

Australian Government
Carbon Neutral Program
Public Disclosure Summary



An Australian Government Initiative

NAME OF CERTIFIED ENTITY:

Austral Fisheries Pty Ltd

REPORTING PERIOD:

Calendar year 2018

SCOPE OF CARBON NEUTRAL CERTIFICATIONS:

- Austral Fisheries Pty Ltd, as an organisation; and
- Austral Southern Fish Catch, Austral Northern Fish Catch, and Austral Prawn Catch, as three products of Austral Fisheries Pty Ltd

Introductory Statement

Austral Fisheries is certified as a carbon neutral organisation under the Carbon Neutral Program. This report is consistent with the National Carbon Offset Standard for Organisations (2017), and is Austral's fourth reporting period after the initial baseline which looked at the 2014 calendar year.


Similarly, the three wild-caught products of the Austral Fisheries business, Austral Southern Fish Catch, Austral Northern Fish Catch, and Austral Prawn Catch, are also certified as carbon neutral under the Carbon Neutral Program. This has involved a Life Cycle Assessment of these products in accordance with the requirements of the National Carbon Offset Standard for Products and Services (2017).

As outlined in this report, we have measured and reported our emissions for our organisation, and our LCA studied products, based on collected data for 2018, and are required to have purchased and retired offsets for 100% of our 2018 emissions by the end of April 2019.

As described in further detail below, the life cycle emissions of the certified products are contained completely within the extensive footprint already offset at the organisation level, negating the need for any additional offsetting of emissions for our fish and prawn products.

Declaration

To the best of my knowledge, the information provided in this Public Disclosure Summary is true and correct and meets the requirements of the National Carbon Offset Standard Carbon Neutral Program.

	09/04/2019
David Carter	
Chief Executive Officer	

Carbon neutral certification category	Organisation, and Products
Date of most recent external verification/audit	27/04/2017
Auditor	Ernst & Young
Auditor assurance statement link	<p>For organisation audit: https://www.australfisheries.com.au/getattachment/Sustainability/2016-AUST-NCOS-CR-Assurance-Report-FINAL.pdf?lang=en-AU</p> <p>For LCA audit: https://www.australfisheries.com.au/getattachment/Sustainability/2016-AUST-NCOS-CR-LCA-Assurance-Report-FINAL.pdf?lang=en-AU</p>



Australian Government
Department of the Environment and Energy

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1A. Carbon neutral information – Organisation Certification

Introduction

The following is an outline of the certification of our Organisation, Austral Fisheries Pty Ltd (“Austral”) as Carbon Neutral by the Carbon Neutral Program, using the National Carbon Offset Standard for Organisations (2017).

Austral is one of Australia’s leading commercial fishing companies, specialising in environmental fishing practices that catch and source sustainable seafood. Austral catches and processes Patagonian toothfish and Mackerel icefish from the Southern Ocean, as well as wild ocean caught Goldband Snapper, and Banana prawns and Tiger prawns from across northern Australia. To do this, Austral owns and operates three longline vessels (including one dual purpose longline-trawler) in the Southern Ocean, 1 fresh trapping vessel out of Darwin, and ten refrigerated prawn trawlers in Australia’s Northern Prawn Fishery.

As part of Austral’s commitment to environmental excellence, the company became certified under the Carbon Neutral Program in 2016. This firstly involved an extensive footprinting analysis under the National Carbon Offset Standard, originally baselined in 2014. Following this, the entire footprint of the company was, and continues to be offset through Gold Standard credits, generated through revegetation in unproductive farmland in Western Australian, by Carbon Neutral Pty Ltd.

All parts of the Austral business have been accounted for in the preparation of this certification. For example, it includes all the fuel we use on our vessels at sea to harvest fish and prawns; the emissions associated with production and transport of supplies we provide to vessels; and all supporting activities such as shore based operations and management, administration, policy development, sales and marketing.

As required under the Carbon Neutral Program, the calculation of the footprint includes extensive emissions generated by other suppliers (i.e. Scope 3 emissions), such as sea, land and air transportation, and cold store facilities.

Essentially, we have accounted for all carbon emissions we can identify from the start of our activities, through to the point of end consumer purchase of our studied fish and prawn products at the retailer or restaurant.

Extensive details are provided on separate calculations, and they were most recently independently audited and verified by Ernst & Young for the 2016 calendar year. The next external audit will be for the 2019 calendar year account, as the Carbon Neutral Program requires an independent audit every third year.

For this section of the carbon footprint inventory, a “greenhouse gas inventory” approach is used, since the entity being analysed is an organisation.

1B. Carbon neutral information – Product Certification

Introduction

The following is an outline of the certification of the wild caught ocean fish and prawn products of Austral Fisheries Pty Ltd (“Austral”) as Carbon Neutral by the Carbon Neutral Program, using the National Carbon Offset Standard for Products and Services (2017).

Further to the organisation-level certification, Austral has carried out Life Cycle Assessments (LCA) of its wild ocean-caught fish and prawn products, so that these products can also be certified as carbon neutral.

This LCA covers all the wild fish and prawn products caught by Austral. Carried out in accordance with the Greenhouse Gas Protocol Product Life Cycle Accounting and Reporting Protocol, this extends from the carbon emissions from the vessels used to catch the fish and prawns, and the bait used to catch the fish, through the pre-processing of materials in the production line, and through to the point of end consumer purchase of our studied fish and prawn products at the restaurant or retailer.

The extensive scope in calculating the carbon footprint of the organisation, Austral Fisheries, covered, amongst other things, the activities involved in producing the fish and prawn products. The carbon emissions associated with the products, assessed via the LCA, are shown to fit within the organisational footprint, as a subset. This is indeed the general intention of the Greenhouse Gas Protocol reporting for the relationship between businesses and products.

As our LCA scope falls inside our organisation emissions boundary, the emissions involved in the production of Austral’s fish and prawn catch are covered by those same offsetting activities as described in section 1A.

Detailed calculations for the three LCA products, as well as a separate full report¹ for this period have been submitted to the Carbon Neutral Program. Like the annual inventory, our LCA data was most recently independently audited and verified by Ernst & Young for the 2016 calendar year. The next independent audit will be for the 2019 calendar year account, as the Carbon Neutral Program requires an independent audit every third year.

¹ Austral Fisheries Pty Ltd 2018 Annual Inventory, including Life Cycle Analysis. *2018 Reporting Period. 2019 Product Certification Period. Prepared April 2019.*

1C. Emission sources within certification boundary

Quantified sources – Organisation

The emissions boundary is the entire organisation of Austral Fisheries Pty Ltd (Figure 1). The boundary for the emissions sources was defined using the “control approach” described in the National Greenhouse and Energy Reporting Act. This then involves accounting for the following emissions:

- Scope 1 (direct) emissions by the organisation, such as fuel burned in fishing vessels;
- Scope 2 emissions, which are emissions attributed to purchased electricity; and
- Scope 3 emissions, which are emissions arising from third party sources associated with activities of Austral.

Austral has followed the carbon accounting principals of relevance, completeness, consistency, transparency and accuracy. It has also referenced the following methods and factors:

the Greenhouse Gas (GHG) Protocol standards, including:

- *GHG Protocol – A corporate accounting and reporting standard* (GHG Corporate Standard) (2004)
- *GHG Protocol – Corporate Value Chain (Scope 3) Accounting and Reporting Standard* (2011);

the National Greenhouse and Energy Reporting Act 2007 (NGER Act) and supporting legislation and documentation, including:

- *National Greenhouse and Energy Reporting Regulations 2008 (1 July 2018 compilation)*
- *National Greenhouse and Energy Reporting (Measurement) Determination 2008 (1 July 2018 compilation)² (referred to as NGER 2018)*
- *National Greenhouse and Energy Reporting Technical Guidelines*
- *National Greenhouse Accounts Factors 2018 (referred to as NGA Factors 2018);*

procedures and factors used by the Environmental Protection Authority Victoria for some Scope 3 emissions;

² The NGER Determination is often used in preference to the NGA Factors. While they report the same methods and factors, we consider NGER is superior since it describes methods in more detail, describes alternative methods and is the source of the data in the NGA Factors.

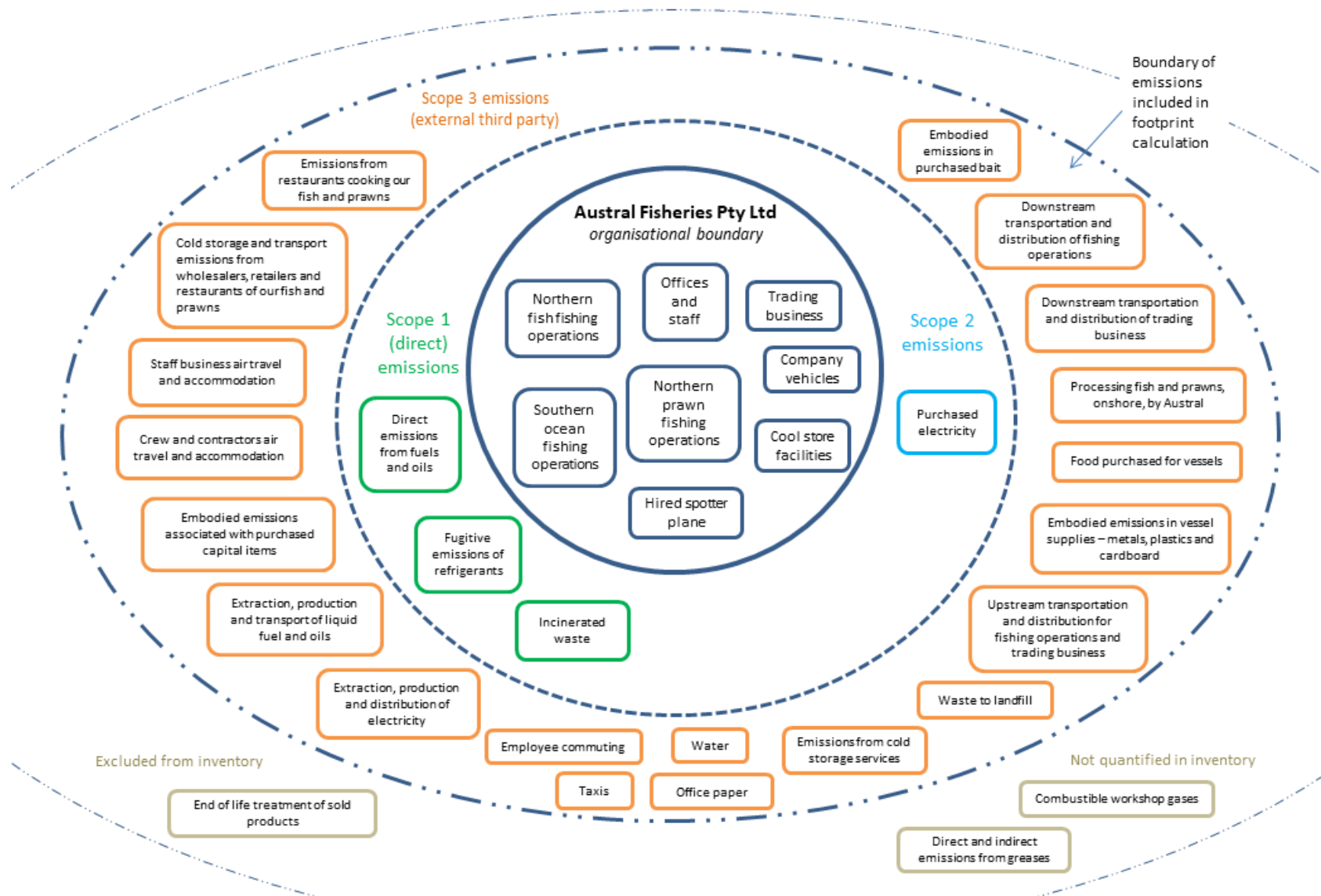


Figure 1. Organisational boundary and carbon inventory boundary of Austral Fisheries 2018 footprint at the organisation level.

emissions factors from the Department of Energy and Climate Change in the United Kingdom; and other in house calculations of emissions where other data was not readily available, which have been audited by Ernst Young.

The following greenhouse gases were accounted for:

- (a) carbon dioxide;
- (b) methane;
- (c) nitrous oxide;
- (d) sulfur hexafluoride;
- (e) hydrofluorocarbons specified in the National Greenhouse and Energy Reporting Determination; and
- (f) perfluorocarbons specified in the National Greenhouse and Energy Reporting Determination.

A summary of the outcomes for our calculations can be seen at Table 4.

Quantified sources – Products

Austral’s three studied LCA products make up the entire wild catch of Austral Fisheries, and the seafood products which make up these catches are listed in Table 1. These catches come from three geographically and operationally separate fishing fleets:

1. ‘Southern Fish’ are mainly catches of Patagonian Toothfish, but also include Icefish, Grenadier and a small portion of High Seas species caught in the Indian Ocean.
2. ‘Northern Fish’ are mainly catches of Goldband snapper, but also include similar tropical reef fish species.
3. ‘Prawns’ are mainly catches of Banana prawns and Tiger prawns, but also include Endeavour and King prawns as minor catches, as well as small bycatch of other species such as squid, moreton bay bugs and scallops, which for the purpose of our LCA, we will include in our ‘prawn’ category.

The studied products also comprise the major reference flows used in the organisation-level carbon footprint of Austral, for example in downstream transport calculations. The unit of analysis is defined as the reference flow since the Austral Southern Fish Catch, Northern Fish Catch, and Prawn Catch are intermediate products and this is a cradle-to-gate life cycle analysis.

Table 1. Summary and definitions of studied products.

	Accounting point and definition	Unit of Analysis, Reference Flow and Functional Unit	Description^A
Studied Products			
<i>Austral Southern Fish Catch</i>	Product leaving the ship	Tonnes of Austral Southern Fish Catch leaving the ship	<ul style="list-style-type: none"> • Patagonian Toothfish, as 'HGT' (headed, gutted and tailed)^B • Icefish, as whole fish • Grenadier, as 'H&G' (headed and gutted), or fillets • High seas fish, as both 'H&G' and whole fish <p>Comprises 100% of the southern fish catch of Austral Fisheries</p>
<i>Austral Northern Fish Catch</i>	Product leaving the ship	Tonnes of Austral Northern Fish Catch leaving the ship	<ul style="list-style-type: none"> • Goldband snapper, as whole fish • Other similar tropical reef fish^C <p>Comprises 100% of the Northern fish catch of Austral Fisheries</p>
<i>Austral Prawn Catch</i>	Product leaving the ship	Tonnes of Austral Prawn Catch leaving the ship	<ul style="list-style-type: none"> • Whole frozen prawns^D • Whole frozen bycatch species^E <p>Comprises 100% of the prawn catch of Austral Fisheries</p>

Notes:

^A For interest, it is estimated that 70% of HGT toothfish and whole snapper, and 50% of whole prawns are actually eaten, due to heads, bones, etc.

^B For simplicity we have not specifically referred to additional minor products from Toothfish which are cheeks and collars (<5%). The emissions for cheeks and collars are nonetheless included in the analysis, and the tonnage of these products is included in numbers referring to 'HGT'.

^C Includes, but not limited to Saddletail Snapper, Red Emperor, Mangrove Jack, Cod and Red Throat Snapper

^D Includes Tiger, Banana, Endeavour and King prawns. Endeavour and King prawns are minor catches during both Tiger and Banana prawn seasons.

^E Includes squid, moreton bay bugs, scallops, cuttlefish, lobster, pomfret, leader prawns and certain whole fish species.

The LCA scope will be Cradle-to-Gate, due to the fact that Austral is a supplier of wholesale seafood which is then processed and eaten in a diverse variety of ways around the globe. We refer to the inventory as Cradle-to-Gate even though we have elected to include 'Use' in the LCA. Consistent with a Cradle-to-Gate scope, End-of-life emissions of the products are not included.

Greenhouse gases involved in the LCA are as per the GHG Protocol Product Life Cycle Accounting and Reporting Standard and the National Carbon Offset Standard, and are the same as used in the calculations in the Austral Fisheries organisational carbon footprint study, mentioned above in *Quantified Sources - Organisation*.

A process map for the production of fish and prawns are shown in Figure 2. The process applies to all studied products, so the one figure is applicable for both.

Wild caught fish and prawns grow naturally in the ocean, and in accordance with the requirements of the life cycle assessment, natural emissions from this process are not included.

The production facility consists of a fishing fleet steaming to the fishing grounds, catching the fish or prawn products, (and where relevant) processing on board, freezing, and packaging. The production facility also includes any onshore processing undertaken by Austral.

Figure 3 shows the relationship between the Austral Fisheries organisation level inventory and the Life Cycle Assessment of the three studied products^{3,4}. We consider that many of these are marginally attributable from a LCA viewpoint, but have included them on the basis that they have already been included in the organisation level inventory.

Austral has followed the carbon accounting principals of relevance, completeness, consistency, transparency and accuracy, as outlined above in *Quantified Sources – Organisation*, with the addition, in the LCA, of:

- *GHG Protocol – Product Life Cycle Accounting and Reporting Standard (2011)*

A summary of the outcomes for our LCA calculations are in Tables 5 and 6 below.

³ Note of explanation on the trading business (Seafood Solutions) within Austral Fisheries, in relation to the LCA: The emissions associated with Seafood Solutions are rightly included in the Organisation level inventory (see Figure 3) but do not feature in the life cycle assessment of Austral Southern Fish, Northern Fish, or Prawn Catch. This is due to the fact that Seafood Solutions is a separate importing business arm which does not deal in significant quantities of these products.

⁴ Note of explanation that the Scope 2 electricity emissions have only been included from Austral's head office as part of the product LCA, as this is the only office that controls the sales and marketing of these products.

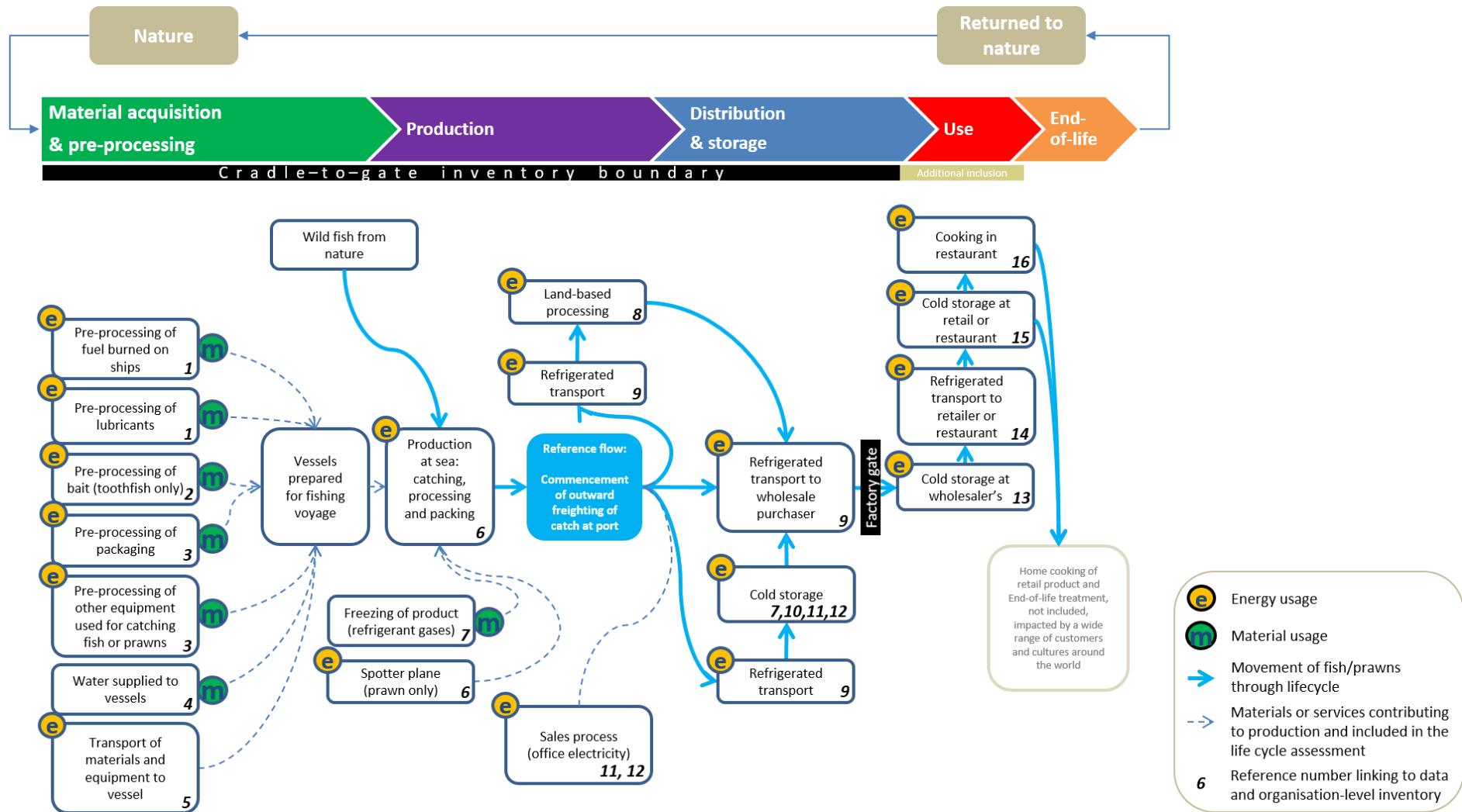


Figure 2. Process map for the production of the studied products, Austral Southern Fish, Northern Fish, and Prawn Catch.

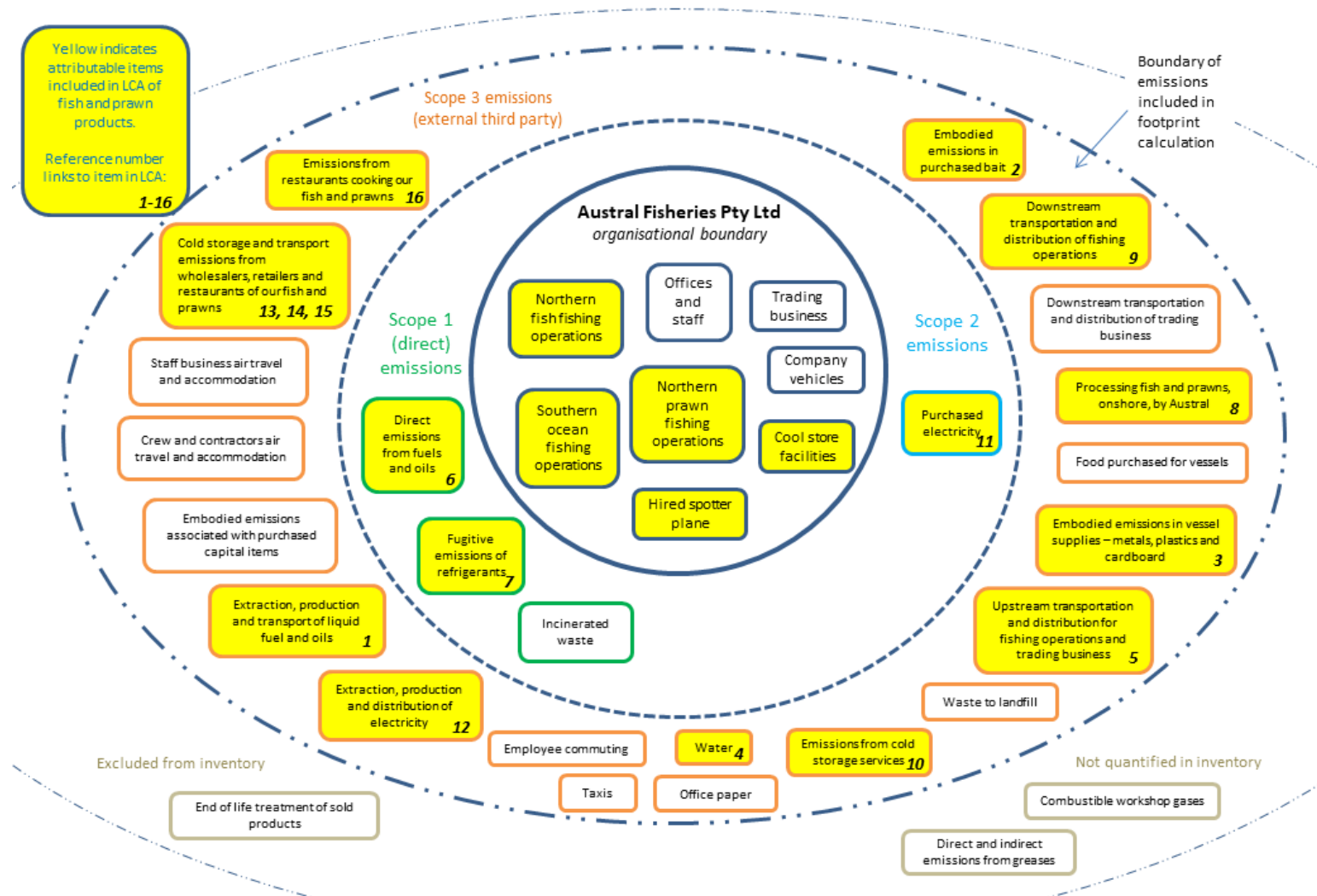


Figure 3. Austral Fisheries organisation level inventory with items which have been used in the life cycle assessment of Austral Southern Fish, Northern Fish, and Prawn products shown in yellow highlight.

Non-quantified sources

Two sources of emissions from our inventory have not been quantified due to immateriality.

Firstly, Scope 1 emissions associated with use of petroleum based greases were excluded on the basis of immateriality. In our original baseline year calculation, this was estimated to account for 0.04t CO₂-e, or approximately 0.0001 % of our organisation's emissions, and usage has not changed significantly since that time.

Secondly, Scope 1 emissions associated with use of combustible workshop gases were excluded on the basis of immateriality. In our original baseline year calculation, this was estimated to account for 0.5t CO₂-e, or approximately 0.002 % of our organisation's emissions, and usage has not changed significantly since that time.

Excluded sources

One emissions source has been excluded from our inventory.

Scope 3 emissions associated with End-of-Life treatment of sold fish and prawns were excluded on the basis that this is outside of the scope of cradle-to-gate accounting. However, we have chosen to extend our boundary further downstream to include downstream transport, cold storage and cooking of Austral fish and prawn catch by restaurants and retailers.

We will be strongly encouraging our suppliers and customers to carry out their business with a low carbon footprint. This footprint is akin to a cradle-to-gate scope in this regard.

2. Emissions reduction measures

Part A. Emissions over time

This section compares emissions over time. We note that the current year (2018), will become our new baseline due to an additional vessel's refrigeration plant switching from R22 to R507a, as well as 2018 being the first full year's worth of accounts from the newly acquired (November 2017) Northern Fishing Fleet.

Over the last few years our baseline has changed, coinciding with business growth and operational changes, and will likely continue to do so in coming years, when new and/or additional vessels become operational.

We have also continued to improve the accuracy of our inventory over this period. These refinements are the result of a better understanding of the data, as well as there being some new internal reporting systems in place which allowed those data to be better retrieved. These changes, we believe, will better allow us to track results over time, and enable us to deliver achievable results in regards to our Emissions Reduction Strategy.

Revised baseline emissions:

According to our baseline recalculation policy, from next year we will use calendar year 2018 as our new baseline, which totals **37,257 t CO₂e**.

2018 comparison to previous years

In 2018, our overall emissions were 6958t (or 23%) higher than the revised 2014 baseline that was recalculated in 2017. While there are many variables between years, the significant changes to our account this year against that baseline came from:

1. The continued upgrade of refrigeration systems in our prawn fleet, with one more vessel undergoing change from R22 to R507a in 2018. Compacting that change, was the unfortunate leakage of R507a refrigerant from some prawn vessels, which amounted to 5575t CO₂e in our inventory in 2018.
2. The increase in diesel use in the 'Northern Prawn' fleet, which amounted to an increase of 1233t CO₂e.
3. The first full set of data for the 'Northern Fish' fleet, which amounted to a total of 739t CO₂e in the LCA for 'Northern Fish' product.
4. On a positive note, refit of the Atlas Cove drive train resulted in fuel savings equating to 3126t CO₂e.

These three operational incidents are also relevant when looking at the 53% increase in the emissions intensity of combined LCA catches against total emissions. Also important to note is that total product landed in 2018 was 25% lower than the 2014 baseline year, which exacerbates this emissions intensity increase. Looking more closely at each LCA product:

- ‘Southern Fish’ emissions intensity increased from a baseline of 5.12 to 6.63 t CO₂-e / t fish landed (mainly attributable to 4% increase in Marine gasoil emissions and 22% decrease in catch).
- ‘Prawn’ emissions intensity increased from a baseline of 6.76 to 12.66 t CO₂-e / t prawn caught (mainly attributable to the aforementioned refrigerant gas leakage, 9% increase in diesel use, and 27% decrease in catch). The decreased prawn catch can be explained by the productivity of this fishery being largely dependent on rainfall across northern Australia during the wet season, and while 2018 was not seen as a disappointing year, it is being compared to 2014 which is seen historically as an exceptional year.
- ‘Northern Fish’ emissions intensity has been calculated based on a full year’s data for the first time, with a result of 3.59 t CO₂-e / t fish caught.

We have chosen to report and track our yearly progress against the total emissions and the emission intensity of total seafood catch for the Organisation; and the emissions intensity per tonne of seafood landed for our Products (Table 2).

Table 2. Emissions comparison to previous baseline year						
		Scope 1	Scope 2	Scope 3	Total	
		(t CO ₂ e)	(t CO ₂ e)	(t CO ₂ e)	(t CO ₂ e)	(t CO ₂ e/t product)
Organisation	Previous Base Year (2014 rev.)	22,720	88	7,491	30,299	6.54 t CO ₂ -e/t fish+prawn
	Current Year and new baseline (2018)	29,376	81	7,800	37,257	10.02 t CO ₂ -e/t fish+prawn
Southern Fish	Previous Base Year (2014 rev.)	10,834	26	2,282	13,142	5.12 t CO ₂ -e/t fish
	Current Year and new baseline (2018)	10,910	18	2,424	13,352	6.63 t CO ₂ -e/t fish
Northern Fish	Previous Base Year (N/A)	2018 is the first year of full data for this fishing fleet				
	Current Year and new baseline (2018)	538	2	199	739	2.84 t CO ₂ -e/t fish
Prawns	Base Year (2014 rev.)	11,786	26	2,127	13,939	6.76 t CO ₂ -e/t prawn
	Current Year and new baseline (2018)	17,473	18	1,500	18,990	12.66 t CO ₂ -e/t prawn

Given around 65% of our emissions in 2018 (and up to 85% in previous years) comes from diesel usage on our vessels, the most relevant metric to track our progress is the emissions intensity of tonnes of CO₂-e per tonne of product landed. Figure 4 tracks this over time for the organisation, as well as the LCA products.

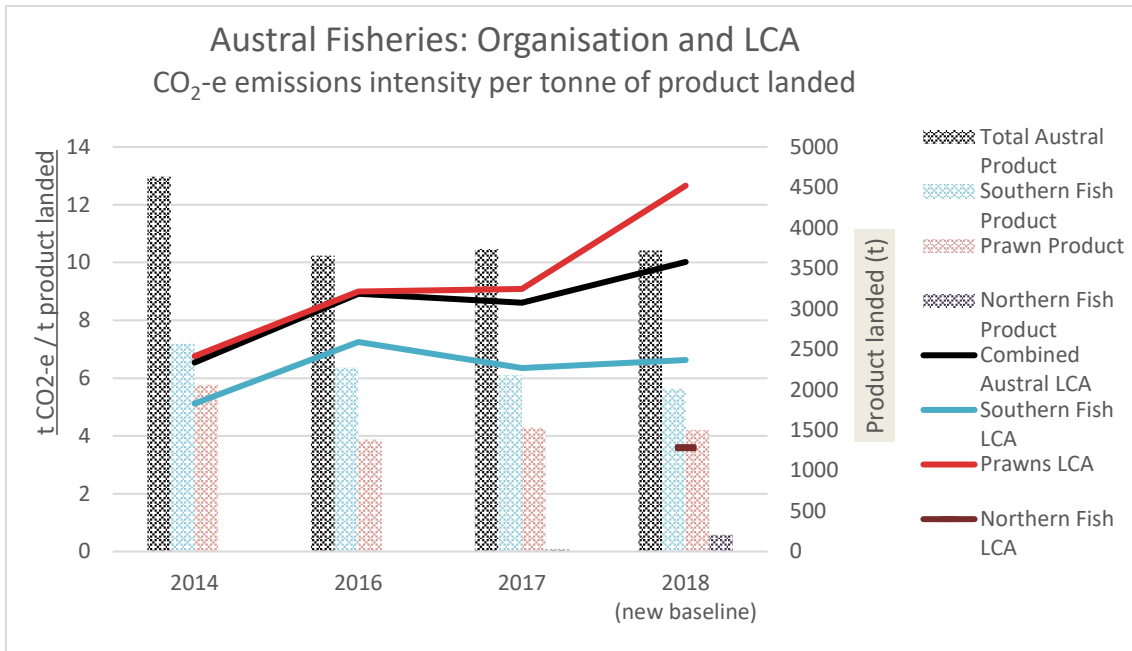


Figure 4: Austral Fisheries: Organisation and LCA products CO₂-e emissions intensity per tonne of product landed. Line graphs (primary y-axis) represent emissions intensity per tonne of product landed. Bar graphs (secondary y-axis) represent tonnes of product landed.

Part B. Emissions reduction strategy

Our decision to become certified as Carbon Neutral as an organisation, and extend that to our products, is a direct result of our aim to do our bit to ensure a sustainable, healthy, environment for the seafood and seafood products that we rely upon for our livelihoods.

Our vision is to increase the efficiency of our operations (relative to carbon emissions) as far as possible, reduce our carbon emissions wherever we can, and to fully offset remaining emissions. Our major offsetting activities support direct revegetation activities in Western Australia, generating carbon offsets under the Gold Standard certification program, which takes into account, not only the direct carbon sequestration benefits of biodiverse plantings, but additional direct benefits including environmental, social, economic and heritage.

We are in the process of reviewing and investigating additional carbon offset programs for future years, including a particular focus on the development of eligible new “blue” carbon offset programs, along with the likes of Qantas, HSBC and Sydney Fish Market.

In our new baseline year of 2018:

- our total direct catch was 3,720 t of fish and prawns⁵,
- our total carbon footprint was 37,257 t CO₂-e, and
- our emissions intensity was 10.02 t CO₂-e per tonne of fish and prawns caught.

Our emissions reduction strategy is primarily focussed on the rate of carbon emissions per tonne of product caught. This is appropriate because our operations fluctuate as a result of catch variability each year, changes to our operational footprint over time (such as the acquisition of the Northern Fish fleet in late 2017), or due to government fisheries resources management or conservation changes out of our control. Any meaningful emissions reduction strategy in a complex business that relies so heavily on expensive, long term assets such as fishing vessels, will not happen overnight, and we acknowledge that this will be an ongoing journey for us.

Our specific Emissions Reduction Strategy for 2019 and onwards will include:

- Aim to reduce the emissions intensity of the 2018 baseline year of 10.02 t CO₂-e per tonne of fish and prawns caught.
- Continue to communicate the policy and approach of our “Carbon Neutral” pledge to all employees, contractors, suppliers, customers and industry peer groups in an endeavour to gain their support for devising mechanisms to lower the carbon emission footprint of Austral Fisheries, and as a consequence, the industry as a whole;
- Public acknowledgement that the seafood industry can be a leader in the transition to the low emission economy, through technological advancements, as well as being responsible stewards for the marine sector.
- Continue to work with government regulators and agencies such as the Australian Fisheries Management Authority, the Australian Antarctic Division, the Commonwealth Scientific and Industrial Research Organisation, and the Australian Maritime Safety Authority to work towards making our operations more emissions efficient, while not compromising safety or operational efficiency;

⁵ In this document, when referring to tonnes of fish and prawns caught, it means the weight of the *total product* that comes off the fishing vessel, which in the case of ‘fish’, consists of either whole fish, headed, gutted and tailed (HGT) trunks, headed and gutted (H&G) trunks, fillets, collars or cheeks, and in the case of ‘prawns’, consists of whole prawns, and minor bycatch species such as squid, scallops and lobster.

- Continue to investigate and improve on fuel efficiency programs for our vessels, to ultimately reduce fuel consumption and decrease our emissions intensity per tonne of product caught.
- Continue to work with non-government organisations such as the World Wide Fund for Nature and the Marine Stewardship Council to adapt or implement relevant suggestions from their programs;
- Continue to encourage our suppliers to provide lower carbon emission goods and services to our company. This would include fishing gear, mechanical and engineering supplies, stevedore and provedore supplies, fuel, product suppliers, and others;
- Working with our customers to encourage them to continue our Carbon Neutral story through to the end consumer.
- Continue to work with stakeholders in the carbon offset community to progress an international offset standard (like the Marine Stewardship Council certification for sustainable seafood), or international alignment of domestic offset standards.
- Continue to work with stakeholders, such as CSIRO, Qantas, HSBC, and Sydney Fish Market to develop methodologies and logistically possible solutions surrounding for future for 'blue carbon' capturing systems.

We will review, evaluate, refine and report on our Emissions Reduction Strategy following the end of calendar year 2019.

Part C. Emissions reduction actions

Table 3 indicates the measures that have been completed or are currently underway in regards to emissions reductions at Austral Fisheries.

Table 3. Emissions reduction measures implemented in the current reporting period					
Year completed	Emission source	Reduction measure and calculation method	Scope	Status	Reduction t CO ₂ -e
2016	Paper	Moved to NCOS certified paper for all offices	3	Complete	1.2t
2017	Perth office electricity	We switched all lights in our Perth office to LED in August 2017.	2, 3	Complete	6.5t
2017	Sydney office electricity	Where available, we switched our energy providers to NCOS certified providers in May 2017.	2, 3	Complete	9t
2018	Litres of diesel per kilogram of prawn caught	We finished the construction of a new prawn trawler in 2017. 2018 was its first year in operation. While we do have a vessel that its more fuel efficient for its size, we did not achieve a higher catch per litre of diesel in our first year but we hope to improve on that in 2019.	1, 3	Not yet realised	
2018	Litres of Marine Gasoil	We finished installing an alternating generator for our largest toothfish vessel, which reduced fuel usage on this vessel by 38%.	1, 3	Complete	3126t
Total emission reductions implemented in this reporting period					3143t

3A. Emissions summary – Organisation

The total emissions of Austral Fisheries at the organisation level in 2018 was 37,257 t CO₂-e, as shown in Table 4.

Table 4. Emissions Summary - Organisation		
Scope	Emission source	t CO ₂ -e
1	Marine Gasoil - transport (Southern Ocean fleet)	10883
1	Diesel oil - transport (Northern Prawn fleet)	11814
1	Diesel oil - transport (Northern fish fleet)	496
1	Diesel oil - transport (Austral Hunter voyage to Cairns / seatrials)	417
1	Petroleum-based oils (Southern Ocean fleet)	27
1	Petroleum-based oils (Northern Prawn fleet)	15
1	Petroleum-based oils (Northern fish fleet)	3
1	Transport petrol-post 2004 vehicles	35
1	Gasoline for aircraft – spotter plane	69
1	Fugitive emissions of refrigerant gas	5614
1	Waste incinerated on vessels	2.7
2	Electricity purchased for Australian offices	78.4
2	Electricity purchased for international offices	3.1
3	Cold storage services	70
3	Food supplies on vessels	1315
3	Water purchased for vessels and offices	0.8
3	Office paper	0.7
3	Bait for Southern Ocean	487
3	Bait for Northern Fish Fleet	90
3	Supplies procured for vessels – cardboard	151
3	Remaining weight of supplies procured for vessels – assumed to be metals and plastics	653
3	Capital goods	54
3	Marine Gasoil - transport (Southern Ocean fleet)	528
3	Diesel oil - transport (Northern Prawn fleet)	603
3	Diesel oil - transport (Northern fish fleet)	25
3	Diesel oil - transport (Austral Hunter voyage to Cairns / seatrials)	21
3	Petroleum-based oils (Southern Ocean fleet)	7
3	Petroleum-based oils (Northern Prawn fleet)	4
3	Petroleum-based oils (Northern fish fleet)	1
3	Transport petrol-post 2004 vehicles	2
3	Gasoline for aircraft – spotter plane	4
3	Electricity purchased for international offices	0.4
3	Electricity purchased for Australian offices	8.1
3	Upstream transportation of supplies for fishing vessels	222
3	Upstream transportation of fish in trading division, by sea	1220
3	Waste to landfill	33
3	Business air travel - employees	175

Table 4. Emissions Summary - Organisation		
Scope	Emission source	t CO ₂ -e
3	Business air travel - crew/contractors	590
3	Business travel accommodation - employees	67
3	Business travel accommodation – crew/contractors	20
3	Employee commuting	44
3	Taxi use	5.5
3	Onshore processing of catch	5.7
3	Downstream transportation of Austral fish and prawn catch	963
3	Downstream transportation of fish in trading division, by road	98
3	Retail and Restaurant use of product	332
Total Gross Emissions		37,257
GreenPower or retired LGCs		0
Total Net Emissions		37,257

3B. Emissions summary – Products

The total emissions relating to Austral Southern Fish Catch (2014 t) in 2018 was 13,352 t CO₂-e, as shown in Table 5. This represents emissions of 6.63 t CO₂-e per tonne of product leaving the ship.

Table 5. Emissions Summary for Austral Southern Fish Catch		
Emission source	t CO ₂ -e for 2018 Austral Southern Fish Catch	t CO ₂ -e for emission source contributing to life cycle of one tonne of Austral Southern Fish Catch in 2018
Pre-processing of fuel burned on ships (Marine Gasoil)	528	0.2622
Pre-processing of lubricants (petroleum-based oils)	7	0.0035
Pre-processing of bait	487	0.2418
Pre-processing of packaging (cardboard)	75	0.0372
Remaining supplies procured for vessels – assumed to be metals and plastics	498	0.2473
Water supplied to vessels	0.2	0.0001
Transport of materials and equipment to vessels	194	0.0963
Production at sea: catching, processing and packing (Marine Gasoil)	10883	5.4037
Production at sea: catching, processing and packing (petroleum-based oils)	27	0.0134
Freezing of product (at sea) (refrigerant gases)	0	0
Land-based processing	1.9	0.0009
Refrigerated transport	410	0.2036
Cold storage on land, third party	0	0
Cold storage, Austral facility (refrigerant gases)	0	0
Sales co-ordination, Leederville office – electricity use	18	0.0088

Table 5. Emissions Summary for Austral Southern Fish Catch		
Emission source	t CO ₂ -e for 2018 Austral Southern Fish Catch	t CO ₂ -e for emission source contributing to life cycle of one tonne of Austral Southern Fish Catch in 2018
Sales co-ordination, Leederville office – pre-processing of supplied electricity	1.3	0.0006
Retail and Restaurant use of fish and prawn products	222	0.1102
Total Gross Emissions	13,352	6.63
GreenPower or retired LGCs	0	
Total Net Emissions	13,352	

The total emissions relating to Austral Northern Fish Catch (206 t) in 2018 was 739 t CO₂-e, as shown in Table 6. This represents emissions of 3.59 t CO₂-e per tonne of product leaving the ship.

Table 6. Emissions Summary for Austral Northern Fish Catch		
Emission source	t CO ₂ -e for 2018 Austral Northern Fish Catch	t CO ₂ -e for emission source contributing to life cycle of one tonne of Austral Northern Fish Catch in 2018
Pre-processing of fuel burned on ships (diesel)	25	0.1214
Pre-processing of lubricants (petroleum-based oils)	1	0.0049
Pre-processing of bait	90	0.4369
Remaining supplies procured for vessels – assumed to be metals and plastics	16	0.0777
Transport of materials and equipment to vessels	20	0.0971
Production at sea: catching, processing and packing (diesel)	496	2.4078
Production at sea: catching, processing and packing (petroleum-based oils)	3	0.0146
Chilling of product (at sea) (refrigerant gases)	39	0.1893
Land-based processing	0	0
Refrigerated transport	29	0.1408
Cold storage on land, third party	0	0
Sales co-ordination, Leederville office – electricity use	2	0.0097
Sales co-ordination, Leederville office – pre-processing of supplied electricity	0.1	0.0005
Retail and Restaurant use of fish and prawn products	18	0.0874
Total Gross Emissions	739	3.59
GreenPower or retired LGCs	0	
Total Net Emissions	739	

The total emissions relating to Austral Prawn Catch (1500 t) in 2018 was 18,990 t CO₂-e, as shown in Table 7. This represents emissions of 12.66 t CO₂-e per tonne of product leaving the ship.

Table 7. Emissions Summary for Austral Prawn Catch		
Emission source	t CO₂-e for 2018 Austral Prawn Catch	t CO₂-e for emission source contributing to life cycle of one tonne of Austral Prawn Catch in 2018
Pre-processing of fuel burned on ships (diesel)	603	0.4020
Pre-processing of lubricants (petroleum-based oils)	4	0.0027
Pre-processing of gasoline for spotter plane	4	0.0027
Pre-processing of packaging (cardboard)	76	0.0507
Remaining supplies procured for vessels – assumed to be metals and plastics	140	0.0933
Water supplied to vessels	0.5	0.0003
Transport of materials and equipment to vessels	8	0.0053
Production at sea: catching, processing and packing (diesel)	11814	7.8760
Production at sea: catching, processing and packing (petroleum-based oils)	15	0.0100
Spotter plane	69	0.0460
Freezing of product (at sea) (refrigerant gases)	5575	3.7167
Cold storage, Austral facility (refrigerant gases)	0	0
Land-based processing	3.8	0.0025
Refrigerated transport	524	0.3493
Cold storage on land, third party	43	0.0287
Sales co-ordination, Leederville office – electricity use	13.1	0.0087
Cold Storage, Austral facility – electricity use	4.4	0.0029
Sales co-ordination, Leederville office – pre-processing of supplied electricity	0.9	0.0006
Cold Storage, Austral facility – electricity use – pre-processing of supplied electricity	0.7	0.0005
Retail and Restaurant use of fish and prawn products	94	0.0613
Total Gross Emissions	18,990	12.66
GreenPower or retired LGCs	0	
Total Net Emissions	18,990	

4. Carbon offsets

Part A. Offsets summary

Austral Fisheries has satisfied its NCOS requirements by offsetting its 2018 emissions through the purchase and retirement of 34,512 Verified Carbon Standard (VCS) Verified Carbon Units (VCUs), which can be viewed on the APX VCS Registry, as well as 2,775 Gold Standard Verified Emission Reduction units, which can be viewed on the Gold Standard Impact Register.

Table 8: VCU and VER serial numbers for the 2018 reporting period		
Serial Number	Vintage	Credits
2018 reporting period, based on 2018 actual emissions		
GS1-1-AU-GS3039-22-2017-4982-20943-23717	2017	2,775
6480-322930819-322955122-VCU-034-APX-IN-1-1214-01012016-31122016-0	2016	24,304
6478-322885123-322895330-VCU-034-APX-IN-1-1214-01012017-31122017-0	2017	10,208
	Total	37,287⁶

Austral Fisheries takes sustainability to the next level through also supporting a local reforestation carbon credit project. Land Use and Forestry activities are recognised as requiring high levels of upfront finance to source land and plant, which is why we have supplemented our intended local carbon credit project with the VCUs above. Along with the 2775 Gold Standard VERs in Table 8, through the forward sales of CO₂-Certificates, Austral Fisheries have purchased and assigned permanently enough Gold Standard Planned Emission Reduction (PER) units, to enable us to have retired or assigned 37,257t CO₂-e of Gold Standard units from the Australian Native Reforestation *Yarra Yarra Biodiversity Corridor* project, noting that the PERs will automatically become Gold Standard Verified Emission Reduction units (VERs) in future years. These assignments can also be viewed on the international Gold Standard Impact Registry: [1](#), [2](#), [3](#), [4](#), [5](#), [6](#).

Part B. Offsets purchasing and retirement strategy

We have chosen to offset our emissions in arrears, as it is a simpler process of retiring units once the annual account is finalised, rather than making estimates for the year ahead, retiring those units, and then tidying up the account at year end, as you make estimates for the following year.

⁶ Note that an additional 30 VCUs were retired unintentionally.

As mentioned above, with the additional Gold Standard units from the Yarra Yarra Biodiversity Corridor project being PERs, this means it may be some years before this quantity of carbon is actually sequestered. We have therefore 'Assigned' 34,482 of these PERs, and have retired an equivalent number of NCOS approved international wind power offsets (VCUs). Assignment is permanent. No one else can hold or Assign these PER certificates, which will automatically be retired on verification. Because of this, over time Austral Fisheries will have offset much more greenhouse gas emissions than the number of tonnes indicated by the VCUs in Table 8.

Part C. Offset projects (Co-benefits)

Australian Native Reforestation within the *Yarra Yarra Biodiversity Corridor*

The *Yarra Yarra Biodiversity Corridor* Gold Standard project is part of nearly 9,000 hectares that has been restored and certified under this Standard, and will capture an estimated 1.059 million tonnes of CO₂-e over the 50 years crediting period.

The project involves the planting of up to 50 mixed native tree and shrub species (some of which are endangered) on degraded agricultural land that no longer supports viable farming practices. The Yarra Yarra Corridor is located in a globally significant biodiversity hotspot and in a region where over 90% of the land has already been cleared. This reforestation project is encouraging native animals and plants that have vanished or been pushed to the brink of extinction in the region to return and breed. This includes iconic threatened species such as Malleefowl, Bush Stone-curlew, Carnaby's Black-Cockatoo, Western Spiny-tailed Skink and the Woylie (Brush-tailed Bettong), as well as over 30 species of conservation-significant native plants.

Project impacts and benefits:

As well as removing carbon dioxide from the atmosphere, the *Yarra Yarra Biodiversity Corridor* project also delivers substantial positive social outcomes in the region:

- **Environmental** includes salt, wind and water erosion amelioration and improved soil biology and aeration (which equals increased soil carbon levels).
- **Social** includes local employment (including First Peoples) and support of local businesses (more than 100 people employed and nearly 100 local businesses benefit since project inception), which is contributing to reversing the population drift from rural areas. Scientific research, eco-tourism and community education is also gathering momentum.
- **Economic** includes nearly \$20 million invested from project inception into struggling rural areas, with the biodiversity project model allowing other sustainable and profitable land uses to occur (sandalwood, dryland irrigation,

agistment of neighbours sheep for fire risk mitigation, beekeeping, bush foods and tourism).

- **Heritage** includes identifying and protecting significant aboriginal heritage sites of cultural significance and relying on Elder’s knowledge on how we interact and manage these areas. One of the project’s core values is to recruit as many local indigenous people as possible and since project inception there has been nearly 50 individuals employed at different times.

5. Use of trade mark

Table 9. Trade mark register	
Where used	Logo type
Austral Fisheries website; Austral Fisheries staff signature blocks and business cards; and Various presentations made by Austral staff.	Certified organisation
Austral Fisheries website; Austral Fisheries prawn and toothfish packaging; and Various presentations made by Austral staff.	Certified product

6. Have you done more?

To date, we are the only marine protein producer that we know of in the world that is certified carbon neutral, which we take great pride in. We continued our low emissions outreach with our supply chain and customer base, to encourage them to also take action in this space.

We have seen positive actions in recent times from our Prawn fleet lubricant supplier, International Lubricant Distributors, becoming an NCOS certified organisation. And similarly the Sydney Fish Market became the second seafood organisation in Australia to achieve carbon neutral status.

We have a genuine vision of leading our suppliers, customers and competitors to reduce carbon pollution as a result of their activities, and will continue to do so into the future.

Watch this space.