

Australian Government
Climate Active Public Disclosure Statement




NAME OF CERTIFIED ENTITY: Wide Open Agriculture Ltd

REPORTING PERIOD: [1 July 2019 – 30 June 2020]

Declaration

To the best of my knowledge, the information provided in this Public Disclosure Statement is true and correct and meets the requirements of the Climate Active Carbon Neutral Standard.

Signature: 	Date: 20 th October 2020
Name of Signatory: Lachlan James Ritchie	
Position of Signatory: Carbon Neutral Agriculture Manager	



Australian Government
**Department of Industry, Science,
Energy and Resources**

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1. Carbon neutral information

Description of certification

Wide Open Agriculture Ltd (WOA) is Australia's leading ASX-listed regenerative food and agriculture company, based in Western Australia. WOA is launching a new oat milk product under its innovative Dirty Clean Food brand. This barista grade oat milk beverage uses oats grown and rolled in Australia, that are then processed at a world class plant-based beverage manufacturing facility in Italy. The product will be sold as a long-life plant-based milk beverage to the Australian and export markets, in response to ever growing consumer demand for high quality, ethical and delicious plant based dairy alternatives.

WOA intends to certify its oat milk product as carbon neutral under the Australian Government's Climate Active certification scheme.

The functional unit is the basis for any analysis in a Life Cycle Assessment (LCA). It describes the service delivered by the processes under study. In this case, the function is the provision of oat milk to the local and export market. With this in mind, the functional unit for this account is:

"The production and supply of 1 L of oat milk drink to the Australian and export market, as forecasted for the financial year 2021."

Product process diagram

The system boundary describes the life cycle stages and unit processes included in the LCA. In the context of a carbon neutrality certification, the system boundary drawn to conduct an LCA is referred as a 'process map', which is used to illustrate the different processes where materials and energy are brought together to move a product or service through its life cycle.

In this case, the system being analysed begins at the production of oat grain and ends at the delivery of oat milk at WOA's warehouse. It also includes the end-of-life management of product packaging waste. Note that a separate certification has been completed for the organisation's footprint, which includes all warehousing and delivery related emissions.

Figure 1 shows the product process diagram for WOA oat milk production supply and consumption with the main processes and emission sources.

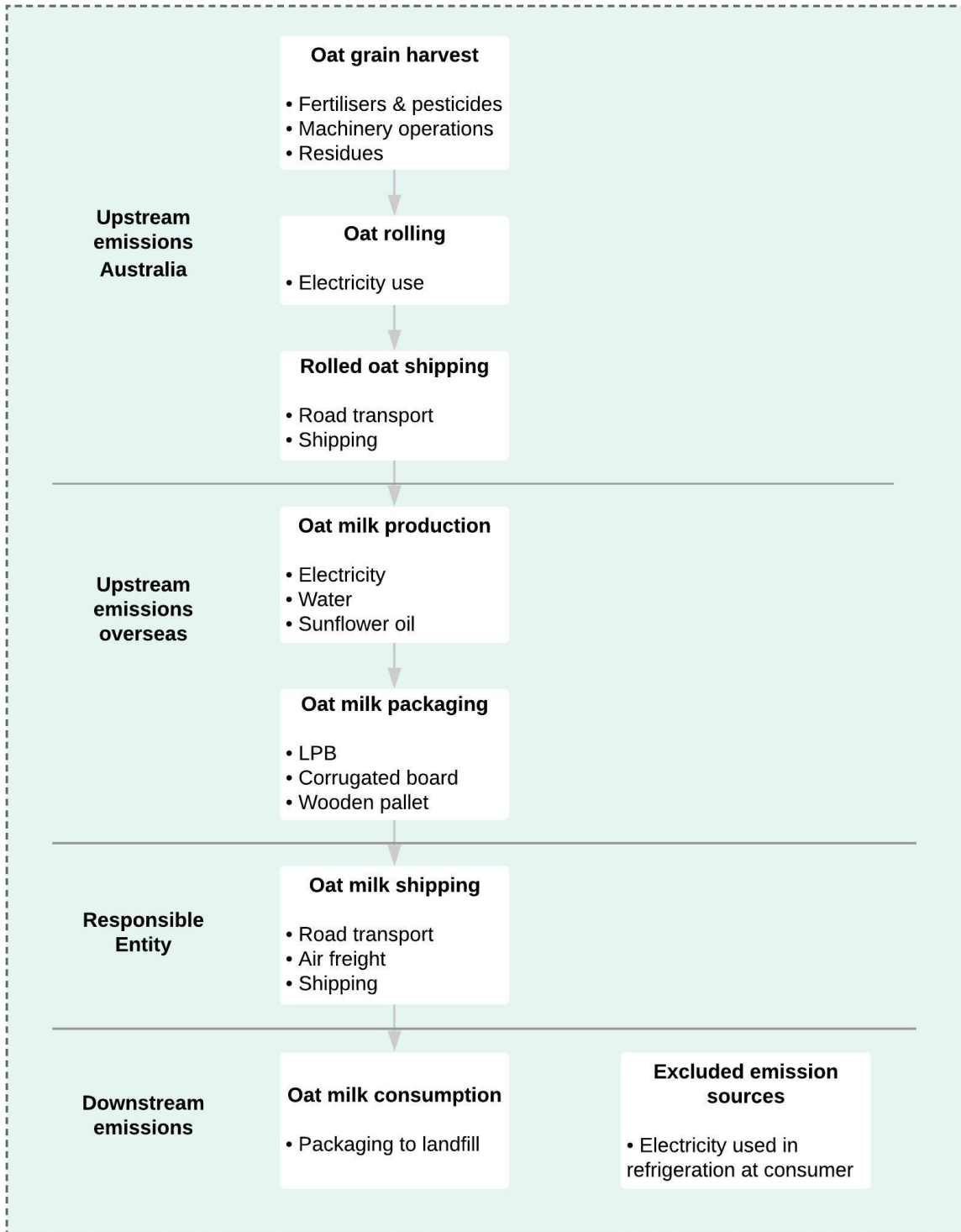


Figure 1 Wide Open Agriculture process map

Emissions reduction strategy

The overall emissions per 1 litre of oat milk drink was calculated to be 0.60 Kg CO₂ equivalent. The table below shows the proportion of emissions attributed to the various components of the Oatmilk Life Cycle Analysis.

Emission Source	Emissions per litre of oat milk supplied to market (kg CO ₂ e / Litre)	% of emissions
Transport	0.35	59%
Packaging	0.10	16%
Oat Milk manufacturing	0.08	13%
Oat grain production(farming)	0.06	11%
Oat rolling	0.01	2%

Transport:

This encompasses emissions associated with all combined air, road and sea transportation steps from the farm gate to eventual delivery at WOA's Perth based warehousing facility. Noting that the emissions associated with the transport from WOA's Perth warehouse to its customers (delivery) is accounted for separately in WOA's Climate Active Carbon Neutral Organisation Certification. To ensure the manufacturing meets the quality requirements for the barista grade oat milk beverage, manufacturing is currently undertaken in a specialist facility in Italy. Reducing air and sea freight per litre of oat milk drink represents the most material opportunity for emission reductions.

Manufacturing:

The manufacturing process undertaken by the 3rd party plant-based beverage facility requires very few ingredients and consumables, the significant majority of emissions associated with this step are related to electricity usage to run the required equipment. While currently outside of WOA's direct operational control, efficiencies in energy usage or transition to usage of renewable energy in the manufacturing process is the primary opportunity to reduce this component of emissions. The Italian manufacturer intends to install more energy efficient equipment in the coming 12-month period.

Packaging:

Packaging includes all primary, secondary and tertiary packaging as well as the end of life treatment. Primary packaging is sourced from Tetrapak, who are world leaders in the provision of sustainable packaging. Wide Open Agriculture will continue to explore opportunities for sourcing primary, secondary and tertiary packaging with the lowest possible carbon footprint.

Oat grain production:

Oat grain production represents the third major opportunity for emission reductions. Wide Open Agriculture works in close partnership with carefully selected farmers who have a demonstrated commitment to the implementation of farming practices that enhance soil health, biodiversity and water cycles on farm (known as regenerative agriculture practices). These practices have the potential to reduce the carbon emission footprint of the grain. The Life Cycle Analysis showed that in the 2019 southern hemisphere growing season WOA's farming partner produced grain with 40% less emissions per kg, when compared to the AusLCI benchmark. The most significant driver for emission reduction at the farm level is ensuring the highest possible *yield to fertiliser usage* ratio. Fertiliser manufacturing and usage (in particular Nitrogen based fertiliser) accounts for 59% of the emission footprint of the AusLCA benchmarks.

Over the next 12 months the Company intends to:

- Create a detailed emission reduction plan and support program to encourage emission reductions in farming operations.
- Undertake a formal feasibility study for the establishment of a West Australian based manufacturing plant.

2. Emission Boundary

All processes taking place in order to deliver oat milk to consumers were identified during the analysis of the supply chain. The emissions boundary diagram shown on Figure 2 illustrates all included and excluded processes identified during the analysis.



Figure 2 Oat milk emission boundary

The Greenhouse Gas Protocol defines attributable processes as services, materials and energy flows that become the product, make the product, and carry the product through its life cycle (Bhatia et al. 2011). This is also the definition used in Climate Active's standard (Commonwealth of Australia 2019).

Attributable sources

Attributable sources have been identified through an analysis of the supply chain. Relevant processes include the production of oat grain, their transport to a rolling mill and subsequent processing, the shipping of rolled oats to the milk processing site in Italy, the manufacturing stage, packing and transport back to WOA's warehouse. It also includes the disposal of oat milk's packaging system (1 litre cartons).

Excluded sources

There are no excluded processes in the inventory.

Non-attributable sources (outside certification boundary)

The standard defines non-attributable processes as those that are not directly connected to the studied product or service. According to the GHG Protocol standard, these could include, for instance, capital goods and infrastructure, and in some case corporate activity (Bhatia et al. 2011).

1. Oat grain rolling by-products are used either as animal feed or as an energy source. By-products may be sold for a small fee. Using a typical attributional LCA approach, a portion of the manufacturing stages should be attributed to the by-products, based on total value. This would discount a small portion of the emissions from the main products. In this analysis, we have chosen a conservative approach whereby 100% of processing emissions are attributed to the main product.
2. Oat milk processing by-products, which are the solids remaining after milk production are sold as animal feed. Using a typical attributional LCA approach, a portion of the manufacturing stages should be attributed to the by-products, based on total value. This would discount a small portion of the emissions from the main products. In this analysis, we have chosen a conservative approach whereby 100% of processing emissions are attributed to the main product.
3. Oat milk can be stored at ambient temperature but must be refrigerated once open. Estimated energy requirements would be highly uncertain, based on estimated number of days stored and estimated energy requirement of average fridges. In addition, WOA would have no operational control over it. Thus, we have excluded greenhouse gas emissions associated with **refrigeration at home** from this assessment.

Data management Plan

Not applicable.

3. Emissions summary

Table 3. Emissions Summary (inventory)	
Emission source category	tonnes CO ₂ -e
Oat growing and harvest	0.0000609
Oat rolling	0.0000113
Packaging: Primary	0.0000450
Packaging: Secondary	0.0000156
Packaging: Tertiary	0.0000098
Transport and shipping: road freight	0.0000326
Transport and shipping: sea freight	0.0002737
Transport and shipping: air freight	0.0000472
Oat milk production	0.0000763

Packaging disposal	0.0000279
1. Total inventory Emissions	0.0006003
2. Net emissions per reference unit	0.0006003
3. A) Number of reference units sold this period OR B) Number of reference units to forward offset to demonstrate commitment to carbon neutrality (true-up to be conducted at end of reporting period)	224,560
4. Carbon Footprint (Net emissions per reference units (2) * number of reference units (3a or b))	135

Uplift factors

None.

Carbon Neutral products

None.

Electricity Summary

Electricity was calculated using a Location based approach.

The Climate Active team are consulting on the use of a market vs location-based approach for electricity accounting with a view to finalising a policy decision for the carbon neutral certification. Given a decision is still pending on the accounting way forward, a summary of emissions using both measures has been provided for full disclosure and to ensure year on year comparisons can be made.

Table 5 Market-based approach electricity summary**Market Based Approach:**

Electricity Inventory items	kWh	Emissions (kgCO ₂ e)
Electricity Renewables	0	0.00
Electricity Carbon Neutral Power	0	0.00
Electricity Remaining	0	0.01
Renewable electricity percentage	19%	
Net emissions (Market based approach)		0

Table 6 Location-based summary

State/ Territory	Electricity Inventory items	kWh	Full Emission factor (Scope 2 +3)	Emissions (kgCO ₂ e)
WA	Electricity Renewables		-0.74	0.00
WA	Electricity Carbon Neutral Power		-0.74	0.00

WA	Netted off (exported on-site generation)			-0.69	0.00
WA	Electricity Total		0.015	0.74	0.011
	Total net electricity emissions (Location based)			0.00	0.011

4. Carbon offsets

Offset purchasing strategy: Forecast.

WOA is forward purchasing carbon offsets to allow for a forecast production of up to 224,560 Litres of Oatmilk Drink to be manufactured and delivered to WOA's warehouse facility within the forthcoming 12-month period. A retrospective adjustment will be made at the conclusion of the 12-month period to forecast offsetting balance is tried to actual results.

Table 4 Offsets Summary

1. Total offsets required for this report						135			
2. Offsets retired in previous reports and used in this report						135			
3. Net offsets required for this report						600			
Project description	Eligible offset units type	Registry unit retired in	Date retired	Serial number (including hyperlink to registry transaction record)	Vintage	Quantity (tonnes CO2-e)	Quantity used for previous report	Quantity to be banked for future years	Quantity to be used this report
Bierbank and Lanherne Regeneration Project (QLD). ERF101519	ACCUs	ANREU	28 Aug 2020	3,783,232,281 - 3,783,232,580	2018-19	300	150	75	75
SMRC Waste Composting Facility Project (WA). EOP100194.	ACCUs	ANREU	28 Aug 2020	3,798,728,289 - 3,798,728,588	2019-20	300	167	73	60
Total offsets retired this report and used in this report									135
Total offsets retired this report and banked for future reports								148	

Offset Projects (Cobenefits)

In line with its holistic commitment to ensure positive social and environmental impact, the Company has selected to purchase 100% of its carbon offset units from Australian based projects registered as Australian Carbon Credit Units (ACCU's). The two projects chosen demonstrated strong alignment to the Company's mission.

SMRC Waste Composting Facility Project in Western Australia is reducing greenhouse gas emissions associated with household waste via aerobic composting. Organic household waste is segregated

and brought to the facility for composting. This compost is used to put nutrients back into the soil for improving crops, pastures, parks, verges and gardens.

The Bierbank and Lanherne Regeneration Project in Queensland supports the assisted revegetation of forest on grazing farmland that was cleared of vegetation and where regrowth was suppressed for at least 10 years prior to the project having commenced

5. Use of trade mark

Table 5

Description where trademark used	Logo type
Product Packaging (Milk carton and boxes)	Certified Product
Company website (associated with Oatmilk product only)	Certified Product
Various digital and print marketing materials directly associated with the Oatmilk product (Campaign fliers, brochures, banners, pop-ups, advertisements and signage).	Certified Product

6. Additional Information.

Wide Open Agriculture through its Dirty Clean Food brand sources products from a network of farmers dedicated to the concept of Regenerative Agriculture. Regenerative Agriculture is a combination of farming principles and practices that increase biodiversity, enrich soils, restore watersheds, and enhance ecosystem services. Regenerative Agriculture helps reverse current global trends of atmospheric accumulation of carbon by drawing carbon back down into the soil, offers increased yields, resilience to climate instability, and higher health and vitality for farming communities (Terra Genesis International). Farmers who adopt these practices will reduce their input costs, and a farm with a strong and healthy ecosystem becomes more resilient to extreme weather and a changing climate.

Wide Open Agriculture has developed a comprehensive farming framework and tiered-payment system for suppliers that incentivises improvements and further adoption of regenerative farming practices. With ongoing strategic support, Wide Open Agriculture invests in these long-term farmer relationships to bring direct benefits to farmers, their communities and the land. Read more about our bold vision and goals via our company websites (www.wideopenagriculture.com.au and www.dirtycleanfood.com.au).

Appendix 1: Non-attributable emissions for products and services

To be deemed attributable an emission must meet two of the five relevance criteria. Non-attributable emissions are detailed below against each of the five criteria.

Table 8

Relevance test					
Non-attributable emission	<i>The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions</i>	<i>The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.</i>	<i>Key stakeholders deem the emissions from a particular source are relevant.</i>	<i>The responsible entity has the potential to influence the reduction of emissions from a particular source.</i>	<i>The emissions are from outsourced activities previously undertaken within the organisation's boundary, or from outsourced activities typically undertaken within the boundary for comparable organisations.</i>
Oat processing by-products	No	No	No	No	No
Oat milk production by products	No	No	No	No	No
Refrigeration at consumer	No	No	No	No	No