundwater and nearby water sources. The BOD and COD values are monthly tested through independent external parties. Moreover, we have set water use intensity target in our mills to achieve 1.2 m3/MT FFB processed or below. As a result, CPO is classified as our low water impact product.
[Fixed row]

(9.15) Do you have any water-related targets?

Select from:
☑ Yes

(9.15.1) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

	Target set in this category	Please explain
Water pollution	*Select from:* ☑ Yes	*Rich text input [must be under 1000 characters]*
Water withdrawals	*Select from:* ☑ Yes	*Rich text input [must be under 1000 characters]*
Water, Sanitation, and Hygiene (WASH) services	*Select from:* ☑ Yes	*Rich text input [must be under 1000 characters]*
Other	*Select from:*	*N/A*

	Target set in this category	Please explain
	☑ No, and we do not plan to within the next two years	

[Fixed row]

(9.15.2) Provide details of your water-related targets and the progress made.

Row 1

(9.15.2.1) Target reference number

Select from:

☑ Target 1

(9.15.2.2) Target coverage

Select from:

☑ Business activity

(9.15.2.3) Category of target & Quantitative metric

Water pollution

☑ Increase in investment related to reducing water pollution

(9.15.2.4) Date target was set

12/30/2010

(9.15.2.5) End date of base year

12/30/2010

(9.15.2.6) Base year figure

1

(9.15.2.7) End date of target year

12/30/2024

(9.15.2.8) Target year figure

17

(9.15.2.9) Reporting year figure

17

(9.15.2.10) Target status in reporting year

Select from:

☑ Achieved

(9.15.2.11) % of target achieved relative to base year

100

(9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Sustainable Development Goal 6

(9.15.2.13) Explain target coverage and identify any exclusions

The target covers the methane capture investment in our mills.

(9.15.2.15) Actions which contributed most to achieving or maintaining this target

Methane capture facilities remain a key approach to reducing our emissions and water pollution. 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 our mills, estates, and workers' housing. In 2024, our 17 methane capture facilities resulted in 490,885 MT CO2e of avoided emissions. Pertaining the water pollution, methane capture is able to reduce the COD and BOD levels of the POME. BOD and COD provide valuable information about the level of organic pollutants and potential for oxygen depletion in aquatic environments. In 2024, our BOD levels for operations in Sumatra and Kalimantan are 57.99 and 32.61 mg/L respectively which are well below the regulatory threshold of 100 mg/L. As for the COD levels in 2024, the value for our operations in Sumatra and Kalimantan are 200.71 and 139.38 mg/L respectively which are also below the regulatory threshold of 350 mg/L.

(9.15.2.16) Further details of target

To avoid impacting groundwater and nearby water sources, we treat the wastewater (POME) from our mills before discharging it. We direct the POME to our methane capture facilities to generate electricity and reduce the BOD COD levels before it is channeled to our treatment ponds and further processed into treated wastewater for irrigation. The BOD and COD levels are kept below the national regulatory thresholds of 5,000 parts per million (ppm) for BOD in land applications, 100 ppm for BOD in waterways, and 350 ppm for COD in waterways. This mitigates any impact on groundwater and water sources. We also perform an annual third-party assurance on our BOD and COD figures for our palm oil mills operations to ensure transparency and credibility. These figures are publicly available in our annual Sustainability Report (https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/).

Row 2

(9.15.2.1) Target reference number

Select from:

☑ Target 2

(9.15.2.2) Target coverage

Select from:

☑ Business activity

(9.15.2.3) Category of target & Quantitative metric

Water withdrawals

☑ Reduction in withdrawals per unit of production

(9.15.2.4) Date target was set

12/30/2019

(9.15.2.5) End date of base year

12/30/2019

(9.15.2.6) Base year figure

1.23

(9.15.2.7) End date of target year

12/30/2024

(9.15.2.8) Target year figure

1.2

(9.15.2.9) Reporting year figure

1.2

(9.15.2.10) Target status in reporting year

Select from:
☑ Achieved

(9.15.2.11) % of target achieved relative to base year

100

(9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Sustainable Development Goal 6

(9.15.2.13) Explain target coverage and identify any exclusions

The target covers the water use intensity of our mills' operations.

(9.15.2.15) Actions which contributed most to achieving or maintaining this target

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. To manage water intensity, we conduct routine checks to ensure there is no leakage or flow meter error as well as implement and socialize water-saving campaigns to the workers. We will continue to explore best practices to improve mills' efficiency further.

(9.15.2.16) Further details of target

In line with our water commitment in sustainability policy, we set a target to achieve average water use intensity in our mills to be below 1.2 m3/MT FFB processed. In 2024, we achieved average mills' water use intensity of 1.13 m3/MT FFB processed which is below 1.2 m3/MT FFB processed.

Row 3

(9.15.2.1) Target reference number

Select from:

☑ Target 3

(9.15.2.2) Target coverage

Select from:

☑ Business activity

(9.15.2.3) Category of target & Quantitative metric

Water, Sanitation, and Hygiene (WASH) services

☑ Increase in the proportion of employees using safely managed sanitation services, including a hand-washing facility with soap and water

(9.15.2.4) Date target was set

12/30/2012

(9.15.2.5) End date of base year

12/30/2012

(9.15.2.6) Base year figure

0

(9.15.2.7) End date of target year

12/30/2024

(9.15.2.8) Target year figure

100

(9.15.2.9) Reporting year figure

100

(9.15.2.10) Target status in reporting year

Select from:

☑ Achieved

(9.15.2.11) % of target achieved relative to base year

100

(9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Sustainable Development Goal 6

(9.15.2.13) Explain target coverage and identify any exclusions

The target covers the sanitation facilities provided for employees in our upstream operations.

(9.15.2.15) Actions which contributed most to achieving or maintaining this target

Aligned with our sustainability policy and SDG 6, we implement the following practices: (1) Providing sanitation facilities for all employees. Since 2013, we have started to build sanitation room for our estates' and mills' employees. In 2024, all of our upstream operations have sanitation rooms. (2) Ensuring access to clean toilets at our operations. (3) Adequate free clean water to all our employees and their households. Through our water allocation system, we ensure that every individual receives 120 litres of water per day (more than national and WHO's recommendations of 50-100 litres). We also partner with public health officials to monitor the quality of the water from wells to track the potential risk of contamination or other issues. (4) Install flow meter in our housing areas to monitor and evaluate our water consumption. (5) Conduct frequent education for all our employees on the importance of water efficiency.

(9.15.2.16) Further details of target

In adherence to our sustainability policy and SDG 6, we provide access to adequate and equitable sanitation and hygiene for all employees. We also invite villages neighboring our operations 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.
[Add row]

C11. Environmental performance - Biodiversity

(11.2) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

(11.2.1) Actions taken in the reporting period to progress your biodiversity-related commitments

Select from:

☑ Yes, we are taking actions to progress our biodiversity-related commitments

(11.2.2) Type of action taken to progress biodiversity- related commitments

Select all that apply

☑ Law & policy

☑ Species management

☑ Education & awareness

☑ Land/water protection

☑ Land/water management

☑ Livelihood, economic & other incentives

[Fixed row]

(11.3) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
	Select from:	*Select all that apply*

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
	☑ Yes, we use indicators	☑ State and benefit indicators ☑ Response indicators

[Fixed row]

(11.4) Does your organization have activities located in or near to areas important for biodiversity in the reporting year?

	Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity	Comment
Legally protected areas	*Select from:* ☑ No	*n/a*
UNESCO World Heritage sites	*Select from:* ☑ No	*n/a*
UNESCO Man and the Biosphere Reserves	*Select from:* ☑ No	*n/a*
Ramsar sites	*Select from:* ☑ No	*n/a*
Key Biodiversity Areas	*Select from:* ☑ No	*n/a*
Other areas important for biodiversity	*Select from:*	*n/a*

	Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity	Comment
	☑ No	

[Fixed row]

C13. Further information & sign off

(13.1) Indicate if any environmental information included in your CDP response (not already reported in 7.9.1/2/3, 8.9.1/2/3/4, and 9.3.2) is verified and/or assured by a third party?

	Other environmental information included in your CDP response is verified and/or assured by a third party
	Select from: ☑ Yes

[Fixed row]

(13.1.1) Which data points within your CDP response are verified and/or assured by a third party, and which standards were used?

Row 1

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Climate change

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Climate change

☑ Project-based carbon credits

(13.1.1.3) Verification/assurance standard

Climate change-related standards

☑ IRECS (International Renewable Energy Certificate services)

(13.1.1.4) Further details of the third-party verification/assurance process

To strengthen our renewable energy endeavors, we have issued renewable energy certificates (RECs) for surplus electricity from our own biogas facilities in Indonesia. The certificates were issued by The Green Certificate Company (GCC) and verified against International Renewable Energy Certificates (I-RECs) standard. For detail of the RECs issued for each facility, please refer to the attached file. Further information of the listed facilities are also publicly available and can be accessed through this link https://evident.app/IREC/device-register/table.

(13.1.1.5) Attach verification/assurance evidence/report (optional)

Musim Mas - RECs issued.pdf

Row 2

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Forests

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Forests

☑ Traceability data

(13.1.1.3) Verification/assurance standard

Forests-related standards

☑ IRF data verification protocol

(13.1.1.4) Further details of the third-party verification/assurance process

As a signatory to the Agriculture Sector Roadmap to 1.5°C, Musim Mas is committed to 100% of our palm oil volumes 'Delivering' on our No Deforestation and No Peat commitments by 2025, per the NDPE Implementation Reporting Framework (IRF) v5.8. In 2024, 98.80% of our supplier volumes were in the "Delivering" category. We continue to collaborate closely with them to reach 100% 'Delivering'. For more information, please refer to our annual Sustainability Report page 81 (attached) and also can be accessed through this link https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/

(13.1.1.5) Attach verification/assurance evidence/report (optional)

Musim-Mas-SR2024.pdf

Row 3

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Water

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Water security

☑ Water intensities of products and services

(13.1.1.3) Verification/assurance standard

General standards

☑ ISAE 3000

(13.1.1.4) Further details of the third-party verification/assurance process

To ensure credibility and transparency, we conduct third-party verification on our mills' water use intensity. The water intensity value of 1.13 m3/MT FFB processed has been verified using ISAE 3000 standards. For more information, please refer to EY assurance statement in our annual Sustainability Report page 97-99 (attached) and also can be accessed through this link https://www.musimmas.com/sustainability/reports-and-ratings/sustainability-report/

(13.1.1.5) Attach verification/assurance evidence/report (optional)

Musim-Mas-SR2024.pdf

[Add row]

(13.3) Provide the following information for the person that has signed off (approved) your CDP response.

(13.3.1) Job title

The Director of Communications and Sustainability and the Director of Climate Action and Supply Chain Sustainability

(13.3.2) Corresponding job category

Select from:
☑ Chief Sustainability Officer (CSO)
[Fixed row]

(13.4) Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

Select from:
☑ Yes, CDP may share our Disclosure Submission Lead contact details with the Pacific Institute