

Skretting Australia

# Annual sustainability report 2014





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## Welcome to the Skretting Australia Sustainability Report for 2014

In 2014, Skretting Australia continued to make sound progress on developing our sustainability position. Internally, focus was given to developing more robust measurement systems so that we could better track our environmental impact and establish a solid platform for future improvements. We also completed a number of energy saving projects that will have on-going benefits.

Significant focus was put into strengthening our raw material sustainability position. We have developed our internal methodologies and reporting processes to ensure our purchasing decisions are well-informed when it comes to sustainability status. We can now move to the next phase of engagement with our suppliers, namely working on improvement projects together.

Importantly, we have also increased our flexibility of raw material supplies. This has contributed to our continued reduction of marine ingredient inclusion in our feeds. This not only improves our positioning against the requirements of various global sustainability standards, but it also reduces our reliance on materials that are highly variable in supply and subject to price volatility.

For many years, we have maintained extensive food safety management and reporting practices that are part of the global Skretting

Nutrace program. In 2014, through the operation of this program higher than normal levels of hexachlorobenzene (HCB) were detected in some batches of fishmeal. This triggered a global response as it involved a number of countries and feed producers. Throughout this event, customers and regulatory authorities were kept informed and the issue was quickly controlled without disruption to our supply. There was no impact of food safety of fish in production and changes were quickly made to supplier practices to eliminate the source of the HCB from future supply.

On reflection, perhaps our greatest achievement was being able to work closely with our largest customer, Tassal, to support them to achieve Aquaculture Stewardship Council (ASC) certification for all of their farms, a world first.

We will continue to work with all of our customers to support their sustainability certifications, and globally Skretting is working with certification organisations to develop, improve and refine standards across many species.

**James Rose**

Managing Director, Skretting Australia

# Skretting Global: Producer of Sustainable Economic Aquafeeds (SEA)

Our priority focus on sustainability is borne from the global challenge of feeding the 9 billion people that are forecast to be populating the planet by 2050. As an essential link in the feed-to-food value chain, Skretting understands that the drive towards greater efficiency in aquafeeds requires our full attention for environmental and economic sustainability.

Skretting is a leading global fish and shrimp feed supplier and forms the aquaculture division of international animal nutrition parent company, Nutreco.

As a Nutreco company, Skretting shares the mission of Feeding the Future. To help fulfil our mission we have developed the Sustainable Economic Aquafeeds (SEA) program, which outlines our commitment to sustainability and is the foundation of our sustainability strategy. The SEA program is comprised of six guiding pillars founded on the objectives of Nutreco's 'Sustainability Vision 2020'.

This report uses the six pillars as the main chapters. In each of these chapters, we define key ambitions for the future and to establish a framework for subsequent sustainability reporting.



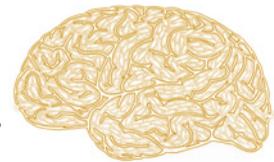
Chapter 1:

**HAVING OUR OWN  
HOUSE IN ORDER**



Chapter 2:

**DEVELOPING  
SUSTAINABLE  
NUTRITIONAL SOLUTIONS**



Chapter 3:

**SECURING ANIMAL  
HEALTH**



Chapter 4:

**FINDING ALTERNATIVES  
TO LIMITED MARINE  
RESOURCES**



Chapter 5:

**CREATING A SUSTAINABLE  
BASE FOR FEED**



Chapter 6:

**INVOLVE AND MOTIVATE**



## MISSION

*feeding the future*

## VISION

In a world with limited natural resources and a growing population, there is a rising demand for high quality meat, fish and shrimp. We will be the global leader in providing innovative and sustainable nutritional solutions that best support the performance of animals, fish and shrimp.

## VALUES



## Strategic Priorities for 2014

The commitments outlined in the adjacent table formed the basis of Skretting Australia's 2014 sustainability strategy. These included a range of short-, medium- and long-term objectives linked to each of the SEA pillars.

To ensure there was a strong commitment to achieving these goals, the objectives were linked to the performance of our Management Team and key staff.

Any commitments followed by 'Global goal' were specifically linked to a member of Skretting's Global Sustainability Team and was a priority for Skretting Global.

Performances against these goals were measured last year and the outcomes form the content of this year's sustainability report.

New commitments for 2015 are outlined at the end of each chapter.

## – Our Reported Commitments in 2014

### Chapter 1: Having our own house in order

- Implement energy management strategies to be in line with ISO 50001 requirements by 2015 (Global goal)
- Report on annual energy usage and energy improvement projects
- Focused internal energy efficiency training for the maintenance and manufacturing departments
- Annually calculate and report the operation's carbon footprint
- Confirm the methodology for the Life Cycle Assessment (LCA) of Skretting Australia's operation
- Quantify our seasonal water usage
- Monthly account for waste stream outputs and log incidences of odour, noise, spillage and dust
- Calculate waste (general, recyclable) per tonne of each specific raw material to identify potential waste improvement opportunities
- Strive for zero injuries and accidents in the workplace
- Reduce our registered workplace risk
- Participate in Nutreco's e-Learning Business Excellence training on sustainability (Global goal)

### Chapter 2: Developing sustainable nutritional solutions

- Launch Premium in the market for barramundi
- Document performance benefits of Premium in freshwater trout

### Chapter 3: Securing animal health

- Further R&D with Protec

### Chapter 4: Finding alternatives to limited marine resources

- Continue to reduce fishmeal usage by targeting key parts of the salmon, trout and barramundi production cycle using MicroBalance™ technology
- Communicate and adopt Skretting ARC developments with alternative sources and improved efficiency with long chain omega-3 fatty acids (Global goal)
- Continue engagement with suppliers to ensure ingredients meet our sustainability requirements
- Develop our internal systems to collect and accurately report on sustainability data (origin and species) of marine ingredients

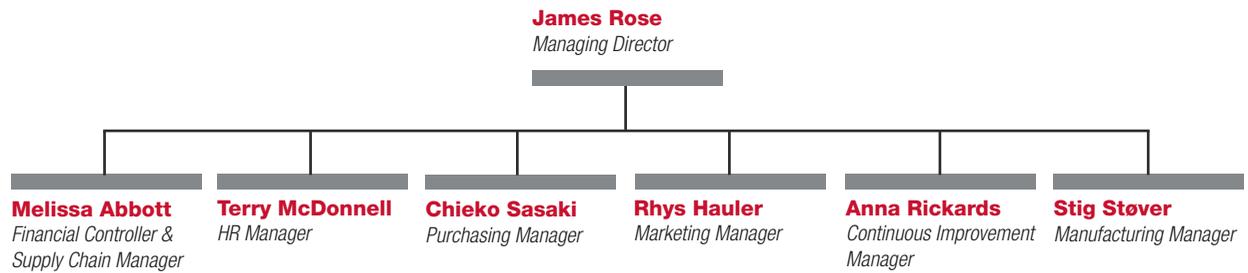
### Chapter 5: Creating a sustainable base for feed

- Instigate an improvement project with a trimmings fishery producer to achieve a sustainability certification by the end of 2015
- Comply with the future requirements of the ASC Salmon standard, BAP and Global GAP standards in relation to sourcing certified marine and soy ingredients
- Conduct another independent assessment of marine species origin and sustainability status according to ASC salmon standard requirements
- Achieve Global GAP certification

### Chapter 6: Involve and motivate

- Integrate the new values into daily operations as well as into our systems and processes
- Internal training to increase awareness of our sustainability activities
- Undertake an internal assessment to determine who are our key stakeholders and what sustainability issues they identify as relevant to our business
- Undertake a community conservation/engagement project

## – Management Team Organisation



### Managing our sustainability strategy

Skretting Global's sustainability strategy is founded on the objectives of the 'Sustainability Vision 2020' and new strategic targets are set annually by our parent company, Nutreco, to support this strategy.

At Skretting Australia, members of the Management Team represent all aspects of the business and are responsible for the implementation of the sustainability strategy and program within their department. Skretting Australia also has an employee dedicated to coordinating the sustainability plan.

### What is important to Skretting Australia?

The issues identified in our Global SEA program are those that Skretting considers to be material to our global business and stakeholders. As such, they have been used to guide the process of defining the content of this report.

In 2014, we recognised that an important first step that we hadn't taken was an internal assessment as a means of identifying who our local key stakeholders are, and what sustainability issues they would identify as being relevant to our business.

Subsequently in late 2014, the Management Team and key staff participated in an externally facilitated workshop to identify our key stakeholders, and to discuss if there were any local issues, not already included in Skretting's global materiality assessment.

We will continue to develop our local materiality assessment and stakeholder engagement program. In the interim, we will continue to report under the Skretting Global materiality assessment structure.

### – Key Stakeholders

- Customers
- Employees
- Nutreco/Skretting Global
- Suppliers
- Industry associations & Researchers
- Government & Regulators
- Local community

## Report Scope and Boundary

This report refers to the performance of Skretting Australia during the last calendar year, with the boundary limited to Skretting Australia's direct operations. Although Skretting's customers and suppliers are beyond the scope of this report, we recognise our role as the essential link in the feed-to-food value chain.

As such, Skretting Australia has included goals and targets that align with the needs of these stakeholders and to assist the industry as a whole to become more environmentally, socially and economically sustainable. All internal data disclosed in the report was sourced from operational databases.

Skretting Australia did not seek external assurances for this report. However, our operations data is externally assured through the Global G.A.P. Compound Feed Manufacturers certification gained during the reporting year and our continued external compliance with ISO9001, FeedSafe®, HACCP and multiple internal audits.

### – Nutreco Corporate Structure

In February 2014, Nutreco announced a new top business structure for the company.

Refer to the 2014 Nutreco Integrated Report for more details.

### NUTRECO EXECUTIVE BOARD



### GLOBAL BUSINESS UNITS



Global Salmon &  
Fish Feed  
Southern Europe

Feed additives

### REGIONAL BUSINESS UNITS



Americas

Asia

EMEA



Skretting Australia's position within the Nutreco business structure - one of several operating companies within the Global Salmon & Fish Feed Southern Europe business group, which is led by Managing Director, Stephen Rafferty.

## Company Overview

Skretting Australia is part of the Salmon Feed & Fish Feed Southern Europe business unit.

Skretting Australia produces feed for the Australian and New Zealand aquaculture markets. In 2014, approximately 93% of feed was for salmonids (salmon and trout) with the remainder made up of feeds for other species, such as barramundi and abalone.

In 2014, employment positions at Skretting Australia remained stable, and unchanged from the previous year.



## History of Skretting Australia

Gibsons Ltd was established

1910

Gibson's was relocated from Hobart CBD to the current Cambridge site, and became operational

1983

First extrusion line was installed

1995

Factory became a dedicated aquafeed mill and steam pellet line was removed

1997

Added a high capacity extrusion line with vacuum coating technology

1999

Certified to ISO9001

1999

Nutreco invests in Gibson's Ltd & began trading as Skretting Australia

2001

Certified to HACCP

2003

Original extrusion line decommissioned and removed

2004

Certified to FeedSafe

2004

Major capacity and technology upgrade

2011

Upgraded oil dosing capacity to accommodate the production of higher energy feeds

2014

Certified to Global GAP Compound Feed Manufacturers Standard

2014



## ≡ Chapter 1:

# HAVING OUR OWN HOUSE IN ORDER

Skretting Global believes sustainability begins at home and as such we are firmly committed to ensuring our own house is in order. Our sustainability commitment therefore includes pursuing greater energy efficiencies and reducing the amount of waste and emissions generated throughout our operations. Human resources are another vital input and we strive to provide the best working environment possible.

### Energy Management

Skretting Australia is committed to improving the energy efficiency of our business in order to drive our operational performance to achieve the lowest practical carbon footprint for our products and service activities.

Our goal of implementing strong energy management strategies into our business last year has given us the foundation to achieve our operational goals going forward. Our future target is to achieve a level of energy management comparable to ISO 50001 requirements by the end of 2015.

One of our main energy efficiency projects was to improve the insulation around our boiler equipment. This enabled the latent heat that was generated through boiler gas usage to be retained within the manufacturing process and

not lost to the surrounding environment. This project contributed to achieving a considerable reduction in energy compared to 2013, particularly the energy derived from gas.

The beginning of 2014 saw remaining employees undertake the energy efficiency awareness training that was initiated in late 2013. Although not quantifiable, the awareness of all employees towards recognising energy waste within their daily activities has a small, but important contribution to our overall energy usage.

As a part of our energy management system, a planned goal for 2014 was to conduct a specific energy efficiency training for the maintenance and manufacturing departments. However, this was not achieved due to changes in internal resourcing. This training session has been re-scheduled for mid-2015.

 **ENERGY USE**  
▼ **0.96 GJ/tonne feed**

\*In 2013, due to a calculation error, we incorrectly reported 1.03 GJ/t. The correct value was 1.08 GJ/t.

## GHG Emissions

Skretting Australia's focused strategy on improving energy efficiency will directly contribute towards reducing the emission of greenhouse gases (GHG) per unit of feed. Improvement in reducing GHG begins with the annual calculation of emissions generated from direct operations (Scope 1 and 2) and outbound logistics (Scope 3).

In 2014, only Scope 1 and 2 emissions were focused on and are reported on. Scope 3 emissions relate to areas such as logistics and business travel. Some data is being collected in this area, but our priority area is the energy sources used in the factory.

GHG emissions were reduced from the previous year, a reflection of the large reduction in our gas usage.



\*In 2013, due to a calculation error, we incorrectly reported 61.6 kg CO<sub>2</sub>e/t. The correct value was 64.7 kg CO<sub>2</sub>e/t.

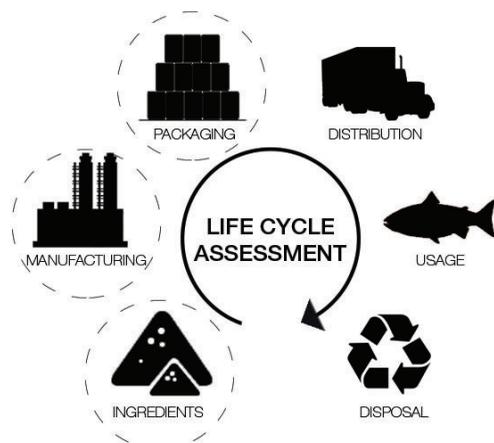
## LCA

As the aquaculture industry grows and matures there are more tools available to assess the sustainability of the industry. A Life Cycle Assessment (LCA) can provide an overview of a company's environmental performance and identify areas in the production process where future improvements can be made.

In addition, as a requirement of some of our customer's sustainability certifications, we are required to calculate and report the LCA of our feeds as of June 2015.

In 2014, our two main focus areas were to determine the correct methodology for calculating the global warming potential (GWP) (kg CO<sub>2</sub>e-) for each of our ingredients and the manufacturing of our feeds, including packaging. We are not yet including the GWP of the outbound logistics distribution component into our LCA.

The methodology for calculating our LCA for Aquaculture Stewardship Council (ASC) Salmon Standard compliance will be the same as that used by Skretting Norway. This method was approved by third-party auditors certifying against the ASC Salmon Standard. In our 2015 report, we will disclose the LCA of our feeds.



Items to be included in Skretting Australia LCA methodology to demonstrate compliance to the ASC Salmon Standard.

## Water Use

Our immediate goal was to monitor and understand our seasonal water usages and our ultimate goal is to be able to identify any improvement opportunities in our water usage.

As of 1<sup>st</sup> July, water meters were installed on our bio-filter and truck-wash station and the remaining water usage could be attributed towards the production of feeds plus a minor contribution to general amenities.

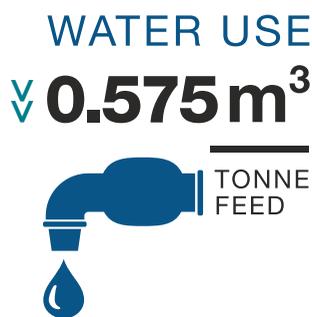
As the meters were not installed until July, a seasonal breakdown cannot yet be reported. However, data from the second half of the year showed the highest water usage could be attributed to manufacturing the feeds, and a smaller proportion to maintain the biofilter and raw material truck-washing station. Once a full year of data is collected, then targeted improvement projects can be identified and implemented if required.

### – High energy feeds need more manufacturing resources

Premium is our high energy feed which provides significantly improved fish performance and environmental gains for our customers.

Compared to a standard energy feed, to produce Premium requires more manufacturing resources in the form of heat and steam.

In comparison to 2013 when only a small volume of Premium was produced, during 2014 we increased our overall production volume (of which a significant volume was Premium) while using the same amount of water and decreasing our operational energy use. This confirms that our energy reduction steps are contributing to improvements in energy efficiency.



\*In 2013, due to a calculation error, we incorrectly reported 0.55 m<sup>3</sup>/t. The correct value was 0.58 m<sup>3</sup>/t.

## Waste

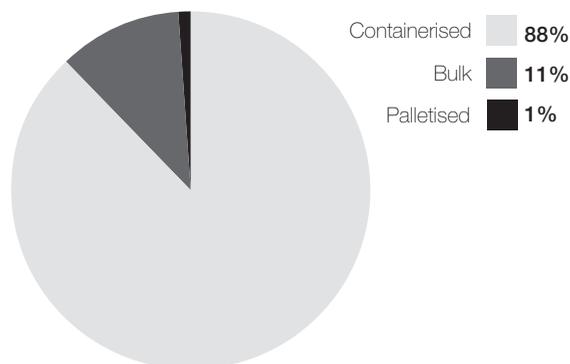
In 2014, our total waste volume was 3.68 kg/tonne feed, which was less than that in 2013 (4.34 kg/t).

We recycled 84.7% of the waste. There was a high increase in organic waste due to the disposal of some feeds containing a contaminated raw material, making them unsuitable for sale.

In 2014, our focus was to further understand what packaging our raw materials come in, as year to year the type and volume of raw materials we purchase has a significant influence on the volume of our waste streams. This information allows us to identify opportunities to focus our attention on in order to come up with solutions to reduce our waste stream volumes.

The majority of our raw materials are delivered in containers, where no waste is generated, while the remaining small percentage is bulk and palletised. There are relatively small gains to be made in the reduction of our bulk and palletised waste volumes.

**Incoming raw material packaging (%)**



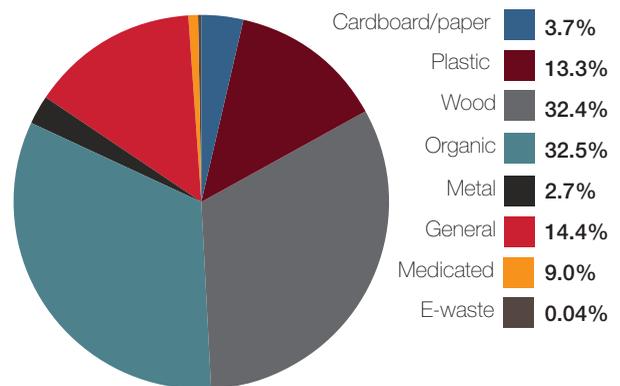
Containerised - delivered in 20 t shipping containers.

Bulk - Usually 1 t bulk bags delivered on a pallet.

Palletised - Usually 25 kg bags delivered on a pallet.



**Waste removal breakdown (%)**



## Our People

Our priority at Skretting Australia is to ensure the health and safety of our employees.

We recognised that to have a Zero Injury workplace our culture needed to shift so that employees at all levels of the business could take responsibility for their own actions. We all need to choose to be healthy and safe and that requires a strong culture in this area to continue to be developed and supported by the Management Team.

The outcome of our “Striving for Zero Injuries” program is to have a business where our employees are increasingly taking responsibility for their behaviors and the values they aspire to.

This has resulted in barriers being broken down and misconceptions quashed around reporting incidents. People see the importance and benefits of reporting incidents and this is reflected in our safety performance.

In 2014, a total of 68 incidents were reported, and 18 (26%) were near miss incidents. Our percentage of near miss incidents reported has been gradually increasing year by year. We see this as a positive aspect as it is a sign of our efforts of promoting a strong safety culture.

We also recognise that to have a Zero Injury workplace target not only requires a strong health and safety culture, but it must also be supported by good risk management.

In 2014, we reviewed all of our work, health and safety (WH&S) systems, processes, policies and procedures to develop a Skretting WH&S Risk Register. The risk register allowed us to outline all our current risks, what level of risk they posed and what control measures were required to reduce or remove that risk. It also provided our Management Team with the framework to identify the gaps and prioritise the areas for improvement to effectively reduce our WH&S risk profile.

For the past 12 – 18 months we have focused on the high and significant risk areas (e.g. traffic management, emergency management and manual handling), with the aim to reduce our overall risk profile so that no risks are rated higher than moderate. We are very pleased to report that we achieved our target by the end of 2014.

We will strive to maintain and improve upon our current risk profile to ensure that no risk is higher than moderate.

# 3

## LOST TIME INJURIES



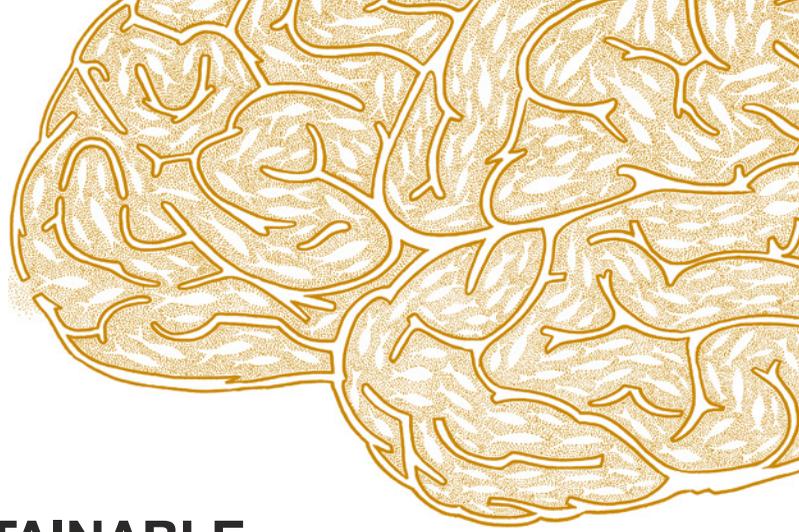
### **Professional Development**

Employee knowledge and competence is fundamental to the success of our business. One of our Skretting Global targets was to raise the level of awareness of sustainability for our Management Team and other managers. A specific e-learning module on sustainability was developed, encompassing areas from the four key pillars of our business: Ingredients, Operations, Nutritional Solutions and Commitment.

Our plan in 2015 is to continue to raise awareness by rolling out the e-learning module to all employees.

### **Future commitment**

- Implement energy management strategies to be in line with ISO50001 requirements by 2015.
- Maintain the WH&S risk profile so that no risk is rated higher than moderate.
- Complete the development and implementation of the Emergency Management & Response Plans.



## ≡ Chapter 2:

# DEVELOPING SUSTAINABLE NUTRITIONAL SOLUTIONS

Meeting growing global demand for protein will require innovative solutions that enable more food to be produced from a fixed resource base. The aquaculture industry offers a good solution since aquatic animals are more efficient at feed conversion than terrestrial animals. Skretting Global believes there is always room for improvement and is determined to help the aquaculture industry become even more efficient. This can be achieved through continued investment in R&D to optimise both environmental and economic returns.

### **Feeding 9 Billion People**

According to the UN Food and Agriculture Organisation (FAO), the global food system will have an additional 2 billion mouths to feed in 2050 as the world population reaches 9 billion. Therefore, a strong focus on efficient manufacturing is required if future demand is to be met in a sustainable manner.

Skretting Aquaculture Research Centre (ARC) has been very active in this area of research, which has enabled us to become industry leaders in delivering high-performance aquafeeds that are proven to deliver faster fish growth and improved feed efficiency.

The use of high energy diets based on our 'Premium' concept (More Fish with Less Feed) has been widely documented, particularly in Atlantic salmon, locally and globally. A natural progression was to determine if the Premium concept could be applied for other species in our local market, specifically the iconic Australian fish, barramundi, and also freshwater rainbow trout.

### *Barramundi*

Through local collaborations, laboratory and semi-commercial scale research trials were undertaken in 2013/2014 to test the performance of high energy feeds for barramundi under summer and winter conditions.

Trial results indicated that fish grew significantly better and the amount of feed required to achieve this growth was lower in fish fed Premium in summer and winter. In particular, the real value of our higher energy feed could be seen during winter. Barramundi are a warm water species, so their metabolism and therefore growth and appetite, usually slow down during winter. Premium was shown to help offset some of this performance effect during the cooler months.

As a result, Nova Premium was successfully launched to our barramundi customers in April 2014.

To read more about Premium for barramundi, please refer to our customer magazine, Nexus issue #17.

#### *Freshwater trout*

The Premium concept was also trialled in freshwater trout during the winter of 2014 under laboratory and semi-commercial conditions. Results were positive in relation to growth and feed conversion.

Spectra Premium for freshwater trout will be launched in 2015.

#### **Future commitment**

- Further applications of Premium in our market place (Freshwater trout and Chinook salmon).

Our Premium concept (More Fish with Less Feed) has been widely documented in Atlantic salmon. A natural progression was to trial if Premium could be applied for other species in our local market, specifically the iconic Australian fish, barramundi, and also rainbow trout.

#### **- Why higher energy feeds for fish?**

The more energy a fish receives the more it will grow. Therefore, we are striving to make feeds that contain higher levels of energy. We know that dietary energy can come from either protein or fat (and to a limited extent from carbohydrate), but fat contains approximately 60% more energy per kilogram than protein.

We find that with the high energy feeds of today, we achieve higher levels of fillet fat content. This ensures high concentrations of healthy omega-3's, sourced from fish oil, are passed on to the farmed fish.

#### **- Economic benefits**

Of course the increased energy component in Premium comes at an additional cost. However, the net benefit to the farmer is one of improved profit as the fish are grown more efficiently and to a larger size (or more quickly) compared to fish consuming a standard energy diet. Growth modelling can be worked through with the farmer to demonstrate the economic benefits.

#### **- Environmental benefits**

Improved efficiencies means that there is less nutrient discharge, which can otherwise be a limiting factor in some Australian aquaculture operations, as well as a reduction in the reliance on marine resources. In other words; more fish with less feed!

To read more about the benefits of Premium for multiple species, please refer to our customer magazine, Nexus issues #15, 17, 18, and 19.

## ≡ Chapter 3: **SECURING ANIMAL HEALTH**



Many aquaculture systems are open to the natural environment, which exposes the fish to stresses such as extreme temperatures, handling and a range of parasites and infectious agents that can have negative health impacts. Additionally, stress can come from routine farming practices, such as transferring fish and grading. Skretting is committed to helping farmers' secure animal health through continued investment in R&D. Maintaining a high level of animal welfare improves both the efficiency and sustainability of production.

### **Functional Nutrition**

Disease and environmental stress can have a significant impact on the productivity of aquaculture through the associated reduction in growth rate and increased mortality. Skretting has made a significant contribution to developing nutritional solutions that help increase the resilience of fish to stress and health challenges.

In 2014, Skretting Australia invested more than \$1 million into R&D in the Australian and New Zealand aquaculture industries. Some of the investments included: support for two PhD projects, and R&D trials on fish nutrition, health

and Amoebic Gill Disease (AGD) research.

In addition, in 2014, construction began on a \$6 million Experimental Aquaculture Facility in Tasmania, jointly-funded by the University of Tasmania, Huon Aquaculture, Skretting and the Australian and State Governments.

SKRETTING GLOBAL  
INVESTMENT IN R&D IN 2014



**AUD \$19  
million**

Two Skretting Australia sponsored PhD's are investigating mechanisms underlying significant production challenges faced by the Tasmanian and New Zealand salmonid industries.

Carotenoid utilisation and metabolism under adverse summer growing conditions for Atlantic salmon is the research focus of a Tasmanian project. While characterisation of vertebral development and mineralisation in Chinook salmon, and interaction with water temperature, diet and growth rate, is the major focus of a New Zealand project.

A large component of the commercial R&D in 2014 strongly focused on health challenges experienced by Atlantic salmon.

A reported re-emergence of the Pilchard Orthomyxovirus (POMV) in the Tasmanian Atlantic salmon industry has triggered a substantial, industry-wide, coordinated R&D focus on developing tools and methods to help diagnose the virus, laboratory trials to characterise the virus as well as developing a vaccine over the coming years to help protect the fish against infection.

In the absence of a vaccine, some of Skretting Australia's salmon farming customers chose to feed Protec to high risk groups of fish during periods in 2014. Although anecdotal, good success was demonstrated with the use of Protec in that farms feeding Protec reported no virus outbreaks during the high risk period.

Another key ongoing focus area for the Tasmanian Atlantic salmon industry is the management of AGD. In 2014, following on from the very encouraging results of AGD challenge trials in 2012 and 2013, further collaboration between the Skretting Aquaculture Research Centre and the University of Tasmania resulted in a third trial

testing experimental health-supporting diets to improve survival of Atlantic salmon challenged with AGD. Preliminary trial results are positive and will be presented in the near future.

During summer conditions fish are often exposed to prolonged periods of sub-optimal water temperature conditions. Since 2011, we have been focusing on R&D to develop feeds that support fish performance and health during these conditions. In 2014, based on successful local trial results, we launched an upgrade of our HT concept for all our summer feeds.

To read more about our HT upgrade for different species, including abalone, please refer to our customer magazine, Nexus issue #19.

#### **Future commitment**

- Develop capacity to carry out R&D under specific local challenges.
- Further development of HT summer solution feeds.





## ≡ Chapter 4: FINDING ALTERNATIVES TO LIMITED MARINE RESOURCES

The aquafeed industry has attracted significant attention with regards to its use of fishmeal and fish oil sourced from finite supplies of wild capture fish. Skretting Global has made significant progress towards reducing its reliance on these materials through investment in R&D that has facilitated the use of alternative raw materials.

We are committed to continuing this research to achieve the further reductions that are required to create a more sustainable future for the aquaculture industry. Efforts have also been made to improve the traceability of marine ingredients to ensure those used in Skretting feeds come from responsibly managed fisheries.

### Flexible Formulations

The use of fishmeal and fish oil in aquafeeds is one of, if not the most material issue for our sector. This is because aquafeeds have traditionally contained high levels of fishmeal and oil, sourced from finite supplies of wild-capture fish.

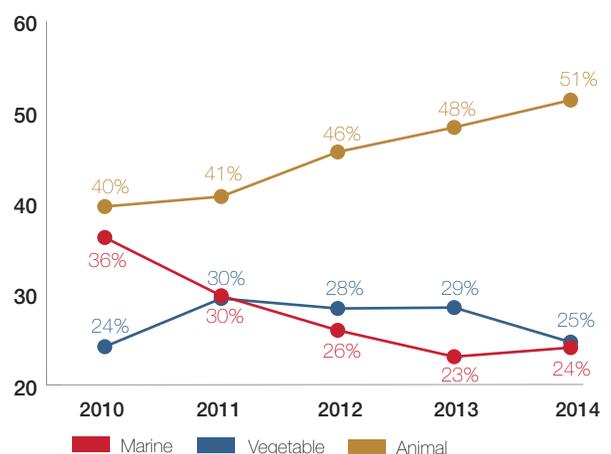
Growth in the aquaculture industry was therefore seen to be unsustainable from both an ecological perspective, as well as

an economic one. As a result, research into alternative sources of feed ingredients continues to be a major R&D focus.

### MicroBalance™

When expressed as a percentage of all protein used, marine protein (fishmeal) increased from 23% in 2013 to 24% in 2014. The increase in marine protein is actually a result of less overall protein being used in diets in 2014. This can be contributed to a higher feed oil usage, as Premium contains more oil, and made a greater contribution to our feed sales in 2014.

Historic use of proteins in feeds 2010–2014



When expressed as a percentage of all feed manufactured at Skretting Australia, the flexibility provided by MicroBalance™ has allowed a reduction in fishmeal inclusion from 14.2% in 2013 to 13.9% in 2014.

MicroBalance™ has allowed the performance of Atlantic salmon and barramundi to increase with the Premium diets, while using slightly lower levels of fishmeal in feeds for those species. This has also been replicated in the trial work for freshwater trout.

With the anticipated impact of El Nino conditions in 2015, we expect that our customers will rely on MicroBalance™ to enable the next level of fishmeal reduction in our high energy feeds.



### LipoBalance™

The fish oil inclusion level in our feeds as a percentage of total oil inclusion was reduced compared to last year. This has been despite increasing the energy content in our high energy feeds for salmonids and barramundi.

In order to manufacture our high energy feed, it required incorporation of a vegetable oil to produce the performance and feed efficiency

### – Average inclusion of feed ingredients (%)

	2014	2013
<b>Marine Proteins</b>		
Fishmeal (reduction fisheries)	8.0%	8.0%
Fishmeal (by-products)	5.9%	6.2%
<b>Land-animal Proteins</b>		
Poultry meal	16.8%	16.0%
Feather meal	9.0%	9.6%
Meat meal	2.5%	3.2%
Blood meal	2.6%	1.7%
<b>Vegetable Proteins</b>		
Lupin	3.7%	6.1%
Wheat gluten	4.5%	3.8%
Soy protein concentrate	2.2%	2.0%
<b>Marine oils</b>		
Fish oil	7.0%	6.5%
<b>Land-animal Oils</b>		
Poultry oil	9.2%	12.8%
<b>Vegetable Oils</b>		
Canola oil	7.8%	2.2%
<b>Carbohydrate</b>		
Wheat	11.5%	11.1%
Faba bean	3.9%	5.6%
Technical and others	5.6%	5.2%
	100.0%	100.0%

benefits. This is reflected in the sharp increase of vegetable oil usage and corresponding decrease in animal oil usage in 2014, compared to 2013.

Careful consideration is given towards what impact a reduction in the fish oil content in the feeds may have on the omega-3 content of the fish. A direct benefit of Premium is its ability to increase the level of fillet fat in the fish.

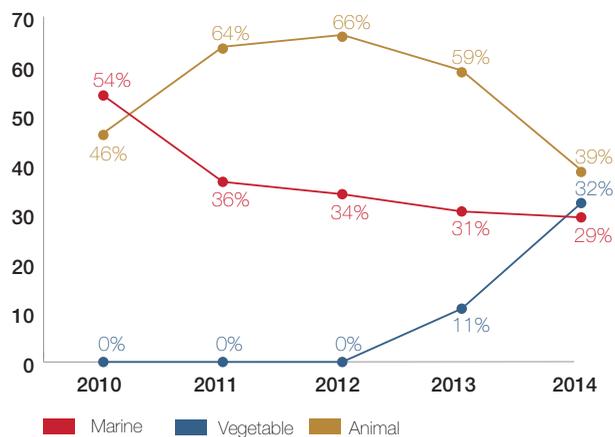
Globally, we typically expect Premium to increase fillet fat by 1% which is a 3-6% increase in long chain omega-3 fatty acids. Locally, we have documented up to 2% fillet fat increase on some Atlantic salmon seasonal input strategies. This corresponds to a potential ~12% increase of long-chain omega-3 fatty acids available in the fillet.

### Traceability of Marine Ingredients

Efforts to reduce fishmeal and fish oil inclusion in feeds will not improve the status of the world's marine resources unless there are endeavours, further up the supply chain, to improve fisheries management. As part of its sustainability commitment, Skretting Global only sources marine ingredients from suppliers that are able to demonstrate a commitment to responsible fisheries management.

During 2014, our goal was to achieve certification to the third-party verified, Global G.A.P. Compound Feed Manufacturing (CFM) standard. This standard is focused on

Historic use of oil in feeds 2009–2013



emphasising food safety across the entire supply chain. Traceability of marine ingredients is also a key element of this standard.

Continued engagement with our marine raw material suppliers has allowed us to strengthen our supply chain traceability of these key ingredients, but also the documentation and declaration of species names and origins.

When marine origin sustainability information is received from our marine suppliers, it is entered into our internal systems so that the data can be easily accessed and is auditable.

#### – Working to maximise Omega-3 retention in farmed fish

The world-wide supply of marine omega-3 fatty acids is very limited. As such, Skretting ARC is part of EU Marie Curie research project, Omega3Max, that aims to raise the sustainability of fish feeds by reducing the content of the marine raw materials fishmeal and fish oil.

The use of alternative raw materials, though, presents a challenge on maximising the retention of marine omega-3 fatty acids. One aspect of the project is to find a bioactive component that can either increase the production of long-chain omega-3 fatty acids from plant based omega-3 or by reducing the natural occurring peroxidation of EPA and DHA in the tissues of farmed fish.

The Aquaculture Stewardship Council (ASC) Salmon Standard requires us to be able to demonstrate, using a mass balance method, that we have purchased enough ASC-compliant marine raw materials to supply the volume of feed we sell to our ASC-Salmon Standard certified customer.

#### Future commitment

- Source at least 50% of our reduction fishery sourced fishmeal and fish oil from International Fishmeal and Fish Oil global standard for Responsible Supply (IFFO RS) approved fisheries.

#### – Mass Balance System Development

We must be able to demonstrate that the balance of all ingredients (both amount and type) used during a given feed production period meets ASC requirements.

Developing this system required considerable engagement with the ASC Standards Committee, auditors and eNGO's (e.g. Sustainable Fisheries Partnership - FishSource) to understand all our requirements to meet the standards criteria.

#### – Species origin and IUCN Status

Ocean/Fishery Region	Common Name	Latin Name	IUCN Status	Fishmeal	Fish Oil
<b>Reduction fisheries</b>					
Peruvian northern-central stock	Anchovy	<i>Engraulis ringens</i>	Least Concern	56.6%	66.5%
Southern Peru/Chilean regions XV-I-II stock	Anchovy	<i>Engraulis ringens</i>	Least Concern		6.5%
	Unknown		Least Concern		0.1%
Indian Ocean	Sardine	<i>Sardinella longiceps</i>	Least Concern		26.9%
				56.6%	100.0%
<b>Trimblings/By-Products</b>					
Southern Pacific Ocean	Albacore tuna	<i>Thunnus alalunga</i>	Near Threatened	5.8%	
Western & Central Pacific Ocean	Skipjack tuna	<i>Katsuwonus pelamis</i>	Least Concern	21.7%	
	Yellowfin tuna	<i>Thunnus albacares</i>	Near Threatened	5.2%	
Eastern Pacific Ocean	Skipjack tuna	<i>Katsuwonus pelamis</i>	Least Concern	7.7%	
	Yellowfin tuna	<i>Thunnus albacares</i>	Near Threatened	1.9%	
	Bigeye tuna	<i>Thunnus obesus</i>	Vulnerable*	1.1%	
				43.4%	0.0%

- \*A regional assessment of bigeye tuna against IUCN criteria in EPO found to be Near Threatened, not Vulnerable.
- Unknown: 0.1% species n/a, but origin declared as Southern Peru/Chilean regions XV-I-II stock.



## ≡ Chapter 5:

# CREATING A SUSTAINABLE BASE FOR FEED

The sustainability attributes of feeds are highly influenced by the methods used to produce and distribute the raw materials from which they are formulated. If these activities are not managed in a responsible manner, it could eventually lead to a decline in productivity and a reduction in the quality and/or safety of feeds. Skretting Global is helping to create a sustainable foundation for fish and shrimp feeds through comprehensive engagement with its suppliers as well as third-party organisations to support responsible practices throughout our supply chain.

### **Sustainable Sourcing**

The majority of our salmonid customers in Australia and New Zealand and some of our barramundi customers have at least one global sustainability certification, such as Best Aquaculture Practices (BAP), Aquaculture Stewardship Council (ASC), or Global G.A.P.

As a feed supplier, all of our feeds are required to comply with criteria in the standards that our customers are certified against. All standards have a key focus area on fishmeal and fish oil conservation, and identifying species origin and traceability. Some standards have future criteria on sourcing marine ingredients from fisheries

that are certified as sustainable/responsible, such as Marine Stewardship Council (MSC) or International Fishmeal and Fish Oil standard (IFFO RS).

By the end of 2015, we set a goal to investigate an improvement project with one of our marine trimmings suppliers to achieve a sustainability certification. During 2014, we took steps to internally investigate what sustainability certification options were available.

In 2014, the BAP Feed Mill Standard had a criteria that by June 2015, 50% of marine trimmings must be certified as IFFO RS or MSC. This standard was revised in mid-2014, and the criteria removed. This is one example of the challenges that the aquaculture industry is faced with – uncertainty of the supply of certified marine raw materials to meet the increasing demand of the aquaculture industry, and complying with the high requirements set in these sustainability standards.

Our role as a feed supplier is an important one to ensure that we have meaningful engagement with all stakeholders involved in sustainability certifications. We must convey a strong position as the vital link between sourcing responsible/sustainable raw material from our

suppliers, and our customer's complying with these standards to produce an economic and marketable product to the consumer.

## Sustainable Partnerships

A sustainable future is not possible if we act alone. Therefore, Skretting Global continues to develop partnerships and working in cooperation with a diverse range of stakeholders.

For the second year in a row we commissioned an independent assessment of the origin and sustainability status of the marine species included in the fishmeal and fish oil used in our feeds. This report provides an independent means of demonstrating compliance with the criteria in the ASC Salmon Standard regarding responsible sourcing (FishSource score) and conservation status (IUCN Red List) of marine species.

This report also provides us with a starting point to ensure that our purchasing decisions are well-informed when it comes to the sustainability status of marine species.

## Feed-to-food quality and safety

Feeds can have a significant influence on the quality and safety of the final product for human consumption. Robust and transparent systems are required to record and monitor all stages of the food chain so that if an issue should arise, it can be quickly identified and addressed.

Last year, through the operation of our Nutrace® monitoring program, higher than normal levels of hexachlorobenzene (HCB) were detected in some batches of fishmeal. This triggered a global response as it involved a number of countries and feed producers. Throughout this event, customers and regulatory authorities were kept informed. There was no impact of food safety of fish in production and changes were quickly made to supplier practices to eliminate the source of the HCB from future supply. More detail can be found in our annual residue report online.

In July 2014, Skretting Australia was officially certified to the Global G.A.P. Compound Feed Manufacturing v2.1 standard. Our factory must be Global G.A.P. certified in order to supply feed to our customers that are certified to the Global G.A.P. Aquaculture Standard.

### Future commitment

- Implement an improvement project with a trimmings fishery producer to achieve a sustainability certification by the end of 2015.
- Complete an independent review of our marine raw material stocks for ASC standard compliance.
- Integrate ISO14001 standard requirements into our operating ISO9001 system.

### What is Global G.A.P. certification?

Global G.A.P. is a voluntary certification scheme that sets standard production processes for agricultural and aquaculture products worldwide. Primarily designed to document to consumers where the food is made, it is manufactured with minimal adverse environmental impact and under good safety conditions.



- **Certifications:** ISO 9001, HACCP, Nutrace, FeedSafe, and Global G.A.P. CFM
- **Compliant with:** ASC Salmon Standard - Principal 4: Fishmeal and Fish Oil Conservation, BAP Salmon Farm Standard, Finfish & Crustacean Farm Standard and Feed Mill Standard



## ≡ Chapter 6: **INVOLVE AND MOTIVATE**

A sustainable future is not viable without the involvement of motivated people. In recognition of the fact that the impacts of feed production extend beyond the manufacturing process, Skretting Global is committed to taking a supply chain approach to stakeholder engagement. To do this, a range of initiatives are in place that enable us to connect with people that have varying opinions on feed manufacturing, and with stakeholders that have different abilities to implement the necessary changes to create a more sustainable value chain in the future.

### **Employee Engagement**

In early 2014, a goal was set to build a culture that integrated all Nutreco companies to create a long-term foundation towards achieving our mission of 'Feeding the Future'. This involved embedding a new set of values - Innovation, Capable, Collaborative and Caring, into the organisation.

In February 2014, all employees came together in a full day workshop to consider our new values and how we might powerfully live these values in our daily work in the areas of safety, quality, people, communication and sustainability.

Following the workshop, a group of 'Values Champions' came together to create a 'Living the Values' document, detailing behaviours that align with our values and for everyone to strive towards high performance achievement. Our values are incorporated into all our training and development activities.

Another aspect of our training and development program was to increase the awareness of our sustainability activities within our business. Our Marketing Manager, Rhys Hauler, led numerous discussion sessions with our staff to develop basic understanding of key topics related to the raw materials we use, including key sustainability aspects. These sessions were also a forum to internally communicate the achievement of publishing our first local sustainability report.





All Skretting Australia employees attending our whole day 'Living the Values' workshop.

## Stakeholder Engagement

In late 2014, all members of our Management Team and key staff participated in an externally run workshop to identify our key stakeholders and discussed if there were any local issues, not already included in Skretting's global materiality assessment.

Further work with the Management Team is still required to finalise our list of local material aspects. Our next steps will be to initiate discussions with some of our key customers to determine if the material aspects we internally identified, match that of our customers. This type of engagement is an important step towards having a deeper understanding of our customer's needs and furthering our ability to support their specific requirements.

Our customers are active, visible members of the community in which they operate, whereas we are more of a business-to-business operation. Therefore, direct interaction with the local community is not as essential for us.

Subsequently, our community engagement strategy is focused on supporting and attending local community events that are typically arranged by our customers.

Our internal discussions on stakeholder engagement and identifying what local issues are material to us is an important step towards having a deeper understanding of our stakeholders needs and furthering our ability to support their specific requirements.

### *AquaVision*

AquaVision is Nutreco and Skretting's multi-stakeholder aquaculture and food business conference for the leaders in the aquaculture industry.

We hosted three of our major salmonid customers and one of our raw material suppliers at this year's AquaVision in Stavanger, Norway. They were exposed to a broad range of speakers with invaluable information, insight and opinion. The main topics and liveliest debates focused on the challenges and opportunities facing the aquaculture industry today and into the future.

We also arranged a variety of additional opportunities for our Australian and New Zealand executive guests. This included meetings with international salmon producers, researchers, including Skretting ARC, and employees of other Skretting operating companies, to get an update on key commercial and research activities of interest.

### **Future commitment**

- All employees complete Nutreco Academy sustainability e-learning module.
- Provide annual training and development opportunities for all Skretting employees.

### **– Sponsorship and Event Participation**

In 2014, we sponsored and attended a range of community events, functions and conferences. We also donated feed to educational organisations such as schools, universities and trade training centres.

- Aquaculture without Frontiers fundraising dinner
- Active Strahan - Beach to Bay Fun
- Business Clean Up Australia Day
- Foundation for Youth Development – Southland, NZ
- Lions Club
- Rotary Club
- Cancer Council
- Cambridge Primary School Fair
- World Aquaculture Adelaide Conference
- New Zealand Aquaculture Conference
- Australian Barramundi Farmers Association
- International Symposium of Fish Nutrition and Feeding

Mr José Villalón, Nutreco's Corporate Sustainability Director, presenting on our mission of *Feeding the Future* at the 2014 AquaVision conference







Delivering sustainable  
feed solutions for aquaculture

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