

# Welcome to your CDP Climate Change Questionnaire 2019

## C0. Introduction

### C0.1

**(C0.1) Give a general description and introduction to your organization.**

Wilmar International Limited, founded in 1991 and headquartered in Singapore, is today Asia's leading agribusiness group. Wilmar is ranked amongst the largest listed companies by market capitalisation on the Singapore Exchange.

Wilmar's business activities include oil palm cultivation, oilseed crushing, edible oils refining, sugar milling and refining, manufacturing of consumer products, specialty fats, oleochemicals, biodiesel and fertilisers as well as flour and rice milling. At the core of Wilmar's strategy is an integrated agribusiness model that encompasses the entire value chain of the agricultural commodity business, from cultivation, processing, merchandising to manufacturing of a wide range of agricultural products. It has over 500 manufacturing plants and an extensive distribution network covering China, India, Indonesia and some 50 other countries. The Group has a multinational workforce of about 90,000 people.

Wilmar's portfolio of high quality processed agricultural products is the preferred choice of consumers and the food manufacturing industry. Its consumer-packed products have a leading share in many Asian and African countries. Through scale, integration and the logistical advantages of its business model, Wilmar is able to extract margins at every step of the value chain, thereby reaping operational synergies and cost efficiencies. Wilmar is a firm advocate of sustainable growth and is committed to its role as a responsible corporate citizen.

### C0.2

**(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Row 1	January 1, 2018	December 31, 2018	No

### C0.3

**(C0.3) Select the countries/regions for which you will be supplying data.**

Australia  
Ghana  
Indonesia

Malaysia  
Myanmar  
New Zealand  
Nigeria

## C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

USD

## C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.**

Operational control

## C-AC0.6/C-FB0.6/C-PF0.6

**(C-AC0.6/C-FB0.6/C-PF0.6) Are emissions from agricultural/forestry, processing/manufacturing, distribution activities or emissions from the consumption of your products – whether in your direct operations or in other parts of your value chain – relevant to your current CDP climate change disclosure?**

	Relevance
Agriculture/Forestry	Own land only [Agriculture/Forestry only]
Processing/Manufacturing	Direct operations only [Processing/manufacturing/Distribution only]
Distribution	Direct operations only [Processing/manufacturing/Distribution only]
Consumption	No

## C-AC0.6g/C-FB0.6g/C-PF0.6g

**(C-AC0.6g/C-FB0.6g/C-PF0.6g) Why are emissions from the consumption of your products not relevant to your current CDP climate change disclosure?**

Row 1

### Primary reason

Evaluated but judged to be unimportant

### Please explain

The information on the emissions from the consumption of our products are not relevant to climate-change disclosure as the details are not utilised by the company internally in any decision-making process for climate change strategies.

## C-AC0.7/C-FB0.7/C-PF0.7

(C-AC0.7/C-FB0.7/C-PF0.7) Which agricultural commodity(ies) that your organization produces and/or sources are the most significant to your business by revenue?

Select up to five.

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**Agricultural commodity**

Palm Oil

**% of revenue dependent on this agricultural commodity**

40-60%

**Produced or sourced**

Both

**Please explain**

A big percentage of our revenue (about 40%) is derived from the processing, merchandising, branding and distribution of palm and lauric oils related products including oleochemicals, specialty fats and biodiesel. The figure is calculated based on the reported revenue in Annual Report 2018 associated with "Tropical Oils" in the past financial year.

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**Agricultural commodity**

Sugar

**% of revenue dependent on this agricultural commodity**

Less than 10%

**Produced or sourced**

Both

**Please explain**

Sugar constitutes roughly 9% of our total revenue in the past financial year and this is derived from the revenue generated from all of our sugar milling, merchandising, refining and consumer products.

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**Agricultural commodity**

Other, please specify  
Oilseeds and Grains

**% of revenue dependent on this agricultural commodity**

40-60%

**Produced or sourced**

Sourced

### Please explain

The "Oilseeds and Grains" segment consists of the processing, merchandising, branding and distribution of a wide range of agricultural products including non-palm and lauric edible oils, oilseeds, flour and rice as well as downstream products such as wheat and rice noodles in consumer pack, medium pack and in bulk. The revenue percentage (less than 50%) is not attributed to one single commodity only but the sum revenues from several agricultural commodities combined (soy, wheat, rice, rapeseed, sunflower seed etc.) and thus contribution from any single commodity would be lower than palm in general.

## C1. Governance

### C1.1

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

#### C1.1a

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Board Chair	Wilmar's Chairman and CEO is responsible for the oversight of our Integrated Policy (which covers climate-related issues) while being supported by the Risk Management Committee for management of sustainability risks.
Board-level committee	Climate-related risk management is incorporated into the Group's risk management structure under the purview of the Board's Risk Management Committee, which reviews general sustainability issues (including climate-related items) on a quarterly basis.

#### C1.1b

**(C1.1b) Provide further details on the board's oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy	On a quarterly basis, a sustainability paper which includes climate-related discussions is presented by

	<p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Monitoring implementation and performance of objectives</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>the Chief Sustainability Officer to Risk Management Committee (RMC) for review before the finalized issues are raised to the Board of Directors for their approval. Included within the paper are the update on the overall approach to managing climate-related risks as well as implementation progress against set goals.</p>
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## C1.2

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Other, please specify Group Sustainability General Manager	Both assessing and managing climate-related risks and opportunities	Quarterly

## C1.2a

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

Wilmar's Chief Sustainability Officer (CSO) reports directly to the CEO as well as Board of Directors and spearheads the overall strategy of the Group's global sustainability agenda. Reporting to CSO is the Group Sustainability General Manager who is responsible for the implementation of these policies and strategies in Wilmar's supply chain, as well as reviewing the progress of execution. The implementation and monitoring of Wilmar's sustainability strategies is delegated to the Sustainability Department which is staffed by more than 60 employees globally, combining a wide range of relevant local and technical expertise across various countries. Through the efforts of the sustainability department, climate related issues ranging from deforestation risks to emissions reduction programs are actively being monitored

on the ground and analyzed accordingly before reporting back up the reporting line for management review.

## C1.3

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

Yes

### C1.3a

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

#### Who is entitled to benefit from these incentives?

Other, please specify

Palm oil mill managers and engineers

#### Types of incentives

Monetary reward

#### Activity incentivized

Emissions reduction project

#### Comment

For palm oil mills that are equipped with methane capture and utilization plants in Malaysia, the efficiency of operating the plants to a reasonable 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.

## C2. Risks and opportunities

### C2.1

**(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.**

	From (years)	To (years)	Comment
Short-term	0	1	
Medium-term	1	3	
Long-term	3	10	

## C2.2

**(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.**

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

## C2.2a

**(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.**

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	Various risks of differing time-frames and importance are assessed and monitored continuously by the sustainability team while on a quarterly basis, major updates on these risks and actions taken are consolidated for the RMC to review.

## C2.2b

**(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.**

Wilmar has operations teams working on site and at regional levels, a communications team at corporate level, and a Technical Advisory Group comprising Non-Governmental Organizations (NGOs) and sustainability partners that advise on specific issues where broader perspectives are needed. 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 (3rd party compliance teams), or allegations of environmental damage by NGOs on company level (communications team). Identified risks are assessed through a risk matrix (5 levels each of likelihood and consequence) by individual level managements before being reported up to the Joint Steering Committee (where CSO & Group Sustainability GM sit) to deliberate and provide proposals to mitigate the risks. The Risk Management Committee at Board level will review the overall risk management guidelines/framework, policies & systems and recommends risk limits to ensure effective governance and oversight is achieved. The risk tolerance level is set and regularly reviewed by the Board and all identified risks are assessed against similar limits (regardless of climate-related or any other sustainability-linked risks).

Wilmar works together with AidEnvironment 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 to assist in the identification of risk process, an effective

grievance mechanism can be a useful tool in the overall monitoring process. As part of the No Deforestation, No Peat, No Exploitation Policy announced by Wilmar in December 2013, a Grievance Procedure was established to enable any stakeholder to raise a grievance against any party. This allows the company to identify and mitigate any potential risks early that might impact Wilmar on an asset/company level.

## C2.2c

**(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?**

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	To conduct a business in any country, it is crucial for the company to adhere to the rules and regulations set and thus, this indicator (and emerging regulation below) is very relevant for inclusion within Wilmar's risk assessment. Example: on an operational level for palm oil mills in Malaysia, due to the lower limit of discharge emissions allowed for boiler stack monitoring, more investments have to be made to ensure the mills are kept within the acceptable range or run the risk of getting fined by the Department of Environment (or revoke of permit for multiple offences).
Emerging regulation	Relevant, always included	Increased environmental regulations lead to increased capital and operational costs, restrictions in expansion of production land, etc. Similarly, with more scrutiny on GHG emissions like carbon tax introduction or requirements to report on GHG emissions, these are important factors included in the overall risk assessment. Examples: Imposing of carbon tax, adoption of sustainable policies for operations (Indonesia Sustainable Palm Oil, Malaysia Sustainable Palm Oil) and mandating of methane capture plants for new or expanded palm oil mills in Malaysia.
Technology	Relevant, sometimes included	With Wilmar's integrated business model encompassing the entire value chain of agricultural commodity processing business, the company is on a constant lookout for any relevant new technological improvements or innovations that support the transition to a lower-carbon, energy-efficient economic system. Risks for potential technologies will be assessed prior to further engagement/investments. Example: feasibility of insects as alternative protein source.
Legal	Relevant, always included	Similar to Current Regulations and Emerging Regulations indicators.



Market	Relevant, always included	With increased pressure on managing sustainability performance including climate-related impacts from consumers, there is a risk of reduced supplier pool due to climate change non-compliant suppliers. Example: increasing requests from customers for various sustainability disclosures including GHG emissions (CDP Climate Change).
Reputation	Relevant, always included	With Wilmar being the leader in the industry, the company tends to be targeted for campaigns related to industry-wide issues. Increased scrutiny from NGOs and consumers on such campaigns can lead to potential reputational impacts, reduced demand or boycotts, etc. Example: increasing focus on sustainability by customers on scorecards (DJSI, Ecovadis etc.) which include climate-related disclosures.
Acute physical	Relevant, always included	Temperature risk and increased frequency of extreme weather events are major risks especially on plantations. Examples: increased volatility of crop production, spread of new diseases and pests, disruption of ecosystem services, forest fires, etc.
Chronic physical	Relevant, sometimes included	Resource scarcity with impacts on operations. Example: restrictions on resource extraction, e.g. groundwater for processing
Upstream	Relevant, always included	Wilmar is involved in the business of oil palm and sugar cultivation in countries subjected to climate impacts. Example: Changes in weather pattern affects production cycle of plantation while extreme trends of precipitation such as heavy rainfall or long drought pose a significant risk to our operating activities.
Downstream	Relevant, always included	Wilmar is also involved in the mid to downstream processing operations and thus any impacts to our upstream supply chain will directly cause a detrimental effect on our raw material sources.

## C2.2d

### (C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

The risks and opportunities identified are prioritized based on their potential impacts on several key areas, including the business's stakeholder value, environmental footprint and socio-community welfare. The effects on the individual key factors are reviewed and weighted equally in order to ensure the sustainability of not only our business but also the community and environment we operate in. With the high priority issues determined, a strategy to handle these through major action plans & budgets are determined through the Joint Steering Committee (with CSO and Group Sustainability GM) for approval by the Board. This process applies to both climate-related risks and opportunities where we see value yet to be unlocked.

As an example of how the process is applied to manage physical risks, our operations have seen the weather patterns becoming more unpredictable 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.

Furthermore, consumers globally are favoring and moving towards responsibly-produced commodities and as such, the industry must adjust to market needs and expectations if it wants to remain competitive. This transitional risk on reputation and market access has resulted in Wilmar taking a long-term holistic approach to sustainability that is fully integrated into our business model. Since 2005, Wilmar has been an active member of the Roundtable on Sustainable Palm Oil (RSPO), an international multi-stakeholder organisation that promotes the production and use of sustainable palm oil. The Group adopts an environmental management system conforming to the RSPO Principles & Criteria and the United Nations Global Compact, amongst others. In managing oil palm plantations, it upholds stringent policies of zero-burning and no-development on peatland while respecting the rights of communities by adopting the 'free, prior and informed consent' (FPIC) principle.

With all the initiatives taken above, it culminated in Wilmar announcing its No Deforestation, No Peat, No Exploitation Policy in December 2013 that aims to advance an environmentally and socially responsible palm oil industry (most substantial business decision made for long term strategy influenced by the need for adaptation). Among the commitments is the effort to map out our supply chain which will help in identifying challenges ahead and develop solutions that are workable and realistic. Also, the policy outlines a clear mandate for transparency which has resulted in the launch of the Wilmar Sustainability Dashboard in January 2015, a microsite dedicated to reporting on Wilmar's sustainability endeavour, in particular, the implementation progress of its policy. The commitment, a first in the palm oil industry, provided a boost to the company's reputation and in turn, has led to almost all our industry peers announcing similar sustainability policy over the last few years. Wilmar's headway in sustainability and transparency is widely regarded as one of our key differentiating competencies that put us in a better position to cater to the needs of our customers, who are also on a tight timeline to meet their sustainable sourcing policies.

## C2.3

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.3a

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

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**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Policy and legal: Mandates on and regulation of existing products and services

**Type of financial impact**

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

**Company- specific description**

With countries we operate in having committed to the Paris Agreement and the Intended Nationally Determined Contributions (INDCs), there is likely possibility for the emission reductions commitment to be delegated down to industries and major companies. 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.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

680,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

Depending on how severe an emission reduction is required from our operations, additional investments would have to be put in place to ensure compliance. In worst case scenario, operations that are unable to meet the new requirements could have huge financial implications if business licenses and production approvals are not renewed. Considering 100% output from plantations are processed in our own mills and supplied to our manufacturing operations, the estimated volume of crude palm oil and palm kernel that could be disrupted with closure of own mill operations could be around 6% of refineries' supply, which can roughly translate to about US\$ 680 million potential financial impact (basis of 2018 revenue from Tropical Oils manufacturing & merchandising).

### **Management method**

In order to ensure our operations can meet any potential stricter requirements, the Group has started working towards implementing methane capture plants at our major mills in Malaysia and Indonesia.

### **Cost of management**

86,000,000

### **Comment**

With an estimated cost of about USD 2 million for a covered lagoon system to capture and utilise the biogas from Palm Oil Mill Effluent, the total capital cost to implement the system in all mills in Malaysia and Indonesia would be estimated to be around US\$ 86 million. Subsequently, the mills will have to incur the operational costs of running the system and expenses related to maintenance and plant upkeep until the end of system lifetime.

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### **Identifier**

Risk 2

### **Where in the value chain does the risk driver occur?**

Direct operations

### **Risk type**

Physical risk

### **Primary climate-related risk driver**

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

### **Type of financial impact**

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

### **Company- specific description**

Changes in weather pattern affects the production cycle of plantation while extreme trends of precipitation (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, 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 risks as well.

**Time horizon**

Long-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

5,100,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

Erratic weather conditions like heavy rainfall can reduce the yield obtained from the palm oil trees (fruits saturated with water, difficulty to gain access for harvesting, etc.). This can impact the company financially due to the lower yield of crops or reduction in harvests. The potential financial impact would hit the revenue from the plantation segment (assuming 10% basis of 2018 revenue figure).

**Management method**

Investments into Research & Development (R&D) to develop palm seedlings with better resilience to diseases/pests and drought tolerant. Our Indonesia R&D laboratory focuses on biotechnology research to enhance our competitiveness and sustainability in the oil palm industry.

By educating and preparing the staff 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. Alleviate climate change impacts based on principles of sustainable management & production while improving our infrastructure to make it resistant against negative climate impacts.

For suppliers, the company actively engages and shares best management practices to ensure supply chain continuity.

**Cost of management**

## Comment

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### Identifier

Risk 3

### Where in the value chain does the risk driver occur?

Customer

### Risk type

Transition risk

### Primary climate-related risk driver

Market: Changing customer behavior

### Type of financial impact

Reduced demand for goods and/or services due to shift in consumer preferences

### Company- specific description

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

### Time horizon

Medium-term

### Likelihood

Likely

### Magnitude of impact

Medium

### Are you able to provide a potential financial impact figure?

No, we do not have this figure

### Potential financial impact figure (currency)

### Potential financial impact figure – minimum (currency)

### Potential financial impact figure – maximum (currency)

### Explanation of financial impact figure

Lower market share due to reduced demands of goods/services that does not meet the necessary requirements of clients (e.g. segregated supply of certified product with lower emission footprint).

#### **Management method**

Alignment of public policy positions with sustainability goals by launching the Integrated Policy on No Deforestation No Peat No Exploitation in December 2013. In addition to the policy, Wilmar is committed to other relevant and globally recognised 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.

#### **Cost of management**

#### **Comment**

Cost of maintaining the policy and other certifications would come from the verification and audit works as well as engagement with other stakeholders on public policies, supporting them in the sustainability journey so that it aligns with our own policy work.

## **C2.4**

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

### **C2.4a**

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

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#### **Identifier**

Opp1

#### **Where in the value chain does the opportunity occur?**

Customer

#### **Opportunity type**

Markets

#### **Primary climate-related opportunity driver**

Access to new markets

#### **Type of financial impact**

Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

**Company-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.

**Time horizon**

Current

**Likelihood**

Virtually certain

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The bioenergy market has grown further with the adoption of the Directive and provides the opportunity for company to develop their biofuel portfolio as well as build on the certified sustainable oil supplies (ISCC, RSPO etc.).

**Strategy to realize opportunity**

Wilmar operations that supply oil to the EU market to be certified accordingly based on commercial considerations.

**Cost to realize opportunity**

**Comment**

Cost is mainly directed towards managing the traceability and sustainability of the supply chain for the feedstock in biofuels as well as the annual cost of audit to verify the compliance to certification standards.



**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of lower-emission sources of energy

**Type of financial impact**

Reduced operational costs (e.g., through use of lowest cost abatement)

**Company-specific description**

With biogas (high proportion of methane) generated from palm oil mill effluent being a free source of 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 fuel cost.

**Time horizon**

Current

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

200,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

With methane captured from palm oil mill effluent (POME) treatment systems and utilized in a biogas engine to generate electricity, this allows the site to replace diesel as fuel for electricity generation as well as biomass (fibre and shell) as fuel for energy generation in boilers. The savings from using less diesel and increased sales of biomass externally are estimated to be around US\$ 200,000 per annum per plant depending on the diesel price. With an expected life expectancy for the methane

capture plant to be around 25 years, the total potential savings that could be accumulated over the lifespan is US\$ 5 million.

#### 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.

#### Cost to realize opportunity

2,000,000

#### Comment

The estimated cost to construct a new methane capture plant with biogas utilization facilities is around USD 2 million.

## C2.5

**(C2.5) Describe where and how the identified risks and opportunities have impacted your business.**

	Impact	Description
Products and services	Impacted	<p>With the opening up of new market access for biofuel into Europe, Wilmar has capitalised on the opportunity and started pursuing the ISCC standard (certification scheme that demonstrates compliance with EU RED requirements) which are developed for the biomass and bioenergy sectors. As of end 2018, 36 sites across the biodiesel supply chain has been certified and certification of further sites will be determined based on commercial considerations.</p> <p>Reduced demand from consumers for our products due to climate-related issues have not yet materialized as we actively engage with our clients to understand their needs and to address concerns whenever possible.</p>
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	<p>Adverse weather changes impact not only our own operations but our supply chain as well. Erratic weather conditions can negatively affect the production yield of crops from our suppliers and extreme weather situations can disrupt the transport delivery of crops in a timely manner as well (delay in processing time of crops has negative consequences on the crop quality). The potential timeline and magnitude of such impact varies depending on each geographical location and commodity. As example, the 2016 El Nino with lower rainfall stressed the palm trees and caused a decrease in yield for subsequent years. This impacted our overall supply of crops to our mills in the affected period and the lower volume meant some refineries were under-utilized.</p>

Adaptation and mitigation activities	Impacted	In order to adapt to increasingly stricter government regulations on climate-related issues, the risk of non-compliance can lead to non-renewal of business licenses and production approvals. The financial implications can be huge considering the loss of income from crude palm oil (CPO) and palm kernel sales for the affected operations.
Investment in R&D	Not yet impacted	Due to the physical risks brought about by climate change, we have had to invest heavily in R&D (e.g. drought tolerant and pests/diseases resilient variants) to mitigate the potential impacts on our plantations which could materialize in the long term (>5 years).
Operations	Impacted	<p>In order to adapt to increasingly stricter government regulations on climate-related issues, the risk of non-compliance can lead to non-renewal of business licenses and production approvals. The financial implications can be huge considering the loss of income from crude palm oil (CPO) and palm kernel sales for the affected operations.</p> <p>Erratic weather conditions can negatively affect the production yield of crops from our own operations while extreme weather situations can disrupt the transport delivery of crops in a timely manner as well (delay in processing time of crops has negative consequences on the crop quality). The potential timeline and magnitude of such impact varies depending on each geographical location and commodity.</p> <p>As example, the 2016 El Nino with lower rainfall stressed the palm trees and caused a decrease in yield for subsequent years. This impacted our overall supply of crops to our mills in the affected period and the lower volume meant some refineries were under-utilized.</p>
Other, please specify	We have not identified any risks or opportunities	

## C2.6

**(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.**

	Relevance	Description
Revenues	Impacted	With the new market access for biofuel, this can impact projected revenue in the coming years. The magnitude of impact depends on how strong the market demand can be sustained for low-emissions biofuel in future.
Operating costs	Not yet impacted	With extreme weather trends or erratic weather patterns, this can lead to increased operating costs for our plantations as

		more actions have to be taken to mitigate the flood/drought impact and alternative longer delivery routes have to be taken to ensure crops are processed in time. Although the impact has not been felt yet (potentially in the long term), this would become an increasing cost for operations in future so budgets have to be prepared for infrastructure upgrades to ensure a resilient operation,
Capital expenditures / capital allocation	Impacted	With stricter government regulations on emissions from operations, additional capital expenditures have to be allocated to invest in additional treatment system in order to meet the requirements. Also, in order to increase our operations' resistance to adverse climate impacts, more capital investments have to be budgeted in to improve the relevant infrastructure.
Acquisitions and divestments	We have not identified any risks or opportunities	
Access to capital	We have not identified any risks or opportunities	
Assets	Impacted	Assets like operational facilities could be impacted by extreme weather phenomena like hurricane or wild fires due to extended drought seasons.
Liabilities	We have not identified any risks or opportunities	
Other	We have not identified any risks or opportunities	

## C3. Business Strategy

### C3.1

**(C3.1) Are climate-related issues integrated into your business strategy?**

Yes

## C3.1a

**(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?**

Yes, qualitative

## C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b

**(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.**

No, we do not have a low-carbon transition plan

## C3.1c

**(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.**

Having seen the changes in global climate, deterioration in the environment in many countries and through many constructive dialogue with different stakeholders, there is no denying that climate change is taking place and impacting lives. We felt it was imperative that big corporates must take the lead in mitigating climate change and work together as never before.

Furthermore, consumers globally are favoring and moving towards responsibly-produced commodities and as such, the industry must adjust to market needs and expectations if it wants to remain competitive (need for adaptation).

The aforementioned information was aggregated and analyzed from the various operations globally throughout the years and this resulted in Wilmar taking a long-term holistic approach to sustainability that is fully integrated into our business model (long term strategy). Since 2005, Wilmar has been an active member of the Roundtable on Sustainable Palm Oil (RSPO), an international multi-stakeholder organisation that promotes the production and use of sustainable palm oil. The Group adopts an environmental management system conforming to the RSPO Principles & Criteria and the United Nations Global Compact, amongst others. In managing oil palm plantations, it upholds stringent policies of zero-burning and no-development on peatland while respecting the rights of communities by adopting the 'free, prior and informed consent' (FPIC) principle.

With all the initiatives taken above, it culminated in Wilmar announcing its No Deforestation, No Peat, No Exploitation Policy in December 2013 that aims to advance an environmentally and socially responsible palm oil industry (most substantial business decision made for long term strategy influenced by the need for adaptation). Among the commitments is the effort to map out our supply chain which will help in identifying challenges ahead and develop solutions that are workable and realistic. Also, the policy outlines a clear mandate for transparency which has resulted in the launch of the Wilmar Sustainability Dashboard in January 2015, a microsite dedicated to reporting on Wilmar's sustainability endeavour, in particular, the implementation

progress of its policy. The commitment, a first in the palm oil industry, provided a boost to the company's reputation and in turn, has led to almost all our industry peers announcing similar sustainability policy over the last few years. Wilmar's headway in sustainability and transparency is widely regarded as one of our key differentiating competencies that put us in a better position to cater to the needs of our customers, who are also on a tight timeline to meet their sustainable sourcing policies.

After meeting our original emission reduction target before the 2020 timeline, we have focused the emission reduction target on our palm oil mills as a short term strategy since we are able to directly reduce a major portion of emissions within a reasonable time period by construction of methane capture plants.

## C3.1d

**(C3.1d) Provide details of your organization's use of climate-related scenario analysis.**

Climate-related scenarios	Details
Other, please specify Internal company assessments	Although we have not started using scenario modelling tools that are available in the market to conduct the scenario analysis, we have analyzed qualitatively the various risks that climate change can potentially bring about in different scenarios and the possible impacts on the company. The analysis results are presented to the Risk Management Committee for their assessment and further recommendations to improve operational readiness in the face of these risks are then put up for the Board's consideration.

## C4. Targets and performance

### C4.1

**(C4.1) Did you have an emissions target that was active in the reporting year?**

Intensity target

### C4.1b

**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

**Target reference number**

Int 1

**Scope**

Scope 1+2 (location-based)

**% emissions in Scope**

34

**Targeted % reduction from base year**

15

**Metric**

Metric tons CO<sub>2</sub>e per metric ton of product

**Base year**

2016

**Start year**

2018

**Normalized base year emissions covered by target (metric tons CO<sub>2</sub>e)**

1,401,786

**Target year**

2023

**Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

**% of target achieved**

81

**Target status**

New

**Please explain**

With palm oil mill effluent being the largest contributor to our process emissions at mills, the intensity target was set to apply for our group of palm oil mills as the methane capture projects would lead to major reduction of emissions within a reasonably short time-frame. With prior experiences gathered from the the initial push to construct the plants, the period of implementation for similar projects have been reduced significantly and thus the progress against the target set has exceeded our initial expectations. If the reductions could be achieved before the initial target year, we might consider looking at the carbon footprint of the wider operations together with science-based target guidelines in the near future.

**% change anticipated in absolute Scope 1+2 emissions**

15

**% change anticipated in absolute Scope 3 emissions**

0

## C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

## C4.3

**(C4.3) 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.**

Yes

### C4.3a

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO<sub>2</sub>e savings.**

	Number of initiatives	Total estimated annual CO <sub>2</sub> e savings in metric tonnes CO <sub>2</sub> e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	2	69,286
Implemented*	15	377,795
Not to be implemented	0	0

### C4.3b

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

#### Initiative type

Fugitive emissions reductions

#### Description of initiative

Agriculture methane capture

#### Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

377,795

#### Scope

Scope 1

#### Voluntary/Mandatory

Voluntary

#### Annual monetary savings (unit currency – as specified in C0.4)

3,000,000

#### Investment required (unit currency – as specified in C0.4)



30,000,000

**Payback period**

4 - 10 years

**Estimated lifetime of the initiative**

16-20 years

**Comment**

## C4.3c

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Compliance with regulatory requirements/standards	To comply with the European Union Renewable Energy Directive's standard of greenhouse gas emission reduction requirements (market access to EU biofuels market).
Dedicated budget for energy efficiency	As a means to reduce the operational cost from fuel use, it would be possible to generate cost savings from methane capture plant by replacing the diesel fuel for electricity generation with methane-rich biogas (at minimal operational cost as the gas is naturally generated from POME treatment ponds). Also, by replacing a portion of electricity generation from boiler-powered turbine engines, boiler fuels (biomass in the case of palm oil mills) could be saved and sold for a profit.

## C-AC4.4/C-FB4.4/C-PF4.4

**(C-AC4.4/C-FB4.4/C-PF4.4) Do you implement management practices on your own land with a climate change mitigation and/or adaption benefit?**

Yes

## C-AC4.4a/C-FB4.4a/C-PF4.4a

**(C-AC4.4a/C-FB4.4a/C-PF4.4a) 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.**

**Management practice reference number**

MP1

**Management practice**

Biodiversity considerations

**Description of management practice**

No developments on High Conservation Value (HCV) areas and avoiding development on high carbon stock forest areas to help conserve ecologically viable areas of natural forests. Also, development on peatlands has been ceased to reduce further emissions from development.

**Primary climate change-related benefit**

Emission reductions (mitigation)

**Estimated CO2e savings (metric tons CO2e)**

22,861,000

**Please explain**

Based on the land clearing emission factors used in RSPO PalmGHG calculators, the difference between an oil palm and undisturbed forest's standing crop emission intensity is 772 tCO2e/ha. Assuming all the conserved areas managed by Wilmar in palm areas are undisturbed forests (29613ha), an estimated total emission savings of 22.86 million tCO2e can be achieved.

---

**Management practice reference number**

MP2

**Management practice**

Fertilizer management

**Description of management practice**

Management of nutrients and fertilizer use (e.g. organic fertilizers etc.) on plantations to ensure correct dosage for optimum yield as well as the right application method to ensure minimum leakage.

**Primary climate change-related benefit**

Reduced demand for fertilizers (adaptation)

**Estimated CO2e savings (metric tons CO2e)**

**Please explain**

The estimated emission savings through this management practice have not been quantified.

---

**Management practice reference number**

MP3

**Management practice**

Integrated pest management

**Description of management practice**

Management of pest, disease and weed on our plantations is achieved through the combination of cultural, mechanical, biological and chemical strategies within an Integrated Pest Management (IPM) program. Recycled palm fronds and other organic products are also used to increase the fixing capacity of soils. An example of an initiative within the IPM is the mass rearing of barn owls for biological rat control and the use of target-specific rat baits.

**Primary climate change-related benefit**

Reduced demand for pesticides (adaptation)

**Estimated CO2e savings (metric tons CO2e)**

**Please explain**

The estimated emission savings through this management practice have not been quantified.

---

**Management practice reference number**

MP4

**Management practice**

Waste management

**Description of management practice**

For land clearing of existing plantations that are due for replanting, only mechanical methods are used with no burning allowed to manage the waste generated from cleared palm trees. The tree fronds and trunks are chopped to smaller pieces for natural aerobic decomposition on site (to minimize anaerobic break-down which leads to methane release) and recycled back to soil as natural fertilizers.

**Primary climate change-related benefit**

Emission reductions (mitigation)

**Estimated CO2e savings (metric tons CO2e)**

**Please explain**

The estimated emission savings through this management practice have not been quantified.

---

**Management practice reference number**

MP5

**Management practice**

Fire control

### **Description of management practice**

The company has a zero-burning policy throughout our oil palm plantations to ensure that emissions from open burning are avoided. Also, we adopt a zero-burning replanting method through mechanical means in our own operations and assists our smallholders (e.g. lend mechanical excavators for replanting use) whenever help is requested. Also, Wilmar is a founding member of the Free Free Alliance that pursues a broad approach to preventing land and forest fires in Indonesia. Members of the alliance share experiences, tools and approaches with regards to addressing the incidence of fires in the areas where they operate.

### **Primary climate change-related benefit**

Emission reductions (mitigation)

### **Estimated CO2e savings (metric tons CO2e)**

### **Please explain**

The estimated emission savings through this management practice have not been quantified.

### **Management practice reference number**

MP6

### **Management practice**

Replacing fossil fuels by renewable energy sources

### **Description of management practice**

At palm oil mills and sugar mills that have readily available sources of renewable energy (biomass waste like shell/fibre for palm and bagasse for sugar), these are maximised as boiler fuel to generate and meet the electricity consumption requirements of the mill while any excess is sold to the grid.

### **Primary climate change-related benefit**

Reduced demand for fossil fuel (adaptation)

### **Estimated CO2e savings (metric tons CO2e)**

### **Please explain**

The estimated emission savings through this management practice have not been quantified.

## **C4.5**

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?**

Yes

## C4.5a

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.**

---

### Level of aggregation

Product

### Description of product/Group of products

Palm-based biofuels (with low Land-Use Change emissions) are supplied to the Europe market which are used in a variety of applications ranging from co-generation of heat/electricity to transport fuel usage; as such, the avoided emissions can be represented by Scope 1 and 2 (internal heat/power generation and transport fuel respectively) of the biofuel consumers. The palm feedstock supplied by our company meets the greenhouse gas savings of 50% and thus, the use of our supply directly enables GHG emissions to be avoided by a third party through reduced use of diesel (replacing it with biofuel of a lower emission value).

### Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

### Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

ENZO2 GHG calculator for palm oil (IFEU)

**% revenue from low carbon product(s) in the reporting year**

**Comment**

## C5. Emissions methodology

### C5.1

**(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).**

---

#### Scope 1

##### Base year start

January 1, 2017

##### Base year end

December 31, 2017

**Base year emissions (metric tons CO2e)**

3,937,372

**Comment**

As highlighted in last year's reporting, the base emissions for Nigeria, Ghana, Australia, New Zealand and Myanmar would be included to form a better comparison basis due to the increase of reporting boundary and thus the base year has been shifted to 2017.

**Scope 2 (location-based)**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO2e)**

593,934

**Comment**

As highlighted in last year's reporting, the base emissions for Nigeria, Ghana, Australia, New Zealand and Myanmar would be included to form a better comparison basis due to the increase of reporting boundary and thus the base year has been shifted to 2017.

**Scope 2 (market-based)**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO2e)**

0

**Comment**

## C5.2

**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.**

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

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

Other, please specify

Biograce and RSPO PalmGHG Calculator

## C5.2a

**(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.**

The main parameters are calculated based on the GHG Protocol: A Corporate Accounting and Reporting Standard (Revised Edition) and 2006 IPCC Guidelines for National Greenhouse Gas Inventories (for methane emissions calculation from effluent treatment plant). For emission factors of other parameters that are not available in the GHG Protocol, those are obtained from Biograce list of standard values and RSPO default values used in the RSPO PalmGHG Calculator Ver.4.

## C6. Emissions data

### C6.1

**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?**

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

4,888,028

**Start date**

January 1, 2018

**End date**

December 31, 2018

**Comment**

### C6.2

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

**Comment**

## C6.3

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO<sub>2</sub>e?**

### Reporting year

---

#### Scope 2, location-based

623,498

#### Start date

January 1, 2018

#### End date

December 31, 2018

#### Comment

## C6.4

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

Yes

### C6.4a

**(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.**

---

#### Source

Emissions from non-manufacturing sites such as regional headquarters in Malaysia, Indonesia, Australia or corporate head office in Singapore are excluded.

#### Relevance of Scope 1 emissions from this source

Emissions are not relevant

#### Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

#### Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

#### Explain why this source is excluded

The emissions from these sources are excluded as they are minimal in comparison to the total emissions from the production/manufacturing components in the supply chain



(i.e. plantations, mills, refineries, etc.). The emissions do not significantly affect the estimated overall emissions and as such, are considered not relevant.

## C6.5

**(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.**

### **Purchased goods and services**

---

**Evaluation status**

Not evaluated

**Explanation**

### **Capital goods**

---

**Evaluation status**

Not evaluated

**Explanation**

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

---

**Evaluation status**

Relevant, not yet calculated

**Explanation**

### **Upstream transportation and distribution**

---

**Evaluation status**

Relevant, not yet calculated

**Explanation**

### **Waste generated in operations**

---

**Evaluation status**

Not relevant, explanation provided

**Explanation**

Waste generated from our operations are generally managed and treated within our own facilities. Only certain scheduled wastes that require specific treatment are sent out for third-party management; however, the amount of scheduled waste is insignificant as compared to the main waste generated and treated within our own facilities.

### **Business travel**

---

**Evaluation status**

Not evaluated

**Explanation**

### **Employee commuting**

---

**Evaluation status**

Not evaluated

**Explanation**

### **Upstream leased assets**

---

**Evaluation status**

Not evaluated

**Explanation**

### **Downstream transportation and distribution**

---

**Evaluation status**

Not evaluated

**Explanation**

### **Processing of sold products**

---

**Evaluation status**

Not evaluated

**Explanation**

### **Use of sold products**

---

**Evaluation status**

Not evaluated

**Explanation**

### **End of life treatment of sold products**

---

**Evaluation status**

Not evaluated

**Explanation**

**Downstream leased assets**

---

**Evaluation status**

Not evaluated

**Explanation**

**Franchises**

---

**Evaluation status**

Not evaluated

**Explanation**

**Investments**

---

**Evaluation status**

Not evaluated

**Explanation**

**Other (upstream)**

---

**Evaluation status**

Not evaluated

**Explanation**

**Other (downstream)**

---

**Evaluation status**

Not evaluated

**Explanation**

**C6.7**

**(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?**

Yes

## C6.7a

(C6.7a) Provide the emissions from biologically sequestered carbon relevant to your organization in metric tons CO<sub>2</sub>.

### Row 1

Emissions from biologically sequestered carbon (metric tons CO<sub>2</sub>)

7,400,176

Comment

## C-AC6.8/C-FB6.8/C-PF6.8

(C-AC6.8/C-FB6.8/C-PF6.8) Is biogenic carbon pertaining to your direct operations relevant to your current CDP climate change disclosure?

Yes

## C-AC6.8a/C-FB6.8a/C-PF6.8a

(C-AC6.8a/C-FB6.8a/C-PF6.8a) Account for biogenic carbon data pertaining to your direct operations and identify any exclusions.

### CO<sub>2</sub> emissions from land use management

Emissions (metric tons CO<sub>2</sub>)

0

Methodology

Default emissions factors

Please explain

### CO<sub>2</sub> removals from land use management

Emissions (metric tons CO<sub>2</sub>)

0

Methodology

Default emissions factors

Please explain

### Sequestration during land use change

Emissions (metric tons CO<sub>2</sub>)

0

**Methodology**

Default emissions factors

**Please explain**

**CO2 emissions from biofuel combustion (land machinery)**

---

**Emissions (metric tons CO2)**

0

**Methodology**

Default emissions factors

**Please explain**

**CO2 emissions from biofuel combustion (processing/manufacturing machinery)**

---

**Emissions (metric tons CO2)**

7,400,176

**Methodology**

Default emissions factors

**Please explain**

The emissions due to biofuel combustion are mainly from the burning of biomass at our palm oil mills and sugar mills (palm fibre and shell; and bagasse respectively) to generate energy.

**CO2 emissions from biofuel combustion (other)**

---

**Emissions (metric tons CO2)**

0

**Methodology**

Default emissions factors

**Please explain**

**C-AC6.9/C-FB6.9/C-PF6.9**

(C-AC6.9/C-FB6.9/C-PF6.9) Do you collect or calculate greenhouse gas emissions for each commodity reported as significant to your business in C-AC0.7/FB0.7/PF0.7?

---

**Agricultural commodities**

Palm Oil

**Do you collect or calculate GHG emissions for this commodity?**

Yes

**Please explain**

For palm operations, the reporting boundary covers company-wide plantations, mills, refineries and other palm-only processing plants (e.g. oleochemical, biodiesel) but does not include third-party emissions from our supply chain (Scope 3).

---

**Agricultural commodities**

Sugar

**Do you collect or calculate GHG emissions for this commodity?**

Yes

**Please explain**

For sugar operations, the reporting boundary covers company-wide sugar farms, mills and refineries but does not include third-party emissions from our supply chain (Scope 3).

---

**Agricultural commodities**

Other

Oilseeds and Grains

**Do you collect or calculate GHG emissions for this commodity?**

No, not currently but intend to collect or calculate this data within the next two years

**Please explain**

We are expanding our scope of reporting and to have emissions from all of our operations captured within the next three years. These data will cover company-wide operations where we have operational control and more than 50% shareholdings. A company-wide data collection platform (Enablon) has been rolled out in 2016 to start the group-wide data collection process (oilseeds and grains) and once the data are accurate and reliable, the boundary will be expanded to include these as well.

## **C-AC6.9a/C-FB6.9a/C-PF6.9a**

**(C-AC6.9a/C-FB6.9a/C-PF6.9a) Report your greenhouse gas emissions figure(s) for your disclosing commodity(ies), explain your methodology, and include any exclusions.**

**Palm Oil**

---

**Reporting emissions by**

Unit of production

**Emissions (metric tons CO<sub>2</sub>e)**

0.72

**Denominator: unit of production**

Metric tons

**Change from last reporting year**

Lower

**Please explain**

As the palm products we produce span across many different types, the unit emission intensity from palm processing has been calculated based on total emissions due to palm operations divided by the total Crude Palm Oil (CPO) we produce.

**Sugar**

---

**Reporting emissions by**

Total

**Emissions (metric tons CO2e)**

581,736

**Change from last reporting year**

Lower

**Please explain**

**Other**

---

**Reporting emissions by**

**Emissions (metric tons CO2e)**

**Change from last reporting year**

**Please explain**

**C6.10**

(C6.10) 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.

---

**Intensity figure**

0.00026

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

5,511,526

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

21,073,115,000

**Scope 2 figure used**

Location-based

**% change from previous year**

31.9

**Direction of change**

Increased

**Reason for change**

There has been a drop in total revenue (denominator) used for the calculation and compounded with an increase in emissions due to the segment for refineries & others (an emission source for one particular refinery was only included this year which bumped up the total emissions), there has been an increase of emission intensity with respect to unit currency total revenue.

**Intensity figure**

0.08

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

333,678

**Metric denominator**

metric ton of product

**Metric denominator: Unit total**

4,166,073

**Scope 2 figure used**

Location-based

**% change from previous year**

3.4

**Direction of change**

Decreased

**Reason for change**

The decrease is minor as there are limited emission reduction projects available in the plantation's context other than managing the use of fertilizers (i.e. nitrogen). Also, as the



intensity figure is calculated basis on the product from plantations (fresh fruit bunches), the emissions used for numerator calculation should only be limited to plantations' emissions (rather than overall emissions as used for previous year's calculations).

**Intensity figure**

0.72

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

1,363,817

**Metric denominator**

metric ton of product

**Metric denominator: Unit total**

1,885,689

**Scope 2 figure used**

Location-based

**% change from previous year**

4.9

**Direction of change**

Decreased

**Reason for change**

Emission reduction initiatives (methane capture projects, renewable energy use etc.) have reduced the emissions related to palm oil mills. Also, as the intensity figure is calculated basis on the product from plantations (fresh fruit bunches), the emissions used for numerator calculation should only be limited to plantations' emissions (rather than overall emissions as used for previous year's calculations).

## C7. Emissions breakdowns

### C7.1

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

### C7.1a

**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
----------------	---	---------------

CO2	3,301,987	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	1,343,409	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	242,632	IPCC Fifth Assessment Report (AR5 – 100 year)

## C7.2

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

Country/Region	Scope 1 emissions (metric tons CO2e)
Malaysia	1,325,580
Indonesia	3,330,205
Australasia	206,673
Myanmar	6,748
Africa	18,822
☞ <sup>1</sup>	

☞<sup>1</sup>Ghana and Nigeria

## C7.3

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

By business division

### C7.3a

**(C7.3a) Break down your total gross global Scope 1 emissions by business division.**

Business division	Scope 1 emissions (metric ton CO2e)
Oil Palm Plantations	328,586
Palm Oil Mills	1,363,413
Palm Refineries and Others	2,661,969
Sugar Farms	13,426
Sugar Mills	133,649
Sugar Refineries	386,985

## C-AC7.4/C-FB7.4/C-PF7.4

**(C-AC7.4/C-FB7.4/C-PF7.4) Do you include emissions pertaining to your business activity(ies) in your direct operations as part of your global gross Scope 1 figure?**

Yes

## C-AC7.4a/C-FB7.4a/C-PF7.4a

**(C-AC7.4a/C-FB7.4a/C-PF7.4a) Select the form(s) in which you are reporting your agricultural/forestry emissions.**

Total emissions

## C-AC7.4b/C-FB7.4b/C-PF7.4b

**(C-AC7.4b/C-FB7.4b/C-PF7.4b) 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.**

---

### Activity

Agriculture/Forestry

### Emissions (metric tons CO<sub>2</sub>e)

342,013

### Methodology

Default emissions factor

### Please explain

Please note that the agriculture/forestry emissions here are the total Scope 1 emissions related to our palm plantations/sugar estates and it includes the distribution emissions involved within the operations (thus there is an overlap with the distribution emissions reported below).

---

### Activity

Processing/Manufacturing

### Emissions (metric tons CO<sub>2</sub>e)

4,546,015

### Methodology

Default emissions factor

### Please explain

The processing/manufacturing emissions are the sum of total Scope 1 emissions from mills, refineries and other downstream operations. Emissions from non-manufacturing sites such as regional headquarters are excluded as they are minimal compared to the total emissions from the manufacturing components in the supply chain. Please note that the emissions here have included the distribution emissions involved within the operations (thus there is an overlap with the distribution emissions reported below).

---

### Activity

Distribution

### Emissions (metric tons CO<sub>2</sub>e)

72,895

### Methodology


Default emissions factor

### Please explain

Most of our distribution activities are outsourced to outside transporters which would be factored under Scope 3 emissions.

## C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO <sub>2</sub> e)	Scope 2, market-based (metric tons CO <sub>2</sub> e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Malaysia	230,596	0	369,641	0
Indonesia	345,221	0	698,576	0
Australasia	47,610	0	451,430	0
Africa	71	0	285	0
 <sup>1</sup>				

<sup>1</sup>Ghana and Nigeria

## C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

### C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based emissions (metric tons CO <sub>2</sub> e)	Scope 2, market-based emissions (metric tons CO <sub>2</sub> e)
Oil Palm Plantations	5,092	0
Palm Oil Mills	405	0
Palm Refineries & Others	570,326	0

Sugar Farms	1,341	0
Sugar Mills	22,843	0
Sugar Refineries	23,492	0

## C7.9

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Increased

## C7.9a

**(C7.9a) 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 emissions (metric tons CO <sub>2</sub> e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption				
Other emissions reduction activities				
Divestment				
Acquisitions				
Mergers				
Change in output				
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other	910,000	Increased	16.5	A major fuel consumption (natural gas) at one site in Malaysia was

				inaccurately entered for previous year's calculation which led to the jump in 2018 emissions.
--	--	--	--	---

## C7.9b

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

## C8. Energy

### C8.1

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 15% but less than or equal to 20%

### C8.2

**(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

### C8.2a

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	19,989,328	12,502,541	32,491,869
Consumption of purchased or acquired electricity		51,122	824,076	875,198
Consumption of purchased or acquired steam		0	645,310	645,310
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		20,040,450	13,971,927	34,012,377

## C8.2b

**(C8.2b) 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	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

## C8.2c

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

### Fuels (excluding feedstocks)

Diesel

### Heating value

LHV (lower heating value)

### Total fuel MWh consumed by the organization

675,837

**MWh fuel consumed for self-generation of electricity**

675,837

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**Comment**

**Fuels (excluding feedstocks)**

Natural Gas

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

5,879,965

**MWh fuel consumed for self-generation of electricity**

2,939,983

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

2,939,982

**Comment**

As the natural gas is used to fuel the boilers together with steam turbine engines which produce both electricity and steam, the MWH fuel is split evenly between the two as an estimate.

**Fuels (excluding feedstocks)**

Lignite Coal

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

49,504

**MWh fuel consumed for self-generation of electricity**

0



**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

49,504

**Comment**

---

**Fuels (excluding feedstocks)**

Subbituminous Coal

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

5,331,730

**MWh fuel consumed for self-generation of electricity**

2,665,865

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

2,665,865

**Comment**

As the sub-bituminous coal is used to fuel the coal boilers together with steam turbine engines which produce both electricity and steam, the MWH fuel is split evenly between the two as an estimate.

---

**Fuels (excluding feedstocks)**

Other, please specify

Other bituminous coal

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

383,531

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

383,531

**Comment**

---

**Fuels (excluding feedstocks)**

Lubricants

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

15,257

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**Comment**

Lubricants used in our operations are mainly on the motors and engines to reduce friction and minimize the heat generation at moving surfaces for a more efficient functioning of the mechanisms.

---

**Fuels (excluding feedstocks)**

Motor Gasoline

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

23,588

**MWh fuel consumed for self-generation of electricity**

23,588

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

### Comment

---

#### Fuels (excluding feedstocks)

Primary Solid Biomass

#### Heating value

LHV (lower heating value)

#### Total fuel MWh consumed by the organization

19,851,965

#### MWh fuel consumed for self-generation of electricity

9,925,983

#### MWh fuel consumed for self-generation of heat

0

#### MWh fuel consumed for self-generation of steam

9,925,982

#### Comment

As the solid biomass fuels (palm fibres and shells, dried empty fruit bunches, bagasse) are used to fuel the biomass boilers together with steam turbine engines which produce both electricity and steam, the MWH fuel is split evenly between the two as an estimate.

---

#### Fuels (excluding feedstocks)

Biodiesel

#### Heating value

LHV (lower heating value)

#### Total fuel MWh consumed by the organization

1.43

#### MWh fuel consumed for self-generation of electricity

1.43

#### MWh fuel consumed for self-generation of heat

0

#### MWh fuel consumed for self-generation of steam

0

#### Comment

---

**Fuels (excluding feedstocks)**

Biogas

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

126,612

**MWh fuel consumed for self-generation of electricity**

126,612

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Liquefied Petroleum Gas (LPG)

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

14.17

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

14.17

**MWh fuel consumed for self-generation of steam**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Wood

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

10,751

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

10,751

**Comment**

---

**Fuels (excluding feedstocks)**

Anthracite Coal

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

143,048

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

143,048

**Comment**

---

**Fuels (excluding feedstocks)**

Acetylene

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

49.27

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

49.27

**MWh fuel consumed for self-generation of steam**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Other, please specify

Ethanol

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

16.13

**MWh fuel consumed for self-generation of electricity**

16.13

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**Comment**

## C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

**Acetylene**

---

**Emission factor**

3.385

**Unit**

metric tons CO<sub>2</sub>e per metric ton

**Emission factor source**

Based on chemical source (after burning):  $2C_2H_2 + 5O_2 \rightarrow 4CO_2 + 2H_2O$ ; thus  
emission factor is  $2 \times 44/26 = 3.385\text{kg/kg}$

**Comment**

**Anthracite Coal**

---

**Emission factor**

2.643

**Unit**

metric tons CO<sub>2</sub>e per metric ton

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Biodiesel**

---

**Emission factor**

1.918

**Unit**

metric tons CO<sub>2</sub>e per metric ton

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Biogas**

---

**Emission factor**

0.197

**Unit**

metric tons CO<sub>2</sub>e per MWh

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Diesel**

---

**Emission factor**

0.003

**Unit**

metric tons CO<sub>2</sub>e per liter

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Lignite Coal**

---

**Emission factor**

1.21

**Unit**

metric tons CO<sub>2</sub>e per metric ton

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Liquefied Petroleum Gas (LPG)**

---

**Emission factor**

0.002

**Unit**

metric tons CO<sub>2</sub>e per liter

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Lubricants**

---

**Emission factor**

0.003

**Unit**

metric tons CO<sub>2</sub>e per liter

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Motor Gasoline**

---

**Emission factor**

0.002



**Unit**

metric tons CO<sub>2</sub>e per liter

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Natural Gas**

---

**Emission factor**

0.056

**Unit**

metric tons CO<sub>2</sub>e per GJ

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Primary Solid Biomass**

---

**Emission factor**

1.179

**Unit**

metric tons CO<sub>2</sub>e per metric ton

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Subbituminous Coal**

---

**Emission factor**

1.829

**Unit**

metric tons CO<sub>2</sub>e per metric ton

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Wood**

---

**Emission factor**

1.777

**Unit**

metric tons CO2e per metric ton

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Other**

**Emission factor**

2.458

**Unit**

metric tons CO2e per metric ton

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

This is for other bituminous coal.

For ethanol (other regions) which is under 'Other' category as well, the emission factor used is 5.56 kg/US gallon.

## C8.2e

**(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.**

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	1,203,745	629,316	795,046	629,316
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

## C8.2f

**(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.**

---

**Basis for applying a low-carbon emission factor**

No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

**Low-carbon technology type**

**Region of consumption of low-carbon electricity, heat, steam or cooling**

**MWh consumed associated with low-carbon electricity, heat, steam or cooling**

**Emission factor (in units of metric tons CO<sub>2</sub>e per MWh)**

**Comment**

## C9. Additional metrics

### C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

---

**Description**

Other, please specify  
Water use per MT FFB processed

**Metric value**

1.34

**Metric numerator**

Water use for process

**Metric denominator (intensity metric only)**

Ton of Fresh Fruit Bunch processed in palm oil mil

**% change from previous year**

0.7

**Direction of change**

Decreased

**Please explain**

Water management drives at our palm oil mills with better monitoring of leakages & points of high risks have allowed tighter control over water consumption numbers.

## C10. Verification

### C10.1

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	No third-party verification or assurance
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No emissions data provided

### C10.2

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

Yes

### C10.2a

**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Product footprint verification	Verification under the EU Renewable Energy Directive (EU RED) and EU RED related national implementation laws.	For palm products sold for ISCC biofuel purpose, third-party verification audits were conducted to check the biofuel product footprint/pathway against the required standards.

## C11. Carbon pricing

### C11.1

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

No, and we do not anticipate being regulated in the next three years

## C11.2

**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

No

## C11.3

**(C11.3) Does your organization use an internal price on carbon?**

No, and we do not currently anticipate doing so in the next two years

## C12. Engagement

### C12.1

**(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers

Yes, other partners in the value chain

### C12.1a

**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

---

#### Type of engagement

Engagement & incentivization (changing supplier behavior)

#### Details of engagement

Run an engagement campaign to educate suppliers about climate change

Offer financial incentives for suppliers who reduce your upstream emissions (Scopes 3)

#### % of suppliers by number

83.6

#### % total procurement spend (direct and indirect)

#### % Scope 3 emissions as reported in C6.5

#### Rationale for the coverage of your engagement

With over hundreds of mills in our supply shed, we have adopted a risk-based approach to engagement and due diligence focusing on areas with commercial importance, as well as higher risks in terms of environmental and social impact. The percentage of suppliers represents the total number that were engaged thus far in the past 3 years across various engagement programmes, for example the ART approach (refinery

level), the Supplier Reporting Tool, Grievance Procedure and the Supplier Group Compliance programme.

### **Impact of engagement, including measures of success**

The main objective for these engagement programmes are to have more suppliers stepping up and becoming more sustainable in their practices to align with global demands. Through these extensive programmes, unfortunately some companies were still unable to be in compliance with our NDPE requirements and as a result, 17 suppliers at a group level have been suspended as of end 2018. This constitutes about 1.0 million MT loss of supply to our operation and through these actions, this shows our seriousness in tackling the issues and hopefully more suppliers would be keen to follow our lead.

### **Comment**

## **C12.1c**

### **(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.**

In December 2013, Wilmar announced its integrated No Deforestation, No Peat, No Exploitation Policy that aims to advance an environmentally and socially responsible palm oil industry. The commitments and plans set out in the Policy were developed as a result of several years' engagement with critical stakeholders, and was crafted in close collaboration with sustainability experts and advisors like The Forest Trust (now known as Earthworm) and Climate Advisors. We also collaborate with other growers, traders, processors, NGOs, end-user companies, financial institutions and other industry stakeholders to guide the effective implementation of the Policy. An example was in December 2018 when Wilmar released a Joint Statement with Aidenvironment and supporting consumer goods companies (e.g. Unilever, Mondelez) that details Wilmar's new supplier monitoring and engagement programme that will accelerate its efforts towards a deforestation-free palm oil industry. The programme was developed to step up the effectiveness of its current NDPE policy while also intending to provide remediation for past deforestation by its third-party suppliers.

Wilmar is currently taking a regional approach known as the Aggregator Refinery Transformation (ART) approach, to provide a collaborative framework of solutions and shared best practices to common issues for mills and growers with all our suppliers within a region, in the hope that our suppliers will pass on those best practices and recommendations on improvements with their suppliers. The ART process will be accompanied by ongoing monitoring on the ground. We also encourage our third-party suppliers to join the RSPO and pursue certification. This is also in line with the RSPO code of conduct that requires members to promote and communicate this commitment to its customers, suppliers, and the wider value chain where necessary. We have hosted workshops on RSPO and responsible sourcing for our suppliers. We have invested in substantial resources to help associated and independent smallholders pursue sustainable practices, improve yield and productivity, including supporting them to attain RSPO certification. In Malaysia, we are working with Wild Asia, a Malaysia social enterprise, to help independent smallholder suppliers in Sabah attain RSPO certification. In

conjunction with this initiative, Wilmar started a fertiliser scheme to help these smallholder suppliers gain access to fertilisers, at wholesale prices, with application advice and monitoring. In Indonesia, our focus has been on setting up groups of independent smallholders to enable better management.

## C12.3

**(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?**

Other

## C12.3e

**(C12.3e) Provide details of the other engagement activities that you undertake.**

Wilmar is a partner and steering committee member of the Tropical Forest Alliance (TFA). The Tropical Forest Alliance 2020 brings governments, private sector and civil society together to end deforestation in commodity production. Wilmar is also a member of TFA's Smallholders Task Force, which aims to support smallholders in improving their livelihoods and productivity while protecting the environment.

Wilmar has been an active member of the Roundtable on Sustainable Palm Oil (RSPO) since 2005, and remains involved in a wide range of RSPO task forces and working groups. We are Chair of the RSPO Smallholder Support Fund Panel, Co-chairs of the RSPO Smallholder Working Group, the Biodiversity and High Conservation Value (BHCV) Working Group and the FFB Legality & Traceability Task Force, as well as members of the Emissions Reduction Working Group and the Trade and Traceability Standing Committee.

Wilmar is also a member of the Grow Asia Business Council, a multi-stakeholder partnership that brings together South East Asia's smallholders, governments, companies, NGOs and other stakeholders to develop inclusive and sustainable value chains that benefit farmers. We are a member of Grow Asia's palm oil working group in Indonesia, which seeks to work on 2 million hectares of land, helping 1 million farmers to increase their productivity by 150%, while reducing their impact on the environment.

The Sustainable Trade Finance Council (STFC) seeks to incentivise the trade of sustainably produced commodities at scale and Wilmar is an active member of the STFC, providing regular inputs and feedback to the various strategies and initiatives. We also participate actively in STFC forums and workshops.

ISCC System GmbH (ISCC) operates globally applicable certification systems for evidencing sustainability requirements due to legal regulations or voluntary agreements, in particular the sustainability requirements of the Renewable Energy Directive (2009/28/EC) of the European Union and national rules & systems existing for the national implementation of this directive. Wilmar is an active member of the ISCC Working Group on Land Use Change and Methane Reduction and Avoidance.

Wilmar is a founding member of the Fire Free Alliance (FFA), which was established in February 2016. The FFA focuses on fire prevention through community engagement. Wilmar socialized the 'Fire-Free Community' program to 61 villages in South Sumatra and Central Kalimantan in 2016.

Wilmar is also a founding member of the PONGO Alliance, together with Sime Darby and Musim Mas, the Orangutan Land Trust and several wildlife conservation experts and NGOs. The alliance aims to support the management of orang-utans and other wildlife in palm oil landscapes. Current priorities include capacity building for companies having orangutans and other wildlife in their land on best practices in forest conservation management.

## C12.3f

**(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

By registering as a member and signatory to various sustainability standards such as Roundtable on Sustainable Palm Oil (RSPO), International Sustainability and Carbon Certification (ISCC), United Nations Global Compact (UNGC), Wilmar has committed itself to the principles and criteria laid down by these standards. Aligning our business practices with these universally acceptable social and environmental standards forms the basis on which we seek to achieve sustainability. To ensure all our activities that influence policy are consistent with our overall climate change strategy, the sustainability team works internally with all relevant parties through briefings/trainings to educate them on our policy and provides support when necessary.

## C12.4

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**


### Publication

In other regulatory filings

### Status

Complete

### Attach the document

 Wilmar Sustainability Report 2018.pdf

### Page/Section reference

Pages 18 (Governance and Management); 29 (Our Approach to Sustainability); 37 (Driving Supply Chain Transformation); 41 (Engagement and Empowerment); 46-62 (Environmental - Protecting Our Environment).

### Content elements

Governance  
Strategy



Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

## C13. Other land management impacts

### C-AC13.1/C-FB13.1/C-PF13.1

(C-AC13.1/C-FB13.1/C-PF13.1) Do you know if any of the management practices implemented on your own land disclosed in C-AC4.4a/C-FB4.4a/C-PF4.4a have other impacts besides climate change mitigation/adaptation?

Yes

### C-AC13.1a/C-FB13.1a/C-PF13.1a

(C-AC13.1a/C-FB13.1a/C-PF13.1a) Provide details on those management practices that have other impacts besides climate change mitigation/adaptation and on your management response.

---

**Management practice reference number**

MP1

**Overall effect**

Positive

**Which of the following has been impacted?**

Biodiversity

**Description of impact**

Conservation of forest increases the carbon sink capability while allowing the biodiversity of flora and fauna to thrive in the conserved forests.

**Have you implemented any response(s) to these impacts?**

No

**Description of the response(s)**

We have not implemented any responses as we did not identify any negative impacts caused by this management practice.

---

**Management practice reference number**

MP2

**Overall effect**

Positive

**Which of the following has been impacted?**

Soil

Yield

**Description of impact**

Better management of fertilizer use has resulted in better soil quality with reduced leaching of excess nutrients. Also, the yield has improved with targeted application of the right dosage/method of fertilizers to ensure maximum effectiveness.

**Have you implemented any response(s) to these impacts?**

No

**Description of the response(s)**

We have not implemented any responses as we did not identify any negative impacts caused by this management practice.

---

**Management practice reference number**

MP3

**Overall effect**

Positive

**Which of the following has been impacted?**

Soil

Yield

**Description of impact**

The soil quality of crops has benefited from better pest, disease and weed management through good pesticides control which prevents excessive toxicity leaking into the soil. The targeted application of the right dosage/method of pesticides can also ensure beneficial plants are not killed off and as an overall impact, this can help with our crop yield in the long-term.

**Have you implemented any response(s) to these impacts?**

No

**Description of the response(s)**

We have not implemented any responses as we did not identify any negative impacts caused by this management practice.

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**Management practice reference number**

MP4

**Overall effect**

Positive

**Which of the following has been impacted?**

Soil

**Description of impact**

By properly managing the palm waste during replanting season with cutting the palm tree fronds & trunks into smaller pieces through mechanical means and allowing it to naturally disintegrate back into the soil, these natural fertilizers contributes back into the soil to maintain optimum fertile soil quality.

**Have you implemented any response(s) to these impacts?**

No

**Description of the response(s)**

We have not implemented any responses as we did not identify any negative impacts caused by this management practice.

## C14. Signoff

### C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

### C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Senior manager (sustainability & supply chain)	Environment/Sustainability manager

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	Public or Non-Public Submission	I am submitting to	Are you ready to submit the additional Supply Chain Questions?
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I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now
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**Please confirm below**

I have read and accept the applicable Terms