

#### About this report

This report is Tassal's fifth annual sustainability report aligned with the Global Reporting Initiative's (GRI) sustainability reporting framework. The report outlines our performance of material sustainability topics for Tassal's entire operations for FY2015 (1st July 2014 to 30th June 2015), presented together with year on year data trends. The report boundary has not changed from our 2014 Sustainability Report, however, with the acquisition of De Costi Seafoods on July 1, 2015 and the construction of the Triabunna processing facility, the report boundary will change in the next reporting year. Environmental and animal welfare information span our marine operations, hatcheries and processing departments; human resources and quality information span the entire business. Safety data includes contractors. All operations are located in Australia.

The report has been compiled in accordance with the GRI's 'In Accordance-Core' reporting level. Restatements of previous years' data are referred to throughout the report where applicable. Complete financial statements for the Tassal Group are available in the Tassal Group Limited Annual Report 2015 (http://www.tassal.com.au/annual-reports/).

External assurance was not sought specifically for this report, however, all financial and food quality data is externally audited. In addition, freshwater operations data is assured through the Aquaculture Stewardship Council (ASC) certification and marine operations data is assured through the ASC and Best Aquaculture Practices (BAP) certification. This audited data is marked (BAP) and information that is aligned with the ASC Certification is marked with ASC. A third party review of Tassal's reporting against the GRI standard was conducted by sustainability consultancy ZOOiD.

#### **Awards**

#### 2015 Seafood Intelligence International Benchmarking

During 2015 Tassal was proud to be benchmarked as one of the world's top three salmon and trout farming companies in corporate, social and environmental reporting by Seafoodintelligence.com, an independent international seafood market intelligence news and information service.

The annual seafood intelligence report is a comprehensive and technically detailed review of the global Salmon and trout farming industry.

#### 2015 Tasmanian Seafood Industry Award - Young Achiever of the Year

Christine Huynh, Tassal's Senior Manager of Fish Health and company Veterinarian was presented with the Tasmanian Seafood Industry Young Achiever Award. The award is presented to an individual under 35 years of age, who has made a positive difference to the seafood industry, and who has the potential to continue to develop as an effective and respected seafood industry leader.

#### World Wildlife Fund Award for Excellence in Driving **Sustainable Aquaculture**

Heidi Hansen, Tassal's Environmental Certification and Sustainability Officer was presented with the World Wildlife Fund (WWF) award for excellence in driving sustainable aquaculture. Heidi was responsible for facilitating Tassal's compliance with the Aquaculture Stewardship Council (ASC) Salmon standard, and led Tassal to become the first company to have all operations certified globally.



#### **Tassal Group Limited**

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# Message from Allan McCallum, Chairman and Mark Ryan, Managing Director & CEO



In FY2015, we broadened our strategy to include both Salmon and Seafood, Salmon of course being our core product offering. The overarching strategic focus going forward is for us to deliver sustainable long term returns to shareholders as the leader in both Salmon and Seafood in Australia, selling highly recognised, ethically produced and valued brands and products to Australian consumers and retailers – while operating in a Zero Harm environment.

To assist us in realising this strategy, we invested significant time and human capital in the due diligence process in the acquisition of De Costi Seafoods (effective 1 July 2015). The effective integration of De Costi Seafoods into Tassal will be critical for us to achieve our growth targets from FY2016 onwards. As a result of this acquisition,

Tassal's total addressable market opportunity will grow from \$700 million to \$4.3 billion annually. We are extremely excited about this new opportunity and warmly welcome the DeCosti team.

Tassal has had a very busy and productive year, again delivering on our key strategic priorities: Zero Harm, Optimizing the business, Maximizing cash flow and Delivering acceptable returns. Our performance in FY2015 provides clear evidence that our strategy is delivering improved profitability and returns.

Tassal's balance sheet continues to strengthen, supporting future growth aspirations, and cash flows have been prudently managed to ensure appropriate investment in fish growth, from both a fish number and weight perspective and infrastructure. We continue to responsibly manage our capital expenditure to support

sustainable growth for longer term returns. Tassal's domestic market strategy has continued to deliver long term sustainable returns as Salmon per capita consumption continues to grow. In addition, we have achieved excellent operational performance right across the supply chain – from growing to processing, throughout logistics/ distribution, and we have mitigated the negative impact of lower wholesale and export prices.

Other key activities for FY2015 included:

- Achieved Aquaculture Stewardship Council (ASC) certification across all our marine sites
- The development of Safety
  Management Plans for each of
  our vessels to meet the Australian
  Maritime Safety Authority (AMSA) new
  requirements for commercial vessels

# "We achieved ASC certification for all our farm sites, a global first for any Salmon company"

- · Construction of the Triabunna fish by-product rendering plant, and
- · Construction of a second recirculation hatchery next to the existing Rookwood Road facility.

We experienced some challenging times in the past year with a Federal Senate Inquiry into the 'Regulation of the fin-fish aquaculture industry in Tasmania' in March 2015. We chose to take a positive view on the issue and used the Inquiry as an opportunity to better communicate the good work Tassal is continuously undertaking to minimise environmental impacts, maximise positive social impact and continue to significantly contribute to the Tasmanian economy. The Inquiry allowed us to showcase the robustness of our regulatory framework and gain a greater understanding of our stakeholder's concerns.

The forum was not an inquiry into Tassal, but an inquiry into Tasmania's finfish regulation. The outcomes of stakeholder views and representation will inform future material issues for Tassal.

Our Board considers Tassal to be a sustainable aquaculture company from an environmental, operational and financial perspective. Part of our role is as a custodian of the environment particularly the marine environment. We achieved ASC certification for all of our farm sites, a global first for any Salmon company. We have maintained our industry leading position by continued implementation of a sustainability focus throughout the company. Key to this focus is meaningful communication with all stakeholders, including customers.

While we have moved from strength to strength from a financial perspective. we understand that it is not enough for Tassal to be just a 'profitable company'. Investors, customers, consumers,

employees and the public expect Tassal to be environmentally and socially responsible.

In response, we intend to continue our responsible way of doing business by striding from strength to strength from an environmental and social perspective through our carefully managed risk management strategy by:

- Maintaining ASC certification across our Salmon business
- Implementing best practice infrastructure and fish health capacity
- · Focusing on impact mitigation and stakeholder engagement
- · Forming collaborative, forward focused research partnerships, and
- · Implementing and resourcing compliance, communication, stakeholder, and seal management plans - together with transparency in reporting.

Of note, we received very positive feedback on our FY2014 sustainability report from Seafood Intelligence, an organisation that reviews a large volume of global sustainability information every year. Their observations, specifically: "...the report is written and carefully 'crafted' in a frank, objective and 'humane' way which both presents very specific/informative data whilst remaining seemingly very accessible for all stakeholders to read....the report's seeming 'simplicity' conceals a very well-thought conception and realisation... This has also merit of conveying aptly the fact that the sustainability "ethos is now truly embedded within Tassal", means a lot to us as we navigate the complexities of our business activities while reporting on these activities in a meaningful and transparent way.

In our day to day communications we do in fact strive to be frank, objective and

humane. This is how we publically show our respect for our stakeholders and their perspectives which actually may be quite different from ours.

Moving forward, the core focus for Tassal is to further improve customer value and build stronger strategic relationships through optimising the supply chain and the value that we create through scale and national co-ordination of procurement, processing and distribution, which will result in improved availability of our product. We will also focus on insights led Seafood marketing, innovation and category management which will aim to increase domestic market per capita consumption for responsibly farmed Salmon and responsibly farmed and caught Seafood.

Finally, we would like to thank our employees who effectively make Tassal the company that we are. Our staff uphold our values, deliver on our promises and targets and have made us the company we are today. Simply put, our people matter.

We look forward to having you along with us for our exciting transition into the Seafood market.

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Allan McCallum





Mark Ryan

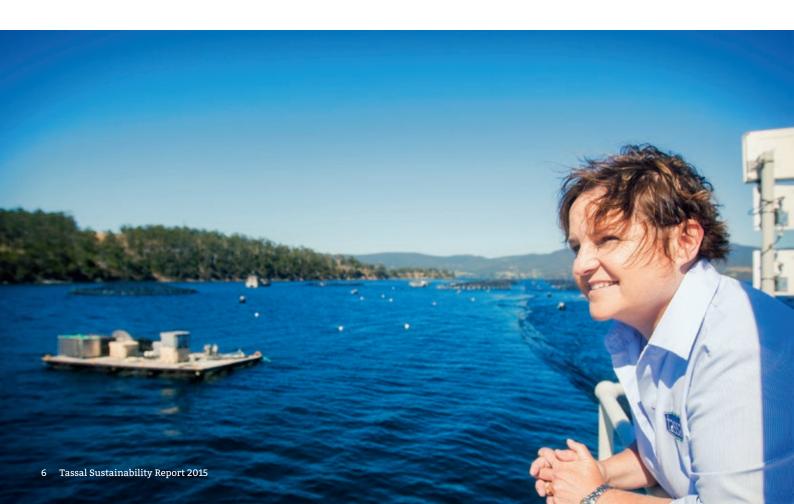


# Message from Linda Sams Head of Sustainability and Fish Health

"we are committed to tackling sustainability issues with integrity, transparency and purpose."

This past year we saw our reputation as a company and an industry come under intense scrutiny by special interest groups, political parties and the media. Although challenging on a professional and personal level it did provide at the same time an opportunity to tell our story, an opportunity to publically present all the gains we have been making in the sustainability space and finally an opportunity for some self-scrutiny and self-awareness.

We learned just how much support we actually had from our stakeholders and we also learned that we had more work to do. All in all we found that Tassal enjoys a high level of acceptance by a multitude of stakeholders which is something we value highly. Expectations of the company performance across the people, planet, product and profit platforms continues to grow yearly and through continuous improvement and striving for global best practice we aim to meet those expectations.



At the same time we successfully implemented the Aquaculture Stewardship Council (ASC) standard across all our marine farms. This was a massive achievement and we became the first Salmon farm company globally to certify our entire operation. One of the aspects that makes ASC certification stand out amongst certification schemes is its third party stakeholder engagement and transparency of audit reports. Both these features assisted us during a time of heightened public scrutiny. Having a defined culture of transparency and respect for stakeholders helped the company embrace and respect that scrutiny.

We have implemented further processes and systems this year, and refined others that support us in meeting our environmental and social targets: Zero Harm for Fish, RSPCA standard development, business intelligence tools and real time, environmental monitoring systems to name a few. Tassal is embracing the digital age of doing business and using that technology to provide the best growing conditions for our Salmon, minimising our environmental impacts while a Salmon RSPCA standard is being developed in Australia for Australian conditions. The Farmed Atlantic Salmon Approved Farming Scheme standard is building on the excellent work done by the Scottish Salmon industry in the area of fish health and welfare. As always, at the forefront of our thinking is our customer. In light of this focus we continue to strive for the highest quality product and maintain the highest level of food safety.

In June 2015, I participated in a panel on climate change as part of the EU Climate Diplomacy Day. The statistics are sobering and the global climate changes are confronting to say the least. I was the only industry person on a panel of scientists, activists and climate specialists and I wondered to myself what I was going to contribute to the session. I started out by speaking about the importance of growing food in changing world conditions, about managing the risk and finding the opportunities, about implementing companywide change to reduce our impact, and about leadership in the business community. The most important thing I shared that night, was that Tassal was choosing not to be overwhelmed by the situation but be purposeful. Sometimes people just want to believe things can be better and that we have the capacity to bring about change. Upon reflection, I realise that is how Tassal tackles many tough issues, such as inherent conflicts over the use of the marine space, the potential environmental impacts of conducting our business or the challenge of food production in the 21st century. Every little improvement matters and every setback that we recover from, and every step backwards that we take is replaced by two steps forward, which is what defines us as a company.

I have said it many times in previous reports - balance is the key, and, like a tight rope walker we are continuously seeking the balance between industry and conservation, food production and animal rights, employment and

environmental impacts, development and social amenity. So, just like the EU climate panel, we do not have all the answers, and we cannot solve all the issues ourselves, but we can and do make a difference.

As we look to the future and enter into the world of Seafood through our acquisition of the De Costi business we will certainly encounter many challenges and wonderful opportunities in the upcoming year. Alongside our new team members at De Costi we are committed to tackling sustainability issues with integrity, transparency and purpose.

And finally, I would like to sign off in remembrance of two Tassal employees who passed away in the last year. Pam Burton who was an outstanding Tasmanian advocate for the care and conservation of wildlife and our own Julie Lucas, a valued and much loved member of our Sustainability and Fish Health team.



**Linda Sams** 





# Message from Ian Miles **Head of Safety**

# "We are extremely proud to say that all our safety goals were achieved in the year of review."

Our focus this past year has been to continuously improve all safety programs and processes. As with previous years, we never leave good enough alone. It has become our habit to continuously seek opportunities to refine, simplify and improve the way we go about doing the job safely. Good to great is truly alive and well in our spirits.

Tassal continues to focus on our Zero Harm safety goals. While some might argue a Zero Harm goal is idealistic or unrealistic, we have defined exactly what it means to us here at Tassal. This is important to us and I believe that even seemingly unrealistic dreams can become a reality if we define them more clearly, build a pathway toward it and continue to do the daily 20 mile march in pursuit of it. We believe that once our people understand what the goal is, what they need to do to achieve it and are encouraged, motivated and driven to achieve it, just about anything is possible. We will achieve Zero Harm - of that I am positive.

This was a year that was full of activity, but happily the right kind of activity. Just to mention a few good projects completed: we implemented a robust vessel safety management system; we refined our Work Health and Safety (WHS) training and induction programs to be more effective and included a one and three month check in/sign off with all inductees. These safety induction processes operate across of all our operations. I am encouraged by the

positive effect this has had on our safety journey including our ever improving safety culture. Recent survey results once again reflect the continuously improving safety culture. Whilst I cannot mention all the details, I can mention that the highest engaged employee group are those with under two years' service, which indicates that our safety induction processes are working and the step changes we have made continue to drive the safety culture toward our

Positively, our Zero Harm safety platform has now been extended to other parts of the business. The concept of Zero Harm for the business is taking shape and includes programs such as Zero Harm for Fish and Environment and Zero Harm for Consumers, where we care for our people, we care for our planet, we care for our product and we care for our profit. At the core of these programs are a set of values of 'I care for' and 'I take care'. All Zero Harm programs have two main pillars, namely compliance (which we internally refer to as our 'license to operate') as well as culture (which we can refer to as how much we care and how we behave). This has driven our safety journey for the past three years and now influences all Zero Harm programs to essentially achieve Zero Harm for the business.

We are extremely proud to say that all our safety goals were achieved in the year of review. As you might imagine, the summary of topics included in this sustainability report are a mere fraction of Tassal's WHS program, so too the achievements and the good work that occurred as a result of the effort of the good people that work for Tassal. I cannot express my gratitude enough to the entire Tassal team that has rallied

behind our safety vision and shared in the effort and achievement of our safety

As with previous years, we continued to invest in our emerging leaders and again had 40 new students attend and graduate from our safety leadership program. This program, in its third year, focuses on building an ever growing team of resilient safety leaders. At Tassal we believe that safety is everyone's responsibility, and, as such, embarked on a journey to create an interdependent workforce that cares for, takes care and is safety focused and will be involved in developing interdependent onsite teams. Each year we invest in our leaders, equipping them with skills to become part of the guiding team to realise our Zero Harm goals. Again this year we succeeded in presenting this course and we had a 100% completion rate.

Enjoy reading through the snapshot summary of a few criteria in the safety pages of this report. I can only hope you come and meet a Tassal employee somewhere in the community and you will see for yourself that we are different. My dream is that you see our nature, that we care for and take care not only for ourselves, but for each other, you included, our planet, our communities, our product and ultimately our Tassal.

Ian Miles



# Our Company

Since the opening of our marine sites in 1986, Tassal has grown from a privately-owned operation to a major public company listed on the **Australian Stock Exchange in 2003** (ASX code: TGR).

We strive to achieve operational excellence, while protecting our core values around quality, community and the environment. Tassal is committed to taking a leadership role in sustainability in aquaculture and Seafood sourcing.

Tassal is a vertically integrated company that includes freshwater hatcheries, saltwater aquaculture, Salmon

processing, and value adding stages through to distribution, wholesaling and export. Tassal is Australia's largest producer of fresh Salmon products.

Our controlled entities are Tassal Operations Pty Ltd and Aquatas Pty Ltd, based in Australia. Our head office is located in Hobart, Tasmania.

Our Financial Performance			
(\$Am)	2015	2014	% Change
Statutory results			
Revenue	309.79	266.33	+16.3%
EBITDA	93.97	78.60	+19.5%
EBIT	75.60	63.13	+19.7%
NPAT	49.99	41.06	+21.8%
Operating results			
Operating EBITDA	72.59	63.55	+14.2%
Operating EBIT	54.22	48.08	+12.8%
Operating NPAT	35.03	30.52	+14.8%
Operating cashflow	42.70	50.63	-15.7%
Final dividend - cps	7.00	6.00	+16.7%
Total dividend - cps	14.00	11.50	+21.7%
Gearing ratio	17.60%	15.41%	
Funding ratio	34.89%	29.13%	

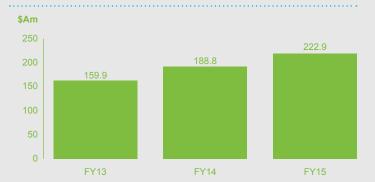
<sup>\*</sup> A comprehensive overview of our financial data is available in the Tassal Group Limited Annual Report 2015: www.tassal.com.au/annual-reports

#### Our Salmon

#### **Our Biological Assets**



Tassal Salmon species of Atlantic Salmon is Salmo salar.



#### Harvest tonnage

23,780

hog tonnes

Fish in sea water

9,042,650

fish

Fish biomass in sea water (live weight tonnes)

17, 169

Combined processing output (hog tonnes)

live weight tonnes

23,726

hog tonnes

#### Our Network



#### 2 directly controlled hatcheries

Majority ownership of Salmon Enterprises of Tasmania Pty Limited (Saltas), an industry hatchery

- 6 diverse marine farming regions
- 4 processing facilities
- 2 owned retail outlets
- 3,357 points of retail presence

#### Our Brands

Tassal markets and sells branded and unbranded Salmon products











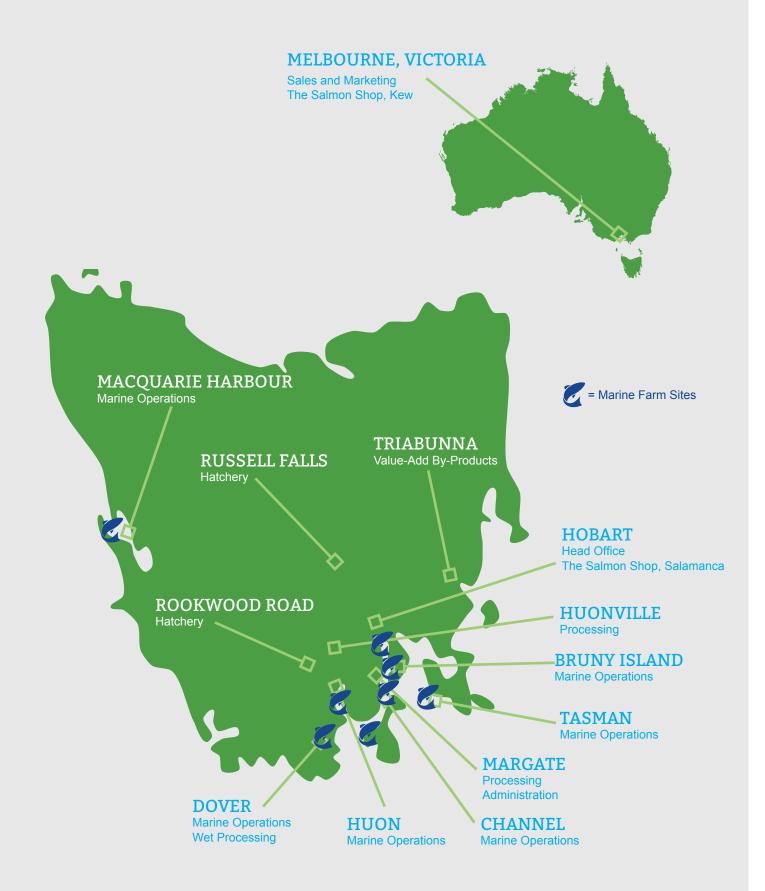




Branded vs unbranded revenue and volume				
	FY	2014	FY2	015
	Volume	Revenue	Volume	Revenue
Unbranded	67%	63%	70%	65%
Branded	33%	37%	30%	35%

#### **Our Markets**





# The Economics of Salmon Aquaculture

Aquaculture is the world's fastest developing source of animal protein, growing by more than 60% over the past decade (KPMG, 2015). Given the growing pressures on wild-catch fisheries, such as lower catch volumes and rising consumer demand for fish, aquaculture product is perceived to have the potential to supply the growing demand for this animal protein (FAO, 2011). The Food and Agriculture Division of the United Nations (FAO) estimates that fish produced through aquaculture will account for 62% of all fish consumed throughout the world by 2030.

Tasmania's salmonid industry has a turnover of \$1.12 billion and represents 2.3% of the state's Gross State Product (KPMG, 2015). The growth rate of Tasmania's economy and employment rates have performed poorly compared with mainland Australian states, hence development of the aquaculture industry is of significant importance to assist in turning these trends around.

The salmonid industry is Tasmania's largest primary industry (food) production sector by value, and, over the past decade, the value of aquaculture production has tripled, currently representing approximately 75% of Tasmania's total fisheries

production, which includes other aquaculture production such as abalone, oysters, rock lobster, and wild catch (Australian Bureau of Statistics cited in TGSA, 2015).

Farmed Salmon comprises 95% of the total value of Tasmanian aquaculture (ABARES, 2015).

Salmonids represented the largest volume of production out of all Australian fisheries commodities between the periods 2011-14, with Tasmanian aquaculture production rising by 4% (\$19 million) between 2012-13 and 2013-14. Providing a longer term perspective, the value of farmed salmonids, predominantly



from Tasmania, increased by 194% (\$358 million) and production volume increased by 149% (16,686 tonnes to 41,615 tonnes) in the 10 years from 2002-2003 to 2013-14. By 2013-14, the value of farmed salmonids throughout Australia had increased to \$543 million.

The volume of farmed Salmon is forecast to expand by a further 2,300 tonnes in 2015-16. Over the longer term, Salmon production is projected to reach 61,400 tonnes by 2019-2020. (ABARES, 2015).

Currently, Tasmanian aquaculture salmonids are primarily (around 90%) produced for domestic markets.

The real gross value of Tasmania's aquaculture production has increased significantly over the past decade. While the majority of economic benefits from the Salmon aquaculture industry are experienced within Tasmania, the industry also contributes over \$115 million to mainland economies. The industry provides direct employment opportunities for 1,571 people and supports an additional 3,769 FTE positions throughout Tasmania and mainland Australia. Salmonid aquaculture accounts for one out of every 100 people employed in Tasmania and accounted for 10 per cent of FTEs in the Tasmanian agriculture, forestry

and fishing sector (Australian Bureau of Statistics, cited in TGSA, 2015).

Regional areas in Tasmania that have suffered from the downturn of employment opportunities in traditional industries such as forestry and mining, have experienced greater employment opportunities which will further grow with the expansion of the aquaculture industry.

The service and transport industries, including electrical and mechanical services, refrigeration, metal fabrication, logistics, concreting and construction, rely heavily on Tasmania's aquaculture industry for employment opportunities within local communities and the health of these industries contributes significantly to the local economy.

Significant emphasis is placed on the development of a skilled workforce across all functions of the aquaculture industry, and the industry provides school based apprenticeships and tertiary education opportunities. Given that Tasmania has historically low levels of educational progression and literacy compared to mainland Australia, the training and education opportunities provided by the aquaculture industry is significant, particularly for young Tasmanians (Parliament of Australia, 2015).



# Looking Forward

# **Strategic Priorities**

Tassal's strategic priority is to deliver sustainable long term returns to shareholders selling highly recognised, ethical, valued brands and products (Salmon and Seafood) to Australian consumers and retailers, while operating in a Zero Harm environment. Key activities to achieve this are:

## Zero harm

**Maintain** compliance focus - due dilligence

**Drive / embed** continued cultural change toward interdependent behaviours - team & individual level

**Leadership** - accountability / performance management

KPIs	
LTIFR	0
Incident rate	0
ATLR	0
MTIFR	<20
Scorecard Compliance	95%
Scorecard Culture	90%

# Optimise the business

Market leadership in Salmon and Seafood - from sustainability to people

Maximise sales market coverage

**Drive** domestic market Salmon and Seafood per capita consumption growth, whilst **maximising** gross and net pricing and **maximising** marketing exposure (for the right spend)

Salmon - lowest cost Salmon growing / farming

Optimise supply chain - from growing to procurement to processing to sales, underpinned by lowest cost processor

Best on ground people and interdependent team

# Maximise cashflow

**Optimise** both Biological Feed Conversion ("BFCR") & Economic Feed Conversion ("EFCR")

Minimise stock on hand to ensure minimised working capital cycle and to maximise cashflow

**Maximise** the use of assets - **responsible** capital spend

Working capital cycles ensure minimum permissable tolerance around collection cycles

# Deliver acceptable returns

**Key focus** on asset returns to ensure the efficient use of the Company's asset base for earnings growth

Proactive management of the "financial health" of the Company - ensure sufficient heeadroom in core debt to absorb "shocks"

Strategic planning consideration of the implications of current strategies / tactics in a short to long term context to deliver acceptable returns

# **Key Enablers**

The key enablers for the 2016-2020 period for us to achieve our strategic objectives and increase our revenue growth, successfully implement capacity expansion and achieve greater operational efficiencies are:

## Revenue Growth

Maintain Salmon growth rate through maximising domestic per capital consumption

Leverage Salmon and Seafood offerings for overall improved Salmon and Seafood revenue growth

Increase share of Seafood Industry beyond NSW to include Eastern Seaboard

Develop and execute a Core Species program for Seafood

Focus on sustainability, quality and freshness credentials



# Capacity Expansion

Increase Salmon biomass from SBP and operational, safety and risk improvements

Establish additional processing capability for scalable species

Complete next phase of Salmon expansionary infrastructure, including new farming leases

Ensure an effective procurement plan is developed and implemented, including consideration of wild catch licences/quota and fishing vessels



# Operational Efficiency

Salmon farming optimisation, both marine lease and operational (reduce growing costs)

Salmon processing consolidation/amalgamation driving supply chain efficiencies

Seafood core species efficiency through scale and line optimisation, driving supply chain efficiencies

Delivery supported by best on ground people and interdependent team



# Our Approach to Governance

Tassal's governance approach has continued to evolve as the business matures. We have been moving towards a whole of organisation approach to governance during the reporting year. In highly regulated industries such as aquaculture, the move towards this model is not a large shift in approach, as compliance is already embedded across the business functional areas, but it is an approach that requires a focused coordinated approach.

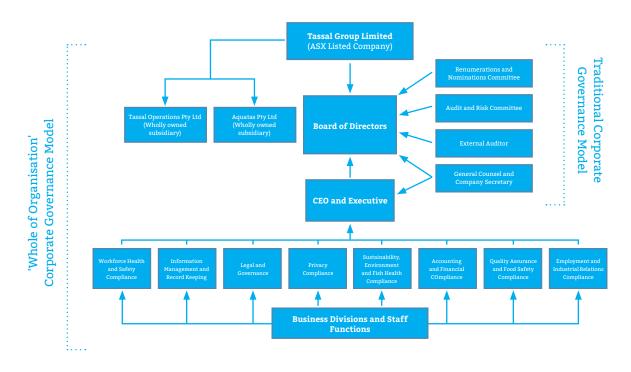
Our aim is to achieve best practice in governance to meet our requirements as per the traditional corporate governance model of compliance and to meet our obligations to our diverse stakeholder groups. We have adopted the Governance Institute of Australia's guidelines on whole of organisation governance: transparency, accountability, stewardship, and integrity.

Good governance is good business and adopting this model supports the achievement of Tassal's strategic objectives by:

- Clarifying that decision making is tied to risk and there is accountability for the exercise of authority
- Empowering our employees and allowing them to respond to changing circumstances while ensuring that decisions are made within the risk appetite set by the Board
- · Improving productivity
- · Reducing risk, and
- Facilitating enhanced responsiveness to the market and environment in which Tassal operates.

For our investors, good corporate governance promotes investor confidence which is crucial to the ability of Tassal as a listed entity to compete for capital. Applying a long term view that social and environmental issues become financial issues means that Tassal has been pro-active in this space, has managed its business with due care and diligence and has ensured that appropriate governance arrangements are in place. This position aligns with the ASX Corporate Governance Principles and Recommendations. It also sends a powerful message to investors who can then factor this information into their decision on whether or not to invest in Tassal securities.

Adopting a whole-of-organisation approach to governance has meant that we have found knowledge flows that challenge our traditional thinking and allow us to discover new ways of connecting and collaborating. This is vital to understanding the position of different stakeholders as well as investing in research and development that provides the science behind our decision making.



# Case Study: Good Governance - Senate Inquiry

In March 2015 the Australian Government Senate referred the regulation of the fin-fish aquaculture industry in Tasmania to the **Environment and Communications References Committee for** inquiry and report. The terms of reference of the Inquiry were particularly focused on the:

- · Adequacy and availability of data on waterway health
- · Impact on waterway health, including to threatened and endangered species
- Adequacy of current environmental planning and regulatory mechanisms
- Interaction of state and federal laws and regulation, and
- Economic impacts and employment profile of the industry

We welcomed the Inquiry, and viewed it as a vehicle to share our story more broadly than with our primary stakeholder base. A written submission to the Inquiry was jointly prepared by the Tasmanian Salmonid Industry as a whole, and lodged by the Tasmanian Salmonid Growers Association (TSGA). Each Tasmanian Salmon farming company was integral to the development of this single industry submission which responded in full to the terms of reference.

Tassal's routine application of the principles of good governance that underpins our business and supports our internal management systems meant that the preparation of our contribution towards the industry submission was relatively seamless. Documentation previously prepared to meet various certification requirements (voluntary and obligatory), our sustainability reports, various internal reports and papers as well as those written for individual stakeholders provided a strong foundation of information on which to draw.

Tassal's contribution was largely prepared by the Environment and Sustainability team under the guidance of our Head of Sustainability and Fish Health and our Managing Director & CEO. In the preparation of our submission, it was important that the team not only align with the company's purpose, but also understand the underpinning social and political context which gave rise to the Inquiry in the first instance. This allowed for the right information to be provided for the right purpose and to answer the questions posed by the Inquiry in a robust manner.

In essence, the Inquiry is about transparency of the industry – a principal which is at the core of Tassal's ethos and for which we are clearly leading the way globally. The real benefit of the Senate Inquiry for Tassal has been to strongly highlight that our approach to transparency, ethics, integrity and environmental responsibility is the right approach and has stood us in good stead. All of these elements have been underpinned by good governance practice.

# Sustainability at Tassal

# Zero Harm for the Environment, People & Fish



"Tassal believes
that part of its role
is as a custodian of
the environment
– particularly the
marine environment."

Sustainability for us is a 'profit' centre. It delivers us a competitive advantage over our local and international competitors. Research, science, adaptive farming and innovation work together to continually drive our sustainability credentials. Tassal undertakes and collaborates on a wide range of research that is facilitated through collaborations or directed to meet the company strategy and objectives.

Transparent reporting of our sustainability activities has pleasingly become the norm for Tassal. This has placed us at the forefront of the global Salmon industry and manages reputational risk for both the company and our customers. In light of our pioneer position in this area and other initiatives, we have received numerous awards and national and international recognition.

Tassal believes that part of its role is as a custodian of the environment – particularly the marine environment. We also acknowledge that environmentally responsible, sustainable production is a precondition for long-term development and growth and it is paramount that the salmonid industry in Tasmania is one which is run with consideration for the environment, and adapted to the marine environment and biological diversity at each marine lease site throughout Tasmania.

The sustainability of our company is clearly linked to the health and welfare of our stock which, in turn, is supported by a healthy marine environment. We aim to provide the best possible living conditions for our fish. Having appropriately trained staff looking after fish welfare is paramount. Investing in fish health initiatives improves growth and fish performance, maximises the value of production and maximises the return for the environmental cost of growing those fish.

Sustainability at Tassal encompasses more than environmental sustainability. As a responsible business, we have a support role to play for the communities in which we operate and for our employees which extends beyond our legal obligations. Tassal employees receive training and development within a culture of care developed under our Zero Harm for People safety program, and the company readily supports employees through the professional and personal challenges that life may present. We never forget that our employees and contractors also belong to the communities within which we operate. Tassal readily supports communities through our dedicated Community Engagement Officer who implements our community engagement strategy. Our sponsorship and donation program is designed to foster activities which create a sense of community.

During the reporting year, Tassal achieved Aquaculture Stewardship Council (ASC) certification for all of its farm sites – a global first by a Salmon aquaculture company. The ASC certification is supported by our

certification to Best Aquaculture Practice (BAP) for our marine sites and wet processing.

We have maintained our industry leading position in implementing a sustainability focus throughout the company – with WWF-Australia as our principal sustainability partner. Key to this focus is meaningful communication with all of our stakeholders, supporting our goal to develop significant environmental and social initiatives led by stakeholder input.

Tassal in general adopts a conservative attitude towards risk taking. We strive to minimise risks (as much as possible) while pursuing strategic ambitions. Our robust Risk Management System is an enterprise wide, holistic system to mitigate risks and recognises that our appetite for risk differs for each area of the business (e.g. operational, strategic, financial, compliance). Our Risk Appetite Statement governs our strategic decisions and provides a level of 'freedom within boundaries' and is aligned with a precautionary approach.

Overall, Tassal is mitigating risk via a focus on sustainability by:

- Implementing best practice infrastructure and fish health capacity
- Focusing on impact mitigation and stakeholder engagement
- Forming collaborative, forward focused research partnerships, and
- Implementing and resourcing compliance, communication, stakeholder, and wildlife management plans – together with transparency in reporting.



# Our Sustainability Commitments

# Progress on 2015 Goals and Targets

ENVIRONMENT			
Goal	Target	Did we achieve our Target?	Commentary
Achieve best environmental Salmon farming practices	Achieve ASC certification across all marine and freshwater operations	Yes	A global first for any salmon company
	Trial new brass nets for predator exclusion	In progress	We are in the final design phase with our preferred supplier. Targeted delivery for winter 2016
Operate responsibly alongside wildlife	Work with local wildlife researchers to develop a Code of Best Practice that will reduce the likelihood of whale interactions		
	Update Wildlife Interaction Plan and Wildlife Management System	Yes	Code of Best Practice for Whale Interactions in development
	Develop a wildlife interactions reporting procedure for real time updates on ASC Dashboard		
	Develop a freshwater monitoring framework	In progress	Ongoing logging of reuse water established at Rookwood Road hatchery
Reduce water use			Flow meters included in hatchery upgrade planning for Russell Falls
			Buffer tank incorporated into design for second Rookwood Road hatchery to reduce water wastage when moving smolt around the hatchery
Improve sustainability of product packaging	Establish a Packaging Taskforce to review operational packaging constraints, food safety packaging requirements and recycling options for consumer disposal and recycling	Partial	Formal task force not established but the following activities were initiated:  • Investigation of recyclable cardboard carton replacement of polystyrene air freight boxes  • Inclusion of recyclable logo onto Superior Gold sleeves  • Investigation of down gauging of web (film) used in Tassal's EasyBake product range, and  • Down gauging wholesale cardboard cartons will come into use once stocks of old cartons

Goal	Target	Did we achieve our Target?	Commentary
	Roll out Zero Harm for Fish program	Yes	The program was implemented across marine operations and transportation
Optimise fish health and welfare	Finalise the draft guidelines: RSPCA Approved Farming Scheme Standards – Farmed Atlantic Salmon with industry and RSPCA Australia	Yes	Final drafts developed, to be implemented in FY2016

#### **PEOPLE**

	Drive timely closeout of safety actions by targeting 0% actions overdue for the close out date		
Zero Harm for People	Drive appropriate control effectiveness by eliminating and/or engineering out of hazards and risks (level 1 and 2 type controls)	Yes	
	Drive cultural change improvements by extending Tassal's ROCK solid safety leadership program to team leaders (previously undertaken by executives, senior managers and management level)		
Create safety 'guiding principles' for employees	Design and launch Guiding Principles platform	In progress	Guiding principles have been designed. Launch to occur FY2016
Improve our understanding of sustainability	Roll out further sustainability self-assessment to parts of the organisation that has not undertaken self-assessment	Yes	

## COMMUNITY

Improve communication with key stakeholders	Develop an additional series of fact sheets to improve community understanding of material issues	Yes	Fact sheets available on Tassal website
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## FOOD SAFETY & QUALITY ACCOUNTABILITY

Communicate product traceability	Achieve Chain of Custody (CoC) certification across all processing facilities	Yes	Gained (CoC) certification for Dover, Huonville, Margate and sub-contractors
Ensure factory practices align to best practice	Become formally certified to new standard with major external partner	In Progress	Certification audit scheduled for early 2016. Current standard with the customer has been maintained; certification to new standard steadily progresses in consultation with the customer's expectations

# Our 2016 Goals and Targets

#### **ENVIRONMENT**

Goal **Target** 

	8	
	Investigate non-compliances at Rookwood Road hatchery	
Improve compliance across hatcheries	Review non-compliances with regulators relating to reuse and potential impacts	
Increase stakeholder engagement around wastewater reuse	Supply stakeholders with relevant information regarding the reuse of wastewater	
	Undertake additional monitoring of freshwater reuse	
Further develop health management and disease surveillance programs for hatcheries	Develop a health management and disease surveillance program for each individual hatchery	
Optimise feed management	Remove 25% of 2.5 inch spinners from our leases by 30 June 2016	
Work with feed supplier to maintain feed sourcing and traceability compliance	Achieve ASC compliance	
	Reduce water used for bathing through selective breeding program	
Improve environmental performance	Complete annual greenhouse gas assessments for each marine farming site in addition to biennial Life Cycle Assessment	
Restructure marine operations	Restructure the six marine operations regions to four operational zones	
Poduce plactice waste	Begin feedpipe recycling program to reduce plastics waste going to landfill	
Reduce plastics waste	Investigate potential recycling and reuse opportunities for waste feed pipe	

#### FISH HEALTH & WELFARE

Optimise fish health and welfare	Implement Zero Harm to Fish – freshwater and harvest programs
	Incorporate biosecurity guidelines into Zero Harm scorecards
	Ensure all sites are compliant with RSPCA Approved Farming Scheme standard
	Complete pre-assessment to draft RSPCA Approved Farming Scheme Standards – Farmed Atlantic Salmon

## PEOPLE

Goal	Target

Maintain high standard of labour conditions	Design and launch employee engagement survey. Analyse and report on results
Achieve Zero Harm for People	Achieve >95% overall score for WHS compliance scorecard
	Implement 'Driving Safety Culture Scorecard' and achieve >90% overall score
	Achieve leading indicator targets: - >60% controls to be level 1 or 2 - actions outstanding 0% overdue
	Achieve lagging indicator targets:  - TRIFR <20  - Fatalities 0  - LTIFR 0  - MTIFR <20  - Incident Rate 0  - Average Time Lost 0
Focus on gender diversity	Appoint a female board member

# FOOD SAFETY & QUALITY ACCOUNTABILITY

Ensure factory practices align to best practice	Become formally certified to new standard with major external partner
Improve quality incident reporting and analysis	Implement improved record and widen distribution of quality incidents reporting. Develop analysis tool for trending incidents
Develop Zero Harm for Consumer program	Develop strategy and roll out plan for Zero Harm for Consumers program





# **Engaging with** our Stakeholders

Community and stakeholder engagement is an overarching and ongoing activity within Tassal. It is also constantly evolving although the end goal of minimising negative impact and maximising positive impact remains fixed and clear.

Fostering an engagement culture within the company supports transparency and allows freedom for all employees to engage on issues important to them. Community engagement activities occur regularly throughout the year and are not necessarily tied to any specific project or proposal.

> Tassal's adaptive stakeholder engagement program focuses on creating opportunities for communities, interest groups, and other stakeholders to engage with our company. Engagement activities include information provision, consultation, complaint resolution, sponsorship of community based initiatives and other activities.

> > Because Tassal's operations are primarily located in small regional communities, it's important that we are actively engaged with these communities. We recognise the importance of local amenity to the people who live there and we respect people's right to enjoy their local spaces and to enjoy their life in the way they choose. We work hard to connect with our communities and neighbours so that we can understand where we can add the most value, where we can mitigate impact and where we can facilitate effective participation. Our dedicated Community **Engagement Officer not** only acts as a conduit between stakeholders and the company, but as an advocate for community. The role works with Tassal's operational staff and contractors to resolve any stakeholder

> > > complaints about Tassal's operations.

"Because Tassal's operations are primarily located in small regional communities, it's important that we are actively engaged with these communities." Our Community Engagement Officer works to support community activities, partnerships and research collaborations, as well as liaising with government and non-government organisations and advisory forums. Additionally, the role connects across all operational sites and lessons learned at one site are shared and worked through at other sites.

Managing an effective resolution to complaints about our operations is not only an important component of maintaining and building positive community relationships, but can also be a matter of legal compliance. At a basic level, it is necessary to comply with all relevant laws and regulations which exist to protect community amenity and safety. These include, but are not limited to regulations pertaining to noise and odour emissions and waste disposal. As a sign of commitment to minimising negative social impact, Tassal has repeatedly demonstrated our 'beyond compliance' approach across the business, particularly when it relates to our relationships with communities and neighbours.

In addition to engaging directly with Tassal, Tassal stakeholders have the opportunity for redress through:

- · Marine Farming Branch of DPIPWE
- · Local councils
- · Environment Protection Authority, and
- · Stakeholder feedback mechanisms of the Aquaculture Stewardship Council (ASC) assessment process.

Tassal engages with those stakeholders (both internal and external) to which we have a legal, commercial or moral obligation. Stakeholder individuals or groups that affect or may be affected by Tassal's actions, objectives and policies are of primary interest to the company and we will engage with them wherever possible and where they are known to us.

Our key stakeholder groups are: employees, communities (including local councils) and neighbours, shareholders, customers and consumers, waterway users (commercial and recreational), regulators (state and federal governments), industry associations, certification bodies, environmental groups, indigenous communities and suppliers.

# Case Study -

## Sharing our Waterways

#### The Issue

Feedback was received by a number of waterway users (recreational and commercial boating) regarding a concern that navigation in some parts of the D'Entrecasteaux Channel and lower Huon River has become more difficult due to the presence of Tassal's Salmon farms, which is a particular issue during periods of low visibility. Concern was also raised regarding the potential for proposed lease alterations which was perceived to compound the issue in the future.

#### **Stakeholders**

Recreational yachtsmen and recreational and commercial fishers, Marine & Safety Tasmania (MAST), Tasports, Salmon industry members, regulators and recreational boaters.

#### Our approach

Working collaboratively with these stakeholders, a comprehensive 'navigational risk' assessment was developed which highlighted the need for publically available information regarding safe boating behaviour around Salmon farms. The industry worked collaboratively with MAST to develop a video which has been made available to recreational and commercial boaters: 'Marine and Safety Tasmania – making boating better'.

(see: http://youtu.be/yFGDY7YNQs4)

Additionally, the synchronisation of boundary marker lights was identified as the best method of making navigation lines clearer at night. This process will take some time, and we expect to test the system during the next reporting period.

The navigational risk assessment will be reviewed annually.

# Stakeholder Engagement Activities FY2015

ENGAGEMENT ACTIVITIES			
Stakeholder Group	Engagement	Frequency	
Employees	One on one meetings and team discussions via Environment & Sustainability team	As required	
	Internal audits of sites and assisting with site preparation for audits	Annual	
	Head of Sustainability and Fish Health visits all sites to speak with entire organisation regarding certification, updates in siting, environmental issues, fish health and general research and development activities	Annual	
	Meetings/presentations with local elected representatives	As required, at least annually	
Communities and neighbours (to our operations)	One on one resolution of complaints	As required	
	Issues based one on one meetings	As required	
	Community forums on the West Coast	Three to four times per year	
	Sponsorship & donations of community activities	Ongoing	
	Information sessions	Annual or as required	
	Stakeholder meetings (ASC)	Face to face meetings every 3 years for each site and written opportunities for feedback annually	
	Feedback via formal statutory representation process when amending marine sites	As required	
	D'Entrecasteaux & Huon Collaboration – engagement via local events, information transfer	Ongoing	
	Talks/presentations to community groups	As requested	
	Community Marine Debris clean ups	Ad hoc/annual	
Indigenous communities	Tassal is developing a relationship with the Aboriginal Land Council of Tasmania and exploring ways to support Tasmanian indigenous communities and culture	Ongoing	

## ENGAGEMENT ACTIVITIES

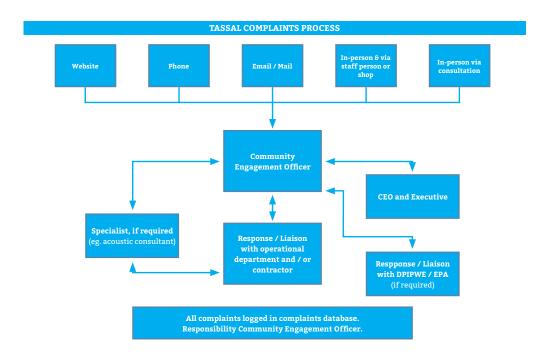
Stakeholder Group	Engagement	Frequency
Waterway users (commercial and recreational)	Presentations to clubs	As requested
	Workshops	As requested
	Navigation risk assessment	Annual
	MAST TV Collaboration: 'Marine and Safety Tasmania – making boating better'	Once off
	Channel & Huon Collaboration	Ongoing
Regulators (state and federal governments)	Formal meetings	Ongoing
	Compliance & audit meetings	Ongoing
	Response to complaints meetings	Ongoing
Industry associations	Face to face meetings with association executives including, Tasmanian Seafood Industry Council, Tasmanian Rock Lobster Fisherman's Association, Tasmanian Association for Recreational Fishing, and various yachting clubs	As required – at least annually
Certification bodies	Engagement throughout audit process and if there are any issues that occur in between scheduled audits	Ongoing
Environmental organisations	Partnership with WWF-Australia	Ongoing regular informal and formal communication
	Tasmanian Conservation Trust – through the Sustainability Report Advisory Committee	At least annual engagement
	Australian Marine Conservation Society – sharing of information about our practices and informal conversations	Ongoing
	Southern Coast Care Association of Tasmania – informal communication via events	Ad hoc
	2015 NRM Conference. NRM North, NRM South, Cradle Coast NRM & OceanWatch (National Marine NRM) – informal communication & hatchery, marine farm & processing facility tour	Ad hoc
	Environment Tasmania – engagement via industry association (TSGA)	Ad hoc
	Environment Defenders Office – engagement via industry association (TSGA)	Ad hoc

#### **ENGAGEMENT ACTIVITIES Stakeholder Group Engagement Frequency** Three posts go live every week and direct Social media – issues based online posts and direct feedback to consumers responses as needed Sales people – team meetings and updates **Customers and consumers** Weekly on sustainability as required Website – regular updates including ASC Ongoing Dashboard Seek information from suppliers such as copies of certifications, specifications, At least every three years policies and other quality/food safety **Suppliers** Issue non-conformance notifications Ad hoc Every one to three years Conduct supplier audits

# **Complaints Mechanism**

Tassal employs a rigorous complaints mechanism that encompasses any Tassal activity. During the reporting year, Tassal received two complaints regarding marine debris, six about noise and two regarding odour. All of these complaints were investigated and resolved during the reporting year. Specific marine debris complaints were resolved within one week by Tassal conducting directed shoreline cleanups (supported by our on farm waste management plans). Noise complaints were resolved within days, with one issue taking a period of weeks to fully resolve. Complaints regarding odour at

Margate are intermittent and not always the result of Tassal activities. Expected improvements in line with a new waste water management plan and waste water treatment facility are underway. No fines or sanctions were incurred by Tassal during the reporting year.



# **Our Material Issues**

We have streamlined our materiality assessment process for this year's report. Materiality assessment for reporting is a relatively new process for Tassal, and we gained traction and visibility this year with over 20 senior line managers and executives (internal stakeholders) attending a formal working day to prioritise issues material to Tassal which were validated by our Head of Sustainability and Fish Health. External stakeholder views were presented by our Community Engagement Officer based upon

stakeholder feedback received through the Senate Inquiry submissions, Aquaculture Stewardship Council (ASC) certification stakeholder engagement process, complaints received and ongoing community engagement activities.

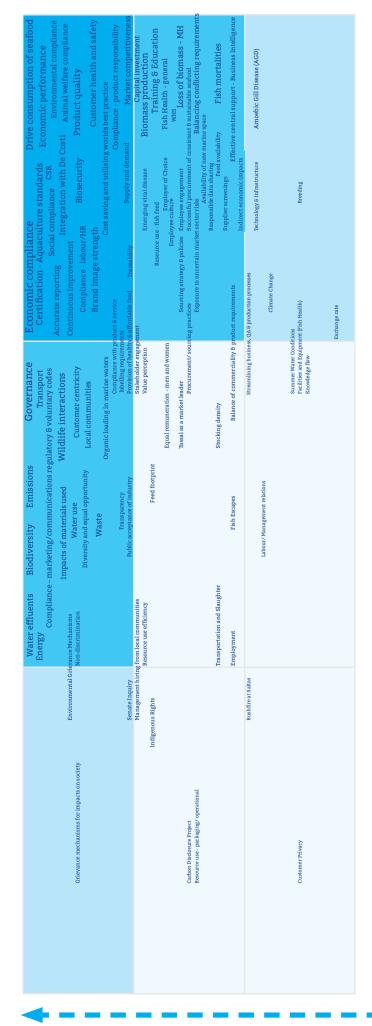
The outcomes of all engagement are presented in the materiality matrix.

Around 100 initial topics were identified through a range of sources including general business activities, including those identified on the risk register,

community engagement activities, local and global aquaculture trends and issues, food processing considerations and aspects identified by the Global Reporting Initiative (GRI) guidelines as important to the sustainability of Tassal and the broader environment and society. This process is consistent with the GRI's 'Reporting Principles for Defining Report Content' and proves to be a robust and replicable way in which to map the reporting scope and guide Tassal's overall business strategy.

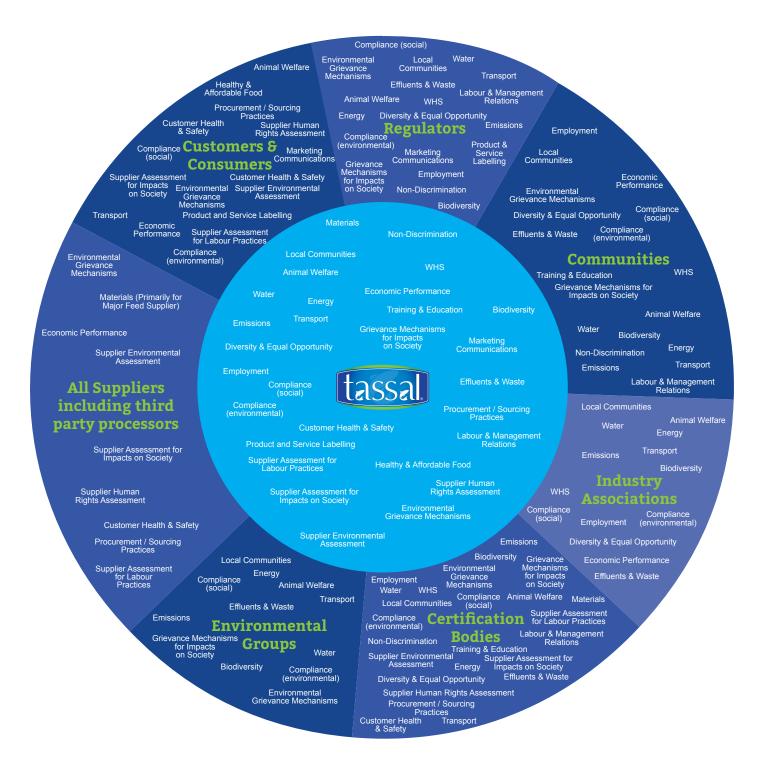


# **Materiality Matrix**



Importance to Tassal's Ability to Deliver on Strategy

# Linking Material Impacts to the GRI Aspects and Stakeholder Group Interest



Note: Additional GRI Aspects reported this year not formally reported as material in last year's report are: Economic performance, Indirect economic impacts, Materials, Emissions, Transport, Environmental grievance mechanisms, Compliance (society), Grievance mechanisms for impacts on society, Healthy and affordable food, Non-discrimination, Diversity & equal opportunity, Labour & management relations, Product and Service Labelling and Marketing Communications.

# Aquaculture Stewardship Council (ASC) Certification

All Sites, Every Fish



Tassal became the first
Salmon aquaculture
company in the world to
achieve 'gold standard'
ASC certification across
all farming operations
during the reporting
year, putting Tassal
at the forefront of
responsible global
Salmon aquaculture.

With global demand for seafood increasing, many of the world's main fishing areas are being fished at maximum capacity, and according to the Food and Agriculture Organization of the United Nations (FAO), global aquaculture production will equal global capture production by 2030 (The World Bank, 2013).

Aquaculture is the fastest growing animal food producing sector in the world, seeking to meet an ever growing demand for seafood, while reducing pressure on wild capture fisheries.

Tassal has been moving towards reaching full ASC certification since

2012, working in partnership with WWF-Australia to further develop its responsible aquaculture practices.

WWF-Australia recognises ASC certification as the highest global standard available for responsibly farmed Seafood, providing credible, third-party validation for practices which reduce impacts on the marine environment, protects local surroundings and wildlife, and supports local communities.

The ASC program promotes industry best practice to minimise the environmental and social footprint of commercial aquaculture. Through its





consumer label, the ASC promotes certified responsibly farmed products in the marketplace.

The standard addresses the key environmental and social impacts of Salmon farming and requires unprecedented levels of transparency on all farm performance and environmental data.

The ASC standards present a rigorous template for global best practice which addresses the following seven principles:

- 1. Legal compliance
- 2. Preservation of the natural environment and biodiversity
- 3. Preservation of water resources and water quality
- 4. Preservation of diversity of species and wild populations
- 5. Monitored and responsible use of animal feed and other resources
- 6. Animal health and welfare
- 7. Social responsibility

To meet the ASC's responsible Salmon standard, Tassal has implemented significant upgrades, including:

· Reducing reliance of fishmeal and fish oil in feed which has resulted in reduced pressure on wild fish stocks and less pressure on the environment through improved feed formulations.

Tassal is a global-leader in this area. with one of the lowest Feeder Fish Dependency Ratios (FFDR) in the world, and together with feed supplier Skretting, is continuing to lower this ratio

- · Removing the last copper treated nets from the water in June 2014 and replacing them with Kikko nets, made from semi-rigid polyester monofilament - an investment of \$10 million
- · Creation of a full ASC dashboard (see: http://www.tassal.com.au/ sustainability/asc-dashboard/) which reports in real time any antibiotic use, wildlife interactions or unexplained fish loss across all of Tassal's marine sites. All reports are available publically online. This level of transparency is one which we feel genuinely sets Tassal apart from others in the industry, and
- · Development of a fish health department, including onsite lab, two veterinarians, a fish health field officer and fish health lab technician, as well as the development of a Zero Harm for Fish welfare program.

In achieving this world first, all aspects of our operations have been audited to ensure that our Salmon are reared in the best possible conditions with the best possible care from eqq to plate, providing optimal quality Salmon available for our customers and consumers.

# Note from WWF-Australia CEO, Dermot O'Gorman



"WWF is very proud of its partnership with Tassal, and, with the global sustainability leadership Tassal has brought to the Salmon aquaculture industry."

Since WWF and Tassal celebrated with the start of our Seafood partnership in March 2012, we have seen exceptional results that has put Tassal at the top of the global leaderboard in Salmon aquaculture sustainability and we see Tassal to be a regular award winner in Australia and beyond. From the outset, we sensed we had an ideal partner in this ambitious company, committed to making 'sustainability a profit centre' and committed to preserving the environment of Tasmania as well as

contributing to the local economy and local communities.

The outstanding success of the partnership was Tassal becoming the first Salmon aquaculture operation in Oceania to achieve Aquaculture Stewardship Council (ASC) certification, and the first Salmon aquaculture company in the world to be 100% ASC certified. This occurred in November 2014 and Tassal retains both positions today.



WWF is very proud to walk side by side with Tassal on their responsible journey by providing advice on the implementation of sustainability strategy and action plans; reviewing the sustainability of operations; offering support and recommendations; and providing guidance through the rigorous ASC certification process.

Through all this, Tassal has made costly operational changes based on our advice, and invested time and resources to achieve sustainability goals, proving time and time again that their commitment to sustainability, both in terms of financial and human resources. Tassal installed predator-proof 'Kikko' nets and seal-proof bird nets to minimise interactions between people, farms and wildlife. Tassal also developed new management, monitoring and reporting processes to provide open and transparent reporting of all wildlife interactions within aquaculture operation. Tassal removed copper-based anti-foulant paints from all infrastructure and is currently working with its feed supplier Skretting to significantly reduce the proportion of wild fish in its aquaculture feeds.

A critical part of the WWF-Tassal partnership is Tassal's investment in conservation projects, demonstrating Tassal's commitment to safeguarding and sustaining our oceans. For example, Tassal's funds have enabled James Cook University scientists, Indigenous Australian sea rangers and traditional owners to undertake three years of surveying the distribution of the Australian snubfin and Indo-Pacific

humpback dolphins in key areas in the Gulf of Carpentaria and northern Queensland. Tassal funds are also supporting the development of a fishery improvement project for the Peruvian Anchovy Fishery, the largest single-species fishery in the world.

WWF is very proud of its partnership with Tassal, and, with the global sustainability leadership Tassal has brought to the Salmon aquaculture industry. We look forward to building on awareness and progress over the last three years to see ASC become the new standard expected of the entire Australian farmed Salmon industry. We look forward to promoting similar standards in other important aquaculture sectors such as prawns and barramundi. With Tassal's acquisition of De Costi Seafoods we look forward to a new partnership which will motivate the entire Australian Seafood industry toward a sustainable Seafood future.







**Dermot O'Gorman** 





# Sustainable Salmon Feed



Feed is a primary input into our production process, and one of the largest costs associated with the production of Tasmanian Atlantic Salmon. The diets that we feed our fish are specifically formulated to optimise fish health, mitigate environmental impacts and maximise growth.

Our feed supplier Skretting is a world leading supplier of aquaculture feeds and is approved under our internal supplier management program in which we perform supplier desktop reviews that capture environmental, ethical, social and sustainability criteria. This information is held in a central register along with a supplier risk register, which is maintained by our Quality Assurance department. In addition, Skretting products are manufactured in accordance with third party traceability and quality standards.

Tassal has an internal Responsible Sourcing Policy, detailing our support of schemes that promote responsible environmental management of small pelagic fisheries and responsible soy purchases. Raw material traceability is fundamental to our Aquaculture Stewardship Council (ASC) certification and Skretting is seen as a likeminded supplier that makes significant contributions to our sustainability commitments.

Implementing a standardised feed strategy across our operations is an important component of farm management, with an aim to reduce both the economic and environmental cost of production. We have Feed Team Leaders at each of our sites who are responsible for ensuring that feed use is optimised.

At each meal, the following factors need to be considered:

- · Pellet size
- Environmental conditions, such as temperature
- · Distribution of feed and feeding control depth
- Delivery rate
- Meal lengths and scheduling
- Presence of predators including birds and seals
- Observations of fish behaviour and recent history, and
- Feed intake and growth.

#### **ASC Compliant Salmon Feed**

Tassal's ASC certification for all farm sites does not only include the direct impacts of Salmon farming. The certification also requires us to be compliant with the ASC Salmon standard throughout our supply chain, including downstream impacts such as sourcing of fish feed.

Salmon feed is made up of protein and fat (from marine, land and vegetable sources), some carbohydrate (from vegetable sources), vitamins and minerals and astaxanthin. All of the resources that go into making these feeds must be sourced in an environmentally and socially responsible

There are several key ASC criteria that relate to the traceability and responsible sourcing of ingredients that our feed supplier, Skretting, must comply with for us to obtain and be successful in our continued certification.

Skretting has established a Supplier Code of Conduct that outlines the minimum criteria expected from their suppliers regarding general sourcing requirements: legal compliance, human rights, labour practices, fair operating practices, environment, supply chain responsibility and other related requirements (see: http://www.nutreco. com/en/sustainability/detailpagina-16/). Specific supplements in the Code of Conduct are related to agricultural and marine products. Skretting only approves and accepts the use of raw materials from suppliers that have agreed to the Code of Conduct.

#### **Marine Ingredients**

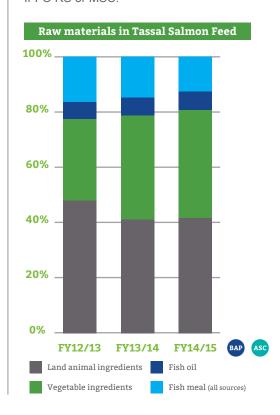
There is concern within society that the extraction of fish from the oceans for fishmeal and oil production may be detrimental to the marine ecosystem and put the long-term viability for stocks of certain marine small pelagic species at risk.

Skretting's minimum criteria expected from suppliers with regards to the sustainable sourcing of marine ingredients and the responsible management of the fisheries where ingredients originate are:

- · Traceability systems to verify species and country and origin
- · Species are not classified as endangered or critically endangered on the IUCN Red List. Species that are listed as vulnerable are not eligible for use as a trimmings product, unless it is from a sub-population that is assessed to be responsibly managed

- Marine ingredients must not be from illegal, unreported and unregulated (IUU) fishing activity
- Compliance with the fishery management principles of the FAO Code of Conduct for Responsible Fisheries, and
- Encouraging suppliers to obtain recognised third-party certification, such as the International Fishmeal and Fish Oil Code of Responsible Supply (IFFO RS) or Marine Stewardship Council (MSC).

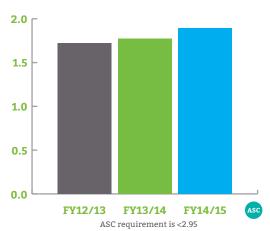
Where possible Skretting purchases fishmeal and fish oil that are certified by IFFO RS or MSC.



#### Forage Fish Dependency Ratio - Fishmeal

#### Forage Fish Dependency Ratio - Fish oil





#### **Land Animal Ingredients**

In Australia, sustainable alternatives to fishmeal and fish oil can also be sourced from the co-products of Australian animals reared for human consumption that are prepared according to strict processing parameters to maintain the integrity of the product.

Skretting's Aquaculture Research
Centre demonstrates that quality
protein sources such as poultry meal
are extremely effective alternatives to
fishmeal and can reduce our reliance on
marine resources, and are ingredients
that are likely to maintain sustainability
of the aquaculture industry of the future.

#### **Vegetable Ingredients**

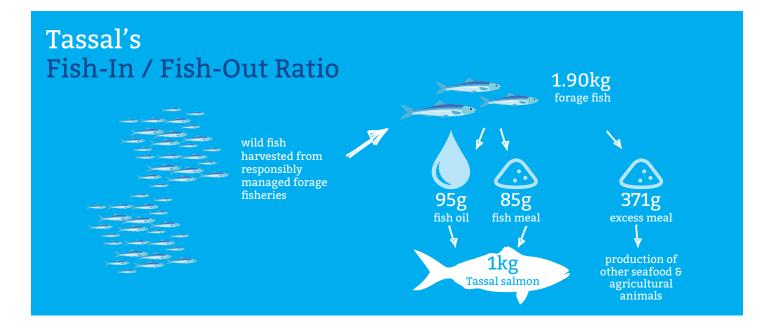
Skretting invests significant resources in finding alternatives to fish oil and fishmeal. Vegetable alternatives, that give equally good performance in terms of fish welfare, taste and quality of the end product, are increasingly used in fish feed.

There are sustainability issues related to vegetable ingredients, an example of which is deforestation in certain regions of the world as the result of soya bean production. Preservation of tropical rain forests is vital as they play a key role in maintaining biodiversity and fixing carbon dioxide from the atmosphere.

In the past few years, Skretting have taken several initiatives to work in partnership with supply chain participants to improve the sustainability of these raw materials. These initiatives include, among others, participation in the Roundtable of Responsible Soy.

Skretting has a signed Supplier Code of Conduct agreement with their non-marine ingredient suppliers, stating compliance with recognised crop moratoriums and local laws. This is particularly relevant for suppliers of soya ingredients.





#### **Innovative Salmon Feed**

Through our close working relationship with Skretting we have applied innovative feed solutions to our Salmon farming operations to improve the efficiency and health and welfare of our Salmon. Tassal began feeding higher energy diets that enable the fish to grow at their optimal rate, and in addition deliver the most efficient feed conversion rate in FY2014 which has led to a slightly higher use of fish oil in our feeds compared to the previous reporting year. The fish oil in our feeds (which comes from the proportion of wild fish stock contained in the fish feed) is at an inclusion level that makes our Salmon a rich source of Omega-3. However, our aim is to reduce our reliance on fish oil due to the declining levels of wild fish stocks. Our challenge is to find a balance in the ingredients contained in the fish feed as the higher energy diets help our fish with digesting feed in cooler water and also maintain salmon requirements in warm water, equalling the healthy benefits of omega-3 for our customers.

In 2015, Skretting contributed to establishing the Tasmanian **Experimental Aquaculture Facility** (EAF) in partnership with the University of Tasmania's Institute for Marine and Antarctic Studies (IMAS), the Tasmanian State Government, Federal Government, and Huon Aquaculture, for local research on large Salmon. This facility will enable us to refine our feed solutions under controlled conditions that are specific to local conditions such as high water temperatures and

Amoebic Gill Disease (see: http:// www.imas.utas.edu.au/research/ fisheries-and-aquaculture/experimentalaquaculture-facility).

Prior to the opening of this facility, we worked closely with Skretting on the development of a high temperature solution through collaborative commercial research.

#### **Feed Optimisation Project**

In an aim to reduce our cost of production via reduced feed breakage and wastage, Tassal has implemented an improvment program that targets key feeding infrastructure, training and management across our six farming regions that aims to deliver best practice results for minimising feed wastage. Feed wastage increases the cost of production and can result in increased environmental impacts.

Infrastructure upgrades detailed below have contributed to an improved Feed Conversion Ratio (FCR) and have assisted with Tassal in achieving our FY2015 environmental sustainability targets.

#### **Butlers Feed Barge**

We are systematically replacing all old barges across our operations and have introduced a state of the art feed barge on our Butlers lease which consists of six feed systems, compared to the average three. A greater number of feed systems allows pens to be fed at an optimal rate which reduces the rate at which pellets are transferred to cages. An optimal feed rate decreases feed breakage, maximises pellet consumption and minimises the number of broken pellets that may reach the sea

#### Improved Feed Spinner/Spreader Design

We began using newly designed spinners at three of our marine leases. The new spinners replace the 2.5 inch diameter spinners which have a feed breakage rate of approximately 0.53%. In comparison the new spinners have a breakage rate of 0.06% which is a significant reduction. The new spinners also have a less erratic pellet distribution than the 2.5 inch models, ensuring that more pellets are distributed within the feed-zone and less wastage occurs during rough weather.

#### **New Feed Monitoring Systems**

Our new feed monitoring systems enable a clear picture to be transmitted back to the feeder under all weather conditions. During rough weather, older camera technology often experienced interference resulting in a poor image, which made feeding stop-signals difficult to interpret, resulting in potential for increased feed wastage and sub-optimal Feed Conversion Ratio.



# Research and Development

Tassal is involved in numerous internal and external research projects that support our fish health and performance, environmental management of our sites, access to new sites and maintenance of operational flexibility. In FY2016 Tassal will spend almost \$1 million AUD on research related to environmental management, selective breeding and our fish.

Environmental Control of the Control				
Project Name	Description	Impact on sustainability		
DEP State of the Derwent	Tassal is directly involved in the integrated sampling regime undertaken in the Derwent Estuary and sits on the Derwent Catchment Water Quality Working Group as part of the Derwent Estuary Program	Developing a greater understanding of the Derwent Estuary – Hobart's primary source of drinking water, and home to numerous primary industries, including agriculture; dairy production and cropping and aquaculture – freshwater hatcheries		
Insitu telemetered water quality monitoring loggers	Tassal has been working with a supplier of scientific equipment to trial a deployment of telemetered water quality logging sensors from a feed barge in the northern D'Entrecasteaux Channel	Providing real-time water quality data has benefits for both fish health and environmental monitoring		
Rookwood Road irrigation survey	Tassal engaged an independent third party to undertake a sustainability survey of irrigation practices. The development of the second Rookwood Road hatchery will see more areas in the Huon Valley receive the reuse water	To ensure the sustainable practice of the reuse of wastewater on pasture originating from normal hatchery operation		
TRF Dorvilleid project	This project looks to quantify Dorvilleid abundance and taxonomy in Macquarie Harbour. Tassal's quarterly compliance surveys play an important role in collecting data that feeds directly into this project	These projects have direct influence on compliance requirements within Macquarie Harbour		
FRDC sediment characterisation project	This project focusses on sediment characteristics in the areas around Tasmania where Salmon farming occurs	narboui		

Breeding and genetics			
Project Name	Description	Impact on sustainability	
Whole genome selection for AGD	Development of modern genomic markers to aid in the selection of resistance to Amoebic Gill Disease (AGD) within Tasmanian Selective Breeding Program (SBP) broodstock	Reduce freshwater use     Improve fish health and welfare     Minimise cost of production	
Genetic correlations between ploidy status and the effects of the environment within the Selective Breeding Program (SBP)	Examination of the effects of ploidy on fish performance in the two major Atlantic Salmon growing areas of Tasmania: Macquarie Harbour, and the South East region	Maximise fish health and welfare and performance     Improve feeding efficiency which reduces environmental impact     Non-reproductive fish reduces risk to local ecology	
Environmental effects on the developmental physiology and performance of Atlantic Salmon (Salmo salar)	Examination of the influence of early rearing conditions on subsequent fish performance	Improve fish performance     Improve fish health and welfare     Minimise cost of production	
Salmonid Maturation – Recommendations for control within the SBP	Study to examine the current methodologies for the control of maturation in Atlantic Salmon	Improve fish health and welfare     Minimise cost of production	

#### Fish health and welfare

Centre of Excellence in Aquatic Animal Health and Vaccine development	Commissioning of a challenge facility with DPIPWE, FRDC and Industry funds	Capacity for challenge work with different pathogens in Tasmania, to improve our understanding of emerging and endemic diseases and better methods of control
POMV diagnostics	Developing real time PCR test for Pilchard Orthomyxovirus	<ul> <li>PCR test will allow rapid detection of the virus, which improves response time, and hence survival in episodes of disease outbreaks</li> </ul>
Thermal stress project – Deakin University	Determining thermal stress markers in Salmon	Assists with breeding thermal resistance into our stock to improve health and welfare
ATP-ase project – Deakin University	This project looks to quantify Dorvilleid abundance and taxonomy in Macquarie Harbour. Tassal's quarterly compliance surveys play an important role in collecting data that feeds directly into this project	Improving health and welfare of smolt by accurately determining smolt 'readiness' for optimal entry time into salt water
CSIRO Collaborative Research Agreement – Amoebic Gill Disease (AGD)	Develop a better understanding of amoeba biology and optimising farm management techniques for AGD	Improving our understanding of amoeba biology to assist in the development of new treatments and farm management techniques to control the parasite
CSIRO collaboration for an AGD challenge facility on Bribie Island	Commissioning and building an AGD challenge facility for improved research capacity in Bribie Island	Capacity for AGD challenge work in tanks that will positively influence our CSIRO collaboration
Aquabirnavirus, Aquareovirus and rickettsia like organism – vaccine development	Develop vaccines for these three endemic diseases	Improved welfare and health of stock



# Working with like-minded Organisations

CSIRO and Tassal's ten year partnership has seen significant achievements made in securing the viability and sustainability of the production of Atlantic Salmon in Australia. CSIRO is Australia's national research organisation, collaborating with 3,000 customers every year to create measurable economic, environmental and social impact that betters the world and Australia's place in it. The primary objective of the science-industry partnership between CSIRO and Tassal is to support the sustainable growth of the \$500 million local industry by breeding Atlantic Salmon that are healthier and grow at a faster rate.

The collaboration to develop the Saltas Selective Breeding Program (SBP) has provided Tassal with the ongoing capacity to produce Salmon that is better adapted to the local environment and are capable of meeting changing environmental or market conditions which underpins the long-term success and sustainability of the industry. The SBP now supplies 100 per cent of Tassal's commercial production and provides improvements in both growth rate and disease resistance of 3-4% per year, increases which are expected to continue.

CSIRO and Tassal are continuing to work together under a new partnership to deliver additional health and environmental benefits in Salmon farming. Our shared goals of increased productivity, profitability and sustainability for Australian aquaculture are realised through strategic planning of research activities designed to deliver the greatest benefit for Tassal, the industry and the environment.

# Salmon Farming in Tasmania's Marine Habitats

Many of the animals and plants in our marine environment symbolise the iconic nature of Tasmanian waterways. Tassal recognises these species as natural assets and acknowledges its responsibility to deliver farm-based actions that support effective and robust management of interactions with these species. Our actions are underpinned by good science, and potential impacts on threatened and endangered species are a key focus in daily activities. The Salmon aquaculture industry in Tasmania is regulated using adaptive management, where research is used to inform a scientific approach to monitoring.

#### **Threatened Species**

In line with our ASC certification requirements, interactions with threatened species are a focus of our internal wildlife management strategies, with an aim to ensure that marine farming operations have minimal impact on populations of wildlife in general, including more stringent and controlled measures applied to the management of threatened species in line with Federal and State regulations such as the *EPBC Act*. We incorporate the IUCN Red List of Threatened Species, regarded as

the most comprehensive and objective global approach for evaluating the conservation status of plant and animal species, into our threatened species assessment program for each marine farm lease area. This is completed as a requirement of our Aquaculture Stewardship Council (ASC) certification for grow out leases, and also DPIPWE lease amendment process. Tassal continues to work with internationally recognised wildlife experts in maintaining cutting-edge monitoring

(cont.) and mitigation strategies in the management of protected wildlife species.

General potential impacts on threatened species from marine farming operations may include:

- Entanglement
- Habitat loss
- · Alteration of breeding behaviour, and /or
- · Behavioural change.

#### **Sensitive Habitats** and Species

Tasmanian coastal waters have extraordinary natural values that are of global conservation significance on the basis of high biodiversity, unusually large numbers of unique species, and rare ecosystems. The potential impacts of finfish aquaculture to these sensitive habitats and unique species is managed within a collaborative framework involving resource managers, scientists and the community. Tassal operates farms in close proximity to sensitive marine reserves in the D'Entrecasteaux Channel, including the Tinderbox Marine Reserve and Ninepin Point Marine Reserve.

Tassal continues to maintain an acute awareness of critical, protected or sensitive habitats located in close proximity to farms, and has robust management systems in place to understand how the environmental impacts of marine farming operations could potentially affect or modify the behaviours and habitats of threatened or endangered species.

Tassal's work in this area includes a characterisation of the marine natural values around their farm leases and an assessment of the potential risks to:

- · Benthic fauna and habitats
- · Marine vegetation and reef communities, and
- · Threatened species and communities (marine plants and invertebrates, fish, bird and marine mammals).

To mitigate potential risks to sensitive habitats or species, Tassal has developed biodiversity management strategies that are based around environmental monitoring programs designed to detect ecosystem change at the broadscale level. Examples of existing monitoring programs include:

- · The BEMP (Broadscale Environmental Monitoring Program) which routinely assesses water quality and sediment health across Tasmania's south east waterways. The BEMP provides important information relating to ecosystem health, particularly in relation to benthic infaunal diversity. To date, over 85 sampling events have been completed for the BEMP, representing over five years of monitoring data
- · Rocky reef health monitoring program - a study aimed at assessing ecosystem condition and the potential broadscale impacts to rocky reef communities from finfish farming. This program is a natural extension of the BEMP, to determine if parameters such as macroalgal species composition, percentage cover, epiphytic growth, changes to

- biodiversity and alteration in seasonal variation will be altered by impacts from Salmon farming. Tassal is committed to progressing macroalgal monitoring at selected sites in the D'Entrecasteaux Channel, and
- Specific marine biological surveys aimed at establishing important baseline information for listed species or species of environmental significance, such as Giant Kelp communities, threatened handfish species and threatened marine invertebrates such as Gunn's Screw Shell or the Live-bearing Seastar. We have been working in collaboration with Tasmania's threatened species arm of the Department of Primary Industries to monitor and record the presence of handfish in the south east. In the reporting period, none had been identified through any of our surveys at sites of suitable depth and habitat.



#### **Marine Reserves**

The D'Entrecasteaux Channel is subject to a range of formal spatial conservation and management arrangements that aim to protect natural values, both along adjacent coastlines and in the marine environment.

#### **Tinderbox Marine Reserve**

Tassal has marine farming operations located in the northern D'Entrecasteaux Channel. Tinderbox Marine Reserve is a reserve for the purposes of education, research and recreation. The sandstone reef of the Tinderbox Marine Reserve extends up to 100 m offshore, and reaches depths of around five to six metres. The reserve is home to more than 30 different species of algae, varying from Neptune's necklace and Cystophora in the intertidal zones through to string kelp and strap weed in the more exposed areas. Sea grass is also common in the sandy areas of Tinderbox Bay.

Fish species that inhabit the reserve include leather jackets, cardinal fish, senator fish and bullseyes. It is also home to weedy sea dragons, pipe fish and seahorses. Many colonial filter feeders are found attached to the reef substrate, including bryozoans, sponges and ascidians, and amongst these are octopus and squid. As with all healthy reef systems, invertebrates are common; at the Tinderbox Marine Reserve, crustaceans scavenge whilst molluscs graze on the algae growth.

#### **Ninepin Point Marine Reserve**

The Ninepin Point Marine Reserve is located near our Huon and Dover farming operations and occupies 731.8 ha in the D'Entrecasteaux Channel near the mouth of the Huon River. It

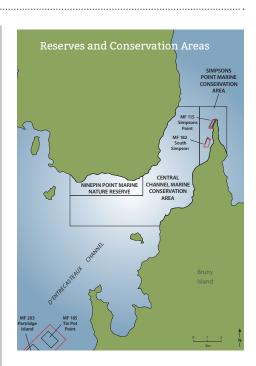
is managed jointly under the Nature Conservation Act 2002 and the Living Marine Resources Management Act 1995. These waters possess significant conservation and biodiversity value which is reflected in its status as a 'no-take' area and the ongoing conservation of the natural values that are unique, important and have representative value.

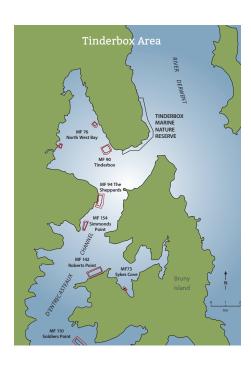
The Ninepin Point Marine Reserve is a unique environment; it has nutrient rich water from the southern ocean, overlaid by tannin rich water from the Huon River. Water temperatures here range from eight to 20 degrees celsius.

Due to the overlying tannin rich layer of water, the reef hosts a wide variety of fauna and algae that often exist at much greater depths. Red algae dominate the reef substrate, while bull kelp and strap weed inhabit the exposed areas.

Red velvet fish inhabit the reef, as do morwong, leatherjackets and little rock whiting, to name a few. Invertebrates that occur within the marine reserve include sponges, lacework bryozoans, hydroids, ascidians, anemones as well as molluscs and crustaceans. Several species of urchins and native seastars are also known to exist within the

The Ninepin Point Marine Reserve also contains habitat known to support threatened species, including live-bearing seastar, Gunn's Screw Shell, and the Spotted Handfish. The coastal area of the reserve supports breeding populations of little penguins and a small forest of giant string kelp (listed as threatened community under the EPBC Act).





#### **New Site Development**

The development of new marine leases in Tasmania and the optimisation of existing marine leases is critical to Tassal's growth and future sustainability. Site selection and optimal use is underpinned by a good understanding of the marine environment, our production processes and stakeholder engagement.

During the reporting period Tassal proposed an amendment to our East of Lippies (Lippies) and Browns Point (Browns) leases in the D'Entrecasteaux Channel, to allow for these leases to be effectively farmed in prevailing weather conditions. The proposal was strongly driven by our focus on proactive fish health management that has directed the need to improve the biophysical characteristics of marine leases.

In response to stakeholder feedback during the consultation period, Tassal chose to relinquish the Browns lease to the Crown, solely focussing the proposal on amending the Lippies lease. This modified proposal involved shifting the Lippies lease as far north as possible and amending its size and location on two separate occasions as a result of this feedback. We view this as an offset to the broader southern D'Entrecasteaux Channel community and see this as an integral part of the working relationship we value with the community.

#### **Marine Debris**

Marine debris continues to be a material issue for our company. It not only impacts safety of wildlife (ingestion, entanglement), but also the safety of people on vessels in the waterways.

Marine debris also interferes with people's experience of the coastline.

It is for these reasons that we have made a special effort this reporting year to not only conduct our regular cleanups, but to focus on the day to day sources of marine debris coming from our farms.

We have conducted farm level workshops at each of our marine sites in order to improve site ownership and understanding of the issue including causes and impacts of marine debris. Farm level waste mitigation plans continue to be implemented and our Adopt a Shoreline Clean Up regime has remained in place.

This reporting year, Tassal staff participated in two community clean up events. The first was an underwater clean up around the Margate fishermen's jetty. Tassal divers provided assistance to a local dive club with a Tassal vessel being used to winch large items to the surface for disposal. The second clean up event was at Alonnah, Bruny Island, where Tassal staff and vessels assisted a cleanup of 10km of shoreline, removing four cubic metres of rubbish collected over 8km of shoreline north of Alonnah.

Feed pipe escaping Tassal's farms has the potential to degrade the natural environment, cause harm to wildlife, damage to vessels and impact on the safety of other users of the waterways. During the year, Tassal developed and implemented a Marine Debris – Feed Pipe Policy that aims to minimise the possibility of feed pipe coming adrift and causing a hazard. Tassal is committed to responsible feed pipe management.

#### **Hawkers Point Remediation**

Tassal has not used copper-based antifoulant on nets since March 2014. There are however, legacy issues resulting from the historical use of this product.

Tassal's Hawkers Point operation is a land based area designated for the repair and maintenance of all our fish nets used in the south east of Tasmania. This site has been in use for more than 10 years, and as such, has areas that are contaminated with copper.

We have been working with the EPA, and are one year into a three year project to remove all copper contaminated waste from this site. Following the completion of this three year project, we have an agreed five year project for remediation, revegetating the site where it has been cleared in the past.

Major goals for the initial three year project include:

- The installation of new water treatment infrastructure to ensure stormwater capture is adequate so as to not cause further contamination of the surrounding areas, and
- Beneficial reuse of old waste material through a local cement supplier.

	Marine Debris Removal				
Year	Volume of rubbish removed m <sup>3</sup>	Hours	% attributable to salmon farms		
FY2013	30.9	363	59		
FY2014	29.5	342	68		
FY2015	33.2	319	36		

**Note:** The FY2014 increase in percentage of rubbish attributable to Salmon farms is the result of a focussed effort by Tassal staff to cleanup historic debris in the upper reaches of Macquarie Harbour, an area which had not previously been undertaken for cleanup.



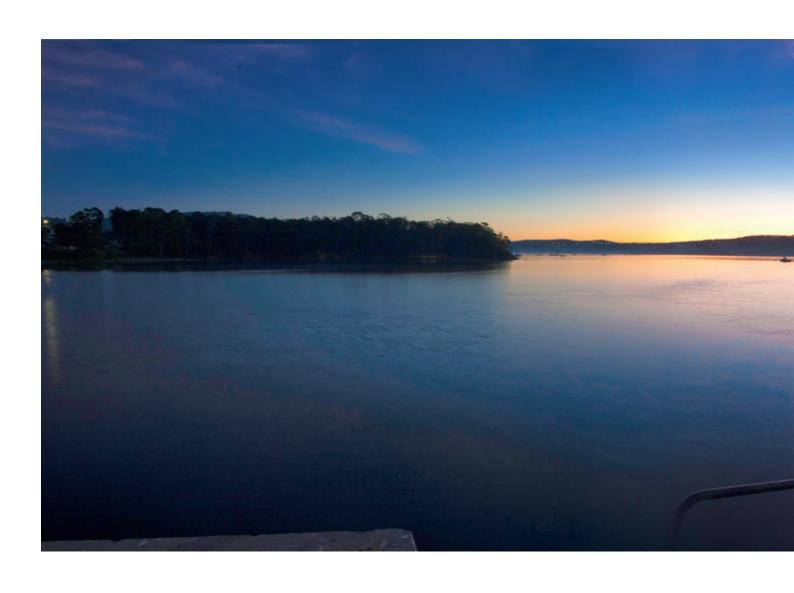


# Changing Ocean Conditions

As a primary producer, the climate plays an important role in our operations. Tassal maintains a comprehensive risk management system to manage the long term risks, issues and opportunities presented by climate change and respond accordingly.

Summer remains a challenging period in terms of fish growth and survival, particularly at our South East sites, with higher ocean temperatures creating operational issues that are unique to farming conditions in Tasmania. In response, Tassal has developed considerable options for adaptation via selective breeding, modification of farming technologies and practices, and geographic diversification. We engage scientists to identify emerging climate trends and system responses, and undertake comprehensive broadscale environmental monitoring, allowing us to identify any early indicators of concern.

Although warmer temperatures can be challenging over summer and management strategies reduce risk through geographic diversity and harvest planning, we have also seen improved growth as a result of higher temperatures. This is aligned with our Selective Breeding Program (SBP) which produces fish with faster growth rates to reduce total time in water. To further support this opportunity we have adapted our stocking strategy to consider the different environmental profiles of each of our sites, with smolt inputs managed accordingly.



# Environmental Regulation and Compliance

Tasmania leads the world in Salmon farming environmental regulation.

Tassal further leads internationally, nationally and locally in the areas of compliance, voluntary environmental management and reporting. This regulatory environment and Tassal's compliance to the regulatory environment has provided a platform for Tassal to achieve its Aquaculture Stewardship Council (ASC) certification, together with facilitating our strategic partnership with WWF-Australia.

Tassal enjoys a high level of compliance in most areas across the marine,

freshwater and processing spectrum. The regulatory environment is evolving in these areas and Tassal is well equipped to move to a higher level of environmental performance in all areas of our business. As environmental regulations and controls develop, newer facilities are being built and managed to meet and exceed these standards.

Tasmanian Salmon marine farming is mainly regulated jurisdictionally by the Tasmanian State Government and is supported by the *Marine Farming Act* 



1995. Freshwater hatchery facilities and land based processing are mainly regulated by the Tasmanian Environmental Protection Agency (EPA).

All of our environmental compliance and performance is transparent and we have a very low appetite for risk or non-compliance with respect to the environment and biosecurity. We undertake very thorough and authentic stakeholder engagement with all of our development activities to ensure that our community acceptance is maintained.

The management controls and license conditions that have the most impact on our Salmon operations are the Total Permissible Dissolved Nitrogen Output (TPDNO) and benthic compliance conditions.

#### Nitrogen Cap

Approximately five per cent of the total feed input from Salmon farming is released into the receiving environment as a form of nitrogen (Wild-Allen, 2005), of which 85% is released as dissolved nitrogen. Because nitrogen is the limiting nutrient in the D'Entrecasteaux Channel and Huon Estuary, the environmental impacts of Salmon farming in these areas are managed by regulating the TPDNO that enters the receiving environment as emissions from feed input. The determination of individual TPDNOs by the Secretary (DPIPWE) for the Huon Estuary and D'Entrecasteaux Channel was a management initiative that was implemented in response to the Aquafin CRC Project (2002) and the Huon Estuary Study (1996) projects.

The TPDNO was implemented in the D'Entrecasteaux Channel Marine Farming Development Plan area by the Secretary (DPIPWE) in 2008 and effectively placed a cap on the production of salmonids in this plan area, considered to be set at sustainable levels of feed input. Tassal is 100% compliant with the TPDNO.

To date, we have not yet reached our TPDNO limits specified for the D'Entrecasteaux Channel or Huon Estuary MFDP area.

#### Compliance in Marine **Operations**

The legislation and regulations that the Tasmanian Salmon industry must comply with is complex, and includes Commonwealth, State and Local government components. Industry has operated within this framework for 30 years and Tassal has been active in the development of a contemporary planning and regulatory environment. The Tasmanian salmonid industry is currently governed by almost 70 Commonwealth and State Acts. These Acts and their subordinate regulations serve to regulate and support the responsible development and growth of the industry.

In addition to these statutory obligations, Tassal participates in or is directed by a number of State and Commonwealth policies and voluntary programs, for example, an industry led voluntary program that is internationally recognised and considered progressive by global Salmon industry peers, is the Tasmanian Salmonid Health Surveillance Program (TSHSP). This is a joint venture between the DPIPWE and the Tasmanian salmonid industry. Other examples are technical or research working groups, stakeholder groups and industry programs.

During the reporting year, Tassal achieved excellent compliance with marine farming regulations across our marine operations. We received zero letters from DPIPWE advising us of breaches to management control relating to the position of navigational markets, buoys and moorings, as well as farming equipment outside of our lease boundaries. No monetary penalties were incurred nor infringement notices issued.

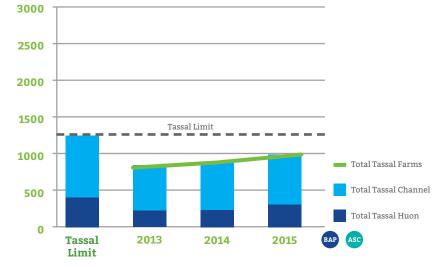
#### **Benthic and Water Quality** Management Compliance -**Marine Operations**

Impacts on marine waterways can be divided into two broad categories seafloor or benthic impacts (solids) and water quality (dissolved) impacts both near field and broadscale. Benthic impacts are related to the deposition of excess feed and the waste that fish excrete to the seafloor. Soluble wastes associated with finfish aquaculture include ammonia, phosphates, and dissolved organic carbon emissions.

DPIPWE marine farming licence conditions require us to undertake annual compliance surveys at all active marine operation sites. These surveys are conducted by our environmental officers using a specialised remote operated vehicle (ROV), which provides video footage of the seafloor under and near Tassal leases. For each annual compliance survey, up to 10 dives are completed within the lease and at least six dives are conducted at compliance points at a 35 metre distance from the lease boundary.

During the reporting year, Tassal advised DPIPWE of seven out of lease non-compliances in Macquarie Harbour. In response, the DPIPWE Marine Farming Branch has set a requirement for quarterly monitoring. This response is designed to track these non-compliances and provide data for the research projects undertaken in Macquarie Harbour, and around Tasmania (TRF Dorvilleid project and FRDC sediment characterisation project). This increased frequency of monitoring will continue for the remainder of 2015, and will be reviewed in 2016 depending on the outcomes.

#### Total Permissible Dissolved Nitrogen Output



ROV Dives & Compliance					
Year	Number of ROV Dives	Number in Compliance	% Compliance		
FY2013	183	180	98.3%		
FY2014	122	121	99.2%		
FY2015	329	322	97.9%		
			RAD ASC		







#### Water Quality in Macquarie Harbour

Due to the unique hydrodynamics and biology of the harbour (the harbour has been historically impacted by mining) the system has responded in unique ways to new sites and benthic impacts. Tassal is actively investing in monitoring and research to improve the predictive capabilities of models as they relate to localised environmental impacts.

There are several long running research projects in place assessing a whole range of habitats that co-exist in relation to our current farming practices. Many of our leases border areas of cultural significance, marine protected areas, marine reserves and threatened species communities. The current three year FRDC reef monitoring project looks at the current state of reefs in relation to farming impacts. This project incorporates the Tasmanian Abalone Council (TAC), Institute of Marine and Antarctic Studies (IMAS), Tasmanian Rock Lobster Fishers (TRLF), Tasmanian Salmon Growers Association (TSGA) and the University of Tasmania.

Some of the sampling locations have been assessed by experts for decades in relation to near field and broadscale changes within the ecosystem. The current ecological balance that is maintained is crucial for farming operations to remain in close proximity to these areas of local and national significance. Tassal participates in an Area Management Agreement in Macquarie Harbour.

#### **Compliance in Hatcheries**

Each hatchery within Tassal has its own biosecurity plan and we are looking at developing a health management and disease surveillance program for each individual hatchery to suit their individual systems.

Based on compliance enforced by local councils and the Inland Fisheries Service, in FY2015, we achieved 96.8% compliance at Rookwood Road hatchery, a decrease since last year (98.4% compliance), as water use is now included in scope. Tassal has undertaken an irrigation sustainability report with the purpose to assess current reuse irrigation practices. and highlight opportunities for further irrigation in the area.

Our Russell Falls and Karanja hatcheries sit on the Tyenna River downstream of the Mt. Field National Park. 100% compliance was recorded for our Russell Falls and Karanja operations.

As part of our ASC certification, we also undertake surveys to assess macroinvertebrate abundance, species and community composition upstream and downstream at our Russell Falls flow through hatchery. Benthic macroinvertebrates are a mix of adult and juvenile forms of aquatic crustaceans, insects, annelids, and molluscs that live in rivers on, and within, river bottom substrates that perform key ecological roles. To date we have performed two annual surveys and have shown compliance with the ASC Salmon standard on both occasions.







### Wastewater Treatment Compliance

Where the EPA has deemed it appropriate, biosecurity management has been integrated into environmental conditions for specific processing activities in collaboration with Biosecurity Tasmania. Tassal's processing activities (Dover, Margate and Huonville) operate within a planning and regulatory environment governed by State legislation that falls under the Tasmanian Resource Management and Planning System (RMPS).

Tassal has achieved substantial improvements in wastewater treatment and compliance with effluent parameters by committing to thoroughly review systems and treatment capacity. Targets with the Dover and Margate factory wastewater treatment plants (WWTP) have largely been met as planned, with technical reviews of both WWTP systems complete and improvements implemented.

#### **Dover Processing Facility**

The Dover processing facility operates under a land use planning permit issued by Huon Valley Council (DA 229/2010) containing environmental conditions issued and regulated by the EPA.

The commissioning of an upgraded Dover WWTP was completed this year with successful staffing, operational development and management that ultimately achieved compliance with the treatment plant maximum discharge limits and met initial performance targets for the new WWTP in May and June 2015.

#### **Margate Processing Facility**

The Margate processing facility operates under an environment protection notice (EPN 7098/2) containing environmental conditions issued and regulated by the EPA. This is a set of revised, augmented and more stringent conditions introduced in July 2014, notably in the area of wastewater management and emission limits. A comprehensive technical assessment was undertaken of the facility's WWTP system and a draft three year wastewater management plan was formulated to manage wastewater from the factory under a staged approach.

Stage 1 of the draft wastewater management plan was a new WWTP headworks for solids, oil and grease removal from the wastewater stream which is largely implemented.

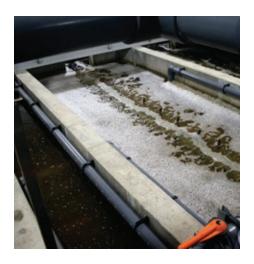
Also in response to the EPN, a comprehensive approved biosecurity management plan was introduced with a very strong wastewater management and disinfection focus.

#### **Huonville Processing Facility**

The Huonville processing facility operates under a land use planning permit issued by Huon Valley Council (DA 54/2009) containing environmental conditions issued and regulated by the EPA.

Wastewater is discharged to TasWater Ranelagh WWTP, which is monitored by Tassal and TasWater.





# Wildlife Management

Tassal is committed to a high standard of wildlife management through staff training, education, and system developments, with a goal to reduce where practical any negative impacts to wildlife interacting with our operations.

When wildlife interactions do take place, Tassal has an obligation to make information publically available through both our annual sustainability report and the Aquaculture Stewardship Council (ASC) certification program. Wildlife interactions have been identified as a material issue to our local communities and it is vital that the information we record and report on is accurate. In the reporting period, Tassal developed and implemented a wildlife interaction and reporting procedure to support our wildlife management system. The procedure describes the reporting requirements and process with regards to seals, birds and other wildlife. We have also started a wildlife working group, made up of staff members from our operational, environmental and safety departments as well as our company Veterinarian. The group meets quarterly with the aim to keeping wildlife interactions a focus across the company.

Wildlife interactions with aquaculture operations in Tasmania are regulated by the Wildlife Management Branch (WMB) of the DPIPWE which also prescribes our minimum exclusion measures for marine farming infrastructure. The primary role of the WMB is to efficiently and effectively facilitate the sustainable

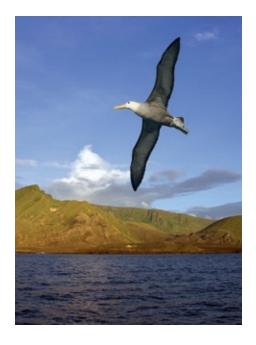
management of Tasmania's wildlife populations. During the reporting period there have been zero incidence of non-compliance with laws and regulations for wildlife management.

#### **Seal Interactions**

During the reporting period we had eight accidental seal deaths occur at our farms. Our relocation events increased in the reporting period as a result of an operational focus and continuous improvements in proactively managing fish welfare, on relocating serial offenders who posed immediate threats to our people and our fish. Increased seal pressure year round, and across sites that historically have been known to be lower for interactions has also aided in the increased number of animals relocated. We experienced high numbers of relocations from our farms in the northern end of the D'Entrecasteaux Channel due to infrastructure differences. Implementing effective seal exclusion technologies at one farming area can result in increased pressure at another. We are constantly adapting to changing conditions when it comes to interactions between seals and our farms.

Seal deaths were predominantly caused by seals chewing through our fish nets to gain access to stock and

being unable to exit through the hole they entered. All accidental mortalities are investigated by the Tassal wildlife working group and improvements are implemented in an attempt to prevent reoccurrence. When seals are relocated, they are under the care of approved relocation providers and all seal deaths are reported to the Wildlife Management Branch of DPIPWE as per regulatory requirements.



### **Exclusion and Deterrent Measures**

#### **KikkoNets**

KikkoNets continue to be an effective method of wildlife exclusion and prevent entanglement. In the reporting period Tassal deployed KikkoNets across our Tasman region.

#### K-Grid nets

The trial at our south east sites was completed and deemed successful with no holes or breaches, and net cleaning was effective. One K-grid net was trialled in the reporting period, with 34 more nets on order to be deployed in FY2016.

#### Seal proof bird nets

Tassal continue to monitor and improve the design and effectiveness of our seal proof bird nets.

#### Internal rigging audits

Regular rigging audits conducted at all farming leases ensures maximum exclusion capability and compliance with DPIPWE regulations. Audits extended to include nets that are not in use, to ensure they are not left in a way that may cause possible entanglement.

#### Seal jump fences

Jump fences are now stitched to fish nets on all pens with seal fences, preventing seal access between the two nets.

In addition to our exclusion technologies, there are a number of deterrent devices we use under permit or licence from the DPIPWE Wildlife Management Branch.

These include:

- · Trapping and relocation
- · Bean bag ammunition
- · Seal scare darts
- · Seal control units (crackers)

We do not use acoustic deterrent devices (ADD) or acoustic harassment devices (AHD) in our operations. An acoustic deterrent device is a technology used to deter marine mammals and birds away from aquaculture operations. These devices can have a negative impact on cetaceans, causing pain, disturbance and displacement from important habitats.

#### Wildlife Interactions

Seal Interactions					
Year	Relocation events	Euthanised	Accidental death (relocation)	Accidental death (entanglement)	
FY2013	144	1			
FY2014	90	0			
FY2015	145	0			





Bird Interactions						
	FY 2	2013	FY 2	2014	FY 2	2015
Region	Accidental death	Alive and released	Accidental death	Alive and released	Accidental death	Alive and released
North West Bay	3	96	13	41		102
Bruny	7	65	7	176	2	109
Huon / Great Taylors Bay	2	237	4	282	1	95
Dover	2	53		184		11
Tasman Peninsula	0	183	4	188	0	186
Macquarie Harbour	1	268	5	80	2	19
TOTAL	15	902	33	951	9	522

No cormorant deaths occurred within our land based and marine operations during the reporting period.





Note: 2014 numbers were reported incorrectly in our FY2014 report and have been amended accordingly.

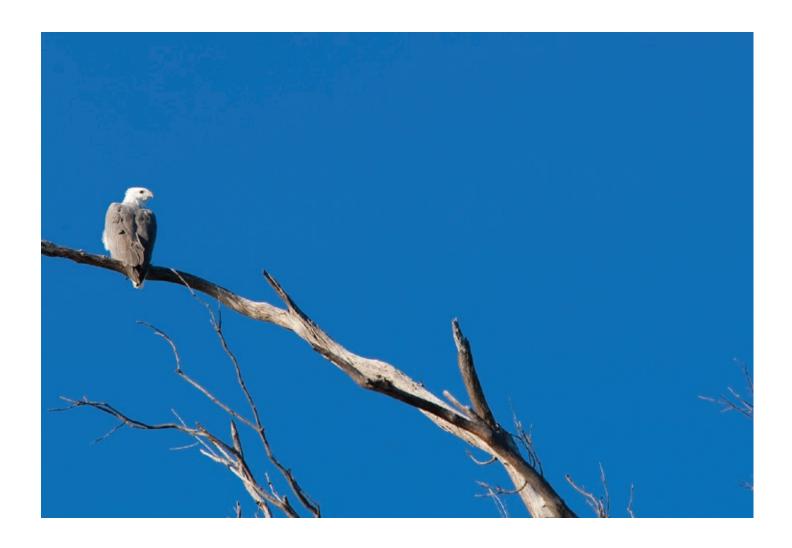
		Shark Interaction	ıs	
		<b>2014</b> onths)		<b>2015</b> conths)
Region	Accidental death	Alive and released	Accidental death	Alive and released
North West Bay	0	2	0	
Bruny	0	1	0	
Huon / Great Taylors Bay	0	1	0	
Dover	0	1		
Tasman Peninsula	0	0	0	
Macquarie Harbour	0	0	0	
TOTAL		5		

There were no interactions with sharks, whales or dolphins during the reporting year.









#### **Bird Gate Innovation**

Bird gates were developed as an on farm innovation to allow birds to make their own way out of fish pens if they were to gain entry. The principle behind the bird gates is that while there is enough room for the birds to walk through the gaps there is no platform for them to land on the outside, or enough room for them to fly through.

The gates are clamped onto the fish pen handrail and the existing bird net is stitched around the framework of the gate. There is a support bracket that sits against the inside of the stanchion to ensure the gate stays in its required position. A platform is located on the inside for birds to land on when they are in the fish pen and they can walk through the gap and take off.

The bird gates are very effective for Silver Gulls, and there have been instances of a bird leaving the fish pen within five minutes of the gate being fitted. Tassal is conducting more trials on enlarging the exit point enough to let the larger gull (Pacific and Kelp Gulls)

species exit while not enlarging them so much that seals see this as an entry point. The gates are made out of 40 mm aluminium tubing and weigh around five kilograms, so they are easy to handle and mount onto the pen by one person.

#### Salmon Escapes

There is currently no specific salmonid escape legislation or regulation in place in Tasmania. There are, however, a number of elements in place at Tassal that provide a management framework. These include licence conditions to report significant escapes, and legislation preventing intentional release of fish. Tassal is required to report escape events of more than 500 fish at any of our marine farming leases, however we have made the decision to report on all escape events of more than 100 fish. No Salmon escape events occurred during the FY2015 reporting period.

Due to the absence of native salmonid stocks in Tasmania, ecological interactions between wild and farmed Salmon and associated genetic impacts remain a non-material issue. Tassal does not rear transgenic fish stocks.

In Tasmania, the potential impacts of escaped Salmon include:

- · Establishment of feral breeding populations
- · Negative ecological impacts on native fish populations and prey species,
- · Disease transfer from farmed fish to native fish.

Tassal has a comprehensive Escape Prevention and Response Protocol (EPRP) that has been implemented to eliminate stock escapes from marine farms within areas that can be controlled and to minimise the risk from areas where it cannot. The EPRP supports the best practice management requirements of our ASC certification and the Macquarie Harbour Area Management Agreement (MHAMA).

Marine operations staff are trained in escape response, and escape drills occur at least annually on each site.

Caring for the health and welfare of stock is the primary responsibility of any farmer. The investment in our fish health department, systems, equipment and training reflects the utmost level of importance Tassal places on the health and welfare of our Salmon.

# Salmon Health and Welfare

Good fish health and welfare outcomes do not occur in isolation which is why our approach to managing fish health focuses on optimal marine operations, optimal environmental management and optimal husbandry practices.

All of our broodstock are kept in freshwater flow through tank systems in the highlands of Tasmania and our young fish, reared up to smoltification, are either in these same locations or at our freshwater recirculation hatchery at Ranelagh in the Huon Valley. Once transported to our marine sites all our fish are housed in polar circle sea cages.

#### **Breeding and Genetics**

Performance improvements from the Selective Breeding Program (SBP) continued to flow into commercial production throughout 2014-2015. The SBP continues to focus on reducing the susceptibility of our Salmon to Amoebic Gill Disease (AGD), thereby improving fish welfare and reducing freshwater use. In FY2015 Tassal fostered international collaborations and developed research in the area of genomics to ensure that the rate of improvement in AGD resistance continues into the future.

Tassal does not farm genetically modified (GMO) Salmon.

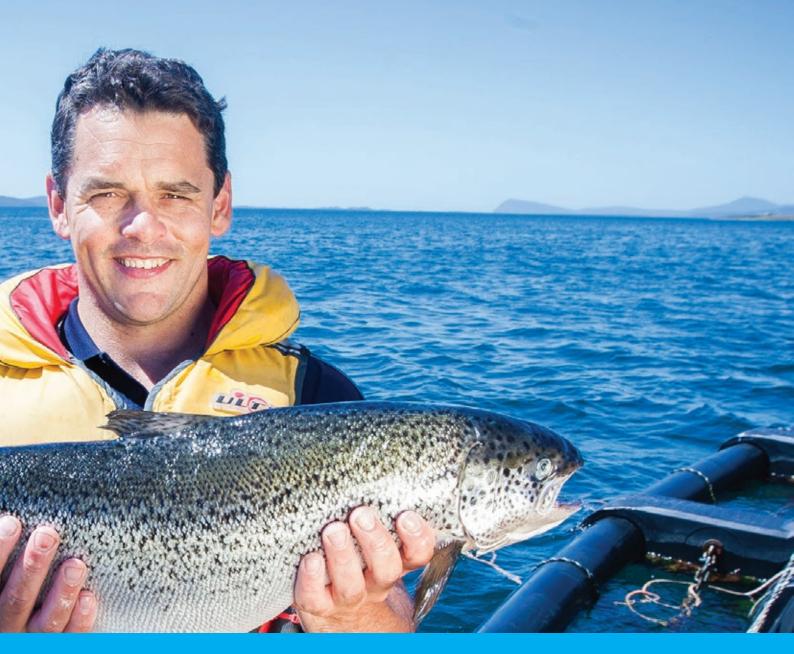
#### Zero Harm for Fish

Tassal's voluntary Zero Harm for Fish program, implemented in January 2015, audits the functioning of the fish health management plan (operations and resourcing) as well as other husbandry factors that can cause disease. The Zero Harm scorecard drives a culture of continual improvement that aims for a target of 91% survival. This program is a comprehensive roadmap to better fish health and welfare built around RSPCA principles. It is also an important platform to drive standardisation of operations and the sharing of best practice husbandry and systems.

Scorecards are used to quantify each region's performance in the following areas:

- · Fish husbandry/welfare
- Fish health
- · Fish quality
- · Management systems, and
- · Emergency preparedness.

Each of the scorecard segments is weighted according to how important the standards are for fish health and welfare. Many of the standards are aimed at promoting best practice culture



across all sites. This program is implemented to avoid and mitigate fish suffering during farming, transport and slaughter procedures.

Continued training and education is an important aspect of our new Zero Harm for Fish program, and Tassal strongly believes that it will assist in promoting the right culture through the dissemination of knowledge. To support our program, training with the assistance of Seafood Training Tasmania was conducted at our marine sites on the following:

- · Finfish husbandry and stress: physiological stressors for fish and mitigation
- · Finfish feeding and nutrition, and
- · Disease identification: normal versus abnormal observations.

The Zero Harm program drives continual improvement across all of our sites and has highlighted the biophysical constraints of regions and leases, the main causes of mortality in our stock and allowed us to design potential mitigation strategies.

Sitting underneath the Zero Harm program is our fish health strategy that outlines our approach to the use of vaccinations, stocking densities and health surveillance. Smolt are given vaccinations to protect them from potential disease threats.

In addition, Tassal places restrictions on stocking densities to reduce the risk of stress on our stock. Due to the unique nature of several of our farming regions, stocking densities range from less than 15kg/m<sup>3</sup> to no more than 17kg/m<sup>3</sup>.

We undertake regular checks and health surveillance for what diseases may be present. Sampling is undertaken on a monthly basis across all of our leases. Tassal has not isolated mycobacteria in any of our sampling at Macquarie Harbour.

Fish health professionals are present on each site, and our Veterinarian undertakes quarterly visits to each site. All mortalities are classified and recorded for each production cycle and Tassal is compliant with the OIE Aquatic Animal Health Code.

Preventative medicine is Tassal's fish health philosophy, and our company has a structure vaccination plan for smolt depending on the inputting site. Fish between two and five grams are vaccinated by dip vaccine for Yersinia – a bacterial disease that is endemic to freshwater hatcheries. Fish stock that are destined for Macquarie Harbour that are 40 grams in size receive an intraperitoneal vaccine for Vibrio anguillarum and Aeromonas salmonicida which are both disease agents present in the Macquarie Harbour region.

# Antibiotics and Anaesthetic Use

Antibiotic use on our farms is rare and limited to isolated health issues. Our goal is to eliminate antibiotic use and we only ever treat our fish in the best interest of their welfare and under veterinary supervision. We do not treat our fish stock prophylactically, nor use any antibiotics listed as critically important for human medicine by the World Health Organisation (WHO). All treated fish are subject to a lengthy withdrawal period to ensure that there are no antibiotics in their system. We report any antibiotic use on our ASC Dashboard within 30 days of the treatment.

(see: http://www.tassal.com.au/sustainability/asc-dashboard/)

Grams antibiotic used per tonne of fish produced					
	Marine Sites	Hatcheries	Total		
FY13	1.8	0.37	2.17		
FY14	6.97	0.72	7.69		
FY15	5.44	0.57	6.01		





Total Kg antibiotic used			
	Marine Sites	Hatcheries	Total
FY13	46.14	9.34	55.48
FY14	178.2	18.4	196.6
FY15	156	16.2	172.2





Note: In our FY2014 report, we incorrectly reported the total Kg antibiotic used in our Hatcheries as 12 Kg. This has been corrected above



Anaesthetics are used in Tassal's marine and freshwater operations in the following instances:

- Fish sampling for weight check, AGD check and non-lethal samples
- Euthanising fish in freshwater operations when there are large numbers of fish that require culling or are moribund, and
- General handling, for example, grading in freshwater.

The anaesthetic we use is Aqui-S (isoeugenol), which is a registered product that requires no withdrawal period. Tassal has an internal fish anaesthesia protocol for using Aqui-S to ensure that all fish are anaesthetised safely. This protocol includes requirements around preparations and monitoring of fish as well as physiological considerations to take into account when using.

#### **Biosecurity**

Biosecurity refers to a set of measures put in place to minimise the risk of disease outbreaks and to prevent the spread of any disease which may occur. Tassal has a legal obligation and duty of care to our stock and to other aquaculture operators to ensure all possible biosecurity measures are in place.

Tassal operates within the Tasmanian State Biosecurity Plan, and our farming operations span across two very distinct biosecurity zones. Tassal has an internal farm disease management and biosecurity protocol and fish health management plans are in place for the south east and Macquarie Harbour. These plans include measures to avoid the introduction of new and/or exotic diseases and to limit the spread and impact of diseases.

The Tasmanian Salmonid Growers Association (TSGA) Biosecurity Management Plan is currently in development with industry members.

### Tassal's Business Intelligence supporting Fish Health

A key project for marine operations was the development of a tool to assist in the management of Amoebic Gill Disease (AGD). This combines field data with modelling from our Selective Breeding Program (SBP) to deliver a user friendly interface that can be used to track disease progression, prioritise on-farm activities and review the efficacy of management strategies.



# **Environmental Performance**

Tassal is committed to environmentally robust business practices which is reflected in the significant investment made throughout our operations. Protecting, conserving and enhancing the environment for current and future generations is a high priority for us and forms a fundamental part of responsibility to the environment and society.

To achieve our environmental goals we are committed to the principles of continuous improvement and the prevention of pollution. We ensure that our activities and services comply with all applicable environmental standards relating to water, emissions, energy, effluents, transport, waste and use of materials.

#### **Water Use**

Freshwater is a vital input into to all stages of Salmon production. Water is used to grow the fish in our hatcheries, to bathe our Salmon in Amoebic Gill Disease (AGD) baths at marine farms and to clean the fish in the processing factories. These water resources are also important to other stakeholders for a variety of recreational and industrial purposes. As such, Tassal endeavours to use these resources as efficiently as possible and to ensure our operations have minimal impact on water quality.

A total of 103,700 ML of freshwater was used by Tassal in FY2015, which equates to 3.4 ML per HOG tonne of Salmon. The majority (98%) of water used by Tassal in FY2015 was in our flow through hatcheries at Russell Falls and Saltas. This water is diverted from

rivers and returned relatively unchanged to the same river following treatment to remove the nutrients from uneaten food and waste products. This is also the case for the 1% of water used for freshwater bathing which is taken from nearby water sources and released into the ocean after bathing the fish. The remaining 1,337 ML comes from reticulated supply.

#### **Energy Use**

Industrial energy used in the production of Salmon represents a significant economic cost to Tassal and is the source of negative environmental impacts. Tassal is committed to reducing these impacts through ongoing efforts to improve the energy efficiency of our operations. To achieve this we calculate emissions annually to assist in identifying areas for future improvement.

Tassal has been conducting Life Cycle Assessments (LCA) to measure environmental performance since 2011. During the reporting year, we undertook an alternative approach to calculate energy and greenhouse gas emissions so that we can simplify the reporting process and make it easier to measure performance over time.



Energy used, and associated CO<sub>2</sub>e and Scope 3 emissions for the year were slightly less than in FY2014 due to a reduction in electricity and diesel use. This was partially offset by an increase in petrol use in the fleet cars. The majority of the savings in electricity came from the hatcheries as a result of reduced biomass produced in FY2015.

The reduction in diesel use came predominantly from the marine farming sites. One of the contributing factors was the reduction of 41 baths across

the south east as a result of our Selective Breeding Program (SBP) together with improved husbandry. With each bath using approximately 400 litres of diesel and 200 litres of petrol, this improvement has saved an estimated 915 GJ of energy.

A slight reduction in the energy used to transport goods to market was experienced due to a lower volume of goods transported via air freight. Despite this, air freight remained the largest contributor to transport related

energy use. There was also a slight increase in energy used in feed and processing due to higher volumes of feed use and fish production in FY2015.

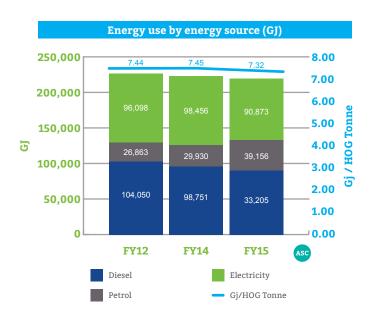
#### **Tassal Water Use**

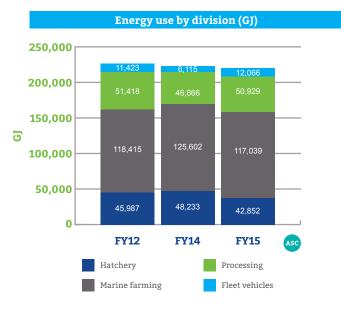
Sector	Site	Freshwater source	Volume (ML)*
	All	Reticulated	1,257.0
	Dover	Dam/River	282.0
MOPS	Huon**	Dam/River	45.0
	Bruny / North West Bruny	Dam	440.0
	Tasman	Dam	298.0
	Rookwood Rd	Bore	61.0
Hatcheries	Russell Falls	River (flow thru)	44,150.0
	Saltas	River (flow thru)	57,123.0
	Margate	Reticulated	6.3
Processing	Huonville	Reticulated	12.6
	Dover	Dam/River	22.0

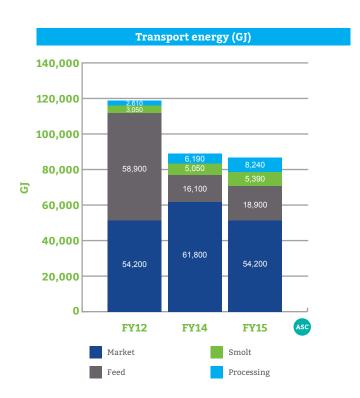
Notes:

- \*1 ML = 1,000 m³ 
  \*\* Does not include dam water used by Huon/Dover for land bases
- Does not include dail water used by nutribuser in land bases
   Data for reticulated water from MOPS and all freshwater sources from processing is sourced from invoices
   Data for all other freshwater for MOPS is estimated based on bath frequency and volume of water used
   Data for Rookwood Road hatchery is sourced from metered usage
   Data for Russell Falls and Saltas is sourced from licenced usage

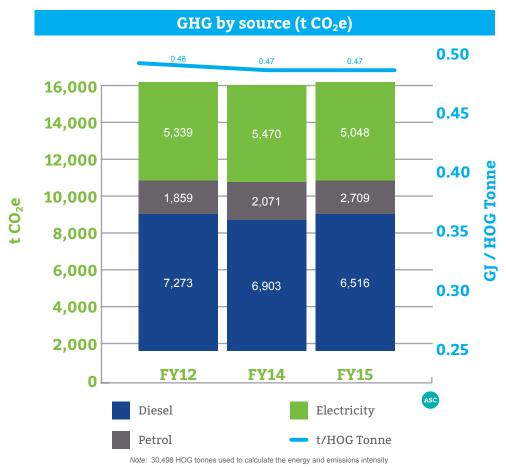




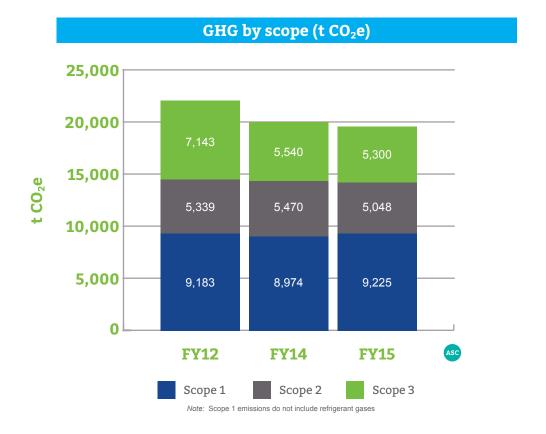




Notes to all energy charts: We have presented the data for the previous two LCA assessments as the base years for comparison. Data for FY2013 has not been included as no LCA assessment was undertaken for this period. Energy and emissions data from FY2012 and FY2014 have been recalculated to reflect the new methodology and enable comparison. Energy has been converted to joules using standard conversion factors. Scope 1 and 2 emissions have been calculated using NGER (2014) emissions factors and GWPs for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O. Scope 3 energy and emissions for transport were calculated using the same Simapro LCA models used in previous years. These models have also been used to calculate the eutrophication potential. As such these results are more comprehensive as they also take into account the upstream impacts. The equity share approach has been used to define the boundaries of these assessments. This covers 100% of the energy and GHG from the operations over which Tassal has full equity share, as well as the 80% share of Saltas in line with the percentage ownership.







### Waste Management

Effective minimisation and managing of wastes ensures that we meet compliance thresholds and reduce our impacts on the local environment. Our commitment to this is reflected in the various policies and procedures that we have in place to cover biological and non-biological wastes as well as waste water and effluents, for example, our waste management plans for our marine operations and processing facilities.

Salmon farming, processing and packaging produce a number of waste streams, including biological and non-biological waste streams. Our goal is to find innovative ways to minimise and manage this waste.

Packaging wastes include soft plastics, polystyrene, cardboard and paper. Tassal is a signatory to the Australian Packaging Covenant (APC) and is committed to the principles of the Sustainable Packaging Guidelines.

#### **Net Slab Waste Management**

Waste generated at our netslab during the reporting period includes 140 tonnes of shells, disposed of through Cement Australia, where it is used as alternative fuel for their furnace, and left over debris is used in the making of cement.

Approximately 100 tonnes of fines are generated from water treatment and around 10 tonnes of rope waste was created. We are currently exploring recycling opportunities for this. Rope waste is stored at our net slab facility.

#### **Biological Waste**

Biological wastes from mortalities and processing offcuts are generated and buried in a pit, or sent to Seafish for

processing. From FY2016 onwards, mortalities and processing offcuts will be sent to Tassal's new Triabunna by-product plant.

#### Waste (Composting)

Our Rookwood Road hatchery operates under an EPN issued by the Huon Valley Council, that covers both the hatchery site (Rookwood Rd) and the reuse water irrigation zones. The EPN is highly prescriptive, and includes requirements around solid waste management.

At Rookwood Road, wastewater is treated with a flocculent and then filtered to obtain a sludge (20-30% solids). This sludge is taken to a composting facility for addition to green waste for further composting. During the reporting period we sent 710 m<sup>3</sup> sludge to the composting facility.

All grey and black water produced by the hatchery is treated in an Envirocycle® system as per the Special Plumbing Permit (SPP) issued by the Huon Valley Council during construction. It is then disposed of via a subsurface irrigation network on the property.

	Waste disposal	
Waste type	Amount (t*)	Disposal method
Liquid (non-hazardous)**	418,222	
Liquid (hazardous)	17,346	
Solids (non-hazardous)	8,741	Third party landfill***
Solids (hazardous)	7.2	THII Q PARTY IARIUIII
Organic solids (non-hazardous)	93	
Paper/Card (non-hazardous)	214	
Feed bags	N/A	Currently crushed and stockpiled – we are looking for a potential disposal method.

Notes: \* Conversion factors from WA Waste Authority (2016) used to calculate weight of waste from volumes provided on invoices. \*\* Predominantly blood water from harvest and sludge from hatcheries. \*\*\* Sludge is sent to compost not to landfill as stated. Table does not include net slab waste or biological waste

#### Recovery of nutrients from biomass sent to Seafish

	Weight (tonnes)			Protein (tonnes)			Omega-3 (tonnes)		
Biomass	FY2013	FY2014	FY2015	FY2013	FY2014	FY2015	FY2013	FY2014	FY2015
Heads & Frames	3381	2790	1416	406	334	160	34	28	12
Guts	3311	2930	3117	728	645	686	338	299	318
Trims	881	743	850	176	149	159	9	7.4	
Skins	403	314	424	81	63	85	4	3.1	2.9
Mortalities	1405	321	1684	263	60	315	70	16	84
Total Nutrients Recovered	9381	7088	7491	1654	1250	1404	455	353.5	422.9

Note: FY2015 numbers are estimates due to non-provision of data.

#### **Eutrophication Potential**

The uneaten feeds and metabolic by-products from Salmon farming contain nitrogen and phosphorus. If there is an excess of these nutrients in the water it can result in eutrophication which has negative implications for various ecological parameters. To manage this, we regularly monitor water quality and manage feed inputs to ensure that we remain within the acceptable limits defined by regulation.

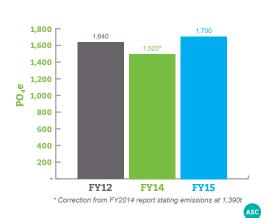
99% of PO<sub>4</sub>e lost to the surrounding environment came from marine farms. This was higher than in FY2014 as a result of higher production volumes and feed usage.

The Margate and Dover processing factories have onsite waste water treatment plants (WWTP) to process the waste water before discharging into the

ocean. In FY2015, a total of 132ML was discharged which had a total Biological Oxygen Demand (BOD) of 4.2 tonnes and contained 8.8 tonnes of Total Suspended Solids (TSS). In addition to this, 53.4ML of waste water from the Huonville factory was sent to a local water treatment facility which contained a total of 52.7 tonnes BOD and 31.5 tonnes TSS.

This year there was a significant improvement in the nutrient load of the water being discharged at Dover. This was due to the successful development of the biological systems in the WWTP upgrade in FY2013. This reduced total nitrogen from 5.27 tonnes to 3.79 tonnes (28% reduction) and total phosphorus from 0.37 tonnes to 0.16 tonnes (58% reduction).

#### **Eutrophication potential**





### **Packaging Materials**

Tassal has formal packaging arrangements designed to keep packaging at a minimum and reduce waste where possible without compromising food safety under product supply contracts with major customers that are leading national retailers. Packaging design is largely dictated by product preservation and quality assurance, with efficient, cost effective shipping and handling.

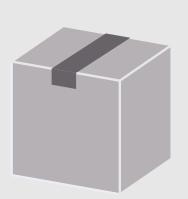


boards 6,529,000 units

cardboard (assorted) 370,328 units







cartons 447,800 units



General Consumables 61,216 units

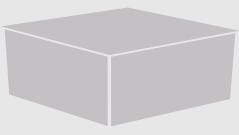
> packaging miscellaneous (eg. ties, straps) 178,450 units



packaging -sleeves 2,274,721 units

trays 126,984 units

packaging - pads 87,640 units



poly boxes 169,612 units

poly liners 21,500 units

packaging - plastic 9,302 units





## Triabunna Value-Add By-Product Plant

In response to community odour and water quality concerns regarding the processing of our Salmon by-products by a third party processor, Tassal committed to undertaking this function and developing its own state of the art processing facility to meet the highest social and environmental standards.

Construction has begun on the processing facility which is located just north of the town of Triabunna on Tasmania's east coast, and is scheduled to be completed by the end of October 2015.

The facility will process all fish waste (gut, heads, frames and trims) from our processing factories and the mort fish from farming operations. Our longer term vision for the facility is to produce fish meal and fish oil which will initially be sold domestically as stockfeed. Further plans are to produce fish oil to an edible grade for pharmaceutical use, supplying health companies for the manufacturing of omega capsules, and also to produce export product.

Approximately 15 direct positions will be created once the facility is

operational, with positive flow on effects to the broader economy in the transport services, consumable purchasing, maintenance contractors and environmental specialist areas.

Tassal has worked closely with the local municipal council to present the project to the local community which has overwhelmingly welcomed the development, particularly with the creation of local employment opportunities.



# "Our longer term vision for the facility is to produce fish meal and fish oil"





# Our People Matter

Culture, engagement and retention are top challenges for any business. To ensure Tassal continues to deliver on its business strategy, Tassal nurtures a culture defined by meaningful work, deep employee engagement, job and organisational fit and strong leadership.

We actually believe that our people are the key to success. We acknowledge we are not perfect but are committed to continue to work on making our organisation a global leader in all aspects, including valuing our people. Our CEO will openly say that he loves the fish but what he really loves about this company is the people. We would challenge anyone to come onto one of our facilities and not feel that Tassal has something special. Tassal has held the Employer of Choice accreditation since 2012. Key indicators that show that our employee programs are working is proven by:

- Annual turnover rates are below 9%
- In our first Employer of Choice survey (636 respondents) we received:
  - o Satisfaction score of 81%
  - o Engagement score of 75%
  - o Flexibility score of 72% of which:
    - 73% of employees are able to access flexible work arrangements that meet their needs
    - 72% agreed that Tassal actively encourages flexible work practices, and







- 71% feel comfortable in discussing work life with human resources / their manager.
- · Feedback is received from team members progressively through employment and/or at exit interviews, and
- Increase in external job applications based on internal feedback or referrals demonstrating a strong employee brand.

#### **Working at Tassal**

We are committed to providing employment opportunities in a range of different occupations to people within areas of our operating sites. In line with our commitment to valuing diversity and being an equal opportunity employer, we also aim to provide job opportunities to people based on their ability to undertake the requirements of the role. regardless of their background, gender or other characteristics.

We aim to mitigate any negative impacts from high employee turnover by ensuring we employ the most suitably qualified people for our vacancies, and by employing the most suitable people in entry level roles. We ensure that positions are advertised internally in all

instances and only where necessary will external applications be sought. We encourage our staff to discuss their ambitions with us to allow for the development of appropriate training to assist their progression if appropriate.

We evaluate our approach to managing employment at Tassal through the following activities:

- Every one to two years, our human resources team conducts a review of the skills, qualifications, physical requirements and experience requirements of our entry level positions including farm attendants and processing attendants to ensure our new employees are suitable for the role. This involves a review of position descriptions in collaboration with the relevant operational supervisors and a review of any skills, machinery, equipment, compliance or licencing changes
- Regularly reviewing our recruitment processes with the aim of improving applicant suitability to vacancies and attracting the most suitable applicants. This includes reviewing advertising strategies and recruitment processes.

- · We have recently implemented our e-recruitment system which launched in January 2015. This has enabled us to have a more user-friendly application process for prospective employees, and has streamlined our previously manual recruitment process, as well as improving our record management, and
- Exit interviews are conducted for all salaried employees, or when we feel valuable feedback from the exiting employee should be obtained in order for us to improve or address issues.

Monthly reporting on turnover data is provided to the Board of Directors. This data is reviewed by the Board and Head of People, Culture and QA. Significant changes in data or trends are discussed and any strategies for action is determined. Current vacancies and timeframes for recruitment are also provided to the Board for review.

In addition. Board members receive an induction upon joining Tassal and are provided with various non-public documents and directed to Tassal's website for the publically available documents such as the company's Code of Conduct.









are provided under the wellness banner that have work and non-work related benefits, such as access to on site medical and physio support, our free annual flu injection program, discounted corporate rate access to two major health funds, and participation in health related programs, such as the 2015 Global Corporate Challenge and access to after-hours onsite yoga classes.

In addition to these benefits, Tassal provides employees with maternity and paternity leave payment provisions that are higher than the current regulated standards; the ability to apply for extended leave without pay and birthday leave - allowing all employees below Senior Management to have an extra day off to enjoy their birthday. The senior management team supports anti-domestic violence with additional leave entitlements (domestic violence leave) and onsite White Ribbon Day events.

We strongly believe that in addition to being an ASX listed organisation, we are a collective of individuals that effectively form a family - and like all families we help each other out in times of need.

Our service reward and recognition program acknowledges the service and contribution of staff at five, 10, 15, 20, 25 and 30 years of service milestones.

As an organisation we understand that we are not perfect and improvement is always a work in progress. The key is that we are committed to continued improvement in support of our people as we firmly believe that they are the key to our collective success.



#### **Authentic Leadership**

Given the size and geographic diversity of our organisation, we use a number of different approaches to ensure connection between leaders and team members:

- Clarity on leadership structures and an open door policy that supports communication at all levels
- At local levels, tool box meeting structures operate to ensure communication across levels
- An annual site barbecue with CEO attending for open discussion
- Cross functional working group, training sessions and briefing sessions allowing all levels in the

organisation to openly engage and communicate

- · Six monthly newsletters
- · Family activities for all employees
- Tasting sessions run by our senior marketing team to review new product development
- · Joint team functions
- Belief in our value of authentic transparent communication – expected to be modelled by all leaders
- ROCK Safety Leadership Program

   with continued focus on developing leaders, which includes participation in the Dragon Den, an annual event

- at which members pitch ideas to the executive, and
- Senior management team members including the executive regularly work from site locations and openly engage with all team members – even if outside their direct functional responsibility.

#### **Our Local Communities**

Tassal operates in a number of small communities within Tasmania where aquaculture is an important part of the area's economy. We place a strong emphasis on employing people from these local communities to enable people to live and work locally, which is sustainable for an effective work / life balance. Indirect economic benefits flow throughout these

# "We place a strong emphasis on employing people from ... local communities"

local communities to other businesses as a result of Tassal's presence. We provide a range of job opportunities in our more remote locations of operation including management and team leader roles, processing attendant and farm attendant positions, technical roles and trade/ maintenance roles.

We employ Australian workers where possible, however, there are instances where Australian workers do not possess the required skills, qualifications or experience to perform the requirements of a position, and we therefore need to look abroad for appropriately skilled people. These employees are typically on 457 or permanent residency visas. As an example, our Bath Team Leader, Team Attendant - Dive, Senior Manager Technical & Planning and Harvest Manager are on 457 or permanent residency visas. We also employ staff on working holiday visas in positions where again, we are unable to fill vacancies with suitably skilled Australian residents, or when we have not had the volume of suitable Australian residents apply for vacancies.

#### **Diversity and Equal Opportunity**

Tassal is committed to being an equal opportunity employer (EEO) that recruits and selects the best applicants based on sound selection criteria. We are fully committed to providing a workplace environment free from discrimination, harassment and bullying and value the diversity and contribution that people with different skills, experience and backgrounds bring to our company. We aim to enhance the positive impacts of having a diverse workforce through

employee education and work practices. Tassal believes that all employees have the right to work in an environment that provides them with the opportunity to develop to their full potential and contribute their best, and where we all value and respect individual differences.

A range of comprehensive and proactive anti-discrimination policies, procedures and practices are in place, which are available to view at http://www.tassal.com. au/governance-policies/.

All new employees are educated on relevant anti-discrimination policies, procedures and practices during our new employee induction process, and harassment, bullying and discrimination prevention and awareness training is conducted with all employees every two years.

Monitoring of internal and external complaints of employees and applicants occurs to ensure that our management approach is on track. We have had no incidences of discrimination either internally, or externally through the Office of the Anti-Discrimination Commission or through Fair Work Australia during this reporting period.

Records of our employee education and training on diversity and EEO are kept to ensure that each employee is adequately trained and educated on our responsibilities and approach to valuing diversity in the workplace.

All recruitment and promotional decisions are based on merit and equity. Discrimination in any form is inconsistent with our company values, Code of

Conduct and philosophy of valuing diversity.





# Learning and Development

Tassal is committed to providing the appropriate training, education and development to our employees so that they have the correct skills and competencies to effectively perform the duties of their position.

We plan to ensure that our training goals and targets, internal and external compliance targets are met and that we have the most suitably skilled, trained and knowledgeable people in our business.

Our training and education is designed to:

- Meet legal obligations where specific licences, tickets or skills are required
- Enable all employees to function effectively and safely within their roles
- Provide opportunities for advancement and increased stimulation within the workplace and maximise productivity, and
- · Meet business goals and targets.

Specific training targets are set for each position, which vary depending on the requirements, level and skills of the position. We have training plans in place for specific tasks within our operational

positions, and offer all employees the opportunity to formally request training or further education.

We place a strong emphasis on developing our workforce and providing opportunities for workers to advance within the company.

We evaluate our approach to training and education through a variety of means including:

 Regular review of training with training providers and internal stakeholders to ensure the training remains relevant and suited to job requirements. This includes annually reviewing our Safety Leadership Program with our RTO Response Consulting,



periodically reviewing compliance and skills training for operational staff and conducting regular reviews of internal training including induction training/processes, training plans and competence based training

- Reviewing turnover data and information obtained from exit interviews to evaluate whether further training could be provided to assist in meeting business goals and targets or enhance the success/contribution of a position
- · Conducting monthly audits of training and licencing records within our marine operations department. All sites have set KPI's for training and licencing compliance. We have set a 100% compliance target for all compliance related training and licencing, and
- · Audits are conducted both periodically and ad hoc by external stakeholders such as government bodies, suppliers and certification bodies.

Significant improvements have been made to our training records system which enables us to obtain reports on training information and set up reminders for when training or licences are due to expire or require renewal. Designated staff members for each area are responsible for ensuring this information is kept up to date and monitored regularly to ensure

compliance. This ensures all employees are safe and suitably skilled to perform the requirements of their roles.

We support a wide variety of educational initiatives for our workers. One example of this is our ROCK Solid Safety Leadership Program, which is in its sixth year. The program has seen 141 employees successfully graduate from nationally recognised qualifications including Diploma of Management, Certificate IV in Frontline Management and Certificate IV in Work Health and Safety.

This year saw 36 leaders graduate from their Certificate IV in Work Health and Safety. In addition, workers of all levels are provided with relevant training required to safely and adequately perform their roles, and for professional development and career advancement.

Our training programs also include personal 'soft skills' development that can apply outside the immediate work location in addition to ongoing leadership development opportunities.

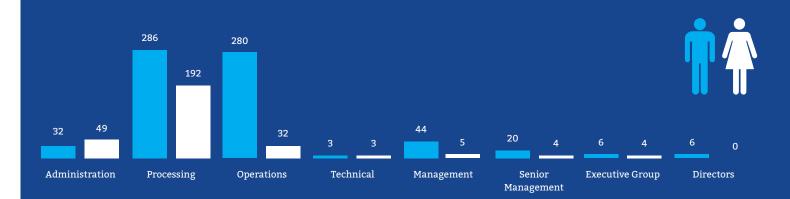
#### **Contractors**

Our Contractor Information Pack and Tassal Contractor Handbook include our social policies and standards and must be completed and read by each contractor prior to working at any of our sites. Included are: Work Health and Safety Policy; Corporate and Social Responsibilities; Harassment, Bullying and Discrimination Policy; Food Safety; and Environmental policies and procedures. Our Client/ Supplier Interaction Policy includes social standards including reference to our Code of Conduct Policy and Ethical Behaviour Policy.

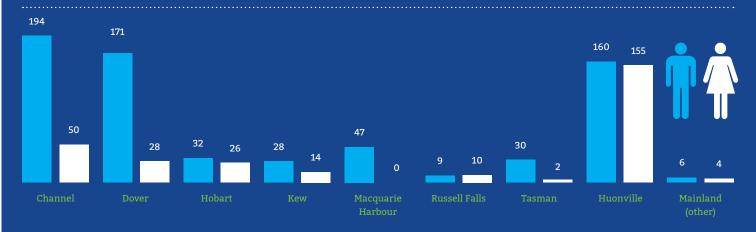
#### Variation in Employment **Numbers**

Tassal experienced one significant variation in employment numbers as a result of the annual Dover processing shut down, between the 26th January and 1st May 2015. The 32 permanent staff either continued to work at Dover; temporarily worked at a different site; took annual leave; or took leave without pay during the shutdown period. 20 casual and seasonal employees were employed specifically to work during the season from April 2014 until January 2015. These casual and seasonal employees were provided with notice of termination at the end of the season.

#### Workforce Snapshot - Employee numbers by category and gender



## Total workforce by gender and region



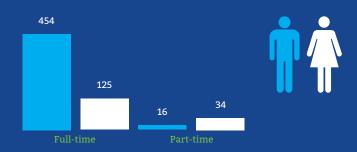
### New hires by age, gender and region

	Male <30	Female <30	Male 30-50	Female 30-50	Male >50	Female >50	TOTAL
Channel	42	17	19	11	2	1	92
Dover	41	15	25	10	2	0	93
Hobart	1	3	2	2	1	0	9
Kew/Mainland	10	3	8	4	1	1	27
Macquarie Harbour	4	0	7	0	1	0	12
Russell Falls	0	0	0	0	0	0	0
Tasman	6	0	3	0	0	0	9
Huonville	60	48	36	31	5	5	185
TOTAL	164	86	100	58	12	7	427

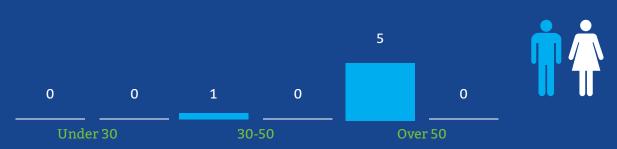
### Total number of permanent employees by employment type and gender

#### **Gender Demographics**



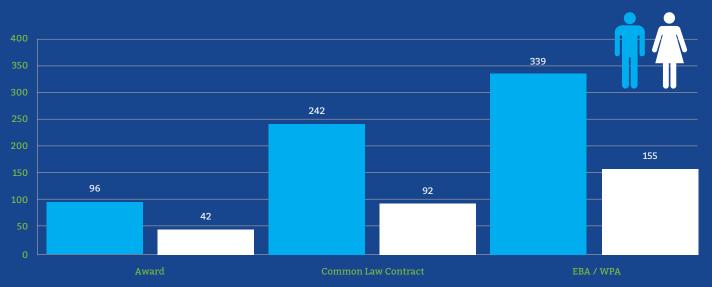


### Directors by gender and age



Note: As at 30 June, 2015, there were no female Board directors.

### Total number of employees by employment contract and gender



Note: 51% of Tassal employees are covered by Enterprise Bargaining Agreements (EBA)/Workplace Agreements (WPA), 35% by Common law contract, and 14% by Award.

#### Leavers by age, gender and region

	Male <30	Female <30	Male 30-50	Female 30-50	Male >50	Female >50	TOTAL
Channel	28	10	18	6	4	1	67
Dover	23	11	12	7	1	1	55
Hobart	2	1	1	2	0	1	7
Kew/Mainland	6	3	6	2		1	19
Macquarie Harbour	4	0	4	0	2	0	10
Russell Falls	1	0	0	0		0	2
Tasman	3	0	2	0		0	6
Huonville	25	29	23	18	9	7	111
TOTAL	92	54	66	35	19	11	277

Percentage of senior management hired from local communities at significant locations of operations

Percentage of Employees covered by Collective Bargaining agreements 33% 45% HUONVILLE Processing HOBART Administration RRH 78% Huon MOPs Dover MOPs Enterprise Bargaining Agreement (EBA) / Processing Netslab Workplace Agreements (WPA) Award 62% Common Law Contract **MARGATE** NWB MOPs Bruny MOPs

Processing

Percentage of employees who live and work in the same local council for our regional work sites

Bruny / Kingborough	74%
Dover / Huon Valley	79%
Macquarie Harbour	21%
Margate	64%
North West Bay	58%
Russell Falls / Derwent	84%
Tasman	65%

Percentage of Australian workers



Percentage above minimum wage rate for males and females in entry level positions

Marine operations	30%
Dover processing	30%
Margate processing	6%
Huonville processing	9%
Shops	10%
Hatcheries	5%

Note: Wage rates are the same for males and females

Average training hours per employee by category and gender (m/f)

Processing	24/22	Management	45/21
Operations	50/17	Senior Management	19/1
Administration		Executive	<b>42</b> /25
Tachnical	0.70		

Workforce absence rate = 4.73%

# Employee Profile Steven 'Scooby' Hodgetts

Steven Hodgetts (AKA 'Scooby') is a well-known member of the Tassal team. Scooby has been with Tassal since 1998, working on our marine farms in a variety of roles.

He commenced his Tassal career as a farm hand when he was 23 years old, and is currently the Systems Team Leader at our Bruny Region. Anyone who has worked in a marine environment will readily tell you workers require a special set of skills. The environment is subject to varying weather conditions (rain, glare, fog, wind, sleet and sometimes snow), employees operate heavy machinery such as cranes, capstans, boats of varying sizes, forklifts and other specialist equipment requiring a high level of attention and communication from workers, and employees are often required to make quick decisions about safety and fish survival. Our employees need to have excellent communication skills, be able to make informed decisions - often under pressure, and be able to adapt to the varying weather and environmental conditions. Scooby possesses all of these skills, but on a whole other level. Scooby was born deaf to two deaf parents. On top of working full time, he has three children and volunteers his time within the Tasmanian community by serving as a Director/President on the board of Tasdeaf, which is a small not-for-profit community organisation.

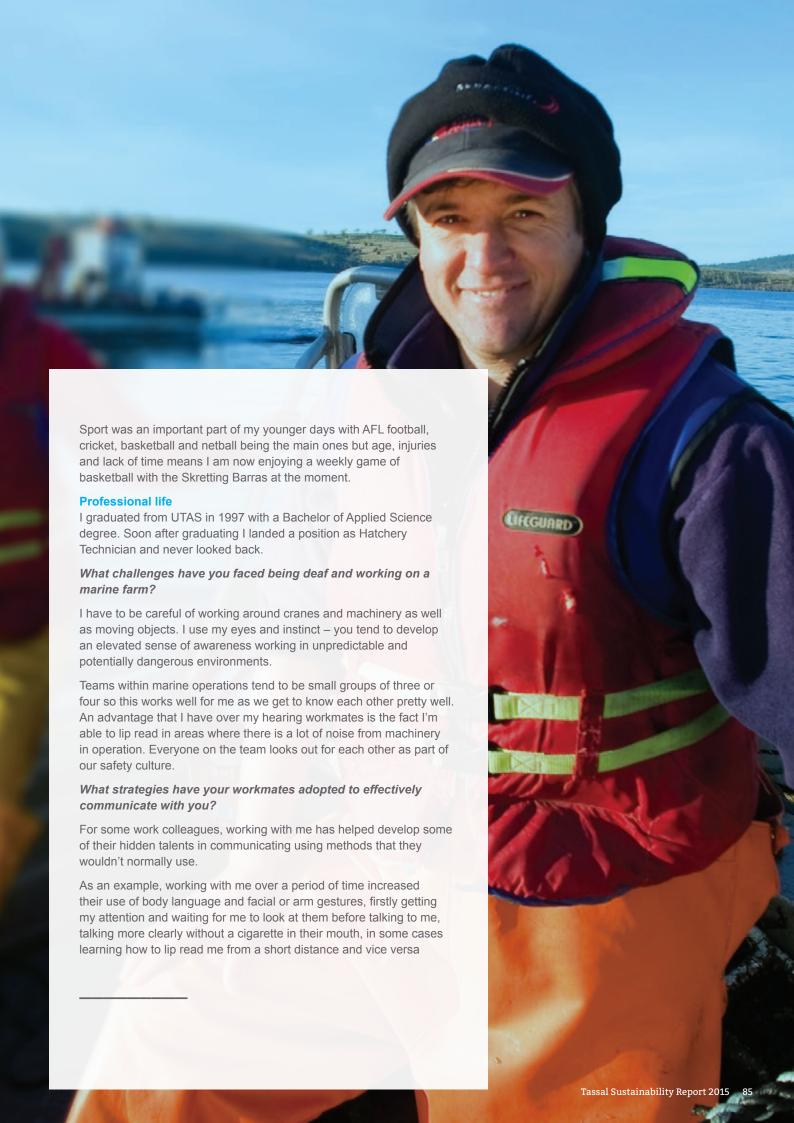
Many of us are simply in awe of how Scooby has managed such a long career in the marine environment and progressed his career into various leadership roles with his deafness, and wondered 'how does he do it?!'. We asked Scooby to provide us with an insight into his personal and professional lives and the communication strategies he has adopted growing up, and working in the marine environment:

#### **Personal life**

I come from a deaf family, where both my parents and sister were profoundly deaf. We are actually the only fully deaf family in Tasmania. One thing that made people smile when I was a kid was the fact our (long departed) pooch was also deaf – but only due to old age.

Auslan, which is the national sign language of Deaf people in Australia, is my first language. I only learnt to speak English when I was around 4 or 5 years of age through regular sessions with a speech therapist at primary school. At home everyone spoke a combination of Auslan, British Sign language and spoken English — all giving me excellent grasps of bilingual language, which enabled me to develop a combination of communication techniques that I still use today — it gave me the flexibility to adapt to the situation and I'm quite comfortable in communicating with people on a one to one basis or a small group.

"I come from a deaf family, where both my parents and sister were deaf. We are actually the only fully deaf family in Tasmania."



# **Workplace Health and Safety**

Tassal has one single aspiration when it comes to health and safety - Zero Harm. This aspiration is to be achieved by continuing the company's journey from independence to interdependence. An interdependent workplace culture contains employees that care not only for themselves (I take care) but for each other (I care for). This driving force of Zero Harm through interdependence has been applied not only to WHS leadership among all employees but to our livestock, environment, community and customers. If we aspire for Zero Harm within all these components we will ensure the long term success as a business and corporate entity in a global workplace.

#### **Our Work Health and Safety Management System**

Tassal's work health and safety management system (WHSMS) was built to drive continuous improvement within the business and features work health and safety (WHS) regulations, Australian Standards and Codes of Practice. We understand that there is only so much that regulatory compliance can do which is why driving consultation and review is at the heart of our WHS system. It is only through making everyone at Tassal a safety leader, that Zero Harm can be achieved.

Tool-box, Take 5 and WHS committee meetings are held regularly at each Tassal site. At these meetings, employees are engaged with each other in discussions regarding safety issues, improvements, hazard identification and controls. All employees participate in these meetings, allowing for strong management and worker consultation and facilitating collaboration between employees with different skillsets. In line with our overall Zero Harm strategy the WHS team along with our training partners Response Learning have developed and implemented our ROCK solid Safety Leadership Program which has proved to be key and very successful in driving our goal of a sustainable interdependent workforce.

WHS leading and lagging indicators are available on Tassal's intranet service for management to access. This dashboard has been built to make our safety progress transparent to all staff.

All executive, senior staff and department meetings begin with a safety share as an agenda item, where working weeks are rated as an A (excellent, proactive measures taken to prevent incidents), B (satisfactory, no negative incidents) or C (poor, negative incidents) performer with regards to safety.

#### From Dependence to Interdependence

All Tassal employees undergo a formal WHS Induction and sign a 'Safety Partnership Agreement'. The agreement aims to transcend regulatory requirements and bring home the message that from the time of induction, individuals are expected to be safety leaders, not just employees, WHS policies and procedures are to be read, understood and signed off by everyone. New employees are given a plan and up to three months to read through the policies and procedures outlined during their induction and training plan. 100% compliance is expected and is reviewed during WHS scorecards.

Tassal understands that new employees are in a state of dependence (dependent phase) while they adjust to a new working environment and we assist all staff to move from this phase to an 'independent' and finally 'interdependent' stage of development.



#### Phases of worker dependence

#### A dependent worker

Relies on others to assist them to remain safe. We need to alert them of hazards and coach them throughout their day.

#### An independent worker

Cares for their own health and wellbeing and is able to function alone or in a group with minimal direction or coaching required.

#### An interdependent worker

Cares for themselves and for others. They are a true safety leader in their ability to lead by example, follow protocol, collaborate effectively, speak up and keep themselves and others safe.

#### **Our Safety Structure**

# **Head of Safety Executive Position - reports to CEO**

# Senior WHS Advisor (Marine & freshwater operations)

compliance & legislative requirements

for Marine and
Freshwater Operations

#### Senior WHS Advisor (Processing, administration & support functions)

compliance & legislative requirements

Conduct audits

Drives safety program for Processing, Admin and Support functions

#### **Senior WHS Injury** Management Advisor

management programs

## WHS Compliance Advisor

Advises on WHS compliance

Harm program for Marine and Freshwater Operations

#### Training and Induction Coordinator (Marine & freshwater operations)

WHS inductions for new employees

Coordinates training, licencing and other compliance

#### Training and Induction Coordinator (Processing, administration & support functions)

WHS inductions for new employees

licencing and othe compliance

# Safety Management Tools

#### **Escalation of Risk**

Tassal has developed an Escalation of Risk Policy to provide guidance if sites cannot determine a solution to a WHS issue, or if the risk is considered to be too high to be handled at that level. In such cases, risk is escalated to upper management, where responsibility is taken by those who have the capacity to implement more effective controls. While this policy may seem intuitive, it is considered vital to prevent employees from feeling forced to make risky decisions under pressure of deadlines, targets or other factors.

#### Hazard Identification, Risk **Assessment and Control**

Tassal has developed many ways in which a hazard can be identified and recorded:

#### Hazard identification booklets

Available to all employees. Consultation and controls determined by WHS committee, Take 5 groups and workgroups with advice by WHS department.

#### Monthly WHS site inspections

Conducted as an internal site audit by the site employees promoting an interdependent safety culture. Identification of their own site safety hazards and risk, and resolve as a team within their limits or escalated.

#### Compliance scorecard

Completed by WHS advisors independent of sites. The focus is on regulatory requirements and compliance to Tassal's WHSMS and is made up of five components – hazardous substances, plant machinery and equipment, site facilities and safety, WHSMS (administration) and emergency preparedness.

#### **Driving Safety Culture scorecard**

Exposes areas of vulnerability within operational units, giving management the insight to make changes, reduce incidents and injuries, and reduce harm.

Tracks drivers of overall WHS leadership program and reflects what staff have learnt through safety leadership training and how they are applying it, thus driving an interdependent safety culture.

#### Job Safety Analysis (JSA) worksheets and pocket-books

Available to all employees, this tool prompts the Take 5 process. Allows employees to think through a task and secure a safely executed job before beginning. Used for all medium to high risk tasks that don't have an operating procedure or task breakdown.

#### **Site Action Plans**

Site Action Plans are a management tool that track actions that can be undertaken to control a hazard on site. The plan lists the hazard, categorises urgency, details the action to be taken, determines accountability for who is responsible and assigns a due date. Each work site reports on their action plan at the end of the month and this leading indicator is measured, along with control effectiveness. Controlling hazards and risks is the most effective way to prevent incidents and therefore reduce risk of injury.

#### **Safety Results**

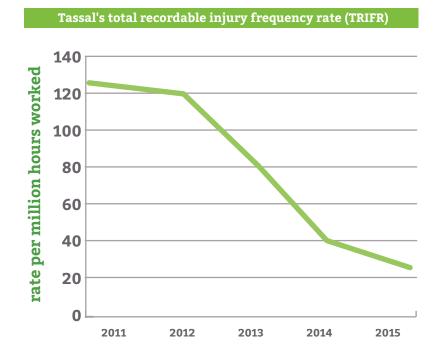
Tassal tracks both lead and lag indicators to measure its progress over time. We see lead indicators as the effort we put in as these indicators are focused on key measured strategies that prevent incidents. Lag indicators show the result of that effort and also measure the effectiveness of our

system. During the reporting year, fatalities, lost time injuries (LTIs) restricted working duties (RWIs) and workers compensation claims were reduced to zero. Medically treated injuries (MTIs) have more than halved. While these indicators have decreased significantly, the number of employees in the business has grown. Aggressive targets for lead and lag indicators remain in place for the next several years. The system will continue to evolve to drive down the rate of incidents, working toward our aspiration of 'Zero Harm'.

All incidents and injuries are recorded with mandatory investigations to take place for any MTIs, serious near misses or worse. Details of incidents are captured, including the type of incident, type of injury and any treatment that may be required. Tassal's WHS Advisor Injury Management is available for consultation and coordination of the injury management process and offers a valuable service for managers and team leaders. Muscular stress, contact with objects and slips/trips/falls were the main mechanisms of incident for the reporting year.

#### National and international safety accreditation

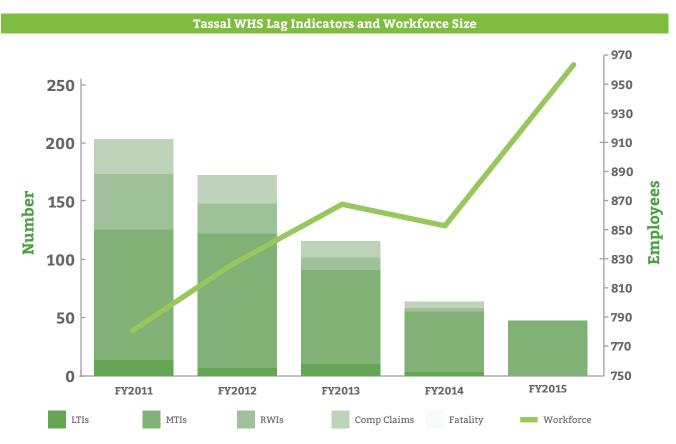
Tassal has achieved both national AS/NZS 4801 and internationally recognised OHSAS 18001 accreditation for safety of which audits are completed annually. The 2015 audit report revealed zero deficiencies at Tassal. Four observations were recorded, with no other actions or discrepancies noted. This for us is a very good result and supports our belief that our Safety systems operate effectively across the entire group. No regulatory interventions occurred in the reporting year.



Total Incidents 2015	
OTHER MUSCULAR STRESS	64
OBJECT HITTING BODY	43
BODY HITTING OBJECT	39
SLIPS/TRIPS/FALLS	39
REPETITIVE MOVEMENT	8
SINGLE CONTACT CHEM SUBS	7
EXPOS VARIAT/PRESSURE	6
UNSPEC. MECH. OF INJURY	4
OTHER CONT. CHEM/SUBS	3
EXPOSURE - HEAT/COLD	3
CONTACT - ELECTRICITY	3
EXPOSURE BIOLOGICAL FACT	2
UNKNOWN	2
EXPOS/SHARP SUDDEN SOUND	0
FALLS FROM HEIGHT	0

Tassal WHS Lag Indicators					
	2011	2012	2013	2014	2015
Fatality	0		0		0
Lost time injurues (LTI number)	14		10		0
Medical treatment injuries (MTI number)	113	116	81	53	48
Restricted Working Duties	46	25	10	2	0
Workers Compensation Claims	31		14		0
Number of Employees	781	828	867	853	966

Note: Of the MTIs, 46 occurred at our Tasmanian operations, and two at our Victorian operations. Male and female injuries are treated the same.



# Safety Survey Results

#### SafeSystem Safety Climate Survey

Tassal has maintained its Safety Climate at 80% (Interdependence) since FY2014, with improvements across the Retail and Farming groups, but lower results in Processing.

Results ranged between 75% and 85% across the 10 safety themes:

- Management Safety Attitudes
- 2. Supervisor Safety Attitudes
- 3. Company Safety Attitudes
- 4. Co-worker Safety
- 5. Equipment and Training
- 6. Compliance versus Commitment
- 7. Measurement
- 8. Communication
- 9. Self

10. Company Engagement

Consistent strengths are:

- · Supervisors are encouraging staff to raise issues, work safety and regularly discuss relevant safety issues
- · Staff are becoming more proactive and are addressing safety issues independently
- · Most staff believe that safety is paramount.

Areas that may need attention:

- · Fatigue and overwork
- · Morale and not feeling valued
- · Rushing and cutting corners

Results are based on two studies:

1. SafeSystem Safety Climate Survey conducted by Peter Berry Consultancy Pty Ltd and Hogan Assessment Systems Inc. (2015)

2. Safety Benchmarking Report Australia & New Zealand 2015 by Safety Action Pty Ltd (2015).

#### **Benchmarking across** Australia & New Zealand (39 companies)

Tassal performed 'best' in LTI with a zero rate against an average 6.6.

Tassal's MTI rate was 48, against an industry average of 13.9.

Tassal's worker's compensation (\$/ worker/year) premium was 'best' against an average of \$1114.

### **Golden Safety Rules**

Tassal operates under Golden Safety Rules that have been chosen to reinforce key behaviours and are known to keep everyone safe. These rules are non-negotiable and failure to comply will result in disciplinary action. Employees are introduced to the rules on day one of their induction.

- 1. Be fit for work and competent to complete the activity
- 2. Report incidents and hazards
- 3. Fulfil your duty of care
- 4. Wear your Personal Protective Equipment (PPE)
- 5. Comply with all isolation procedure
- 6. Comply with all licencing requirements
- 7. Keep out of danger zones
- 8. Speak up

#### **Contractor Management**

Contractor management is an involved process that begins with risk assessment. Prospective contractors are selected based on multiple factors, including their own WHS system. After the selection process, contractors are inducted, and must complete a job safety analysis or safe work method statement for the task at hand. Contractors are required to comply with Tassal's own policies and procedures at all times and are supervised where necessary. This 'life-cycle' approach to contractor management is integral to Tassal's Zero Harm aspiration. It focuses not only on the selection process but on the integration of contractors to our sites, and their health and safety.

### WHS

## **Innovations**

#### Standardisation

In FY2015, we implemented standardisation and improved safety design in our vessels, barges and associated deck machinery, such as capstans, winches, cranes and davits. Heavy works, dive, plastic light works boats, aluminium light works boats and feed barges all have a standard design for their capacity. This allows employees to transfer from vessel to vessel or site to site and have a familiar working environment, reducing the risk of incident or injury.

#### Tasman Bathe Barge design an industry first

Our new bathe barge design (the bathe barge is the infrastructure that bathes our fish to reduce the risk of Amoebic Gill Disease) features a walkway that has been engineered onto the existing airlift frame. When the airlift is lowered for pumping operations, this walkway lowers into position over the gap created by the pipework. The increase in deck-space and removal of a fall hazard has made the barge safer to operate. The deck is made of fibreglass non-slip material and all pipework has been plumbed beneath the deck to greatly reduce trip hazards. The new design essentially creates a flat, larger and safer working platform for our employees. The addition of electrical pumps and a muffled generator shed have also proved useful by reducing decibels to well below 85, eliminating hearing protection requirements for our employees while on deck.

#### Tassal Develops a Capstan Standard for Industry

Capstans are hydraulic or electrically driven deck machines. The working section of the machine is a rotating drum (capstan head) that rope is wound around to pull heavy loads with ease. There are a number of purposes for this plant on marine fish farms. Historically, capstans have been of any number of designs, and are often not 'fit-for-purpose'. As a result, the capstan has been the source of multiple incidents and injuries to workers in the industry and

on fishing vessels. No standard exists within Australian Legislation. As a result of communication and consultation between Tassal's WHS team, marine management, works crew, special projects and maintenance managers, along with third party hydraulics specialists and third party engineers, we developed a Tassal Capstan Standard.

The current design has the control station set at a distance to the capstan head, reducing risk of entanglement. The control lever incorporates speed control allowing for very good control of the load by the operator as well as minimising the amount of hardware involved. Signage is clear and direct, indicating functions, exclusions and warnings which complement the plant accordingly.

Continuous improvement is now so ingrained in our safety culture, that other added features are still emerging. A waterproof cover is being developed for the controls to increase longevity in the harsh marine environment and our smaller outboard motor powered vessels have had a hydraulic pack mounted on the flywheel of the outboard to power the vessels capstan. This reduces the WHS risk from noisy petrol powered packs that traditionally run these capstans – a separate innovation developed by the maintenance team while on the Safety Leadership Program.

Tassal's industry competitors have accepted the Capstan Standard, and have ordered these capstans and the associated procedure for their own operations. This collaboration between industries is something Tassal fully supports within WHS as it makes our industry safer. This capstan design is also used for the industry Deck Machinery and Lifting Appliance (DMLA) training given to all industry works crew. The added benefit is fish farmers moving from one business to another will not have to re-learn separate designs, which greatly reduces the risk of injury. Improving the safety of other

businesses, even our competitors, aligns with Tassal's Zero Harm aspirations - 'for everyone, everywhere'.

#### **Vessel Safety Management Plans**

Tassal takes marine safety seriously and understands that our presence on Tasmanian waterways acts as a safety net for the entire community. There have been several incidents over the vears with various marine enthusiasts requiring assistance from Tassal's marine fleet.

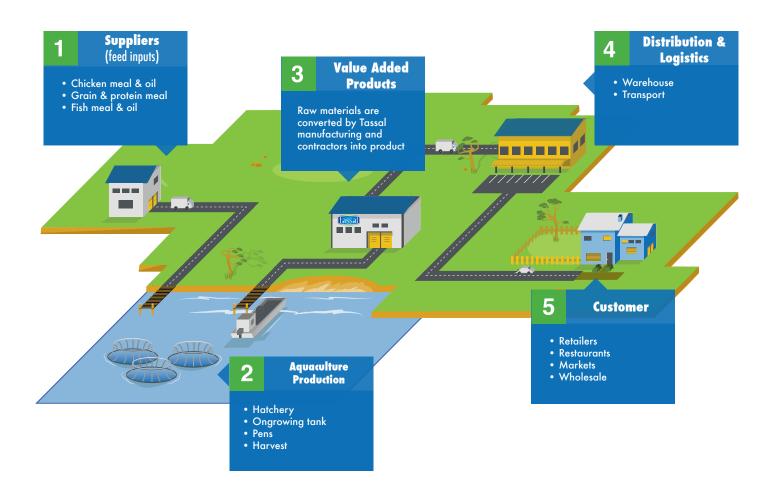
Safe vessel operation is a key component of Tassal's business. The Australian Maritime Safety Authority (AMSA) has worked to standardise the safety management system for commercial vessels in Australia. Tassal has been a leader in developing a Safety Management Plan (SMP) for each of its vessels as per AMSA's new requirements. The overarching SMP procedure has been built by Tassal's WHS Advisors in consultation with Marine and Safety Tasmania (MAST). The procedure was based on standards from the National Standards for Commercial Vessels (NSCV) and tailored for marine fish farming where necessary. Tassal SMPs have been developed ahead of deadlines set by AMSA and have been endorsed by them, our insurers and other business partners.

Contractors who operate or lease vessels to Tassal have asked for these plans to be built for their vessels. SMPs have been standardised and are uniform across our fleet except where unique vessel requirements are necessary. Vessel log books have also been developed and standardised and are an essential component of preventative maintenance scheduling and ensures capital longevity and overall safety on high risk equipment.

# Caring for our Customers through Quality Assurance

Our most quietly achieving team, our Quality Assurance (QA) department has a philosophy to drive cultural change to support the objective of Zero Harm for the consumer and our brand. This is achieved through partnering with operational areas of our business to ensure the effective implementation of food safety and quality standards, with a focus on maintaining a proactive approach and driving continuous improvement throughout our supply chain.

# Tassal's Supply Chain



Tassal's Quality and Food Safety Policy is supported by our third party certified quality systems. Our objective is to have a level of food safety, quality, consistency and reliability of supply that will equal or surpass the expectations of our most critical customer and consumer. Measurable food safety and quality objectives are set and reviewed regularly. We aim to continually achieve a standard of product which will comply with all specifications, standards and contractual obligations.

## Our Team

Each of our processing facilities has a QA production partner, who works with the central QA team to develop and maintain HACCP (food safety) plans across our operations. HACCP plans encompass our freshwater and marine operations, and processing facilities.

Tassal has an in house quality assurance laboratory, with two qualified laboratory technicians who perform routine and ad hoc product testing, Certificates of Analysis, product and ingredient sampling, water and ice sampling and shelf life validation/ verification testing and reporting.

The quality assurance team is also responsible for:

- · Internal and external audits
- The implementation and maintenance of customer and third party food safety standards
- · Supplier risk assessment and audits
- · Import and export requirements
- · Allergen risk assessment
- · Quality incident investigations
- Coordination of mock recall & traceability exercises
- Health Department (DHHS) notifications, and
- Liaising with external customers and third party processors.

Within the QA team, our Integrated Management System Manager is responsible for document management across the business including development, maintenance and system administration, extending to all certificates, registrations, licences and permits.

QA works closely with our New Product Development (NPD) team, conducting NPD trials and developing product specifications, and with our marketing team on the approval and review of label, artwork and marketing materials and to ensure the accuracy of nutritional information panels.

The team also works closely with our Environment and Sustainability Department as both teams work together to implement best practice management strategies in different areas.





"It is only by our joint effort and total commitment to food safety and quality in everything we do that we will achieve the high standards that we are seeking."

#### **Training**

The QA team coordinates quality training and delivery across the business, ensuring that each and every employee takes ownership for product quality and food safety. It is only by our joint effort and total commitment to food safety and quality in everything we do that we will achieve the high standards that we are seeking.

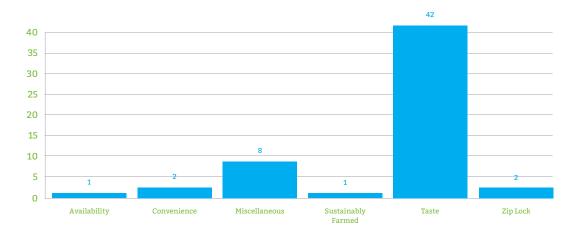
#### **Food Safety**

We have had a positive year in terms of food safety and fish quality with no food safety recalls nor incidents in relation to fish safety measures regarding fish/fish product levels for various contaminants (e.g. PCBs, heavy metals).

Our Quality Assurance team also coordinate key projects related to food safety.

# ASC Chain of Custody Certification

Tassal's ASC Certification requires
Chain of Custody certification for
Tassal's primary and secondary
processing sites at Dover, Huonville and
Margate, as well as our sub-contractors.
To achieve the certification, the sites
are audited to assess conformity to the
relevant requirements of the Marine
Stewardship Council (MSC) Chain of
Custody Standard and MSC certification
requirements. Some of the key areas
audited are the traceability systems,



segregation procedures and labelling of the relevant products.

All (100%) processing sites audited in FY2015 obtained Chain of Custody certification.

We have commenced working with major customers to promote sustainable Seafood which can be traced back to source.

#### **Supplier Risk Assessment**

Our key supplier groups cover feed, ingredients, packaging, logistics, warehousing and third party processing. Tassal's QA department works closely with all existing and new suppliers to assure that all (100%) have management systems in place and policies on quality and food safety, the environment, sustainability, workplace health and safety, ethical sourcing and/ or social responsibility, discrimination and harassment and compliance with labour laws. Our supplier program is risk based, and supplier risk ratings are reviewed annually. Records of third party certifications held by suppliers are maintained on an ongoing basis and supplier questionnaires are re-sent at maximum three year intervals.

#### **Harvest Project**

A major project carried out by the QA team in FY2015 was to reduce the number of bloodspots in cold smoke salmon. Although bloodspots do not have an adverse effect on the taste of the product, they can be seen as unsightly and do not fit the specification for our Premium range of products, particularly our Superior Gold range. The launch of the Superior Gold

range was the catalyst for initiating the project. The project team included a cross functional group of people across the marine, processing and quality departments.

The key areas of focus for the group included:

- · Reducing stress during harvest
- · Effective bleeding of fish at harvest, and
- Improving communication between Harvest and Processing, if it was expected that a harvest had not been optimal.

As a result of the work of the project group, new harvesting equipment was purchased and installed on the Tassal 1 harvest vessel, which significantly increased the effectiveness of the bleed and reduced the likelihood of

bloodspots as well as other benefits to the harvest crew and fish quality. These other benefits include a reduction in stress leading to improved flesh quality, reduction in gaping of fillets and firmer flesh. The installation of the equipment also enabled the practice of manual stunning to cease, eliminating a potentially unsafe task and also improved efficiency on the harvest boat.

#### **Customer Feedback**

The QA team are our customer's point of contact for requests for information, and are responsible for consumer and customer feedback management, addressing complaints and tracking resolutions.

#### Number of negative reports

**Bones: 118 Burst bags: 24** 

Colour/ discolourisation: 86

Cooking instructions: 6 Dry / tough / chewy: 102

Foreign objects: 41

Gaping / soft /oily: 22

Misleading description: 8

Other: 227

Packaging issues: 34 Poor presentation: 35

Salt: 58

Size / shape / appearance: 17 Slicing / size / thickness: 17

Smell: 32 **Taste: 169** 

Use-by-date issues: 34

Weight issues: 30

# Compliance with Labelling and Marketing Requirements

All artwork/labels on Tassal branded products and products produced by Tassal for third parties is reviewed annually to ensure the information on them complies with all current standards and legislation (Australian New Zealand Food Standards Code, National Trade Measurements Regulation 2009, Competition and Consumer Act 2010, Department of Agriculture and Water Export regulations). Any new artwork/labels are reviewed against current legislation by an artwork approval group prior to any packaging being approved.

Tassal has a range of internal processes to ensure that we comply with the Australian Competition and Consumer Commission's (ACCC) Competition and Consumer Act 2010 which covers a range of aspects including advertising, consumer rights, pricing and product safety.

Tassal also has concise internal processes in place to ensure all our products meet Food Safety Australia & New Zealand (FSANZ) guidelines. These include recent updates to the

Tassal website to align to new FSANZ guidelines in relation to nutrition, health and related claims.

There were no incidents of non-compliance with regulations concerning product labelling or marketing communications during the reporting year.



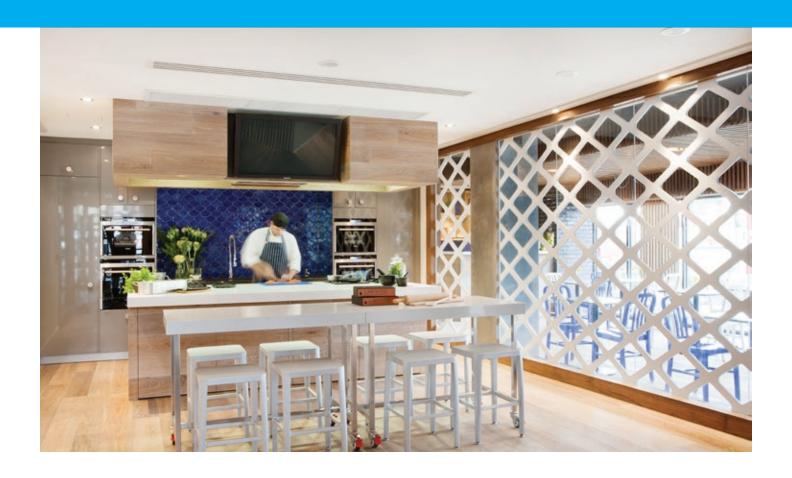












# **Promoting Healthy Lifestyles**

In addition to our involvement in community programs and partnerships, our marketing campaigns encourage Australians to incorporate Tassal Salmon as a part of their meal choices and healthy lifestyles. We have laid the groundwork for consumers, making them aware that Salmon is a good, low fat, healthy source of protein. **Our New Product Development** (NPD) team is constantly developing innovative new products with a focus on quick and healthy meals. Our website provides access to a comprehensive library of recipes, further communicating Salmon versatility in different meal types and for various occasions.

#### Partnership with Hawthorn **Football Club**

Tassal has partnered with the Hawthorn Football Club (Hawks) to host executive and player cooking classes at the Tassal Salmon Shop to showcase how Salmon can play a vital role in an everyday, healthy and balanced diet. The Tassal Salmon Shop shares the Hawks passion for Salmon with the community.

#### **Salmon Shop Programs**

Tassal's Salmon Shops operate a number of programs designed with a focus on understanding nutrition, balanced diets and healthy lifestyles. These programs include demonstrations and interactive cooking classes. The primary learning objective of all programs is to address the identified

community need by giving attendees an insight in the health benefits of Salmon. The secondary learning objective is to demonstrate the versatility and ease with which Salmon can be used. Attendees develop cooking skills and pick up tips imparted by our qualified chefs which can be used in the preparation of healthy meals.

# **Third Party Certification**

Tassal's farming operations, environmental performance, processing facilities, workplace health and safety systems and quality systems are subject to third party certification. Some certifications are required to meet legal and compliance obligations, some to gain access to markets or customers and some certifications are voluntary.

Tassal undertakes these certifications in order to provide assurance to our stakeholders that we operate within and frequently beyond our compliance requirements across the supply chain.



#### **Tassal certifications**

Certification	Auditing body	Coverage	Main purpose	Audit frequency
DA (formerly AQIS)	DA Biosecurity	Dover – processing/marine operations Huonville - processing Margate - processing Harvest boat- as catcher boat only	Export compliance	Dependant on site rating and previous audit results - between six and nine months All facilities currently have an A rating
ISO 9001:2008	Societe Generale de Surveillance (SGS)	Dover - processing/marine operations Huonville - processing Margate - processing Rookwood Road hatchery	International Standard	Annual surveillance/ three year recertification
НАССР	SGS	Dover - processing/marine operations Huonville - processing Margate - processing Rookwood Road hatchery	International Standard	Annual recertification
SQF Code (Safe Quality Food) Level 3	SGS	Huonville - processing Margate - processing	International Standard/ Customer requirement	Annual recertification
WQA	SGS	Huonville - processing Margate - processing	Customer requirement	Annual recertification/ six monthly surveillance
Coles supplier requirements	SGS	Huonville - processing Margate - processing	Customer requirement	Annual recertification
ASC (MSC) Chain of Custody	SCS Global Services	Dover – processing/marine operations Huonville – processing Margate - processing Petuna – external processing George Town Seafoods – external processing	ASC traceability for Chain of Custody	Annual surveillance/ three year recertification
HALAL	Halal Australia	Huonville - processing Margate - processing	Sell product with Halal approval (all products)	Annual desk audit
KOSHER	Kosher Australia	Dover – processing/ marine operations Huonville - processing Margate – processing	Sell product with Kosher approval (most products	Annual audit
AS 4801	TQCS	All sites	Australian standard	Annual audit rotation basis/ three yearly recertification
OHS AS 18001:2007	Halal Australia	Huonville - processing Margate - processing	Sell product with Halal approval (all products)	Annual desk audit
Best Aquaculture Practices (BAP)	Global Trust	All marine operations (Macquarie Harbour, Tasman, Dover, Huon, North West Bay, Bruny) and Dover Processing site	International standard	Annual audit
Aquaculture Stewardship Council (ASC)	SCS Global Services	All marine operations	International standard	Certification for three years with annual surveillance

# Sponsorships and Donations

Our giving program exists to support initiatives within communities local to our operational centres. The value of Tassal's sponsorship and donations for the reporting year exceeded \$120,000 of which almost \$100,000 was provided in cash and almost \$25,000 of product was donated through our Salmon Shops to a wide range of community groups, schools and charities. These product donations are often leveraged through raffles in order to maximise the value of the donation to the group.

Tassal has contributed to well over 50 community organisations within our operational areas during the reporting period, including schools, arts groups, sports clubs and cultural festivals.

# Recipients of sponsorships and donations include (but are not limited to):

 Primary, high schools and colleges within our areas of operation and beyond

- · Margate Bowls Club
- · Summerleas Eagles Cricket Club
- Lower Huon River and D'Entrecasteaux Channel Collaboration
- Health West
- · Strahan Family Christmas night
- · Strahan Fire Brigade
- · Geeveston Bowls Club
- · Huon Art Exhibition
- · Bruny Island Arts Inc.
- · Kingborough Beach SLSC
- Active Strahan Beach to Bay fun run
- Taiko Drumming
- · Geeveston Fire Brigade
- · Kingborough Anglers Association
- Huon Valley Little Athletics
- Tasmanian Special Children's Christmas Party

- · Kermandie Junior Football Club
- · Channel Football & Cricket Clubs
- · Huon Business Awards
- · Huon Show
- · Kettering Yacht Club
- Triathlon South
- Wheels in the Park
- · PCYC Child Safety handbook
- · Seconds Count Gala Ball
- · Working on Water
- · Koonya Garlic Festival
- · Dover Golf Club
- · Huonville Bowls Club
- · Derwent Sailing Squadron
- · Dunalley Neighbourhood House



**Local Sporting Clubs** 

**Schools and Youth** 

**Environmental Initiatives** 

46%

4%

5%

Community Initiatives

Charities

**Community Based Arts** 

11%

18%

16%

% of total cash sponsorships and cash donations

# **Memberships and Committees**

#### Tassal is a member of the following organisations:

- · Tasmanian Salmon Growers Association
- · Tasmanian Seafood Industry Council
- · National Aquaculture Council
- Tasmanian Business Sustainability Roundtable
- Australian Human Resources Institute
- · Institute of Engineers Australia
- Governance Institute of Australia Ltd
- · Association of Corporate Counsel (ACC)

#### **Board Membership:**

· Institute of Marine and Antarctic Studies (University of Tasmania)

#### Tassal staff also sit on the following committees:

- · Agrifood Seafood Advisory committee
- · SQF Technical Advisory committee
- · Institute of Marine and Antarctic Studies Research Advisory committee
- · Gill Health Initiative Steering committee
- · Birds Tasmania
- · Derwent Estuary Program
- · Sense-T

- · Australian Diver Accreditation Scheme (ADAS)
- Better Work Tasmania (BWT)
- · Safety Institute of Australia (SIA)
- · Member of Australian Institute of Directors (MAID)
- · Agri Food Advisory Board
- · Employer of Choice reaccreditation committee
- · Seafood Training Tasmania board
- Employing People with Disabilities Committee - Mission Australia

# Glossary

#### **Aboriginal Land Council of Tasmania**

A statutory authority established under the Aboriginal Lands Act 1995 (Tas) to act as a custodian of parcels of land returned to the Tasmanian Aboriginal community.

#### **Adaptive Management**

A systematic approach for improving resource management by learning from management outcomes.

#### Aeromonas salmonicida

A bacterial disease of salmonids.

#### Ammonia

A compound of nitrogen and hydrogen with the formula NH<sub>3</sub>.

#### Amoebic Gill Disease (AGD)

Caused by Neoparamoeba perurans, the most important amoeba in cultured fish.

#### **Antifoulant**

A substance designed to discourage the growth of fouling organisms.

#### Aquabirnavirus

A virus belonging to the family Birnaviridae.

#### Aquareovirus

A virus belonging to the family Reoviridae.

#### **Aquaculture**

The farming of aquatic organisms including fish, molluscs, crustaceans and aquatic plants with intervention such as regular stocking, feeding and protection from predators in the rearing process to enhance production.

#### AS/NZ 4801

Australian Standard that establishes

an audit framework principally for use by third party bodies that have been asked by an organisation to conduct an independent audit of the organisation's OHS management system.

#### **Astaxanthin**

The carotenoid astaxanthin is added to the diets of farmed salmon to ensure the flesh has the rich colour that consumers seek. Astaxanthin is not just a pigment, but is closely related to beta-carotene (the precursor of vitamin A), and plays a role in the fishes' immune system and acts as an antioxidant, promoting the good health of the fish.

#### **ASX Corporate Governance Principles** and Recommendations

The benchmark for good corporate governance in Australia.

#### **Aquaculture Stewardship Council** (ASC)

ASC aims to be the world's leading certification and labelling programme for responsibly farmed seafood. The ASC's primary role is to manage the global standards for responsible aquaculture, which were developed by the WWF Aquaculture Dialogues.

Average Time Lost Rate.

#### **Australian Competition and Consumer Commission (ACCC)**

An independent Commonwealth statutory authority responsible for ensuring that individuals and businesses comply with Australian competition, fair trading, and consumer protection laws - in particular the Competition and Consumer Act 2010.

# **Australian Marine Conservation**

A national charity dedicated exclusively to protecting ocean wildlife and their homes.

#### **Australian Maritime Safety Authority** (AMSA)

A statutory authority established under the Australian Maritime Safety Authority Act 1990 (the AMSA Act).

#### **Australian Packaging Covenant**

A sustainable packaging initiative which aims to change the culture of business to design more sustainable packaging, increase recycling rates and reduce packaging litter. It is an agreement between government, industry and community groups to find and fund solutions to address packaging sustainability issues.

#### **Best Aquaculture Practices (BAP)**

A third party audited world recognised environmental standard.

#### Benthic

Ecological region at the lowest level of a body of water.

#### **Benthic compliance**

Compliance with benthic conditions relating to the environmental management in and around finfish farms as set by the Marine Farming Branch of DPIPWE.

#### **Benthic infaunal diversity**

Range of organisms that inhabit and are associated with the benthic zone of a waterbody.

#### **Biomass**

A measure of weight.

#### **Biosecurity**

Procedures or measures designed to protect a population against harmful biological or biochemical substances.

#### **Biological Oxygen Demand (BOD)**

The amount of oxygen required by aerobic microorganisms to decompose the organic matter in a sample of water. such as that polluted by sewage. It is used as a measure of the degree of water pollution.

#### **Broadscale monitoring**

Monitoring that is conducted at distance further afield then the marine farming zone to assess detectable levels of change in a region.

#### **Broodstock**

Broodstock, also known as broodfish, are a group of mature Salmon for breeding purposes in aquaculture.

#### Capstan

A capstan is a hydraulic or electrically driven deck machine used to pull heavy loads with ease.

#### Chain of Custody (CoC)

The MSC/ASC Chain of Custody standard is a traceability and segregation standard applicable to the full supply chain from a certified fishery or farm to final sale.

#### CO<sub>2</sub>e

Carbon dioxide equivalent is a measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

#### **CSIRO**

Commonwealth Scientific and Industrial Research Organisation.

#### DA

Department of Agriculture.

#### **Department of Primary Industries,** Parks, Water and Environment (DPIPWE)

Tasmania's State Government entity that is responsible for the sustainable management and protection of Tasmania's natural and cultural assets for the benefit of Tasmanian communities and the economy.

#### Dissolved organic carbon emissions

A soluble waste associated with finfish farming.

#### **Dorvilleid worm**

An opportunistic polychaete worm that is naturally occurring in the marine environment.

#### **Environmental Defenders Office (EDO** Tasmania)

A non-profit community legal centre advising on environmental and planning

#### **Environment Protection Authority** (EPA) Tasmania

A State Government authority that regulates developments and activities that may impact on environmental quality and promote best practice, sustainable environmental management.

#### **Environment Tasmania**

A non-profit, non-government conservation council that represents conservation groups dedicated to the protection, conservation and rehabilitation of Tasmania's natural environment.

#### **Environmental Protection and Biodiversity Conservation (EPBC) Act**

A legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places.

#### **Epiphytic growth**

Communities of algae, bacteria and invertebrates with a form of attachment mechanism whose growth may be a result of nutrient enrichment.

#### **Eutrophication**

Natural or artificial addition of nutrients to bodies of water which may change the natural marine or fresh water systems.

#### Fish Feed Dependency Ratio (FFDR)

A measure of the quantity of wild (forage) fish used to grow a defined quantity of farmed fish. FFDR is the quantity of wild fish used per quantity of cultured fish produced. This measure can be calculated based on fish meal (FM) or fish oil (FO).

#### **FFDRm**

Fishmeal Forage Fish Dependency

Ration (FFDRm): formula available in ASC Salmon Standard Version 1.0 (available at: http://www.asc-aqua. org/upload/ASC%20Salmon%20 Standard v1.0.pdf).

#### **FFDRo**

Fish oil Forage Fish Dependency Ratio (FFDRo): formula available in ASC Salmon Standard Version 1.0 (available at: http://www.asc-aqua.org/upload/ ASC%20Salmon%20Standard v1.0.pdf).

#### Fin-fish

Free swimming fish with fins as opposed to less motile crustaceans or molluscs.

#### **Fishmeal**

A commercial product made from both whole fish and the bones and offal from processed fish. It is a brown powder or cake obtained by rendering and pressing the cooked whole fish or fish trimmings to remove most of the fish oil and water.

#### Fish oil

Fish oil is oil derived from the tissues of oily fish.

#### **Food and Agriculture Organization of** the United Nations (FAO)

An intergovernmental organization that aims to meet the demands posed by major global trends in agricultural development and challenges faced by member nations

#### **Food Safety Australia and New** Zealand (FSANZ)

A bi-national Government agency who develop and administer the Australia New Zealand Food Standards Code, which lists requirements for foods such as additives, food safety, labelling and GM foods.

#### Forage fish

Often called bait fish, forage fish are usually smaller fish which sustain larger predators.

#### Freshwater hatchery

A freshwater facility where eggs are hatched under artificial conditions.

#### Freshwater operation

Aquaculture that occurs in a freshwater system.

#### **Genetically Modified Organism (GMO)**

Any organism whose genome has been altered by the techniques of genetic engineering so that its DNA contains one or more genes not normally found there.

#### Genome

The complete set of genes or genetic material present in a cell or organism.

#### Giant Kelp (Macrocystis pyrifera)

Large, canopy forming algae which grow in dense beds along the inshore subtidal reefs of south-east South Australia. Victoria and Tasmania.

Gigajoule. A unit of measure of energy in joules. 1GJ = 1 billion joules.

#### Greenhouse gas (GHG)

A gas in an atmosphere that absorbs and emits radiation within the thermal infrared range.

#### Halal (food)

Any foods that are allowed to be eaten according to Islamic Sharia law.

#### Handfish

A primitive aquatic family of benthic dwelling fish found only in southern Australia – most species to only occur in south-eastern Tasmania.

#### **Hatchery**

A facility where fish eggs are hatched under artificial conditions

#### **Hazard Analysis Critical Control Point** (HACCP)

A tool to identify specific hazards and measures for the control and safety of food. It assesses hazards and establishes control systems that focus on prevention rather than relying mainly on end-product testing.

#### **Heads and frames**

Skeleton of fish including the head and tail.

Fish that have been processed as 'head on and gutted'.

#### **Hog tonnes**

Head on gutted weight.

#### Husbandry

The care, cultivation and breeding of crops and animals.

Situated in a pre-defined place, location or position.

#### **Institute for Marine and Antarctic** Studies (IMAS)

IMAS pursues multidisciplinary and interdisciplinary work to advance understanding of temperate marine, Southern Ocean, and Antarctic environments

#### Intraperitoneal vaccine

Vaccination by injection into the peritoneum (body cavity).

#### International Fish meal and Fish oil Code of Responsible Supply (IFFORS)

The IFFO RS is an independent third party auditor with a certification programme that assures that the value chain of marine ingredients are responsibly sourced and responsibly produced.

#### ISO 9001:2008

An international standard related to quality management systems.

#### **IUCN Red List of Threatened Species**

Provides taxonomic, conservation status and distribution information on plants, fungi and animals that have been globally evaluated using the IUCN Red List Categories and Criteria. The list is developed and managed by the IUCN Global Species Programme, working with the IUCN Species Survival Commission.

#### **Key Performance Indicator (KPI)**

A measure used to evaluate success or monitor progress towards a particular

#### **K-Grid Net**

Nets comprised of two interwoven polymers to form a rigid net that can withstand the force of large predators.

#### Kikko Net

Semi-rigid net system made from polyester monofilament.

#### Kosher

Foods are those that conform to the regulations of kashrut (Jewish dietary law). Only fish with fins and scales may be eaten, for instance, tuna, salmon, and herring.

#### Lag indicator

An indicator that follows an event (e.g. rate of incidents/injuries).

#### Life Cycle Assessment (LCA)

A technique to assess the environmental aspects and potential impacts associated with a product, process or service. Sometimes referred to as 'Cradle to Grave' assessment.

Lost Time Injury.

#### **LTIFR**

Lost Time Injury Frequency Rate.

#### Macroalgae

Large aquatic photosynthetic plants.

#### Macroinvertebrate

A small animal that does not have a spinal column, such as worms and crustaceans, and can be seen with the naked eye.

#### **Marine and Safety Tasmania (MAST)**

A statutory authority that ensures the safe operation of vessels (recreational and commercial), provide and manage marine facilities and manage environmental issues relating to vessels.

#### **Marine invertebrate**

Animals that inhabit the marine environment and lack a vertebral column.

#### **Marine lease**

Areas of water registered to grow finfish, shellfish or other marine organisms.

#### Marine Stewardship Council (MSC)

The Marine Stewardship Council is an international non-profit organisation established to address the problem of

unsustainable fishing and safeguard seafood supplies for the future.

#### **Material issues**

Material issues are those issues identified by our stakeholder groups as important to them.

#### ML

Megalitre. 1 ML = one million litres.

#### **MTIFR**

Medically Treated Injury Frequency Rate.

#### Mycobacterium

A bacteria that can affect fish.

#### **Near-field**

Monitoring that occurs within or around a marine lease.

#### **Netslab**

A facility where nets are repaired, stored and managed.

#### **Nitrogen**

A fundamental chemical element with the symbol N.

#### NRM

National Resource Management.

#### Offcuts

Trimmed sections from a fish fillet not usually preferred by the consumer market.

#### **OHSAS 18001**

OHSAS 18000 is an international occupational health and safety management system specification.

#### **OIE Aquatic Animal Health Code**

Standards for the improvement of aquatic animal health and welfare of farmed fish worldwide, and for safe international trade in aquatic animals and their products.

#### Omega-3

Being or composed of polyunsaturated fatty acids that have the final double bond in the hydrocarbon chain between the third and fourth carbon atoms from the end of the molecule opposite that of the carboxyl group. These are found in fish, fish oils, green leafy vegetables, and some nuts and vegetable oils

#### **Pathogen**

A bacterium, virus or other microorganism that can cause disease.

#### **PCR** test

Polymerase Chain Reaction test. A method used to amplify selected sections of DNA or RNA.

#### **Pelagic fisheries**

Commercial fishery of fish that inhabit the pelagic zone. Species include forage fish such as anchovies and sardines.

#### **Phosphates**

An inorganic chemical that can exist in a soluble form.

#### **Pilchard orthomyxovirus**

An endemic disease of pilchards belonging to the family orthomyxoviridae.

#### **Ploidy**

The number of sets of chromosomes in a cell, or in the cells of an organism.

#### PO<sub>4</sub>e

Phosphate equivalent.

(see Pilchard orthomyxovirus).

#### **Precautionary principle**

When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.

#### **Processing facility**

A facility where raw materials are processed into finished products.

#### **Prophylactic**

A preventative measure.

#### **Reticulated Water**

Treated water supplied through a system of pipes, mains and control valves.

#### Rickettsia

A bacterial disease of salmonids.

#### Roundtable of Responsible Soy

A civil organisation that promotes

responsible production, processing and trading of soy on a global level.

#### **RSPCA Approved Farming Scheme Standards**

A standard established by the RSPCA to improve the lives of Australia's farm animals and provide guidance and a trustworthy choice to consumers wishing to purchase products from higher welfare farming systems.

#### **ROV Dive**

Inspection dives that are performed by Remote Operated Vehicles.

#### Salmonid

Any fish of the family Salmonidiae, which includes Salmon.

#### Salmo salar

The scientific name for Atlantic Salmon.

#### Scope 1 emission

All direct GHG emissions, e.g. combustion of fuel in company cars or machinery.

#### Scope 2 emission

Indirect GHG emissions from consumption of purchased electricity, heat or steam.

#### Scope 3 emission

Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport related activities in vehicles not owned or controlled by the reporting entity, electricity related activities (e.g. T&D losses) not covered in scope 2, outsourced activities, waste disposal, etc.

#### Selective breeding

The intentional breeding of organisms with desirable traits to produce offspring with similar desirable characteristics or with improved traits.

#### **Smolt**

A stage in the life cycle of salmonids at which the salmon is ready to move from the freshwater to saltwater environment.

#### **Smoltification**

An internal metabolic process which enables a fish to adapt from fresh to sea water with a minimum of stress characteristic of salmonid fish.

#### Southern Coast Care Association of Tasmania

A non-profit, incorporated association representing around 40 Coastcare groups including hundreds of volunteers in southern Tasmania.

#### **Feed spinner**

The infrastructure at the end of the feeding system that distributes feed to the fish in individual fish pens.

#### **SQF** Code

An internationally recognised certification system, featuring an emphasis on the systematic application of HACCP for control of food quality hazards as well as food safety.

#### **Stanchion**

An L shaped component of a plastic fish pen used to support the hand rail and overall structure.

#### Stocking density

The biomass of fish in kilograms per m<sup>3</sup> of cage volume.

#### **Tasmanian Association for Recreational Fishing (TARFish)**

The fully independent peak body representing the interests of recreational marine fishers in Tasmania.

#### **Tasmanian Conservation Trust**

The longest continuing non-political environment organisation in Tasmania.

#### Tasmanian Rock Lobster Fisherman's **Association**

The peak commercial fishing body

recognised under the Act for the rock lobster fishery. The Crustacean Fisheries Advisory Committee (CFAC) provides advice directly to the Minister on the management of the fishery.

#### **Tasmanian Salmonid Growers** Association

The Tasmanian Salmonid Growers' Association Ltd is Tasmania's peak body representing salmon growers. It is a not-for-profit organisation.

#### **Tasmanian Seafood Industry Council**

The peak body representing the interests of wild capture fishers, marine farmers and seafood processors in Tasmania.

#### **TasPorts**

A private company fully owned by the Tasmanian Government with responsibility for the operations and management of all ports in Tasmania.

# **Tassal Integrated Management System**

Tassal's internal management system that includes procedures for the management of environmental, safety and quality indicators

#### **Thermal stress**

Stress caused by water temperature fluctuations.

#### **Total Permissible Dissolved Nitrogen Output (TPDNO)**

A marine farming regulation. The TPDNO limits the output of allowable nitrogen from farming operations.

#### **Total Suspended Solids**

Suspended particulates within a waterbody.

#### **Traceability**

The ability to track any food through all stages of production, processing and distribution. All movements can be traced one step backwards and one step forward at any point in the supply chain.

#### **Transgenic**

Relating to, or being an organism whose genome has been altered by the transfer of a gene or genes from another species or breed.

#### **Trimmings (trims)**

By-products produced when fish are processed for human consumption or if whole fish is rejected for use of human consumption because the quality at the time of landing does not meet official regulations with regard to fish suitable for human consumption.

#### Vibrio anguillarum

A bacterial disease.

#### Wild catch

Fisheries harvesting seafood from the wild.

#### **WQA**

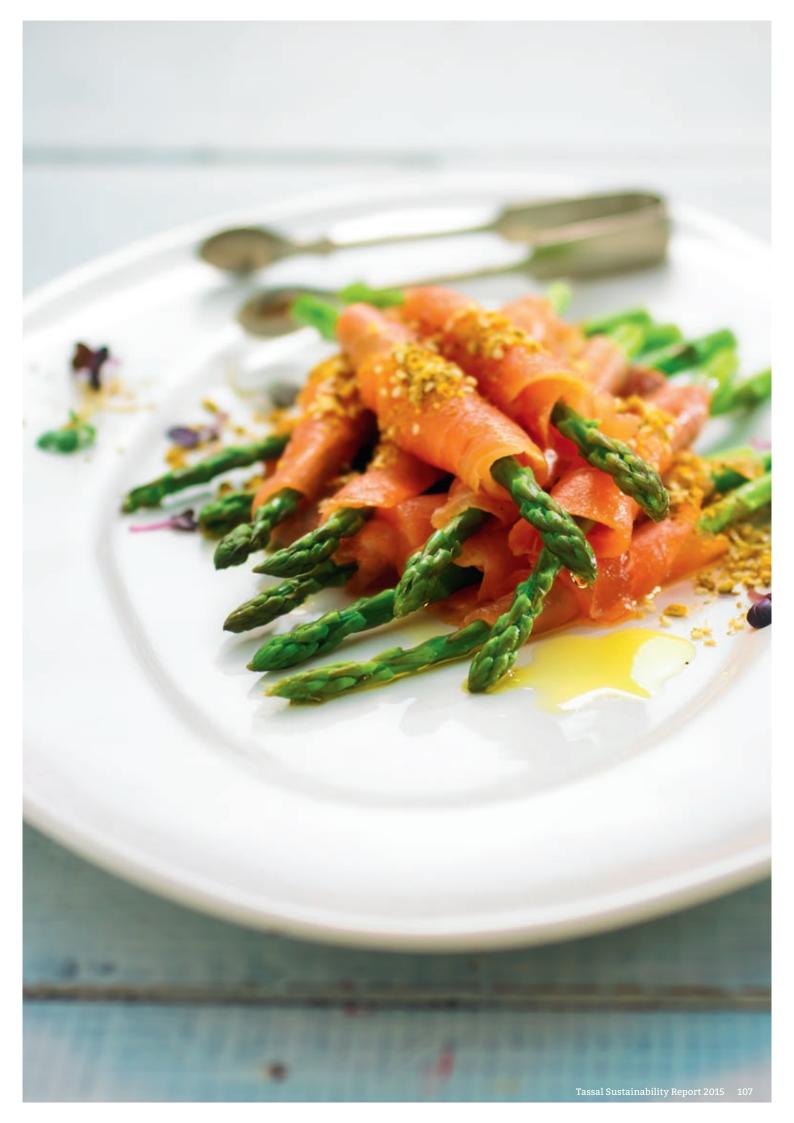
The Woolworths Quality Assurance (WQA) Standard represents benchmarking of the Woolworths Quality program against global product safety standards.

#### **WWF-Australia**

WWF-Australia is part of the WWF International Network, the world's leading, independent conservation organisation.

#### Yersinia

A bacterial disease endemic in Tasmania.



# References

Australian Government Department of Agriculture ABARES,. Fisheries and Aquaculture - Prospects and Competitiveness. 2015. Available at http://www.agriculture.gov.au/abares/outlook-2015/Documents/curtottiabares-fisheries-aquacullture.pdf [17 Mar. 2016].

Australian Government Department of Agriculture and Water Resources ABARES,. Australian Fisheries and Aquaculture Statistics 2014. Canberra: Commonwealth of Australia, 2015. Available at: http://frdc.com. au/knowledge/publications/Pages/australian\_fisheries\_stats.aspx [17 Mar. 2016].

Food and Agriculture Organization of the United Nations,. World Aquaculture 2010. Rome: Aquaculture Service, Fisheries and Aquaculture Resources Use and Conservation Division, FAO Fisheries and Aquaculture Department, 2011. Available at: http://www.fao.org/docrep/014/ba0132e/ba0132e.pdf [6 Apr. 2016].

KPMG,. Economic Impact Assessment Tasmanian Aquaculture Industry. KPMG, 2015.

Parliament of Australia,. The Fin-Fish Industry's Contribution To The Tasmanian Economy And Employment. Unknown: Parliament of Australia. Available at: http://www.aph.gov.au/Parliamentary Business/Committees/Senate/Environment\_and\_Communications/Fin-Fish/Report/c07 [24 Mar. 2016].

Peter Berry Consultancy Pty Ltd & Hogan Assessment Systems Inc.,. Safesystem Safety Climate Survey. Peter Berry Consultancy Pty Ltd & Hogan Assessment Systems Inc., 2015.

Safety Action Pty Ltd,. Safety Benchmarking Report Australia & New Zealand 2015. Safety Action Pty Ltd, 2015.

Tasmanian Salmon Growers Association,. Submission To The Senate Standing Committee On Environment And Communications With Respect To The Regulation Of The Fin-Fish Aquaculture Industry In Tasmania. Hobart: Tasmanian Salmon Growers Association, 2015.

The World Bank,. FISH TO 2030 Prospects For Fisheries And Aquaculture. Washington DC: The World Bank, 2013. Available at: http://www.fao.org/docrep/019/i3640e.pdf [10 Apr. 2016]. World Bank Report Number 83177-GLB.

Volkman et al.,. Aquafin CRC Project 4.2 - FRDC Project No. 2001/097: A Wholeof- Ecosystem Assessment Of Environmental Issues For Salmonid Aquaculture. 2009. Available at: http://frdc.com.au/ research/Final Reports/2004-074-DLD.PDF [28 Apr. 2016].

Western Australia Waste Authority, 2016. Fact Sheet 6: Converting Volumes to Tonnes. Available at: www. wasteauthority.wa.gov.au/publications/lg-resources [30 Mar. 2016].

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# **Production Notes**

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