Wilmar International Limited

2024 CDP Corporate Questionnaire 2024

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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.
Terms of disclosure for corporate questionnaire 2024 - CDP

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C1. Introduction

(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
	12/31/2023	*Select from:* ☑ Yes	*Select from:* ☑ No

[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

The time horizon categorization is defined based on the likelihood of occurrence and financial impact of the risks and opportunities on our businesses. For short-term time horizon, the risks and opportunities are characterized to have high likelihood of occurrence in 0-2 years and high financial impact (US$5 million). The material risks and opportunities are identified during the Group's risk assessment and business specific scenario analysis. The short-term risks included current regulations, legal and market risks. Any current regulatory requirements must be fulfilled to ensure the business license to operate and minimize any impact.

Medium-term

(2.1.1) From (years)

2

(2.1.3) To (years)

10

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

The time horizon categorization is defined based on the likelihood of occurrence and financial impact of the risks and opportunities on our businesses. For medium-term time horizon, the risks and opportunities are characterized to have high likelihood of occurrence in 2-10 years and high financial impact (US$5 million). The material risks and opportunities are identified during the Group's risk assessment and business specific scenario analysis. The medium-term risks included emerging regulations and technological advancements. Climate change advocacy groups are looking to influence policy makers to adopt and impose stricter climate-related regulations such as carbon pricing mechanism. As a result, these emerging risks are closely monitored and communicated with relevant stakeholders to mitigate the impact.

Long-term

(2.1.1) From (years)

10

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

Select from:

☑ Yes

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

The time horizon categorization is defined based on the likelihood of occurrence and financial impact of the risks and opportunities on our businesses. For long-term time horizon, the risks and opportunities are characterized to have high likelihood of occurrence after 10 years and high financial impact (US$5 million). The material risks and opportunities are identified during the Group's risk assessment and business specific scenario analysis. The long-term risks included the acute and chronic events such as temperature rise, drastic change of weather, deterioration of soil fertility and others. Studies suggest the frequency and severity of these events may get even more intense if we continue to do business as usual so such long-term impacts have to be considered in the overall business strategy as well.
[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: ☑ Yes	*Select from:* ☑ 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

(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

(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

(2.2.2.12) Tools and methods used

Enterprise Risk Management

☑ Enterprise Risk Management

☑ Internal company methods

Databases

☑ Nation-specific databases, tools, or standards

☑ Other databases, please specify **:**Agri-footprint; Eco-invent

Other

☑ External consultants

☑ Internal company methods

☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Acute physical

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

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

☑ Wildfires

Chronic physical

☑ Change in land-use

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

☑ Increased severity of extreme weather events

☑ Soil degradation

☑ Water stress

Policy

☑ Changes to international law and bilateral agreements

☑ Changes to national legislation

☑ Poor enforcement of environmental regulation

Market

☑ Availability and/or increased cost of certified sustainable material

☑ Availability and/or increased cost of raw materials

☑ Changing customer behavior

☑ Uncertainty in the market signals

Reputation

☑ Increased partner and stakeholder concern and partner and stakeholder negative feedback

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

☑ Stigmatization of sector

Technology

☑ Data access/availability or monitoring systems

☑ Transition to lower emissions technology and products

Liability

☑ Exposure to litigation

☑ Non-compliance with regulations

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

☑ Investors

☑ Suppliers

☑ Regulators

☑ Local communities

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

Select from:

☑ No

(2.2.2.16) Further details of process

Wilmar's Group-wide ERM process assesses climate-related risks and opportunities on a regular basis. Various risks/opportunities with differing time-frames and importance are identified, assessed and monitored continuously by the sustainability team while major updates on these risks and actions taken are consolidated for the BSC to review on a quarterly basis. Wilmar has operational teams working on site and at regional levels, a communications team at corporate level, and an Independent Sustainability Advisory Group (ISAP) comprising external sustainability partners (e.g. sustainability collaborators and civil society organisations) that advise on specific issues where broader perspectives are required. These teams are responsible for monitoring their respective risks like unusual weather patterns affecting the plantations on asset level (site operational teams), deforestation risks at suppliers' areas (third party compliance teams), allegations of environmental damages by non-governmental organisations (NGOs) at corporate level (communications team), or regular engagements with various departments on external stakeholders' feedback to identify key issues/concerns. Identified risks are assessed through a risk matrix (five levels each of likelihood and consequence) by the respective management teams before reporting up to the group's sustainability team (where CSO & Group Sustainability General Manager sit) for further deliberation and proposals of risk mitigation. The BSC at Board level will regularly review the overall risk management guidelines/framework, policies & systems to determine the potential financial/strategic impact before recommending risk tolerance limits to ensure effective governance and oversight is achieved. Specifically on deforestation risk (key risk for climate change), Wilmar works together with Earthqualizer on the Supplier Group Compliance Programme to provide proactive monitoring and surveillance of our supply chain to ensure deforestation risks are identified early so that actions can be taken to resolve issues at an early stage. To ensure more

feedback can be garnered from the public to assist with the risk identification process, an effective grievance procedure was established in 2013 to enable any stakeholders to flagged out deforestation risks on our operations or supply chain so that any potential risks can be mitigated in time. As to how we manage identified climate-related risks and opportunities, an example is how our operations manage the physical risk of more unpredictable weather patterns with longer drought periods or heavier rainfall during wet seasons. This has a strong negative impact to our plantations which are reliant on rainfall for majority of the water needs and thus considered a high priority issue to control. As part of the wider strategy to manage the resources for plantations, Wilmar has invested heavily in the Research & Development of palm seedlings which are more resilient to extreme weather patterns to ensure the sustainability of the plantations. These seedlings are also sold to smallholders and smaller plantation companies for a fee to ensure the reliability of future supply sources to our mills.

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

(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

Chronic physical

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

(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

☑ Ghana

☑ Indonesia

☑ Malaysia

☑ Nigeria

(3.1.1.9) Organization-specific description of risk

Climate anomalies creates excess in precipitation, altering vegetation and soil conditions, causing fertilization in unfavourable weather conditions, which is not beneficial to crop. Excess rainfall can stunt growth and reduce yield. Wilmar has a total planted oil palm area of 230,135 ha as at end 2023, of which 66% in Indonesia, 25% in Malaysia and 9% are in Africa (Ghana and Nigeria). These countries have a wet tropical climate necessary to support the cultivation of oil palm which has a high water requirement. Therefore, changes in weather pattern affects the production cycle of plantation while extreme changes in precipitation patterns (i.e. heavy rainfall or long drought) pose a significant risk to our operating activities. The resultant flooding from heavy rainfall or drought from longer dry season will cause production stress and landscape instability which leads to lower production rate (through adverse impact on crop growth and oil palm fresh fruit bunches (FFB) yield), higher operational cost as well as supply chain and transport disruption. Other than the company's oil palm plantations in Malaysia, Indonesia and Africa as well as sugar farms at Australia and Myanmar, the supply chain will be susceptible to the above chronic risks as well.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Decreased revenues due to reduced production capacity

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

Select all that apply

☑ Long-term

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

Select from:

☑ More likely than not

(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

Reduced yield due to crop damage, leading to reduced revenue and disruption of operations. Increases cost to seek resolution.

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

Select from:

☑ No

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Increase investment in R&D

(3.1.1.27) Cost of response to risk

31500000

(3.1.1.28) Explanation of cost calculation

The cost of response to this risk was estimated by using average cost of RSPO certification and maintenance (US 18 per MT CPO) and total production in 2023.

(3.1.1.29) Description of response

Investments into Research & Development (R&D) to develop palm seedlings with better resilience to diseases, pests and drought tolerant. Our Indonesian R&D laboratory focuses on biotechnology research to enhance our competitiveness and sustainability in the oil palm industry. By educating and preparing the staffs to deal with climate related incidents - crisis management preparation, having in place protocols and periodic drills to maintain the capability to handle such emergencies effectively and restore operations promptly, taking into account all necessary safety precautions. For suppliers, the company actively engages and shares best

management practices to ensure supply chain continuity. The idea is to alleviate climate change impacts based on principles of sustainable management & production while improving our infrastructure to make it resistant against negative climate impacts. These would be embedded in our recurring operational cost.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk2

(3.1.1.3) Risk types and primary environmental risk driver

Policy

☑ Changes to regulation of existing products and services

(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

☑ Ghana

☑ Indonesia

☑ Malaysia

☑ Nigeria

(3.1.1.9) Organization-specific description of risk

With countries where we operate having committed to the Paris Agreement and the Nationally Determined Contributions, the relevant ministries in those countries are planning to distil down these emission reductions commitments to the key industries within their laws and regulations to meet the targets. In Malaysia's example, the government might be looking at the feasibility of mandating methane capture plants in all palm oil mills in the near future. Currently there is already a mandate for new mills or expansion plans for existing mills to include methane capture systems in the designs. For context, the palm oil industry has been regulated by Malaysian Palm

Oil Board (MPOB), which is imposing the mandatory installation of biogas trapping or methane avoidance facilities in palm oil mills as a condition for any new mill construction or existing mills applying for throughput expansion in the country. This would affect our mills in Malaysia with respect to any expansion plans, as well as any new mills. Similarly, Indonesia will be imposing carbon tax on coal-fired power plants and there is potential for it be further rolled out to more industries, including those we operate in.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Increased indirect [operating] 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

☑ Short-term

☑ Medium-term

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

Select from:

☑ Very likely

(3.1.1.14) Magnitude

Select from:

☑ 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

Increased capital expenditure and operating cost due to either the need to invest & operate on new technologies to meet the revised mandates or regulation of existing products, or to pay additional cost to source for renewable sources to replace with cheaper fossil fuels.

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

Select from:

☑ No

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Increase environment-related capital expenditure

(3.1.1.27) Cost of response to risk

90000000

(3.1.1.28) Explanation of cost calculation

With an estimated cost of about US2 million for a covered lagoon system to capture and utilise the biogas from Palm Oil Mill Effluent (POME), the total capital cost to implement the system in all mills (45) in Malaysia, Indonesia, Nigeria and Ghana would be estimated to be around US90 million.

(3.1.1.29) Description of response

In order to ensure our operations can meet any potential stricter climate requirements, Wilmar has worked towards implementing methane capture plants at our major mills in Malaysia and Indonesia. Once installed, the mills will also have to incur the operational costs of running the system and expenses related to maintenance and plant upkeep until the end of system lifetime.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk3

(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:

☑ Downstream value chain

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ China

☑ India

☑ Italy

☑ Spain

☑ Malaysia

☑ Indonesia

☑ Netherlands

(3.1.1.9) Organization-specific description of risk

The consumer market is becoming increasingly sophisticated in their demands such as requesting traceability and no deforestation as well as sustainable production for their goods. Thus, by not adapting and aligning with the changing consumer needs, the company stands to lose out in the market against competitors who are updated and kept abreast of such demands.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Decreased revenues due to reduced demand for products and services

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

Select all that apply

☑ Short-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-low

(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

Loss of customers due to not meeting their specific climate requirements in terms of lower carbon footprint products will lead to loss of revenue on organization.

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

Select from:

☑ No

(3.1.1.26) Primary response to risk

Compliance, monitoring and targets

☑ Other compliance, monitoring or target, please specify **:**Improve our overall ESG performance of the company by implementing best-in-class practices across the Environment, Social and Governance domains

(3.1.1.27) Cost of response to risk

0

(3.1.1.28) Explanation of cost calculation

The cost of response (6.16%) is the estimated cost based on the average cost of capital for ESG compliance for high ESG companies as disclosed in an MSCI research article about "ESG and the cost of capital". This is reflected in a percentage form and thus no absolute figure for cost of response was provided.

(3.1.1.29) Description of response

Alignment of public policy positions with sustainability goals by launching the Integrated Policy on NDPE in December 2013. In addition to the policy, Wilmar is committed to other relevant and globally recognized certifications and standards like International Sustainability & Carbon Certification (ISCC), Roundtable on

Sustainable Palm Oil (RSPO) and Bonsucro. These commitments provide the Group with a baseline to benchmark ourselves against other players in the industry with clear goals and targets to be achieved.
[Add row]

(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

[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

(3.6.1.2) Commodity

Select all that apply
☑ Palm oil
☑ Not applicable

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Resource efficiency

☑ Increased efficiency of production and/or distribution processes

(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

☑ Australia

☑ China

☑ Indonesia

☑ Malaysia

(3.6.1.8) Organization specific description

By focusing on energy efficiency projects wherever feasible in our production processes, this can help us to reduce the energy consumption at our operations and lower our cost of operations as well.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Reduced indirect (operating) 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

☑ The opportunity has already had a substantive effect on our organization in the reporting year

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

Select from:

☑ Virtually certain (99–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium-low

(3.6.1.13) Effect of the opportunity on the financial position, financial performance and cash flows of the organization in the reporting period

With lower operating cost, this can help us reduce our cost of goods sold which can potentially result in better profit margins.

(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

Improved company financial health and potential growing reputation in near-term horizon

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

Select from:

☑ No

(3.6.1.24) Cost to realize opportunity

40000000

(3.6.1.25) Explanation of cost calculation

An estimate of the average investments put in for various energy efficiency projects in our global operations in 2023.

(3.6.1.26) Strategy to realize opportunity

We adopt a wide range of technologies across our factories to reduce energy use and improve energy efficiency, focusing on heat recovery and energy efficiency upgrades. Some initiatives include installing cascading heat pumps for waste heat recovery and high efficiency magnetic levitation compressors that improve condensate recovery to generate electricity and steam/condensate savings as well as carrying out steam and condensate energy audits. At the Group level, our energy intensity in 2023 was 4.8% lower than in 2022 and this decrease was mainly driven by improved energy efficiency across our key business units such as sugar, oleochemicals, soy protein and tropical oil refining.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp2

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Markets

☑ Expansion into new markets

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Downstream value chain

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ Germany

☑ Italy

☑ Netherlands

☑ Spain

(3.6.1.8) Organization specific description

The European Union's Renewable Energy Directive (RED) mandates the levels of renewable energy use within the European Union and requires 20 percent of the energy consumed within the region to be renewable. A possible approach is the use of biofuels to replace existing fossil fuel which can potentially open up new markets for the company to supply sustainable biofuel/biodiesel into Europe market. For the renewable biofuels supplied, there are requirements of certain GHG emission reduction percentages for various feedstocks to be considered eligible. There is potential for countries to explore encouraging further GHG emission reduction initiatives by seeking for even stricter requirements of supplied biofuel.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues through access to new and emerging markets

(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

☑ The opportunity has already had a substantive effect on our organization in the reporting year

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

Select from:

☑ Virtually certain (99–100%)

(3.6.1.12) Magnitude

Select from:

☑ High

(3.6.1.13) Effect of the opportunity on the financial position, financial performance and cash flows of the organization in the reporting period

Potential new revenue stream for new product sales resulting from new markets access as well as increase in revenue with increase in sales volume for existing products due to a wider customer base in new markets

(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

Increase in overall revenue for the company in near- to long term

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

Select from:

☑ No

(3.6.1.24) Cost to realize opportunity

56700

(3.6.1.25) Explanation of cost calculation

The average cost of ISCC certification was estimated to be US 900 per site and it would translate to the total potential cost of US 56,700 based on the number of sites that are ISCC-certified (63) in 2023.

(3.6.1.26) Strategy to realize opportunity

Wilmar's operations that supply oils to the EU market are required to be certified based on commercial considerations. It would be applicable to various sites in Malaysia and Indonesia that are involved in the supply chain to Europe. The estimated cost would mainly be directed towards managing the traceability and sustainability of the supply chain for the feedstock for biofuels as well as the annual cost of audit to verify the compliance with certification standards.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp3

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Energy source

☑ Use of low-carbon energy sources

(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

☑ Ghana

☑ Indonesia

☑ Malaysia

☑ Nigeria

(3.6.1.8) Organization specific description

With biogas containing high proportion of methane generated from POME being waste energy that is not fully tapped, methane capture and utilization as a fuel source allows palm oil mills to replace diesel for electricity generation at minimal operational cost.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Reduced indirect (operating) 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

☑ The opportunity has already had a substantive effect on our organization in the reporting year

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

Select from:

☑ Virtually certain (99–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium

(3.6.1.13) Effect of the opportunity on the financial position, financial performance and cash flows of the organization in the reporting period

With lower operating cost, this can help us reduce our cost of goods sold which can potentially result in better profit margins.

(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

Improved company financial health and potential growing reputation in near-term horizon

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

Select from:
☑ No

(3.6.1.24) Cost to realize opportunity

2000000

(3.6.1.25) Explanation of cost calculation

The estimated cost to construct a new methane capture plant with biogas utilization facilities is around US2 million.

(3.6.1.26) Strategy to realize opportunity

Depending on the feasibility of building methane capture plants at our palm oil mills, Wilmar is actively looking at building more of the plants to maximize this opportunity.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp4

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Products and services

☑ Development of new products or services through R&D and innovation

(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

☑ China

(3.6.1.8) Organization specific description

With raising awareness by consumers on climate change and sustainability issues, there is a growing demand for sustainable products with reduced negative environmental and social impact. Wilmar is thus actively investing in research and development efforts to identify environmentally friendly solutions and address the growing demand for sustainable products. Examples of such focus areas include developing plant-based protein to reduce reliance on beef (which is a key driver of deforestation) and developing soaps and detergents using vegetable-based surfactant which are more consumer, fabric and environmentally friendly.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues through access to new and emerging markets

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

Select all that apply

☑ Long-term

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

Select from:

☑ Virtually certain (99–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium-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

Increase in overall revenue for the company in near- to long term

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

Select from:

☑ No

(3.6.1.24) Cost to realize opportunity

14000000

(3.6.1.25) Explanation of cost calculation

In collaboration with the Chinese Nutrition Society, the Yihai Kerry Arowana (YKA, Wilmar's China subsidiary) R&D Centre has established the National Nutrition Science Research Grant which funds research on the nutritional status, requirements and interventions of specific populations and regions. The research aims to develop more targeted products for consumers, which would improve health and reduce medical expenses. In 2024, the YKA R&D Centre will strategically focus its research efforts on key areas crucial to advancing nutritional science and promoting consumer well-being. These areas include studying the health impacts of fats, managing common diet-related diseases through dietary interventions, conducting research on food nutrition and actively working towards the establishment of a comprehensive nutrition information sharing platform.

(3.6.1.26) Strategy to realize opportunity

The Yihai Kerry Arowana (YKA, Wilmar's China subsidiary) R&D Centre has pledged over RMB100.0 million (approximately US14.0 million) to support scientific R&D.

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

☑ Non-executive directors or equivalent

☑ Independent non-executive directors or equivalent

(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

(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

☑ Board chair

☑ Director on board

☑ Chief Executive Officer (CEO)

☑ Chief Sustainability Officer (CSO)

☑ Board-level committee

(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

☑ Board Terms of Reference

(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

☑ Overseeing the setting of corporate targets

☑ Monitoring progress towards corporate targets
☑ Approving corporate policies and/or commitments
☑ Approving and/or overseeing employee incentives
☑ Monitoring the implementation of the business strategy
☑ Monitoring the implementation of a climate transition plan
☑ Overseeing and guiding the development of a business strategy
☑ 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

(4.1.2.7) Please explain

The Chairman and CEO, and the Board of Directors oversee the management of Wilmar's sustainability strategy. They are supported by the Board Sustainability Committee (BSC) which meets quarterly. The BSC assists the Board of Directors in fulfilling its oversight responsibility in relation to Wilmar's objectives, policies and practices pertaining to sustainability or ESG matters including climate change. These include formulating ESG strategies, identifying ESG-related risks, evaluating ESG performance and targets and monitoring the implementation of ESG related policies and practices. To achieve effective implementation of sustainability throughout the Company, the BSC receives periodic reporting and advisories from the following: 1. SUSTAINABILITY MANAGEMENT TEAM (SMT) which is headed by the Chief Sustainability Officer (CSO) who is assisted by the General Manager – Group Sustainability. The SMT is supported by the Sustainability Department and comprises members across all internal Wilmar departments and operational units. 2. INDEPENDENT SUSTAINABILITY ADVISORY PANEL (ISAP) works with our SMT to provide on-the-ground support to execute and evaluate the implementation of our ESG policies. The ISAP comprises independent sustainability experts and eminent individuals and provides advisories and recommendations related to external stakeholder expectations and global sustainability trends.

(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

(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

☑ Managing environmental dependencies, impacts, risks, and opportunities

Engagement

☑ Managing public policy 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 business strategy which considers environmental issues

☑ Developing a climate transition plan

☑ Implementing a climate transition plan

(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

Board Sustainability Committee (BSC) meets every quarter

(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

Not disclosed

(4.5.3) Please explain

The remuneration framework consists of a fixed and a variable component. The variable component includes an annual bonus tied to the performance of Executive Directors, key management personnel and the company, as well as short and long-term incentives in the form of share options. Relevant key ESG targets were taken into consideration in the annual performance review of our Executive Directors and key management personnel with one of the key targets incorporated in the performance review for FY2023 being our Climate Change performance (e.g. establishment of near-term climate targets). The performance of each senior management member was appraised with reference to the key targets, along with external factors such as changing business environment and industry trends, to determine the executives' remuneration package. The exact breakdown of remuneration percentage is not publicly disclosed.

(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

☑ Corporate executive team

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

☑ Salary increase

☑ Shares

(4.5.1.3) Performance metrics

Targets

☑ Achievement of environmental targets

Strategy and financial planning

☑ Achievement of climate transition plan

Emission reduction

☑ Implementation of an emissions reduction initiative

☑ 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

Engagement

☑ Increased engagement with suppliers on environmental issues

(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

The remuneration framework consists of a fixed and a variable component. The variable component includes an annual bonus tied to the performance of Executive Directors, key management personnel and the company, as well as short and long-term incentives in the form of share options. Relevant key ESG targets were taken into consideration in the annual performance review of our Executive Directors and key management personnel with one of the key targets incorporated in the performance review for FY2023 being our Climate Change performance (e.g. establishment of near-term climate targets). The performance of each senior management member was appraised with reference to the key targets, along with external factors such as changing business environment and industry trends, to determine the executives' remuneration package.

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

The performance indicator is in line with our near-term science-based targets, which form part of our climate transition plan.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Senior-mid management

☑ Procurement manager

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

☑ Promotion

☑ Salary increase

(4.5.1.3) Performance metrics

Engagement

☑ Increased engagement with suppliers on environmental issues

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ The incentives are not linked to an incentive plan, or equivalent (e.g. discretionary bonus in the reporting year)

(4.5.1.5) Further details of incentives

As part of implementation of Wilmar's NDPE policy, our procurement teams are expected to actively verify and filter out companies involved with deforestation (environmental criteria) from their sourcing volumes. If a company has been flagged out due to deforestation risks but is still included in our supply chain, the procurement teams will be negatively impacted during their annual review of performance.

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

The performance indicator is in line with our near-term science-base target (Scope 3), which forms part of our climate transition plan.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Senior-mid management

☑ Process operation manager

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

☑ Promotion

☑ Salary increase

(4.5.1.3) Performance metrics

Targets

☑ Achievement of environmental targets

Emission reduction

☑ Implementation of an emissions reduction initiative

☑ Increased share of renewable energy in total energy consumption

☑ Reduction in absolute emissions

Resource use and efficiency

☑ Reduction in total energy consumption

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ The incentives are not linked to an incentive plan, or equivalent (e.g. discretionary bonus in the reporting year)

(4.5.1.5) Further details of incentives

For palm oil mills that are equipped with methane capture and utilization plants in Malaysia, the efficiency of operating the plants to a targeted level is incorporated into the evaluation for appraisals of managers and engineers. This will thus impact the bonuses and pay increments of the related personnel with better performances leading to bigger monetary rewards. Ensuring an efficient methane capture system allows us to realize actual savings in emissions by reducing the amount of methane being released to the atmosphere from the palm oil mill effluent treatment system, putting us on track to meet our emission reduction targets. Also, with the captured methane used to generate supplementary electricity for mills & housing uses, this reduces our reliance on diesel fuel which would have otherwise been used as the fuel source.

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

The performance indicator is in line with our near-term science-based target, which forms part of our climate transition plan.
[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:

☑ Not defined

(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

☑ IEA 2DS

(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

☑ Policy

☑ Market

☑ Reputation

☑ Technology

☑ Liability

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 2.0ºC - 2.4ºC

(5.1.1.7) Reference year

2020

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2030

☑ 2050

☑ Other, please specify :2022

(5.1.1.9) Driving forces in scenario

Stakeholder and customer demands

☑ Consumer sentiment

☑ Other stakeholder and customer demands driving forces, please specify :Reputational risk leading to boycotts by stakeholders

Regulators, legal and policy regimes

☑ Global regulation

☑ Methodologies and expectations for science-based targets

Relevant technology and science

☑ Other relevant technology and science driving forces, please specify **:**Potential new technologies as alternatives for our products

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

As the qualitative analysis is mainly based on the information and feedback the company has been exposed to thus far, the outcome is still generic and not subjective with no quantitative calculation included.

(5.1.1.11) Rationale for choice of scenario

As part of our preparation for setting SBTi targets, the scenario selected allows us to get an idea of what are the key risks, opportunities and drivers for taking up the SBTi commitment at group-level.

Climate change

(5.1.1.1) Scenario used

Physical climate scenarios

☑ RCP 2.6

(5.1.1.2) Scenario used SSPs used in conjunction with scenario

Select from:

☑ No SSP used

(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

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 2.0ºC - 2.4ºC

(5.1.1.7) Reference year

2020

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2030

☑ 2050

☑ Other, please specify :2022

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Changes to the state of nature

☑ Changes in ecosystem services provision

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

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

As the qualitative analysis is mainly based on the information and feedback the company has been exposed to thus far, the outcome is still generic and not subjective with no quantitative calculation included.

(5.1.1.11) Rationale for choice of scenario

As part of our preparation for setting SBTi targets, the scenario selected allows us to get an idea of what are the key risks, opportunities and drivers for taking up the SBTi commitment at group-level.
[Add row]

C7. Environmental performance - Climate Change

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

Scope 1

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

8800000

(7.5.3) Methodological details

In 2023, we revised our baseline year for Scope 1, 2 and 3 from 2020 to 2022 to better reflect the recent increase in emissions as a result of delayed projects earmarked for execution in 2020 as well as to better align our accounting with the Forest, Land and Agriculture (FLAG) guidance that was launched in September 2022.

Scope 2 (location-based)

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

4900000

(7.5.3) Methodological details

The location-based Scope 2 emission was calculated based on amount of energy purchased and local average emission factor by country or region.

Scope 2 (market-based)

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

4900000

(7.5.3) Methodological details

For the countries where we have access to contractual instruments such as green tariff, energy attribute certificate (EAC) and supplier-specific emission factors, we monitor and report the Scope 2 emission based on the amount of energy purchased and their specific GHG attributes. For rest of the countries, we assume their emission similar to that from location-based approach.

Scope 3 category 1: Purchased goods and services

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

143700000

(7.5.3) Methodological details

The emission was quantified based on volumes of various commodities (including palm, soy, sugar, wheat, rice, etc), chemicals and packaging materials sourced in 2022.

Scope 3 category 2: Capital goods

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

1500000

(7.5.3) Methodological details

The emission was quantified based on spend-based approach and the activity data from Wilmar's 2022 Annual Report.

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

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

2100000

(7.5.3) Methodological details

The fuel- and energy-related emissions, other than those reported under Scope 1 and 2 were quantified based on fuels and energy purchased in 2022.

Scope 3 category 4: Upstream transportation and distribution

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

6400000

(7.5.3) Methodological details

The emission was quantified based on volume of materials and products if the cost of transport was borne by us, and their distance between origin and destination in 2022. For those without such details, assumptions had been made with the guidance from consultant to close the gaps and to improve data quality in future.

Scope 3 category 5: Waste generated in operations

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

500000

(7.5.3) Methodological details

The emission, other than reported under Scope 1 and 2 was quantified based on quantity sent to off-site treatment sites and method of treatment.

Scope 3 category 6: Business travel

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

23000

(7.5.3) Methodological details

The emission was quantified based on spend-based approach and the activity data (including accommodations and flights) from Group Accounts.

Scope 3 category 7: Employee commuting

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

95000

(7.5.3) Methodological details

The emission was quantified based on number of employees by country and external secondary data such as average distance travelled by country and mode of key transportation.

Scope 3 category 8: Upstream leased assets

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

38000

(7.5.3) Methodological details

The emission was quantified based on spend-based approach and the activity data from Wilmar's 2022 Annual Report.

Scope 3 category 9: Downstream transportation and distribution

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

1900000

(7.5.3) Methodological details

The emission was quantified based on volume of products if the cost of transport was borne by the customers, and their distance between origin and destination countries. For those without such details, assumptions had been made with the guidance from consultant to close the gaps and to improve data quality in future.

Scope 3 category 10: Processing of sold products

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

1500000

(7.5.3) Methodological details

The emission was quantified based on volume of sold products which could potentially be processed by third-party companies. For those products that have vast range of applications, they were excluded from the scope according to GHG Protocol.

Scope 3 category 11: Use of sold products

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

500000

(7.5.3) Methodological details

The emission was quantified based on volume of sold products which could be directly used by end consumers only.

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

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

900000

(7.5.3) Methodological details

The emission was quantified based on volume of packaging materials and method of end-of-life treatment by country.

Scope 3 category 13: Downstream leased assets

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

The emission from the downstream leased assets such as tankers and dry bulk vessels had been accounted for under our Scope 1 due to operational control criteria.

Scope 3 category 14: Franchises

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

We do not operate any franchising business.

Scope 3 category 15: Investments

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

500000

(7.5.3) Methodological details

The emission was quantified based on spend-based approach and the activity data from Wilmar's 2022 Annual Report.

Scope 3: Other (upstream)

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

As an agribusiness company, more than 90% of the total Scope 3 emissions is expected to be from purchased goods. As we also take into account other 14 categories as listed under GHG Protocol in our mapping, we do not consider other source(s) of Scope 3 emissions relevant.

Scope 3: Other (downstream)

(7.5.1) Base year end

12/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

As an agribusiness company, more than 90% of the total Scope 3 emissions is expected to be from purchased goods. As we also take into account other 14 categories as listed under GHG Protocol in our mapping, we do not consider other source(s) of Scope 3 emissions relevant.
[Fixed row]

(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:
☑ Low-Carbon Investment (LCI) Registry Taxonomy

(7.74.1.3) Type of product(s) or service(s)

Power
☑ Other, please specify **:**Biomass

(7.74.1.4) Description of product(s) or service(s)

All of Wilmar's sugar mills in Australia and India are equipped with cogeneration plants to generate both electricity and heat simultaneously. While we primarily use this energy for our own mills, some mills have been designed to generate renewable electricity for export. To ensure a readily available source of renewable energy outside of the traditional crushing season, we stockpile surplus bagasse in specially designed pads at one of our mills. In 2023, we exported a total of 478,676 MWh to the national grid from our mills in Australia and India.

(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:

☑ Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Use stage

(7.74.1.8) Functional unit used

1 kWh electricity usage from grid versus biomass (i.e. bagasse)

(7.74.1.9) Reference product/service or baseline scenario used

Local grid electricity

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:

☑ Use stage

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

417776

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

We followed an attributional approach to our calculation and measured the difference in emissions during usage stage between the renewable electricity generated from bagasse and local grid electricity. Rationale of allocating for usage stage only is because it could simplify the calculation by excluding the uncertainties such as the potential emissions due to land use change and wide fuel mix used in the grid. We used the following Global Warming Potential 100 (GWP100) factors from the IPCC 6th assessment report: Carbon Dioxide (CO2): 1 Non-Fossil Methane (CH4): 27 Nitrous Oxide (N2O): 273 We estimated and compared the GHG emission per kWh electricity from bagasse and grid. To estimate emissions from combustion of bagasse, we applied the total electricity generated into the GHG Protocol's calculator under "Other primary solid biomass fuels". At the same time, we used the grid emission factors from local governmental data and Institute for Global Environmental Strategies (IGES) to estimate the GHG emission from grid at the same amount of electricity sourced. It resulted in total avoided emissions of 417,776 metric tons CO2e by using 478,676 MWh electricity generated from bagasse versus from the local grid. The calculation does not account for the biogenic emissions from combustion of bagasse.

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.087

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:

☑ Low-Carbon Investment (LCI) Registry Taxonomy

(7.74.1.3) Type of product(s) or service(s)

Biofuels

☑ Bioethanol

(7.74.1.4) Description of product(s) or service(s)

In Australia, we are the largest manufacturer of sugar-based ethanol with a capacity of 60 million litres of bioethanol a year at our Sarina Distillery. About two-thirds of this ethanol is sold into the Australian market for use in E10 and E85 blends of petrol. Bioethanol is the most widely used alternative fuel in the world. It is a renewable derived from natural ingredients, making it a sustainable fuel option for motorists. Our bioethanol is produced from molasses – a by-product of the sugar manufacturing process. In India, we are the leading supplier of ethanol to oil marketing companies. Its distilleries produce both potable alcohol and ethanol that can be blended with petroleum. Having achieved the target of 10% ethanol blending in June 2022, the Indian government has pushed forward its target of 20% by five years to 2025. Our ethanol distillery plants are located in states of Karnataka and have the capacity of 1,250 kilolitres per day.

(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:

☑ Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Use stage

(7.74.1.8) Functional unit used

1 litre motor fuel usage derived from petroleum vs biomass (i.e. sugar production)

(7.74.1.9) Reference product/service or baseline scenario used

Motor gasoline

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:

☑ Use stage

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

364746

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

We followed an attributional approach to our calculation and measured the difference in emissions during usage stage between the bioethanol and motor gasoline. Rationale of allocating for usage stage only is because it could simplify the calculation by excluding the upstream production emissions which require further evaluation and assessment. We used the following Global Warming Potential 100 (GWP100) factors from the IPCC 6th assessment report: Carbon Dioxide (CO2): 1 Non-Fossil Methane (CH4): 27 Nitrous Oxide (N2O): 273 We estimated and compared the GHG emission profile between bioethanol and petroleum-based gasoline on the same unit basis. To estimate the emissions from bioethanol, we applied the total quantity of bioethanol sold into the GHG Protocol's Transport Tool under "Ethanol". At the same time, we applied the emission factor of petroleum-based gasoline using the same quantity sold to calculate the resultant emission for comparison. It resulted in total avoided emissions of 364,746 metric tons CO2e by using 160 million litres of bioethanol vs petroleum-based gasoline. The calculation does not account for the biogenic emissions from combustion of bioethanol.

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.241

Row 3

(7.74.1.1) Level of aggregation

Select from:

☑ Group of products or services

(7.74.1.2) Taxonomy used to classify product(s) or service(s) as low-carbon

Select from:

☑ Low-Carbon Investment (LCI) Registry Taxonomy

(7.74.1.3) Type of product(s) or service(s)

Biofuels

☑ Other, please specify **:**Biofuel feedstocks

(7.74.1.4) Description of product(s) or service(s)

We are the world's largest producer of palm biodiesel and biofuels. The biofuels can be used in a variety of applications ranging from cogeneration of heat/electricity to transport fuel. The palm oil supplied by Wilmar meets the minimum GHG emission savings of 35% as stipulated in the Renewable Energy Directive (RED) and usually ranges from 40-60%. Therefore, the use of our palm oil enables avoided GHG emissions as compared to diesel from crude oil. Wilmar is a member of the International Sustainability and Carbon Certification (ISCC) association and has been an active user of the system since 2011 to facilitate trade to the renewable energy market in the European Union. The ISCC is an international certification system covering all kinds of bio-based feedstocks and renewables catering to energy, food, feed and chemicals sectors. It incorporates sustainability criteria such as reduction of greenhouse gas emissions, sustainable use of land, protection of natural biospheres and social sustainability. Achieving ISCC certification enables delivery of products compliant with the sustainability criteria laid out by the EU's RED.

(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:

☑ Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Cradle-to-grave

(7.74.1.8) Functional unit used

1 litre diesel usage from petroleum vs biofuel

(7.74.1.9) Reference product/service or baseline scenario used

Petroleum-based diesel

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:

☑ Cradle-to-grave

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

600904

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

We followed an attributional approach to our calculation and measured the difference in cradle-to-grave emissions between the biofuels and diesel. Based on the EU RED's requirement, the biofuels are required to be able to reduce the GHG emissions by minimum 35%. Wilmar's biofuels are able to reduce the emissions by 40-60% as compared to the fossil fuel comparators. We used the following Global Warming Potential 100 (GWP100) factors from the IPCC 6th assessment report: Carbon Dioxide (CO2): 1 Non-Fossil Methane (CH4): 27 Nitrous Oxide (N2O): 273 Based on the baseline fossil fuel's life cycle emission which is 83.8 gCO2e / MJ, we assume 50% (middle of 40-60%) lower GHG emission using our biofuels to calculate the avoided emissions. In 2023, we sold around 388,000 MT certified biofuels. Based on the lower heating value of 0.037 MJ/MT, the quantity would be converted to total energy content in order to calculate the avoided emissions. It resulted in total avoided emissions of 600,904 metric tons CO2e.

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.45

Row 4

(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:

☑ Low-Carbon Investment (LCI) Registry Taxonomy

(7.74.1.3) Type of product(s) or service(s)

Other

☑ Other, please specify **:**Organic fertilisers

(7.74.1.4) Description of product(s) or service(s)

In India, the press mud and filter cake obtained as waste is mixed with effluents from our distillery operations to manufacture organic fertilisers, which is eco-friendly as well as cost-effective than chemical fertilisers. It is a 100% natural product that enriches the soil fertility and is useful for all soil types and crops. It helps to avoid the emissions from the upstream production as compared to the chemical fertilisers.

(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:

☑ Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Cradle-to-cradle/closed loop production

(7.74.1.8) Functional unit used

1 tonne fertiliser that is chemically-produced vs 100% biomass

(7.74.1.9) Reference product/service or baseline scenario used

Chemical fertilisers

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:

☑ Cradle-to-grave

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

12940

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

We followed an attributional approach to our calculation and measured the difference in emissions during upstream production stage between the organic and chemical fertilisers. Most of the avoided emissions occur where the organic fertilisers are produced as waste from our distillery operations and require no further upstream production processes where inputs such as materials, energy and logistics are required. We used the following Global Warming Potential 100 (GWP100) factors from the IPCC 6th assessment report: Carbon Dioxide (CO2): 1 Non-Fossil Methane (CH4): 27 Nitrous Oxide (N2O): 273 The Nitrogen (N), Phosphorus (P) and Potassium (K) content of the organic fertilisers are estimated in mass unit. Each nutrient type (N, P and K) would be multiplied with the respective production emission factor from BioGrace standard values. Summation of these emissions, which is estimated to be 12,940 metric tons CO2e would be the potential avoided emissions by replacing chemical fertilisers with the organic ones.

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.002

Row 5

(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:

☑ Low-Carbon Investment (LCI) Registry Taxonomy

(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)

We are the world's largest producer of palm biodiesel. We produce palm oil methyl ester and palm olein methyl ester. Our biodiesel plants are located in Malaysia and Indonesia. The palm oil supplied by Wilmar meets the minimum GHG emission savings of 35% as stipulated in the Renewable Energy Directive (RED) and usually ranges from 40-60%. Therefore, the use of our palm oil enables avoided GHG emissions as compared to diesel from crude oil. Wilmar is a member of the International Sustainability and Carbon Certification (ISCC) association and has been an active user of the system since 2011 to facilitate trade to the renewable energy market in the European Union. The ISCC is an international certification system covering all kinds of bio-based feedstocks and renewables catering to energy, food, feed and chemicals sectors. It incorporates sustainability criteria such as reduction of greenhouse gas emissions, sustainable use of land, protection of natural biospheres and social sustainability. Achieving ISCC certification enables delivery of products compliant with the sustainability criteria laid out by the EU's RED.

(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:

☑ Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Cradle-to-grave

(7.74.1.8) Functional unit used

1 litre diesel usage from petroleum vs palm biodiesel

(7.74.1.9) Reference product/service or baseline scenario used

Petroleum-based diesel

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:

☑ Cradle-to-grave

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

75513

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

We followed an attributional approach to our calculation and measured the difference in cradle-to-grave emissions between the biodiesel and diesel. Based on the EU RED's requirement, the biodiesel is required to be able to reduce the GHG emissions by minimum 35%. Wilmar's biodiesel is able to reduce the emissions by 40-60% as compared to the fossil fuel comparators. We used the following Global Warming Potential 100 (GWP100) factors from the IPCC 6th assessment report: Carbon Dioxide (CO2): 1 Non-Fossil Methane (CH4): 27 Nitrous Oxide (N2O): 273 Based on the baseline fossil fuel's life cycle emission which is 83.8 gCO2e / MJ, we assume 50% (middle of 40-60%) lower GHG emission using our biodiesel to calculate the avoided emissions. In 2023, we sold around 49,000 MT certified biofuels. Based on the lower heating value of 0.037 MJ/MT, the quantity would be converted to total energy content in order to calculate the avoided emissions. It resulted in total avoided emissions of 75,513 metric tons CO2e.

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.085

[Add row]

C9. Environmental performance - Water security

(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:

☑ Less than 1%

(9.2.5.3) Please explain

Using WRI Aqueduct Water Risk Atlas with 'water stress' as the indicator, one of our plantations is located at high risk area (40-80%) and the rest located in the areas with water risk less than or equal to 40%. The denominator used to calculate the percentage of total palm oil produced in areas with water stress was the quantity of Fresh Fruit Bunch (FFB) produced from all of our plantations. The percentage had increased marginally compared to previous year and is anticipated to be relatively stagnant next year because the countries where we operate own plantations have high annual precipitation. This location-based metric is actively monitored to inform strategy in addressing any potential shortage of water supply, where the quantity of water available is very critical in growing the crops and it directly impacts the production volume.

Sugar

(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

Using WRI Aqueduct Water Risk Atlas with 'water stress' as the indicator, the region where we have our sugarcane farms (Australia) has low water stress risk (10%) and thus not considered water-stressed areas (minimum more than 40%). The percentage was the same as the previous year and is anticipated to be similar next year. This location-based metric is actively monitored to inform strategy in addressing any potential shortage of water supply, where the quantity of water available is very critical in growing the crops and it directly impacts the production volume.
[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:

☑ 1-10

(9.2.6.3) Please explain

Using WRI Aqueduct Water Risk Atlas with 'water stress' as the indicator, 1.2% of total sourced volume from the areas with water stress. The percentage had increased slightly compared to previous year because the scope had been expanded to include CPO, PK and PKO supply from third-party. In next year, we expect this percentage to be stagnant because the countries where our suppliers are based in have high average rainfall and lower water stress risk. This location-based metric is actively monitored to inform strategy in addressing any potential shortage of water supply across our supply chain which may directly disrupt the supply of palm oil materials to our processing plants.

Sugar

(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:

☑ 26-50

(9.2.6.3) Please explain

Using WRI Aqueduct Water Risk Atlas with 'water stress' as the indicator, 33.0% of total sourced volume from the areas with water stress. There was no significant change compared to previous year and we project it to be almost similar next year. This location-based metric is actively monitored to inform strategy in addressing any potential shortage of water supply across our supply chain which may directly disrupt the supply of sugarcane and raw sugar to our processing plants.
[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

75

(9.3.3) % of facilities in direct operations that this represents

Select from:

☑ 1-25

(9.3.4) Please explain

75 sites, representing 18.8% of total number of sites globally are located in water-stressed areas in the reporting year. Those sites with with high (40-80%) and extremely high (80%) baseline water stress risk score were considered located in water-stressed areas via World Resources Institute's Aqueduct tool. Note that for the purpose of reporting, our definition of 'facility' is the same as our definition for a site i.e. for which there could be several different types of plants operating in the same location.

Upstream value chain

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ No, we have not assessed this value chain stage for facilities with water-related dependencies, impacts, risks, and opportunities, but we are planning to do so in the next 2 years

(9.3.4) Please explain

We are still in progress in engaging relevant stakeholders in order to map our supply base for other key commodities than palm and sugar. This process might take more than 2 years due to the number of commodities we source and prioritization of other environmental issues such as climate change.
[Fixed row]