# NUTRECO SUSTAINABILITY REPORT 2017



Our mission reflects our ambition to contribute to producing enough nutritious and high quality food for a growing world population in a sustainable way.

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Our missior

# leeding The future

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# **CEO Knut Nesse:**

"Nutreco wants to ensure that every opportunity to advance is explored."

## Letter from the CEO

Through our global focus on innovation, our technical expertise and our steadfast dedication to delivering the highest possible quality and safety standards across our entire business, Nutreco is ideally placed to contribute towards greater sustainable protein output in the feed-tofood chain.

The vision and actions needed to ensure that we consistently live up to our obligations and ambitions, and one of the primary means by which we gauge our own levels of responsibility and progress are delivered through Nuterra, our comprehensive sustainability programme. Nuterra is aligned and contributes to eight of the United Nations' Sustainable Development Goals (SDGs), which define global sustainability priorities and seek to mobilise efforts around a common set of targets. These are predominantly achieved by encouraging businesses to seek opportunities for creating shared value for the benefit of the broader industry and for society as a whole.

In parallel, Nutreco continues to support the ten principles of the Global Compact on human rights, labour, environment and anti-corruption. A description of the practical actions taken towards these and the outcomes achieved in 2017, as well as our plans for the future are described throughout this report.

By being immersed into Nutreco's day-to-day operations, these far-reaching approaches have become part of our company-wide culture and our long-held Mission of 'Feeding the Future', through which we are striving to



enable farmers to double their production whilst halving the broader value chain's environmental impact.

As this report illustrates, our current focus areas include the fundamental fields of community development, antimicrobial resistance (AMR) and innovative business opportunities. It is extremely motivating to witness our expanding Community Development Project initiative enabling more small-scale protein farmers in emerging regions to improve their livelihoods through the introduction of best-practice production techniques and nutrition. At the same time, our technical solutions have been helping more and more agri- and aqua-farming operations become antibiotic-free, thereby working towards addressing one of the most potent challenges facing public health today. Nevertheless, truly facilitating sustainable food security for a global population experiencing unprecedented growth unquestionably requires the development and adoption of new technologies at a much faster rate than has ever been delivered before. Because meeting this challenge requires much bolder steps at every level, including animal and aquaculture feeds, Nutreco wants to ensure that every opportunity to advance is explored.

As such, it is our intention to capitalise on our leadership position in the marketplace by seeking additional opportunities to provide innovative new tools through which farm productivity can be increased, resources become much more efficiently used and environmental impacts are significantly reduced.

#### Knut Nesse

# Sustainability. It's not just what we aspire to do, it's what we do.



Our mission

leeding The future



## **WE SUPPORT**



# Welcome to the **Sustainability Report 2017**

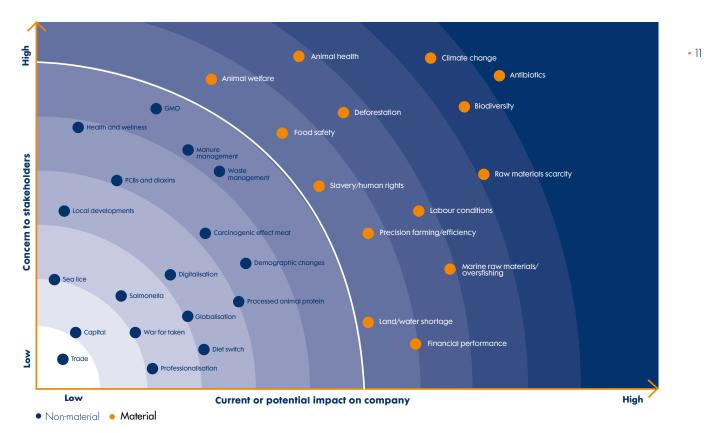
The report is written in accordance with the Global **Reporting Initiative Fourth Generation (G4) Guidelines** for core reporting. In our 2016 Sustainability Report, we made commitments to the United Nations Global Compact and eight of the UN Sustainable Development Goals (SDGs). As such, this year's report has a strong focus on reporting the efforts made to put our commitment into action during 2017. With regards to the UN SDGs, in 2016 we set clear targets to enable us to measure and report on our progress. A summary can be found in the table on the next page, with a more detailed overview in the relevant chapters of this report. Goal 2, Zero Hunger, is underscored in all of our activities and aligned with Nutreco's Mission of Feeding the Future.

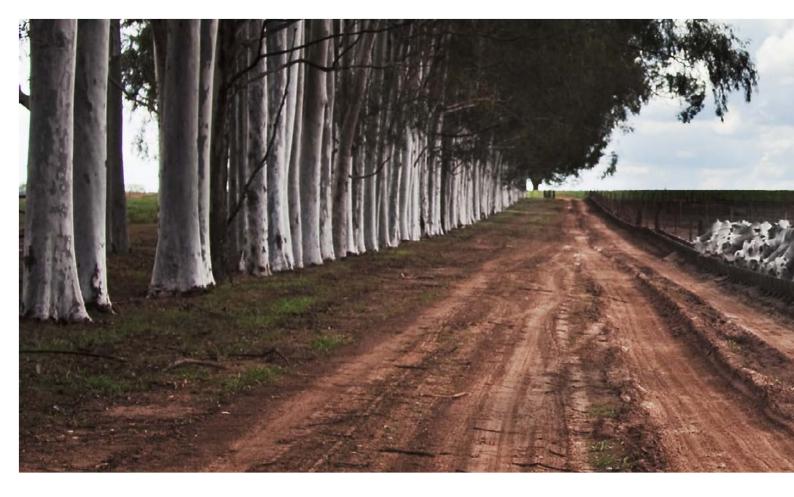
# Progress against Sustainable Development Goals

SDGs	Nutreco objective	Progress	Explanation
3 GOOD HEALTH AND WELL-BE	By <b>2018</b> we will contribute to a 50% reduction in antibiotic use in Chile through our involvement in the Pincoy Project	25%	Refer to page 65, 72, 73 of the Commitment chapter of this report for further details.
	By <b>2018</b> we will have a portfolio of examples from farmers that have reduced their reliance on antibiotics through the implementation of our Healthy Growth Initiative	50%	Refer to page 27, 34, 35 of the Nutritional Solutions chapter of this report for further details.
8 DECENT WORK AND ECONOMIC GROWTH	By <b>2020</b> we will have an additional eight community development projects (total of 10) set up in emerging markets that transfer knowledge and best practice to subsistence farmers	25%	Refer to page 64, 66 - 73 of the Commitment chapter of this report for further details.
12 CONSUMPTION AND PRODUCTION	By <b>2020</b> we will have Nuterra Product Assessments for at least four of our new global products (total of six)	10%	Refer to page 26 of the Nutritional Solutions chapter of this report for further details
13 CLIMATE	By <b>2018</b> we will launch a Nutreco wide efficiency programme to encourage OpCos to reduce energy and water consumption	0%	This goal has been postponed while the new Global Operations team restructures the implementation of this programme
	In <b>2017</b> and beyond, we will continue to monitor, record and encourage operational action to reduce the impact in our five KPI monitoring programme across all of Nutreco companies in scope	100%	Refer to page 42 - 45 of the Operations chapter of this report for further details
14 UFE BELOW WATER	By <b>2017</b> we will implement a multi-stakeholder fishery improvement project in Peru together with our industry and government partners	100%	Refer to page 56, 61 of the Ingredients chapter of this report for further details
	By <b>2020</b> we will successfully complete the fishery improvement project in Peru	20%	Refer to page 56 of the Ingredients chapter of this report for further details
15 UFE DN LAND	By <b>2020</b> we will contribute to the development of an industry based solution to reduce deforestation associated with the primary production of crops	50%	Refer to page 57, 60 of the Ingredients chapter of this report for further details
17 PARTINERSHIPS FOR THE GOALS	By <b>2020</b> we will be functionally engaged with external partners and platforms addressing specific sustainability issues in Nutreco's value chain	50%	Refer to page 72 of the Commitment chapter of this report for further details

## **Materiality**

The focus of this report is based on the findings of our materiality assessment; an assessment of what our stakeholders and we, as Nutreco find important. Nutreco's Sustainability Platform (NSP) undertook a full materiality assessment in 2015 that was then reviewed and reconfirmed internally in 2016 and again in 2017. Details of these processes can be found in those respective sustainability reports. Plans are underway to conduct a full revision of Nutreco's materiality assessment in 2018. This will include reaching out to stakeholders from various areas of our global value chain including suppliers, customers and Nutreco employees. By carrying out the three-cycle process in conducting a full materiality assessment, periodic reconfirmation of materiality and specific alignment with the SDGs, we are ensuring that our focus on addressing sustainability topics remains relevant.





## Shift from Third Party Assurance to External Quality Assessment

Since 2014, Nutreco has pursued Reasonable Assurance for our sustainability report. This has enabled us to significantly improve the quality of our reporting processes and provide assurance to our stakeholders that we are delivering on our promises. This year, we decided to take a different approach. We asked our sustainability consultant to perform examination procedures to help us maintain and improve the quality of our reported data. The main reason for this shift is to allow us to use an external expert opinion on the quality of our data and reporting processes, while at the same time receiving concrete advise on how to improve these in the future. Such a step was not possible when undergoing the Assurance process due to the associated rules that prevent any potential conflict of interest. It is intended that such an approach will further enhance our focus on





continuous improvement as well as demonstrating our ongoing commitment to stakeholders. Moving forward, we will continue to be aligned with seeking Assurance. As such, it is our intention to seek Reasonable Assurance every three years and external verification for those years in between. Such an approach will enhance focus on continuous improvement.



'Our new community development focus is all about producing more with less, but ensuring it is done in the right places to alleviate poverty and hunger."

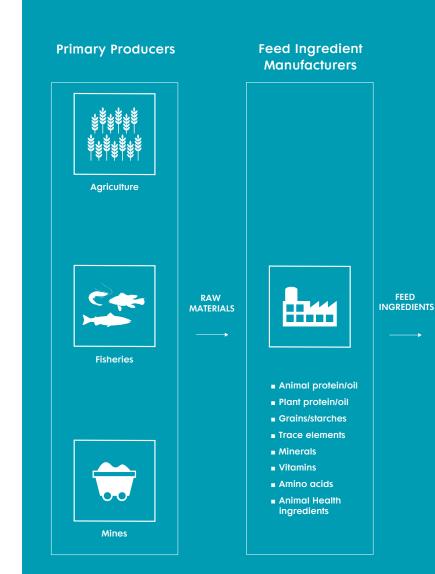
Jose Villalon, Nutreco Sustainability Director



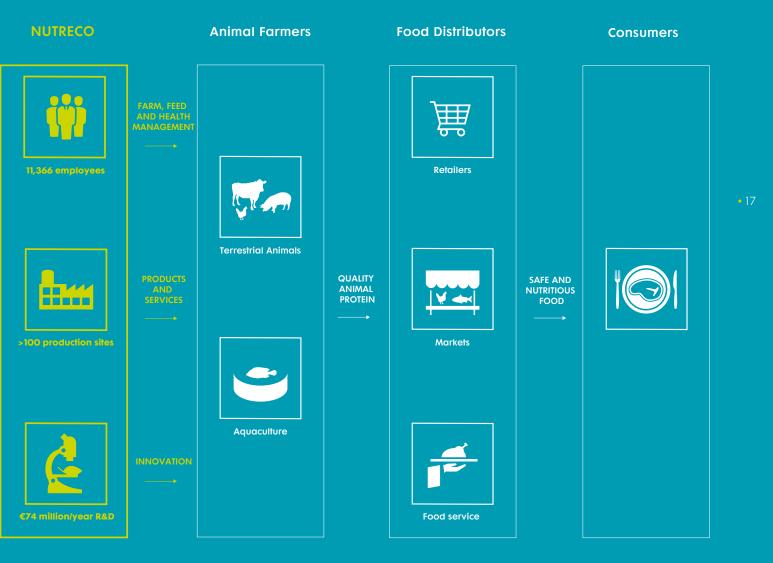
# Our mission: Feeding the Future

Our ambition is to contribute to meeting the rising food needs of a growing world population in a sustainable manner. We aim to be the global leader in providing innovative and sustainable nutritional solutions that best support the performance of animals, fish and shrimp. The UN Food & Agriculture Organization (FAO) predicts that total food production will need to increase from the current level by 70% to meet the demands of 2050.

Simultaneously, the World Wildlife Fund's Living Planet Report predicts that the population is already consuming the equivalent of 1.5 planet Earth's worth of natural resources. Nutreco wants to help address this paradox. This is the essence of our Mission – Feeding the Future – in which we work towards enabling farmers to double production whilst halving the environmental impact of the feed-to-food value chain. To help us to put these ambitions into action we have developed the Nuterra Programme.



# Nutreco's Role in the Feed-to-Food Value Chain



## Nuterra Programme

The Nuterra Programme was introduced in 2016 and has since become an integral part of the Nutreco value proposition. Nuterra is Nutreco's sustainability programme and is made up of three components. Component one is the Nuterra Roadmap which is aspirational targets of where we want to be from a sustainability perspective by the end of 2020. It is difficult to manage a programme if one cannot measure progress; so component two was developed. Component two is the Nuterra Standard. This self-assessment tool measures annual progress made against all the sustainability claims and targets set in the Roadmap. Finally, component three represents the Nuterra Product Assessment tool, which is a life-cycle methodology assessment of the environmental attributes of our nutritional solutions. This tool can be used by our clients to demonstrate the reduction in "footprint" when using certain products. In 2017, a new strategy was introduced to align the activities of the programme with the company strategy for 2021. The activities representing the three components of Nuterra undertaken to date will continue, as they have been adopted by our Operating Companies (OpCos) as "business-as-usual". We are now transitioning to a renewed focus in three core areas: community development, antimicrobial resistance (AMR) and innovative business



#### SUSTAINABILITY FOCUS AT NUTRECO

development opportunities. Our efforts in these areas, together with the existing Nuterra Programme, will ensure we meet our commitments to the SDGs.

With 2020 fast approaching, the current Nuterra Roadmap will soon become obsolete. As such, in 2018, the NSP is planning a comprehensive Materiality Assessment by "polling" both internal and external stakeholders in our value chain. The results of this Materiality Assessment exercise will then be used in 2019 to revise the Nuterra Roadmap and Nuterra Standard, setting its new horizon of 2025.

## **Nuterra Self-Assessment**

In 2017, a new version of the Nuterra Self Assessment was launched. Feedback from the OpCos gathered during the last two years helped the NSP to reshape the layout in order to facilitate completion by the OpCos. In addition, due to natural changes in the business, some criteria were extracted to avoid overvaluing scores. This was the case for the 'Commitment' pillar.

The scores shown indicate the percentage of the total number of criteria for 2020 that had been met at the time of assessment comparing 2015 and 2017. Results are a compilation of criteria targeted to Nutreco corporate departments, Business Units (BUs) and local OpCos. Although the figures might not be greatly improved, an interpretation is needed to fairly judge performance.





To enable comparisons between 2015 and 2017, a score adjustment for the 2015 results was performed. The results were summarised in a report and distributed to management and Nuterra Champions to identify the areas that need further work towards fulfilling 100% of our Nuterra Roadmap by the end of 2020.

#### **EMEA**

At BU and OpCo levels, the results show significant improvement compared with results in 2015 for all four pillars. Corporate level criteria fell short and negatively affected scored results for this BU. The NSP and corporate departments are working towards fulfilling those goals set for 2020.

#### **Feed Additives**

Progress was made overall across three pillars. In the ' Commitment' pillar, the score fell slightly lower in 2017 due to the need of better coordination between local and corporate HR. This will be a priority in the coming year.

#### **Global Salmon**

At BU and OpCo levels, the results show improvement compared with results in 2015 for all four pillars. In particular, all the Skretting salmon companies are well advanced in complying with our internal standard. We also see the companies in Southern Europe rapidly improving in working towards fulfilling our standard requirements.

## \*COMPARATIVE SCORING RESULTS OF NUTERRA STANDARD FOR 2015 AND 2017 IN PERCENTAGES (%)

BU EMEA	INGREDIENTS	OPERATIONS	NUTRITIONAL SOLUTIONS	COMMITMENT			
2015	79	71	72	67			
2017	82	71	81	70			
BU Feed Additives							
2015	79	57	82	58			
2017	86	66	82	46			
BU Global Salmon							
2015	77	78	85	82			
2017	86	82	89	83			

\*Target is 100% by the end of 2020

## **Nutreco Governance and Strategy**

In October 2017, the Nutreco Executive Committee announced a restructuring of the company, with a shift from six Business Units (BUs) to two divisions, Trouw Nutrition and Skretting. This meant that all OpCos predominantly producing for land animals became part of the Trouw Nutrition division, and those for aquaculture became part of Skretting. In addition, Nutreco announced the establishment of a new branch that is responsible for overseeing innovation and disruptive business ideas. The composition of the Executive Committee also changed, reducing from nine members to six as shown in the diagram on the next page. The same Executive Board remains in place, comprising the CEO and CFO. The Corporate Sustainability Director continues to report directly to the CEO and chairs the Nutreco Sustainability Platform (NSP).

The NSP governs sustainability within Nutreco. It has five members with equal representation from the businesses. Policy is developed within the NSP, then the Chair presents a proposal to the ExCo. If the ExCo approves, then the policy returns to the NSP to "trickle-down" to the OpCos around the world through the respective Division Sustainability Manager's communications with the OpCo Nuterra Champions (see organizational chart). Each division has six clusters of OpCos with a key focus to coordinate and facilitate communication between division and OpCo. Despite the changes in structure, the company strategy remains the same and Nutreco Corporate maintains control over this as well as the investment agenda and the company values and culture. But the responsibility for strategy execution and day-today business lies fully with the two divisions.

Since this change was implemented in the fourth-quarter of 2017, this report maintains the original reporting structure based on the six BUs for this year, with a shift to the divisions planned for 2018.



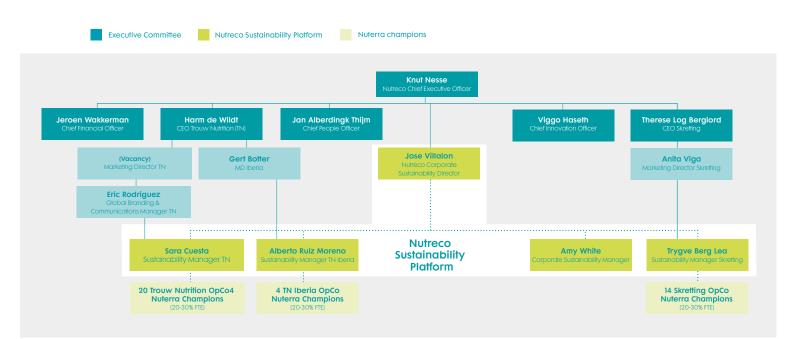
## **Sustainability Governance**

The governance of sustainability within Nutreco has changed slightly to be in line with the aforementioned structural changes. The Nutreco Sustainability Platform (NSP) remains the same, but the reporting lines have altered as shown in the diagram below. This will facilitate a more focused approach to dealing with sustainability issues that are relevant to the different divisions.

In 2017, we extended the scope of our sustainability team with the appointment of 38 Nuterra Champions who collectively represent Nutreco's 46 OpCos around the world. This programme was launched in October with the full support of the CEO and NSP team. The remaining eight OpCos, lacking a Nuterra Champion are in the process of identifying their representatives.

Each Nuterra Champion dedicates 20-30% of their time to executing sustainability related tasks and providing feedback to the NSP on local sustainability issues relevant to their OpCo. The first task assigned to the group is to review the results of their respective OpCo's most recent Nuterra self-assessment with their management team and identify priority areas to address in 2018. The objective is to reach 100% compliance by the end of 2020.





## **Nutreco Brands and Customers**

### **Nutreco animal nutrition**

Premixes | Compound feed | Farm minerals | Young animal feeds | Preventive animal health products | Feed additives

#### Market

• Trouw Nutrition is #2 global premix producer, with a #1 position in Canada.

compound feed and a #1

position as poultry producer

In Iberia Trouw Nutriton

holds a #1 position in

- Presence
- 84 plants in total, a.o. in EMEA and the Americas.
- Joint venture in Ukraine

#### Customers

 Feed compounders, integrators, distributors, farmers, companion animal industry, retail, wholesale, food industry, pig meat processors

#### Suppliers

a Nutreco company

 Producers of grains, vegetable proteins, land animal products, vegetable oils, amino acids, trace elements & minerals, vitamins, dairy products, vegetable oils, preventive animal health products and organic acids.

trouw nutrition

### Nutreco aqua feed

High-quality feeds from hatching to harvest for more than 60 species of farmed fish and shrimp



#### Market

- Skretting is the leading global salmon feed producer
- Global #3 shrimp feed
  producer

#### Presence

- 32 plants, a.o in Chile, Asia and Norway.
- Joint ventures in Honduras, Nigeria and Zambia

#### Customers

• Fish and shrimp farmers

#### **Suppliers**

 Producers of marine ingredients, vegetable proteins, vegetable oils among others

Nutreco's unique combination of products, services and models are designed to help farmers boost their productivity and support animal health. By doing so we address the UN SDGs 3 and 12.



# **C** NUTRITIONAL SOLUTIONS

# What is our objective?

By 2020 we will have Nuterra Product Assessments for at least four of our new global products (total of six).



#### What did we do in 2017?

- → Feasibility study to implement product assessment into NutriOpt;
- Became member of The Global Feed LCA Institute (GFLI) with the aim to develop a freely and publicly available feed LCA database and tool;
- → Participated in a research project to establish LCA values for marine feed ingredients to be integrated into the GLFI database.

#### What was achieved?

- One prototype product assessment was done for salmon feed in Norway;
- Developed a pilot module to calculate the environmental impact of fattening pig production systems in Canada;
- Created awareness of the reduction of environmental impact when improving animal performance;
- → Increased our knowledge of LCA methodology;
- Contributed to the development of accurate and harmonised LCA data.

#### What was the impact?

- Contributes to the development of common industry standards and methodologies for sustainability across the lifecycle of a product;
- → Enables Nutreco to accurately measure and communicate the impacts of our products and services.

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# NUTRITIONAL SOLUTIONS **C**

# What is our objective?

By 2018 we will have a portfolio of examples from farmers that have reduced their reliance on antibiotics through the implementation of our Healthy Growth Initiative.



#### What did we do in 2017?

→ Developed farm, feed and health management strategies to reduce antibiotic use through the Healthy Growth Initiative.

#### What was achieved?

- Implemented the Healthy Growth Initiative with 9 poultry customers;
- Implemented the Healthy Growth Initiative with 4 swine producers.

#### What was the impact?

→ Helps our customers to reduce the use of antibiotics for routine use in food production.

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# Nutritional Solutions in Action

Through our offering of products, services and models, we not only aim to boost productivity and support animal health, we also support and encourage the development of environmentally friendly farming methods and the efficient use of natural resources. By doing so we contribute to Guiding Principle 9 of the UN Global Compact. The following case studies demonstrate how we are working towards these goals in practice.

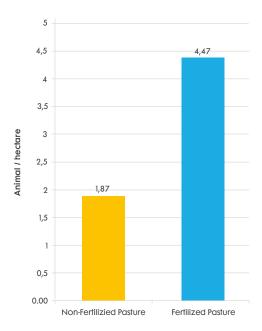
## Producing More with Existing Pasture Land and Eliminating Incentives to Deforestation<sup>1</sup>

Beef farming in Brazil is a growing business, and one that plays an important role in feeding the future through the utilisation of grazing land, forage and by-products to produce high-quality animal protein. However, it has also attracted negative publicity in recent years due to the associated deforestation that has occurred as some farmers have sought to increase the size of their herds. Currently, the land occupation in Brazil is represented by 61% native vegetation, of which 11% is located on farms, with the area of pasture used to graze livestock representing approximately 20%. One approach to stopping deforestation is to improve the productivity of the area already used for grazing. In 2016, Trouw Nutrition Brazil partnered with the Sao Paulo State University (Jaboticabal, SP) to undertake research aimed at demonstrating the benefits of adopting more intensive beef production systems, with the focus on feed and farm management. A total of 88 young bulls were used in the trial that focused on the growing phase in pasture (December 2016 to May 2017) and the finishing phase in feedlot (June 2017 to September 2017).

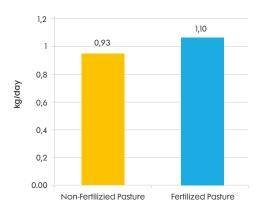
Since pasture represents around 95% of the diet of beef cattle in Brazil, this was seen as the area where significant improvements could be made through changes to farm management. As such, the first phase of the research looked at the impacts of the fertilisation of pasture during the growing phase. Results showed that the controlled use of nitrogen fertilisers increased the quality and quantity of the forage. This not only increased the number of young bulls able to graze per hectare by almost two and a half times, but it also increased the average daily growth rate by 18%. The combined impact of this is that each hectare of land can be used to produce almost three times the amount of meat when fertilisation is used, hence reducing the need to clear more land to increase herd sizes.

The second stage of the research focused on feed management during the finishing phase, which occurs during winter when the availability of good quality and quantity pasture is limited. This phase can have a detrimental impact on the health and body condition of cattle and can increase the time needed for them to reach the desired body weight.

#### **STOCKING DENSITY**



#### **AVERAGE DAILY GROWTH RATE**



- Increasing the efficient use of land is a huge opportunity.
- Focusing on the soil quality and precise use of fertiliser can have a dramatic impact on pasture quality.
- Productivity losses can be minimized by focusing on transitioning beef herds from one diet to another.



#### 30 •

To slaughter young animals (average 24 months) and obtain good quality meat, farmers often use diets with high feed concentrates and feedlot style farming for a period of 90-120 days.

The shift from pastures to diets with high concentrates requires the animals to undergo metabolic changes that can place them under stress. Trouw Nutrition's Vivalto and Intellibond products offer support during this period, with Vivalto assisting the liver (which plays a vital role in metabolism), and Intellibond Copper (C) and Zinc (Z) helping to support the animals in coping with stress as well as their immune system. Trials were undertaken to test the impact of concentrates that contained these two ingredients, with results showing at least 10% improvement in productivity. This means the animals are able to produce more meat and reach the desired slaughter weight in less time (90 days). Decreasing the time to slaughter reduces production costs and the associated environmental impacts per tonne of animal meat produced.

This research demonstrated that with a combination of feed and farm management productivity can be increased whilst simultaneously decreasing the environmental footprint. It is the intention of Trouw Nutrition to use the results from this research to demonstrate to farmers the benefits of alternative approaches such as fertilisation and supplementation. This will be achieved through its network of technical staff who are in regular contact with farmers, advising them on feed and farm management strategies.

## **Tackling Salmonella at the Source**

Salmonella is one of four key causes of diarrheal disease affecting around 550 million people globally per year, including 220 million children under the age of five. Animal products such as chicken and eggs are common sources of salmonella. As such, Trouw Nutrition has been working with farmers for many years to find solutions that address salmonella in animal production.

Because salmonella contamination can pass through the entire feed-to-food chain from the raw material, to animal feed, all the way to processed products for consumers, Trouw Nutrition has extended the scope of its nutritional solution to include the treatment of feed ingredients with the aim of tackling this challenge at its origins. Consequently, Trouw Nutrition is working together with traders, crushers and shippers to reduce the prevalence of salmonella in their grain consignments.

In cases where salmonella is detected, the batch is treated with Selko® Fysal®, a unique combination of organic acids and salts. This is performed using a mobile dosing system that can be used on a ship, in a factory, or at any other location. The treatment itself takes place at a speed of 1,000 tonnes per hour, meaning a ship's 20,000-tonne cargo can be offloaded and treated within one day. This system is only effective when coupled with the expertise provided by Trouw Nutrition.



"Anyone can purchase organic acids, but the correct application is a specialist area," says Hay Kleuskens, Feed Additives Regional Manager for Trouw Nutrition in Europe. "Thanks to our close relationship with animal feed producers, we gained an understanding of how raw material streams work and where the problems lie."

The economic benefits of this are significant, with salmonella contamination reducing the value of the cargo by  $\in$ 20/tonne during transportation. Considering that 52 million tonnes of oil seed are consumed in Europe annually, this represents a significant cost to animal feed producers and crushers.

Europe is currently the primary focus for this area of work due to the strict legislation that exists in this market. However, it is anticipated that the lessons learnt in Europe will be highly valuable in delivering similar solutions in other regions of the world in the future as their approach to salmonella control historically follows in Europe's footsteps.

This approach to managing salmonella at its source not only helps to reduce the negative impacts on human health, it also helps to reduce food waste by decreasing the discarding of contaminated raw materials throughout the food chain.

> "Anyone can purchase organic acids, but the correct application is a specialist area." Hay Kleuskens





## **Case Study: AMR Iberia Cluster**

The large and expanding use of antimicrobials in livestock, which is a consequence of the growing global demand for animal protein, is of considerable concern due to the mounting challenge of antimicrobial resistance (AMR). Use of antimicrobials in animals has been linked to drug-resistant infections in both animals and humans. In September 2016, the UN General Assembly recognised that the inappropriate use of antimicrobials in animals was a leading cause of the rising AMR. In September 2018, the interagency group established by the UN Secretary General will report on the progress made with regards to the global response to AMR, including antimicrobial consumption in animals.

According to the latest figures from the European Centre for Disease Prevention and Control (EDCD), Spain with 23 defined daily doses (DDD) per 1,000 inhabitants has shown an increasing trend in its population's antimicrobial consumption. Only Greece (36.3 DDD) has seen more growth. The EU average is 21.9 DDD.

At the same time, advances have been made to reduce antibiotic consumption among animals. Therefore, in line with the Nutreco Strategy, the Iberia Cluster and all OpCos worked diligently in 2017 to reduce the use of antibiotics. For example, the use of colistine in swine feed declined by 82% in the first semester of 2017 after an agreement was signed with 44 companies who collectively represented about 70% of the sector. Grupo Nanta, Ingafood and Trouw Nutrition España are part of this group, their activities included:

#### Ingafood

Antibiotic use in swine premixes were reduced by 45% to 203 mg/PCU in 2017 without increasing the use of oral or injected antibiotics. Ingafood did not use any colestine in its premixes throughout 2017.

Nutreco's commitment to improving farms' hygienic conditions, piglet feeds and preventive measures for animal health contributed to this important reduction.

#### **Trouw Nutrition**

In trying to reduce the use of medication, a combination of organic acids are being used in water with the aim to improve the hygienic treatment (chlorine, etc.), improve digestibility and to control the enterobacterias and undesirable microorganisms in the piglet digestive system. Presan, a mix of acids that regulate intestinal microbiota in addition to having an anti-inflammatory effect on the intestinal wall has complemented this strategy.

#### **Grupo Nanta**

Through 'Nutrición Sostenible' Nanta has taken further significant step towards farming systems that are more environmentally and socially responsible, thereby contributing to a more sustainable future.

Nanta has the clear aim of being an active leader in consolidating the 'One Health' concept, including doing everything it can to reduce antibiotic use in farming. Through its open-minded attitude towards production, whereby all potential opportunities warrant exploration, Nanta has created the website www.nutricionsostenible. com where all relevant information, expert opinion, advice, personal experiences and infographics can be accessed.

In addition, all farmers can request a farm audit where, among other things, food, health, facilities and animal welfare can be audited and training also given. After this audit, an improvement plan will be presented and subsequently reviewed through a continuous improvement process.

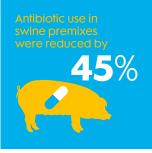
Of the 19 Nanta sites, three are now producing feed without any antibiotics. Overall, antibiotic use was reduced by 30% in 2017.

#### Grupo Sada

Sada signed the Antibiotic Use Reduction Policy in 2016 but has been working towards the reduction of antibiotic use for a lot longer. By the end of 2017, it was using less than 10 grams of antibiotics per tonne of meat produced.

Improvements in facilities and the increasing awareness of its veterinarians and farmers has led to more than 60% of its broilers (white and yellow) now being free of antibiotics.





## N-3 Aquaculture Diets Supplemented with Omega-3 Oils from Algae

Fish oil availability is no longer an obstacle to the expansion of the global aquaculture industry thanks to N3 - a diet that contains marine algae oil. Fish oil has historically been essential to aquaculture as it has ensured that farmed fish contain the long-chain omega-3 fatty acids that are desired by consumers for their well-known health benefits.

N3 feeds enable the freedom of the industry to grow sustainably without the previous dependency on the finite fish oil source. Consequently, more consumers around the world will be able to benefit from omega-3 rich fish like salmon and trout with no additional dependency on finite oceanic fish stocks.

## Dairy Farming Challenge: Produce More with Less

Supporting the healthy lifetime productivity of dairy cattle is crucial at a time when the industry is under pressure to produce more with less. As the global population continues to grow, we need to challenge the status quo and explore new ways to sustainably increase production.

The evolution of dairy farms during the last 20 years has been substantial. Today's dairy cow produces as an average 60% more milk than the cows from the past quarter century. Farm management nowadays requires professionalism and commitment in order to be successful and meet social demands. A dairy farmer therefore has to balance a wide range of factors in order to maintain a sustainable dairy farm in the long-

# Today's cows produce 60% more milk Past Today



term. At the heart of this challenge lies the need to manage a herd for lifetime performance, while ensuring short-term profitability and controlling overall workload and costs. Trouw Nutrition's LifeStart Programme provides solutions to operate durably on three focus areas:

#### **Optimal growth and development**

Farmers tend to pay less attention to their young stock because they are generating costs without producing output. The focus on calf management has traditionally been on mortality, early weaning and rumen development. However, recent studies suggest that nutrient intake and management during the pre-weaning period have positive effects on future milk production of those calves (Soberon et al. 2012).

Trouw Nutrition's research validates that early calf nutrition can help 'programme' a cow's future metabolism.

Researcher Leonel Leal, who is in charge of the five-year longitudinal study, summarises the key findings so far: "It's clearer than ever that what you feed a dairy calf in the first 60 days of life helps determine her future and metabolic programming plays a substantial role in that. The data shows that pre-weaning nutrition has significant carry-over effects on longer-term metabolic functions as well as on a variety of growth, development and performance parameters. By understanding this mode of action, we can better harness the benefits of optimised nutrition for our farms." Properly fed and managed calves are stronger, have less metabolic and respiratory problems and have lower mortality rates, improving significantly animal health and welfare and future return on investment when higher milk production is accomplished.

#### Earlier calving age

Heifer rearing represents a significant cost to any dairy farmer. It takes two years before a cow starts producing milk, thereby generating income for the farm. Being aware that the single most important factor influencing heifer-rearing costs is its age at first calving, this becomes a natural priority to optimise.

A cow needs to be physiologically ready to optimally carry its first pregnancy. As a combined result in the proper early life nutrition and management of calves, these animals are healthier and have reached the adequate body weight for an earlier first calving age reduction from 26 months of age to 23 months. This earlier calving age not only has a significant positive effect in monetary terms but also has a significant impact on the environment by decreasing emissions when combined with higher longevity of the herd.

#### Increased longevity

High animal replacement rates are a main concern at dairy farms. Part of the replacement occurs naturally, as a cow reaches the end of her productive cycle. However, animal health, fertility and/or other production issues of young producing animals, contribute to increased culling rates. Average animal replacement rates are 30-40%. High replacement rates have a significant impact on the economy of the farm by forcing farmers to maintain higher numbers of young, non-producing stock. Through the LifeStart Programme culling rates have lowered, ultimately increasing longevity of the herd. This has had a positive impact on farmers' profits, animal health and welfare and reduces the environmental impact when combined with age at first calving as previously mentioned.

## **Reducing Methane Emissions**

Greenhouse Gas Emissions (GHG) caused by dairy farms are derived from energy and fuel use, manure management, manure application, roughage production, compound feed production, land use change (linked to cultivation of raw materials) and enteric fermentation. The latter is the largest contributor of these emissions.

Through the application of the LifeStart Programme, GHG, ammonia, phosphate and nitrogen emissions are reduced due to the overall better performance of the farm.

Methane emissions are the largest contributor of GHGs from dairy farms, which is why considerable R&D resources are focused on reducing this particular environmental impact.

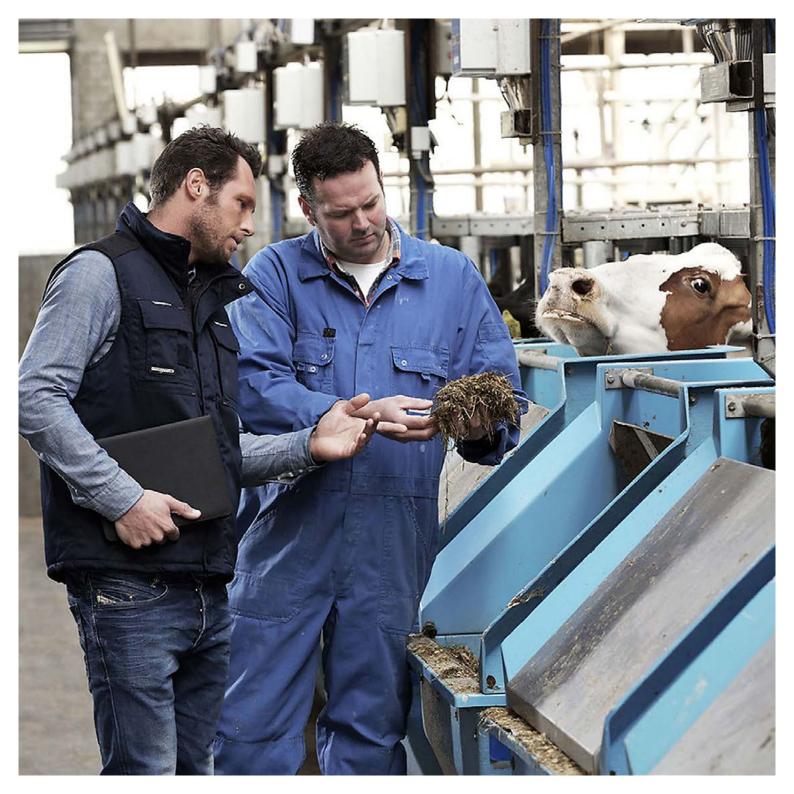
Research shows that methane production per kg of milk decreases when the milk production of the cow rises (table 1). In addition, methane emissions related to rearing increases when the rearing periods are longer (table 2). The LifeStart Programme effectively increases longevity of production and decreases the time to first calving to 23 months. Combined, these characteristics significantly reduce methane emissions in the dairy industry.

#### TABLE 1: METHANE OUTPUT PER LACTATION (VAN LAAR E.A., VAN STRAALEN, 2006, CRV 2010)

Milk production per lactation	kg milk	<b>g Methane</b> per kg milk
Lactation 1	8,399	14,72
Lactation 2	9,499	14,00
Lactation 3	10,067	13,00
Lactation 4	10,220	13,60
Lactation 5	9,952	13,80

# **TABLE 2: METHANE OUTPUT OF YOUNG STOCK**(VAN LAAR E.A., 2004, VAN STRAALEN, 2006)

Calving age heifers in months	<b>Total exhaust methane</b> in kg
21	71,86
22	76,77
23	82,12
24	87,92
25	93,86
26	99,96
27	106,22
28	112,47



We strive to minimise the negative impacts of our direct operations and create valuable employment opportunities for the communities in which we operate. These efforts directly address the UN SDG 13.



# 

# What is our objective?

In 2017 and beyond, we will continue to monitor, record and encourage operational action to reduce the impact in our five KPI monitoring program across all of Nutreco companies in scope.

13 CLIMATE

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#### What did we do in 2017?

- Implementation of data collection, recording and analysis systems;
- → 5 training sessions held at OpCos in Mexico, Canada, Ecuador and Brazil;
- Development of reports and dashboards to communicate results to operational staff and management;
- Integration of data reporting tools into quarterly management meetings.

#### What was achieved?

- → 100% of Nutreco OpCos recording and monitoring their environmental footprint;
- Increased awareness of the activities that drive changes in environmental performance.

#### What was the impact?

→ Helps Nutreco to measure, reduce and report climate exposure and progress on actions to confront climate change.

# Sustainability Manufacturing KPI Reporting

The sustainability manufacturing KPIs refer to five environmental and social measurements that Nutreco has committed to set as focus areas for our direct operations. Since 2016, 100%<sup>2</sup> of Nutreco production sites have been reporting on these quarterly using our financial reporting system. We continue to strive for continuous improvement in the data collection and reporting processes by undertaking data quality control procedures and training workshops. In 2017, five of these workshops were held at Nutreco sites in Brazil, Ecuador, Canada and Mexico to assist employees involved in the Sustainability KPI reporting process. The training was attended by employees from 20 OpCos, which enabled us to get a better idea of common issues faced by these teams and provide solutions to overcome them.

<sup>21</sup>Newly acquired companies are out of scope for the first three years after purchase



#### **OVERALL RESULTS PER BU FOR 2017**

	GSFF	FA	EMEA	Asia	Americas	Nutreco Iberia	Nutreco Total
Energy consumption (kWh)							
Total non-renewable energy	266,910	378	91,172	63,640	144,935	124,315	768,251
Total renewable energy	217,044	686	27,595	33,756	107,864	144,423	455,317
Total energy consumption	483,954	1,064	118,766	97,396	252,798	269,589	1,223,568
Greenhouse Gas (GHG) emiss	sions (tonnes CC	<b>D</b> <sub>2</sub> )					
Total GHG emissions	57,373	77	19,493	16,387	35,023	27,279	189,310
Waste type (tonnes)							
Total hazardous waste	149	124	1,101	135	130	228	1,867
Total non-hazardous waste	12,736	1,054	5,036	2,491	14,423	15,025	50,765
Total waste	12,885	1,178	6,138	2,625	14,554	15,272	52,841
Water (m³)							
Total water consumption	859,513	6,660	152,508	261,159	379,110	1,646,357	3,305,307
Lost Time Injuries							
Total lost time injuries	25	1	19	5	40	58	148

All emissions from indirect energy were offset by purchasing Certified Emission Reductions (CER) under Clean Development Mechanism (CDM) projects derived from the Kyoto Protocol. When comparing the overall results for the BUs that reported in 2016 on a per tonne of saleable feed basis, there was a reduction in energy (-0.1%) and water use (-5.4%) KPIs. We showed increases in  $CO_2$  (+6.37%), waste generated (+9.5%) and lost time injuries (+2.7%).

Conversion from energy use to  $CO_2$  emissions follows standard mathematical conversion tables. These conversion tables change with the changes made annually in the municipal/national energy grid mix. The increase of  $CO_2$  in spite of marginally reduced energy consumption is linked to a large increase in production in Chilean sites where woodchip and coal are used to generate municipal energy, both with high emission ratings. The 9.5% increase in waste was principally due to a change in packaging of raw materials in the Global Salmon and Fish Feed BU and new construction,



and its subsequent debris, at Sada Catalunya. The 5.4% decrease in water use is attributed to closing of several processing plants in Spain (Sada) that had significant water consumption.

In spite of the important decrease in accidents in Ecuador, the increase of accidents in Grupo Sada and GSFF show an overall increase in Nutreco for 2017. The Safety First programme is a priority focus during 2018.

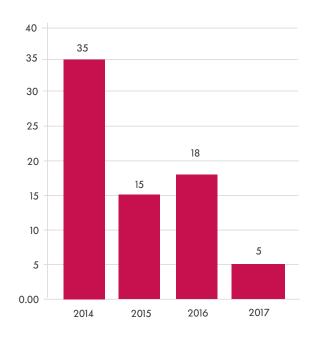
#### YEAR ON YEAR COMPARISON OF THE FIVE KPI'S FROM 2016 TO 2017



### Case Study: Skretting Ecuador – LTI Reduction Activities

Reducing lost time injuries (LTIs) has been a central focus of Skretting Ecuador in recent years and the OpCo continued to expand this important work in 2017. A long-term work plan was developed by the Operations Team, supported by the local management, which concentrated on both worker behaviour and workplace conditions.

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Five key points for improvement were identified and the following actions taken:

- Unsafe facility conditions Improve conditions that could potentially expose employees to accident risks, prioritising the findings of corporate audits. (+85% closed non-conformities)
- Manual handling project About 60% of LTIs occurred during manual reception/dispatch operations; through agreements with suppliers and customers, approximately 45% of raw materials and finished products were transported on pallets, reducing exposed personnel and operating costs
- Personnel training Developing technical safety skills for personnel, prioritising higher risk practices, strengthen awareness and responsibility among workers, and the reinforcement of these endeavours with a new consequences programme
- Communication campaigns Ensuring that safety information is made available to all, sharing lessons learned from incidents, near misses or through awareness/integration activities
- Procedure standardisation Further alignment with Nutreco standards, reinforcement of the importance of compliance through the definition of "Safety Absolutes", and launch of new standards and practices through the 'My Workplace' concept

In the coming year, Skretting Ecuador will continue the focus on creating safety accountability among personnel through new initiatives and ensuring safe conditions in the workplace.

# Case Study: Energy Management in Nanta Griñón

Nanta has placed considerable emphasis on energy management in recent years and in 2017 these efforts were particularly evident in the Nanta Griñón (Madrid, Spain) facility with a reduction of 9.4% in KWh per saleable tonne.

This improvement followed comprehensive analysis of Griñón's production systems, which led to a more efficient and automated plan for information system training.

Looking for opportunities to establish substantial improvements, Griñón started by introducing new pneumatic dosification silos for micro-ingredients. These enabled increased energy (electricity) efficiency while reducing manual handling and also improving workplace ergonomics. At the same time, a new, more powerful pellet mill was acquired with the highest efficiency criteria.

Enhancements were also made to the steam line, including redesigning injection lines, installing more efficient drift eliminators and changing the return circuits to contribute to decreasing the site's energy consumption. Boiler room investments were also made during 2017.

## **Ensuring a Safe Workplace**

Employee safety is a fundamental responsibility for all businesses, and at Nutreco, we go to great lengths to ensure that all of our workplaces around the world are safe and healthy environments in which to conduct our operations. We also acknowledge that there is no room for complacency, which is why we are continuously seeking to identify further ways in which we can make all of our Nutreco facilities safer and healthier for our employees and consequently reduce the number of injuries and LTIS.

Steady progress continues to be made in this regard through investments in more sophisticated plants, implementing better-organised operations and by ensuring our people are well trained and know exactly what they should be doing.

To ensure that the same robust health and safety standards are applied at all of its global locations, Nutreco continued to conduct its comprehensive audit programme last year. This process identifies any health and safety shortcomings or "non-conformities" and provides an appropriate timescale to rectify them. All non-conformities are monitored through a live reporting system.

"The audit programme is the backbone of our work. In total, we inspected 46 facilities in 2017, and it's an ongoing cycle. Without question, health and safety and good operations go hand-in-hand: We don't want to have waste, we don't want accidents, and we don't want things to go wrong; instead we want optimal professional operations," says Harm Teunissen, HSE Director at Nutreco. All operations are also subject to a rating programme, whereby their health and safety compliance is scored and reported. To assist these processes, each facility must be organised in such a way that it has an individual responsible for health and safety. There is also a Health & Safety Executive Network, comprising representative members from across the business globally that physically meets every year and interacts as much as possible outside of that meeting to address current priorities.



Also included in the audit programme are plants selected for acquisition by Nutreco. This is part of the due diligence process, and ensures that any nonconformities are identified ahead of the transaction and that action points are known and can be readied for implementation once the purchase is formalised. In 2017, a study was progressed that began in September 2016 in which other companies in and outside the SHV Group were visited to discuss safety issues, including safety culture and awareness, and incident reduction. The aim of this ongoing research is to establish measures by which the health and safety agenda can be further progressed within the business. "This work further confirmed that having a safety culture in the workplace is vital. It leads to increased safety levels and reduces the number of LTIs," says Teunissen.

"Safety awareness is of critical importance and must be observed across the company at all levels. This is why we started the HSE Safety First programme in 2017. This new Nutreco-wide strategy specifically focuses on ensuring all employees are aware of the importance of working safety at all times."

"Health, safety and good operations go hand-in-hand: We don't want waste, or accidents; but professional operations." Harm Teunissen

### Workforce

#### Nurturing Talent Through Opportunities and a Well-defined Structure

Sustainability is a driving force for our business. It allows us to set and achieve measurable goals that contribute to meeting our Mission of Feeding the Future. As a global company, positioned in the feed-to-food supply chain, many of our sustainability efforts concentrate on our environmental impacts – reducing our footprint and ensuring best-practice across all of our operations – but another vital aspect of our sustainability commitment and being responsible citizens focuses on how we look after the people within our organisation and particularly the opportunities that we offer them.

As an employer, our talent management ambitions are rooted in our company-wide values of being innovative, collaborative, capable and caring. This focus brought a number of new people-focused initiatives in 2017, including the opening of our new head office in Amersfoort, in the Netherlands. Known within the company as "the hub", this office is set up in such a way that it stimulates contacts; it fosters collaborations on multiple levels; and also generates new ideas. Furthermore, we are confident that this is the environment that can best progress our sustainability agenda.

"Our people are our most valuable resource. Knowledge and the ability to innovate are extremely important to remain relevant in our industry. This requires talented people, with the best ideas and capabilities. We have always had a lot of talent across the entire company – from a local level through to international levels and everything in between – performing a wide variety of essential functions. However, we feel the need to further step up our efforts to build a strong, diverse and dynamic workforce. We do this by identifying and developing talent and by offering our people meaningful opportunities to grow the business and professionally," explains Jan Alberdingk Thijm, Chief HR Officer and Member of the Executive Committee at Nutreco.

Another important development to benefit our employees was the introduction of a new organisational structure. In reshaping Nutreco – from a company with seven business units to two divisions (Animal Nutrition and Aquafeed) – the company has created more focus, made it more global and also more accountable. As well as providing the opportunity to better direct our energy and to deliver more specific innovative strategies, the transparency of the new structure provides our people with a much clearer vision of where we are heading and what is expected from them.

Meanwhile, through the new 2:2:2 Leadership Programme, we have changed the way that we source new young talent. This unique three-year trainee initiative brings high-potential individuals into the organisation and offers them the opportunity and support to put their leadership to the test – in two countries, two jobs and two different companies – and hopefully a route into general management relatively early on in their career.

At the same time, we are continuing with our Employee Engagement Survey and the Culture Champions programme. The survey determines the level of motivation among our employees and identifies any barriers affecting performance, while our team of 100 Culture Champions continue to carry out actions at a local level that support culture development as well as an inspiring environment in which to work.

"These are two very important strategies aimed at delivering the kind of positive culture from which our business and our people can thrive. Essentially, we want our people to make the most of their careers with us – it is good for them and it's equally good for Nutreco's progress as a sustainable global company," says Thijm.

#### **EMPLOYEE BY GENDER AND CONTRACT TYPE**

	2017	2016
Number of employees at year end	11,366	11,545
Full-time	95%	95%
Part-time	5%	5%
% Women	26%	26%

#### **EMPLOYEES PER REGION**

	Male	Female
Asia Pacific	1,132	322
Africa	288	26
Europe	3,870	1,735
North America	1,213	463
South and Central America	1,951	366

#### **EMPLOYEES PER SEGMENT**

	2017	2016
Animal Nutrition	5,350	5,279
Fish Feed	3,157	3,026
Iberia	2,589	2,925
Corporate	270	315

"Our people are our most valuable resource. Knowledge and the ability to innovate are extremely important to remain relevant in our industry." Jan Alberdingk Thijm

#### **NEW HIRES AND TERMINATIONS**

	Male	Female	Undeclared
New Hires	1,101	400	17
Left Nutreco	1,277	526	4

#### % EMPLOYEES HAVING REGULAR PERFORMANCE/ CAREER DEVELOPMENT REVIEWS (WHITE COLLAR ONLY)

Total	3,780
% of Nutreco Employees	33%, but 84% of white collar

## **Ethics and Compliance**

Nutreco wants to conduct its business with a focus on results and sustainability – today and for future generations. We can achieve this by doing business in a responsible way, whereby behaving with integrity and in compliance with laws and internal rules are essential. This is not only what our stakeholders expect from us, it is also how we want to contribute to current and future society.

Ethics and compliance are essential for our license to operate. It is our belief that a sound ethics and compliance system creates competitive advantage in the sectors and areas where we operate by helping the business to navigate to secure our future. The Nutreco Ethics and Compliance Programme contains all the building blocks for an effective compliance system. The foundations of the programme are our corporate values and our Code of Ethics. The Code of Ethics clearly outlines our approach to business conduct, personal conduct and business integrity and by doing so addresses Guiding Principles 3-6 and 10 of the UN Global Compact.

At the heart of the programme are the six compliance topics that Nutreco focuses on: Third Party Due Diligence, Trade Sanctions & Export Controls, Anti-Bribery and Corruption, Competition, Data Protection and Fraud. On each of these topics up to date policies, processes and tooling are in place to guide the business. This is further supported by a training programme comprised of e-learning and in-class education. Next to this, our whistle-blower facility "Speak Up" allows for reporting concerns, anonymous or by name, by telephone or via a web portal.

To drive a culture of ethics and better support the business in meeting its compliance obligations, a separate Ethics & Compliance function is currently under development. Once implemented to its full scope, each OpCo will have a well-trained and experienced Ethics & Compliance Officer to turn to for guidance, education and support.

Our ultimate goal is to embed and ensure sustainable ethics and compliance throughout our businesses. Our Ethics and Compliance programme is based on a maturity growth model encompassing a defined set of actions involving people, processes and policies and technology.

# 5 comprehensive assessments

- 1 Food safety and regulatory compliance
- 2 Nutritional properties
- **3** Physical attributes

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- 4 HSE and potential risks
- 5 Sustainability classification



### Feed to Food Quality and Safety

Consumers demand safe, healthy and delicious food, which means that trustworthy, high-quality feeds are a prerequisite for the agriculture and aquaculture industries. As a leading global supplier of these feeds, Nutreco has embedded strong quality assurances and controls into every stage of its operations. At the heart of this commitment is Nutrace®, our global feed-to-food

quality and safety programme.

In 2017, the focus was on the finalisation of the multipurpose Nutrace®-HACCP (hazard analysis and critical control points) system – covering both feed and food safety, as well as quality and reputation – which will contribute to the protection of brand value and product liability across all of our companies. Another important milestone, saw our new global assessment tool, the Ingredient Supplier Assessment Management (ISAM) system go live. With the company sourcing raw materials and ingredients globally for the products that it makes, every supplier is required to adhere to Nutreco's Supplier Code of Conduct. Essentially, ISAM evaluates potential suppliers, with the process beginning with the collection of important detailed data on their products, after which five comprehensive assessments are conducted: (1) food safety and regulatory compliance; (2) nutritional properties; (3) physical attributes; (4) HSE and potential risks of exposure to the product for our plant workers; and (5) sustainability classification. These assessments are available to the Quality, Procurement and Production teams in order to help mitigate and control risks and to see how products could be handled in our plants in the safest and most efficient ways possible.

Meanwhile, part of our global Food Safety & Quality team meeting focused on crisis training and ensuring



"Risks are reduced by having all of our plants operating in a safe and sustainable way. Such an approach also builds trust levels and leads to much greater confidence in the supply chain." Nina Flem and Peter Fidder

that our risk management plan were robust, efficient and practical. This included identifying any potential weaknesses in our crisis plan and ways in which improvements could be made. In addition, we looked at how further modules could be implemented into our 1QM platform for better and more efficient quality assurance. Supporting Nutrace®, 1QM monitors core processes by optimising and standardising business quality management processes and information.

Alongside systems that are continuously being refined to minimise any potential risks associated with feed production and to see that any irregularities are quickly found and acted upon, equally strong emphasis continued to be placed on close team collaboration and sharing of best-practice across all Nutreco companies and operations. Together these strategies provide the bedrock upon which the manufacture of high-quality agri- and aqua-feeds, produced from safe and sustainable raw materials are ensured.

"Risks are greatly reduced by having all of our plants operating in a safe and sustainable way. Such an approach also builds trust levels and leads to much greater confidence in the supply chain, which is crucial when it comes to fulfilling our company-wide mission of 'Feeding the Future'," according to Nina Flem and Peter Fidder, Directors of Quality Affairs for the Skretting and Trouw Nutrition Divisions, respectively. Nutreco is always seeking to expand our knowledge of the nutritional composition of feed ingredients as well as the impacts of the supply chains that create them. This helps us to deliver products that enable farmers to produce more from less, and by doing so addresses the UN SDGs 13, 14, 15 and 17.

lindo



# 

# What is our objective?

By 2020 we will successfully complete the fishery improvement project in Peru.





#### 56•

#### What did we do in 2017?

- → Signed MOU together with two other industry partners to be part of an advisory committee;
- → Granted economic support to the project;
- → Participated in two advisory committee meetings.

#### What was achieved?

- The project has been officially registered as a comprehensive fishery improvement programme;
- Progress has been made on gathering information necessary to applying the ecosystem approach to the Peruvian anchovy northerncentral stock fishery.

#### What was the impact?

- → The development of innovative solutions to preserve marine resources;
- Sharing of expertise with governments and other stakeholders to better mitigate and manage risks arising from fishing and aquaculture.

# INGREDIENTS

# What is our objective?

By 2020 we will contribute to the development of an industry based solution to reduce deforestation associated with the primary production of crops.











#### What did we do in 2017?

→ Engaged with stakeholders from various parts of the soy supply chain to establish partnerships.

#### What was achieved?

- → Became signatories of the Cerrado Manifesto;
- → Became signatories to the New York Declaration on Forests;
- → Joined the Collaboration for Forests and Agriculture (CFA).

#### What was the impact?

→ Contributes to the elimination of agriculture driven deforestation. • 57

# Assessing the Sustainability Performance of our Suppliers

Since 2010, Nutreco has required suppliers to demonstrate their commitment to sustainability by asking them to sign our Supplier Code of Conduct (SCoC). The criteria specified in this code relate to various aspects including those referred to in UN Global Compact Guiding Principles 1,2,4-6,7 and 10. We further built on this in 2015 with the introduction of sustainability questions into the supplier audits undertaken by the quality team. Full details of the development of this process can be found in the 2016 Sustainability Report.

# Signing the Supplier Code of Conduct

In 2017, Nutreco continued to ask all new suppliers to sign the SCoC. Our percentage of direct spend covered by suppliers that have signed the code remained stable at 86% from 2016 as offsetted by some suppliers which were discontinued. In 2017, we started the implementation of the new quality and document management system (refer to quality section on page 52 for details), which will facilitate the on-boarding of new suppliers and provide a central storage location for all signed SCoCs. The new system requires all existing signed documents to be migrated from the existing platforms where they were stored, which is currently work in progress. Furthermore, Nutreco has started to include the SCoC as part of Frame Work Agreements with main suppliers. During the course of 2018, with further development of these main actions, we shall see an increase in the percentage of direct spend covered by SCoC.

## **Supplier Audits**

A total of 50 quality audits were undertaken in 2017. The majority of these (58%) took place in China, with 26% of the Chinese audits undertaken by FQSI, a thirdparty auditor. The remaining audits were executed by our internal quality team throughout various locations around the world, including China, Brazil, India and South Africa. Sustainability was included in most of the audits, with the exception of the 12 companies for which the audit was just a follow-up on criteria that were found to be non-compliant in the previous audit. In these cases, the sustainability criteria were not included because they were fully compliant and did not require any further investigation.

The majority of suppliers were found to be compliant, with 12% having minor non-conformities and 6% having major non-conformities. Of these, three suppliers were not approved and the remainder were required to undertake corrective actions. The major non-conformities included lack of engagement with their suppliers on sustainability related issues, unsafe or polluting work environments and a failure to adequately train staff on relevant sustainability policies.



# 86% of our direct suppliers have signed the Supplier Code of Conduct

### Future Plans for Assessing Supplier Compliance with Supplier Code of Conduct

In recognition of the need to further extend our approach to sustainable procurement, Nutreco initiated a project in 2017 to investigate options for assessing supplier compliance with the criteria specified in our SCoC. This project took into consideration the best practices from literature as well as top performing companies worldwide. From this it was identified that the most practical and effective solution for Nutreco was to adopt a three-step process aimed at identifying and assessing our most high-risk suppliers. The first step is to engage with all suppliers by changing the Supplier Code from a standalone document to one that is integrated into the supplier contractual agreement. Not only will this strengthen supplier commitment, it will also help to reduce the internal administrative burden. The second step is undertake a risk assessment that will determine which suppliers pose a high sustainability risk based on their country of origin and product category. The suppliers that are identified as being high-risk will then be considered to undergo a site audit.

### **Deforestation**

Nutreco has been a long-term supporter of multistakeholder initiatives that are focused reducing deforestation. This includes our involvement as an active member of the Roundtable for Responsible Soy (RTRS), the Roundtable for Sustainable Palm Oil (RSPO), the FEFAC Sustainability Committee and the US Soy Export Council Advisory Committee.

In 2017, we set a goal to work towards developing industry-based solutions to this issue, which led us to join three new platforms targeting deforestation. Firstly, Nutreco joined a number of strategic partners that formed the Collaboration for Forests and Agriculture (CFA). This initiative was launched in 2016 by the National Wildlife Federation (NWF), The Nature Conservancy (TNC) and the Gordon and Betty Moore Foundation with the aim to achieve solid commitments to zero conversion by leading companies that buy, distribute and process soy and beef in the Amazon and Cerrado regions in Brazil, and in the Gran Chaco region spanning Argentina and Paraguay.

Nutreco was also part of a broad support group facilitated by the Consumer Goods Forum (CGF) formed in 2017 to address further ways of protecting the Cerrado biome in Brazil. The Cerrado biome represents 21% of Brazil's land area and is one of the richest tropical savannahs in the world. Nutreco was one of the 23 original signatories and the only business-to-business company to sign. By doing so we commit to bringing practical proposals and solutions that will allow the Brazilian industry to increase its beef production in ways not requiring further deforestation. Last but not least, we became signatories to the New York Declaration on Forests (NYDF), which was launched during the 2017 UN Climate Change Conference in Bonn. This agreement outlines ten ambitious global targets to protect and restore forests and end natural forest loss by 2030 and has been endorsed by over 190 countries, subnational governments, companies, indigenous peoples and NGOs to date.

In addition to our involvement in multi-stakeholder initiatives, we have also continued to support the development of deforestation-free supply chains through our direct raw material purchases. Since 2015, Nutreco has purchased book and claim certificates to offset 100% of all palm oil ingredients purchased throughout the global business, excluding palm kernel oil which accounted for 15% of our total palm oil purchased in 2017. The decision to exclude palm kernel oil is due to the limited availability of this product and the associated costs. Further to this, 100% of the soy purchased by Skretting Norway and Skretting Australia is Proterra certified.

### Applying an Ecosystem Management Approach to the Peruvian Anchovy Fishery

In 2016, Sociedad Nacional de Pesquería (the National Fishing Association of Peru), Skretting and Cargill Aqua Nutrition (producers of aquaculture feeds) in cooperation with CeDePesca established a comprehensive fishery improvement project (FIP) with the aim of strengthening research, management and sustainability in applying the ecosystem approach to the Peruvian anchovy northern-central stock indirect human consumption (IHC) fishery.

Among the coastal pelagic species of the Northern Humboldt Current System, the Peruvian anchovy (Engraulis ringens) is predominant and creates one of the most important single species fisheries worldwide. The Northern Humboldt Current System is an important area of one of the most productive world marine ecosystems, the Humboldt Current Large Marine Ecosystem. The Humboldt Current extends along the coast of Chile and Peru.

In 2017, the project made progress in a number of areas: It is building a database derived from data gathered by the industrial fishing vessels; improvements for the management system of the fishery are being promoted; while the impacts of the industrial fleet on endangered, threatened and protected (ETP) species and other ecosystem components have been determined.



At Nutreco, we believe that a sustainable future is not viable without the involvement of motivated people. Therefore, we are actively engaged with internal and external stakeholders to achieve common sustainability goals. This addresses the UN SDGs 2, 3, 8 en 17.





# What is our objective?

By 2020 we will have an additional eight community development projects (total of 10) set up in emerging markets that transfer knowledge and best practice to subsistence farmers





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#### What did we do in 2017?

- Capacity building and training of farmers on best practices;
- → Data collection and analysis;
- → Connecting farmers to other stakeholders from their value chain (e.g. fingerling providers, marketers);
- → Establishing partnerships with NGOs, governments and farmer groups;
- → Contribution of up to €50,000 per project per annum.

#### What was achieved?

- → 53% increase in farmer income and 18% increase in milk production in Indonesian dairy project;
- → 100% improvement in harvest weight and 33% improvement in survivability for Nigerian catfish project;
- → Two new projects initiated in Zambia and Guatemala.

#### What was the impact?

→ Develops the capacity of small scale farmers to participate in supply chains and improve their livelihoods.



# What is our objective?

By 2018 we will contribute to a 50% reduction in antibiotic use in Chile through our involvement in the Pincoy Project.





#### What did we do in 2017?

→ Established a working group with seven other local and international companies within the Chilean salmon industry.

#### What was achieved?

- Established the first fish health project in the world that covers the concept of animal welfare in FW and SW;
- → Gathered data on health parameters from pilot farms;
- Collaboration with academia to communicate about AMR and the use of antibiotics in the industry;
- → Started the work to make collaborative best practices handbook in the area of fish health;
- → Participation in FAO's "Antimicrobials use in Latin America's Aquaculture" conference (Lima, Peru, 22-24 Nov).

#### What was the impact?

- → Helps our customers to reduce the use of antibiotics for routine use in food production;

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# Community Development Projects

Through our company-wide Mission of 'Feeding the Future', we are very much aware that estimated increases in world population and the growth of middle classes will put increased demand on global food production. We are also aware that the increase in food production should originate in the geographies where the demand is growing the most. Essentially, it is not only about increasing food production to satisfy this demand, it is about increasing it in the right places. By focusing increased food production in emerging economies, we are able to address the challenges of alleviating poverty as well as hunger.

By carrying out Community Development Projects, Nutreco is proactively addressing UN SDGs 2 (Zero Hunger) and 8 (Decent Work and Economic Growth). Nutreco has strategically decided to convert these initiatives as part of a renewed focus of its Nuterra programme and is targeting engagement in 10 initiatives around the world over the next three years.

In 2013, Nutreco shifted its Community Development Projects from being philanthropically-driven to being driven by "creating shared value". The latter, allows us to remain involved indefinitely because it is part of our business model in those emerging economies. It also enables small-scale protein farmers to improve their livelihoods and help themselves out of poverty. By sharing best-practice production technology and selling nutritional solutions, together we can 'Feed the Future'. Our community development programme continues to grow, with two new projects started in 2017 for small-scale tilapia farmers in Zambia and poultry egg producers in Guatemala. Further to this, plans are in place for another three projects in 2018. One of which has already been scoped and involves small-scale dairy farmers in Vietnam. Summaries of the progress for the four existing projects are provided below.

## **Nigerian Catfish**

After two years, the catfish farmers participating in this project have demonstrated their abilities to adapt to new techniques, keep records to improve their pond management protocols and to organise themselves to sell their final products more strategically.

A combination of periodic training workshops coupled with weekly farm visits to assist farmers in specific challenges has resulted in significant improvements. Many of these farmers live at the poverty income level and because of their increased farming output, they have successfully raised their incomes. Farmer enthusiasm and their willingness to share data with other participants and to learn from past mistakes have been major drivers of success. Several challenges and obstacles have been encountered along the way. Principally, the lack of sufficient "revolving fund" micro-financing to allow farmers access to purchase catfish feed throughout the production cycle often leads farmers to revert to pre-programme practices, which is counter-productive. However, those farmers that "stay the course" clearly demonstrate productivity improvement as reflected in the KPI table below.

Another challenge that we are currently working to improve is the selling of the final product at open food markets. With increased production and synchronised harvest timetables, some local markets become over-saturated, leading to significant decreases in the selling price and potentially reduced income. Several workshops have been held to better organise cooperative selling. Farmers generated ideas and proposed strategies to address these obstacles, including value-added (smoked) products, staggering harvest activity over longer timeframes and offering variable fish sizes. We expect much better selling income results during 2018 as a consequence of these revisions.





#### **IMPROVEMENTS IN KPIS FROM 2016 TO 2017**

	2016	2017	+/-
Participating farmers	50	109	+118%
Feed conversion ratio	1.7	0.9	-47%
Average harvest weight (kg)	0.6	1.2	+100%
Survival rate (%)	69%	90%	+33%
<b>Production cycle</b> (# harvests per year)	2	3	+50%



## **Indonesian Dairy**

After three years, Trouw Nutrition Indonesia's Community Development Project reached maturity and closed. We are very proud of the collaboration with our partners in assisting 279 small-scale dairy farmers to raise themselves out of economic poverty. Those partners included:

- Directorate General for Livestock and Animal Health Services (DGLAHS), Indonesian Ministry of Agriculture (MoA)
- West Java Provincial Livestock Office
- Bogor Agricultural University (IPB)
- Wageningen University Livestock Research (WUR-LR)
- Dairy Coops (KPGS Cikajang and KPSP Saluyu)
- Barrenburg

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• Ottevanger

During the project, we conducted workshops to train the 279 trainers so that they can return to their respective farm co-ops and train their membership, which totalled in excess of 1,800 additional small-scale farmers. Training workshops included proper forage selection, supplemental feeding programmes, the improvement of feeding practices and capacity building.

The combination of education and proper management practices resulted in measurable success and directly benefited the community. Principally, the programme was successful in increasing milk production per cow/day by an average of 18%, reducing feed cost per litre of milk by 13.4%, and increasing family income by an average 53%.

Trouw Nutrition also achieved good results in advising on customised feed concentrate formulations and mineral premixes. The co-ops were able to develop three new formulas that supported increased animal performance.

The concept of feed advisors employed by coops was well accepted by the co-ops and by local provincial government. Feed advisors focused on increasing capacity and expertise at a co-op level regarding dairy cattle feeding and best-practice. A total of five





feed advisors were employed by the two co-ops. They will play an important role in the continued monitoring and improvement at the farms as the project continues independently.

On completion, results of the project were presented to 100 stakeholders from the dairy sector (dairy companies, dairy coops, government and academic and financial institutions). Ongoing data collection and project monitoring will continue over the next three years to ensure a continuation of the good results.

A short, three-minute video was produced to describe the project results and can be viewed at: www.youtube.com/watch?v=M3GWZ8tidTk

#### **BENEFITS SOCIETAL (COMMUNITY)** Impact of improved concentrate feed

Milk Production	Feed Cost	Farmer Income
18% increased	13.4% reduced	53% increased

### **Zambian Tilapia**

Nutreco launched this project during the fourth-quarter of 2017 following the identification of two northern districts, Mpulungu and Kawambwa, and 25 candidate small-scale farmers in each location, thereby providing a total of 50 participating tilapia farmers for year-one of this three-year commitment.

The choice to focus on these two districts in northern Zambia was because of the high level of fish farming activity and low technology employed by farmers in this region, as well as the current lack of quality feeds and the potential to positively affect incomes and livelihoods. Another reason to choose Zambia was the enthusiasm and commitment to succeed by the local farming community as well as the determination of Skretting staff to make a difference in the country.

By inviting local partners that have similar strategies to combat world hunger and increase economic outlook of communities such as the WorldFish Centre and others to join this initiative, we believe that a well-executed work-stream to help the fish farmers in Mpulungu and Kawambwa will result in long lasting improvement for those communities.

Initial responses from the Department of Fisheries and the fish farmers has been very positive; locations for the first training workshops have been identified and arrangements to support the first tilapia stocking are well underway.

### **Guatemalan Eggs**

Similar to our Zambian community project, our Guatemalan egg production initiative was launched late in 2017 and is in its early phases. Guatemala was chosen as a focus for Nutreco's Community Development Projects due to the combination of high levels of poverty and malnutrition, low levels of education and limited opportunities for income generation, especially for females.

In 2017, Trouw Nutrition Latin America initiated collaboration with our local partner Good Neighbors Guatemala to improve the quality of life within the La Fragua community by creating an egg production co-op, called Plumas. Eggs continue to be the most available and affordable source of protein in this region, making it the ideal choice to create an alternative, stable and sustainable source of income to cover basic needs such as food, housing and education. Good Neighbors Guatemala and Trouw Nutrition Latin America's partnership aims to empower the female members of the household to successfully manage a fully-equipped poultry house with 100 laying hens. Together, the partners interviewed and selected 25 families to participate in this initiative.

Trouw Nutrition's main role within Plumas is to ensure optimal knowledge transfer and to open up new opportunities via our business partners and network. Through our partners, the initiative will have access to economical high quality laying hens and feed, while our team of experts will provide training and mentoring regarding feed (nutritional premixes), farm and health management.

This project has the basic building blocks in place to have a positive impact on household income and child education. It should also strengthen family ties and add to the nutritional alternatives of family protein intake.







# Nutreco's Community Day goes Global

As part of our effort to maintain social engagement in the communities where we operate and facilitate employee bonding outside the workplace, Nutreco expanded its traditional Community Day to be a global undertaking.

On 28 September 2017, Nutreco employees from around the world took part in the first-ever Global Community Day. Approximately 4,000 employees from 33 countries took part in over 140 different activities to help their local communities. The wide variety of projects included spending time with disabled, elderly and refugee communities, as well as more physical activities such as renovating schools and building community gardens.

In order to capture the energy and enthusiasm generated by this event, a short film was made at each of the sites and compiled into six BU videos. Due to the success of the event, the Nutreco Global Community Day will become an annual occurrence.

## SeaBOS

Skretting through Nutreco is one of 10 seafood companies that joined forces in 2016-2017 to form the Seafood Business for Ocean Stewardship (SeaBOS) initiative, aimed at leading a global transformation towards sustainable seafood production and a healthy ocean. This includes a pledge to protect the world's oceans by working to eliminate illegal activities including slave labour and preventing overfishing. These commitments are now being translated in to timebound and operational targets and actions, in close collaboration between SeaBOS members and scientists at the SRC. By doing so Skretting is demonstrating its commitment to UN Global Compact Guiding Principles 1, 2, 4, 5, 7 and 8.

On 9 June 2017, Knut Nesse travelled to the UN Headquarters in New York to attend a Stockholm Resilience Centre event on 'Engaging the private sector in SDG 14', held during the Ocean Conference. SeaBOS is also one of the 1,328 voluntary commitments made in connection with the Ocean Conference. Acting as interim chairperson of the SeaBOS initiative, Nesse also spoke at the event, representing the 10 signatory companies.

## **Pincoy Project**

The Chilean salmon industry has long been criticised for its extensive use of antibiotics. Although the primary reason for this high usage has been to combat Septicemic Rickettsial Syndrome (SRS), a bacterial disease that has hit the Chilean salmon industry hard over many years, growing government and consumer pressure has resulted in a stronger focus from industry to reduce its antibiotic dependence. While these coercions have led to the development of a number of positive innovations, they have all been deployed in isolation, leaving the sector still waiting for its first large-scale improvement.

In 2016, to find a holistic solution to Chile's antibiotic challenge, Skretting brought together seven local and international industry partners from various stages of the





salmon production chain to initiate the Pincoy Project. Collectively, the project incorporates selective breeding, high-quality hatchery diets, careful smolt selection, vaccines, functional feed-based diets, best-practice protocols at both the freshwater and seawater growth stages, as well as close monitoring and reporting throughout.

Together Skretting, AquaGen/Blue Genomics, Pharmaq, Centrovet, Cermaq, Blumar and Entisqueros are working collaboratively on strategies aimed at minimising the risk of disease and therefore the use of antibiotics. Specifically, this unique project seeks to halve the use of antibiotics on pilot farms by the end of 2018, and to use this knowledge to contribute to the sustainable growth of the industry as a whole. As a result of the technical committees' work (Freshwater, Seawater and Health), along with the Executive Committee formed by the leaders of each company, the first-ever health project in the world to focus on fish welfare across the entire production cycle was established. In addition to this undertaking, data continues to be gathered from the pilot farms on health parameters, and work has started on a fish health best-practice handbook, which will be shared with the broader industry upon completion. Last but not least, in order to share our progress externally, we presented Pincoy at FAO's 'The Use of Antimicrobials in Aquaculture in Latin America' conference (Lima, Peru, 22-24 November 2017).

## **AgriVision**

Nutreco hosted its 9th biennial AgriVision conference 12-15 June 2017 at Noordwijk aan Zee in the Netherlands. The conference was attended by approximately 400 delegates from more than 40 countries including board-level executives in food and agribusiness, influential public officials and key NGO representatives.

This year's conference had a strong focus on developments in agricultural technology, the global public health issue of antimicrobial resistance and the importance of agricultural development for feeding a growing world population. The keynote speaker was Kofi Annan, the 7th Secretary-General of the UN who made particular mention of the good work Nutreco is doing with its community development projects in Nigeria and Indonesia. Annan was joined by a selection of high profile speakers including Anne Villemoes, former VP Communications of Danish Crown, and David Rowan, editor of WIRED magazine.

The event included a 32-hour "hackathon" with the objective to showcase the power of open innovation as a means to encourage collaboration to find innovative uses of agricultural data. Five teams took part in five



challenges that focused specifically on solutions for swine production systems. The winning place was awarded to SwineSmarts, a data capture tool to link pig feed intake patterns to desirable characteristics at slaughter. This event was made possible by the generous donation of data by Nutreco together with AgriSyst, For Farmers, Geodan, Hendrix Genetics, Nedap, Vion Food Group and Wageningen University.

"I am convinced that we are entering an era in which companies that are integrating responsibility and sustainability into the core of their operations will be the market leaders of tomorrow" Kofi Annan







# External Quality Assessment Statement

### To Nutreco management

In its 2017 Sustainability Report Nutreco reports on the sustainability matters that were identified by Nutreco in its materiality assessment. The quantitative data on these indicators were compiled from source data on the level of operating companies on the basis of Nutreco's reporting criteria and processes. We were asked by Nutreco to examine the reporting processes and controls and to assess for a number of specific indicators whether the quality of the reported data was in accordance with Nutreco's criteria.

The purpose of our examination procedures is to give advice to management on how to improve its reporting processes and controls as well as enabling management to safeguard the quality of the reported data in the 2017 Sustainability Report. As we are not bound by assurance standards, we do not provide external assurance on the reported data. The scope of our examination procedures was limited to the following information as reported on pages 44, 58, 19, 50, 51 and 60:

- Energy data
- CO<sub>2</sub>
- Water withdrawal
- Waste
- Number of injuries
- Supplier Code of Conduct
- Nuterra Self-Assessment
- Workforce
- Deforestation-free supply chains

#### We performed the following procedures:

- We performed 5 site visits to Nutreco's local companies in Sevilla (Spain, two sites), St. Mary's (Ontario, Canada), Grodzisk Mazowiecki (Poland) and Tooele (Utah, USA). During these site visits we assessed the data that was reported to head office at the end of the third quarter. Part of our work consisted of assessing local reporting practices in line with Nutreco's reporting criteria and reconciling the reported information to source data;
- At head office level we performed analytical procedures on data that was reported by locations that were not visited;

- We assessed the administrative organization concerning Nutreco's sustainability performance data
- We assessed the reporting process and related controls by performing interviews and walk-throughs;
- We assessed the narrative assertions in the 2017 Sustainability Report with regard to the indicators in scope;
- We assessed the application of the GRI guidelines and the GRI table in the 2017 Sustainability Report;

We conveyed our observations and recommendations for improvement to management. Misstatements and data errors that were identified as a result of our procedures were corrected by Nutreco in the 2017 Sustainability Report.

Sustainalize, 23 April 2018

#### **About Sustainalize**

Sustainalize is a management consultancy firm focused on CSR and sustainability. We support organizations in developing their strategy, internal and external reporting, data validation and performance management.







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