



# ENVIRONMENTAL REPORT 2013



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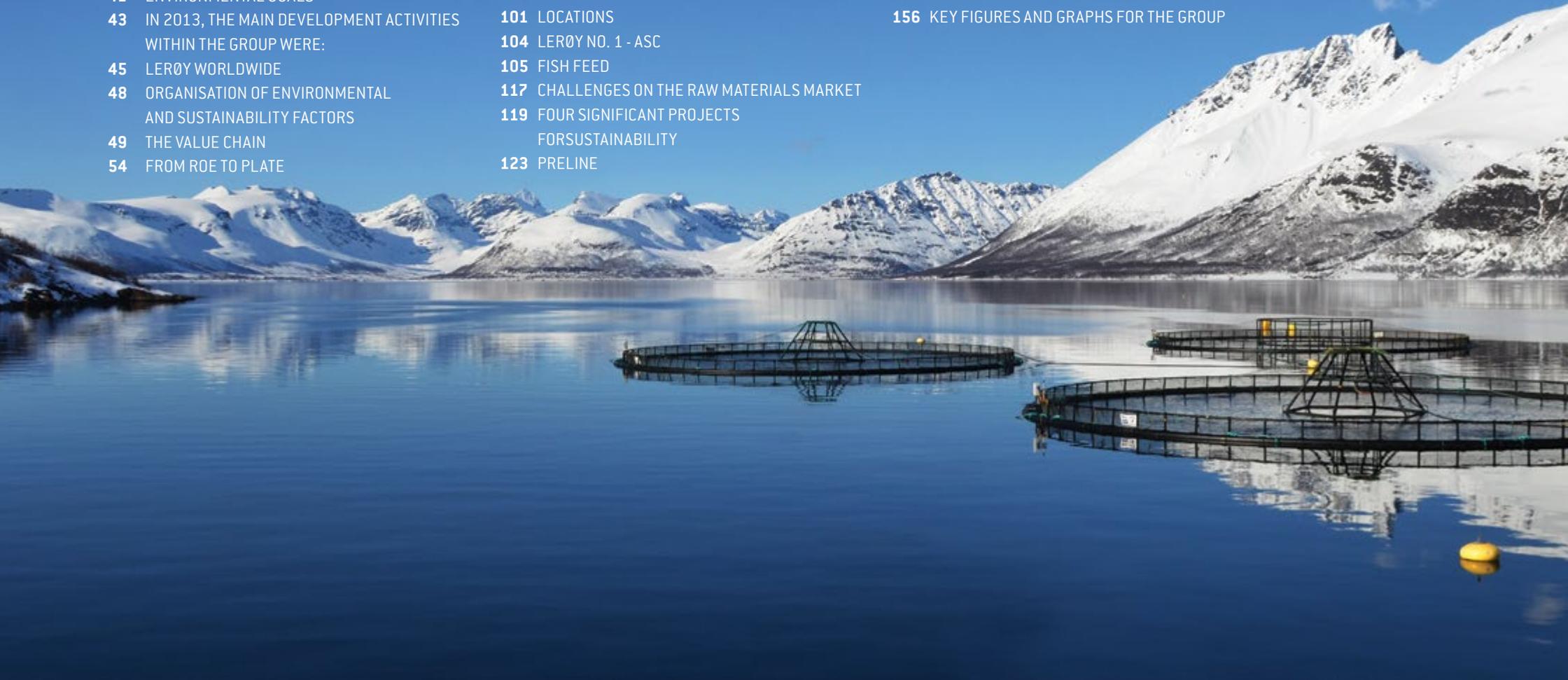
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# LERØY SEAFOOD GROUP



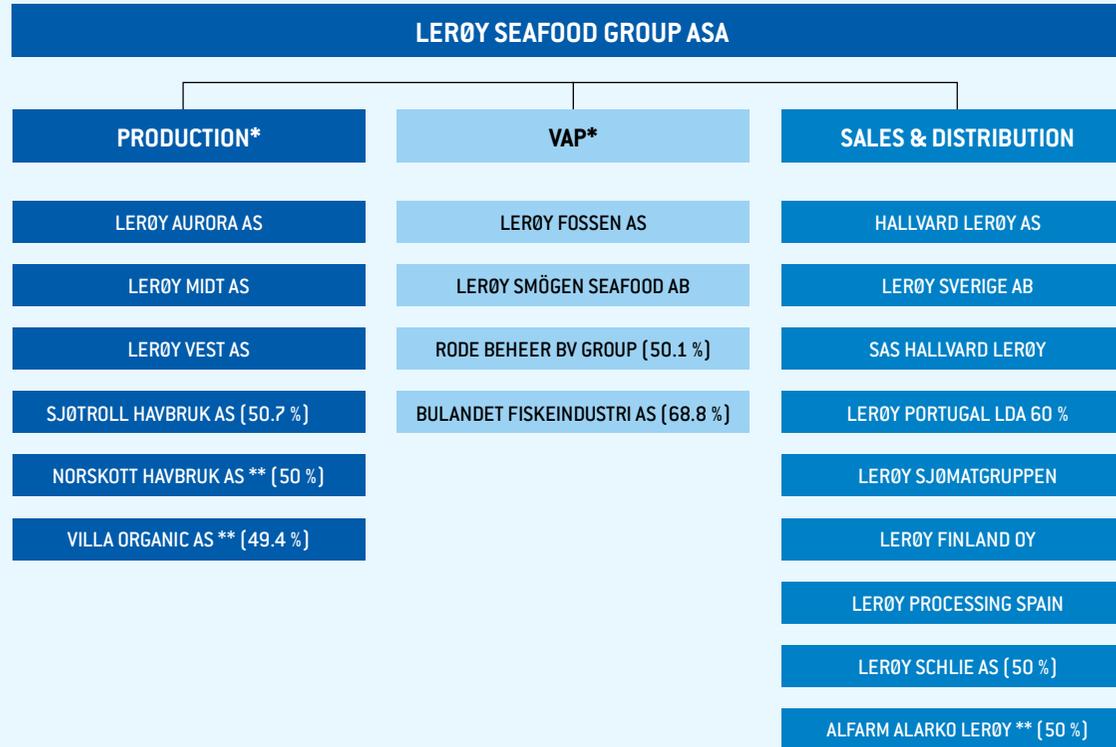


## HISTORY

The Lerøy Seafood Group can trace its operations back to the end of the 19th century, when the fisherman-farmer Ole Mikkel Lerøen started selling live fish on the Bergen fish market. This was fish he either had caught himself or had bought from other fishermen. The fish was hauled to market in a corf behind Ole Mikkel Lerøen's rowing boat, a journey that could take between six and twelve hours, depending on prevailing winds and currents.

Over time, Ole Mikkel Lerøen's operations gradually came to include retail sales in Bergen, the sale of live shellfish and a budding export business. In 1939, two of his employees, Hallvard Lerøy sr. and Elias Fjeldstad, established what today has become the Group's principal sales company - Hallvard Lerøy AS. Since its establishment, the company has been a pioneering enterprise in a number of fields in the Norwegian fishing industry. The main focus has constantly been on development of markets for seafood. The company has very frequently been the first to launch on new markets, or to commercialise new species of fish, products and concepts". This pioneering spirit is still very much alive in the Group.

Since 1999, the Group has invested substantially in various domestic and international enterprises, both upstream and downstream. Thanks to the Group's investments, it is now firmly established as a national and international distributor of fresh seafood.



Thanks to these investments carried out over slightly more than ten years, the Group has now developed into a totally integrated seafood group with a solid foundation for further growth. Production of own-farmed salmon started at the end of 2003, when the Group acquired 100% of the shares in Lerøy Midnor.

The historical growth achieved by Lerøy Seafood Group has been based on good operations, acquisitions, development of acquired enterprises and building of alliances. The Board of Directors and management work continuously on developing strategic, forward-looking models for the Group's business. This will continue to include mergers and acquisitions, both upstream and downstream.

# IMPORTANT MILESTONES IN 2013

## STRATEGIC EVENTS

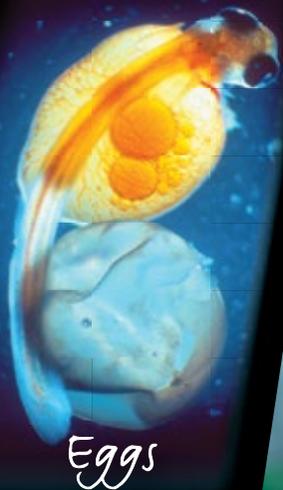
- Acquisition of 49.4% of the shares in the fully-integrated sea farming company Villa Organic AS. 16 licences and an estimated slaughter volume for 2014 of 18,000 tons of salmon.
- Official opening of the new, highly modern recirculation plant for smolt in Belsvik, Sør Trøndelag, representing an investment of NOK 350 million.
- Start of construction of the extension to Lerøy Fossen's production facilities in Hordaland and Lerøy Smøgen in Sweden. Capacity doubled for both companies.
- Investments in fish cut facilities in Norway, France and Spain.
- Cooperation agreement with Brødrene Schlie AS in Denmark regarding production, marketing and distribution of freshly packaged produce in Denmark and Germany.
- Lerøy Hydrotech AS and Lerøy Midnor AS merged with Lerøy Midt AS.

## PRODUCT DEVELOPMENT

- Lerøy becomes Norway's largest producer of sushi.
- National launch of entire MAP range – packaged fish for distribution to Norwegian grocery chains.
- Speciality award from Matmerk for Lerøy Fossen for high quality processed trout.

## ENVIRONMENT/SUSTAINABILITY

- Launch of Ocean Forest.
- Lerøy was the first company in the world to gain ASC certificate for its salmon distribution chain.
- The first three aquaculture facilities to gain ASC certificates in the world are linked to Lerøy.
- No antibiotics have been administered for fish in the sea in 2013.
- No use of Chitin inhibitors over the past three years.
- Management of and participation in various R&D&I projects within aquaculture with a focus on the environment and sustainability.



Eggs



smolt



Farming



Harvest



Production



Distribution



Customer



## LERØY SEAFOOD GROUP

Paramount in Lerøy Seafood Group's strategy is to be a fully integrated supplier of the Group's key products, Atlantic salmon and trout. The Group currently reports within two main segments; Production and Sales & Distribution. The Group views its operations as regional with a global perspective. The Sales and Distribution activities are global, while the production processes are largely regional.

The Production segment includes the Group's activities within production and processing, mainly Atlantic salmon and trout. The subsidiaries in this segment represent a major employer along the Norwegian coastline and other areas, and strive to be visible and supportive in all operating regions. The Sales and Distribution segment has a global reach, and is involved in sales, marketing, product development and distribution of both the Group's own produced products as well as products from external suppliers. From the start of 2014, the Group plans to report for three segments; Fish Farming, Processing and Sales & Distribution. This new segmentation has been introduced in order to more clearly illustrate the substantial investments made in Processing, particularly in 2012 and 2013. At the end of 2013, the Group had 2,067 employees.

Sustainability is an increasingly important part of the Group's strategy. As one of the world's largest companies in the seafood sector, the Group is very aware of its responsibility to choose and develop sustainable solutions throughout its value chain. Lerøy Seafood Group's operations are based on what is produced in the sea, and the Group is highly dependent on the sustainable management of these resources, allowing for growth for the industry and the supply of products of an equally high quality also in the future.

The Group maintains a strong focus on the market. By actively developing new markets and new products from fisheries and aquaculture based on sustainable principles, the Group aims to develop profitable, efficient and binding alliances both nationally and internationally for both supply and marketing.

The seafood market is experiencing ever-increasing demands on food safety, quality, cost-efficiency, sustainability, continuity of supply and a higher level of processing. In order to meet these increasing demands and remain a driving force behind such developments, Lerøy Seafood Group follows an active policy to increase its coordination of the value chain, production and sales units, to increase sales expertise among employees and to make investments that will ensure the Group has the capacity to supply the right products at the right time. With its major and significant position within Sales and Distribution of seafood, the Group believes it is uniquely positioned to meet these increasing demands.

Lerøy Seafood Group strives to ensure that the products manufactured and purchased comply as a minimum with the industry's prevailing rules and regulations.

Lerøy Seafood Group also continuously seeks improvements which may reduce pollution and help protect the environment. Such sustainable solutions often materialise from the Group's own operations, but also in close cooperation with the Group's suppliers and customers. The Group has a long list of environmental goals with indicators which are measured at least every month. These are described in the chapter entitled "External environment".

Developments in the world's food markets make increasing demands on our marketing work and require differentiated approaches depending on the respective market area and on the products being marketed. Lerøy Seafood Group will therefore also in the future strive to provide its customers with cost-efficient, individual and forward-looking solutions, thus providing the Group and its partners with the best possible opportunities for growth.



Lerøy Seafood Group and its collaborators form a commercial network, which must strive to ensure mutual exchange of expertise between network members.

The seafood industry harbours a considerable potential, but if this potential is to be realised and exploited to the full, new products will have to be created and developed in line with the evolution of new markets. Lerøy Seafood Group is active in the development of new products and markets. It is important that trade between Norway and other nations can take place according to international regulations. Lerøy Seafood Group and its partners and colleagues will therefore work systematically to improve the reputation of Norwegian seafood both nationally and internationally.

Throughout 2013, Norway succeeded in sustaining its position as the world's leading producer of the Group's main product, farmed Atlantic salmon. Even when including the catch of wild salmon, Norway is still the largest supplier of Atlantic salmon.



Subsequent to numerous acquisitions in recent years, Lerøy Seafood Group has become the world's second largest producer of Atlantic salmon and trout, and this product area is therefore crucial for the Group's further development.

The Group's core activities demand various forms of expertise and a high degree of adaptability. For this reason, our organisation is made up of people from different sectors of trade and industry with a wide range of formal backgrounds and practical experience from different fields. As the Group is involved in a global industry which experiences continuous fluctuations in general conditions, it is paramount that our employees remain up to date and expand their knowledge and areas of expertise. The Group is made up of a young yet highly experienced group of people. With the constant rate of change in general conditions for the Group, we rely on employees who are dynamic, willing to learn and flexible. The Group has employees who meet these requirements. Our employees work hard to improve the Group's competitive edge and earnings and display a burning desire to see the individual companies fulfil future requirements and thereby achieve the Group's long-term strategic goals and performance requirements.

In order to meet future challenges in the world's food markets, the Group will continue to develop its organisation through projects linked to the Group's strategic goals. The Group's rapid development in recent years has been made possible by capable people who have found the Group to be an attractive place of work. One of several important prerequisites for the Group's continued positive development is its ability to offer attractive jobs to as many capable employees as possible. The Group must maintain a strong focus on leading the competition for result-oriented and competent personnel with higher than average capacities for work and change.

In Norway the Group had activities in 9 counties and 49 municipalities at year end. The Group is a major employer in several of these municipalities and is grateful for the good support provided by both local and central public authorities. In countries outside Norway, the Group is most active in Sweden and is well established in Stockholm, Gothenburg, Malmö and on the west coast in Smögen. In other countries, the Group has established activities in Denmark, Finland, France, Portugal the Netherlands, Spain and Turkey. Finally, the Group has sales offices in several important seafood markets such as Japan, USA and China. The Group is also represented in Scotland through the associated company Norskott Havbruk AS.



## BUSINESS SEGMENTS

The Group's primary business segments are Sales & distribution and Production.

This segmentation is chosen according to type of organisation and commercial risk.

The Production segment comprises the following companies: Lerøy Midnor AS, Lerøy Vest AS, Lerøy Hydrotech AS, Lerøy Aurora AS, Sjøtroll Havbruk AS, Lerøy Fossen AS, Bulandet Fiskeindustri AS, Lerøy Smögen Seafood AB, SAS Fish Cut, SAS EuroSalmon and Inversiones Seafood Ltda. Sales & Distribution consists of all other subsidiaries apart from Lerøy Seafood Group ASA (parent company). Lerøy Seafood Group ASA is not assigned to either of the segments.

Lerøy Seafood Group is experiencing significant growth and has already established major activities in many countries. While headquartered in Bergen, Norway, the Group's global sales and distribution activities are established in the most important seafood markets in the world. Sales and Distribution together with the Group's production activities constitute an efficient and profitable seafood group with considerable growth potential. The production clusters in the various regions shall be further developed by harvesting synergy effects in several areas, and the various production environments will draw on each other's expertise through extensive exchange of know-how. The Group's decentralised operation model in the production segment makes such exchange possible. The Group's regional focus creates, in our opinion, a basis for interesting industrial developments in that it forms alliances and collaborations beyond those of direct ownership. The Group's market orientation, with well-managed sales and distribution activities, makes it possible to benefit from economies of scale within logistics and distribution in collaboration with our future customers.

Our wholly integrated operations comprise a totality of decisive importance for our competitive ability when providing the Group's central customers with continuity of supply of quality fresh seafood products.

## PRODUCTION

In order to meet increasingly strict requirements on food safety, quality, cost efficiency, sustainability and continuity of supply within the Group's main areas of Atlantic salmon and trout, it is decisive in the Group's opinion to aim for a position as a fully-integrated supplier. The term "fully-integrated supplier" is defined by the Group as having control of all processes involved in the value chain for the production of the Group's main products, Atlantic salmon and trout. The Group is currently a fully-integrated supplier of Atlantic salmon and trout, and invests continuously in increasing the level of processing and in developing new products. Without a doubt, Atlantic salmon and trout are the most important species for the Production segment. The segment is also involved in the processing of white fish and production of seafood in brine and different types of seafood salads etc.

After Atlantic salmon and trout, white fish is the largest product area for Lerøy Seafood Group. In recent years, this product area has developed favourably through cooperation with a number of small and medium-sized companies. Our association with these businesses will continue to expand and is expected to afford us many interesting opportunities in the future. Lerøy Seafood Group is also a supplier of shellfish and fresh pelagic fish to Norwegian and European markets. The supplies of shellfish and fresh pelagic fish represent a small but interesting niche product area.

Since 2002, the segment's production of salmon and trout has enjoyed a tremendous development and now comprises units that in total harvested 145,000 tons of salmon and trout from 130 licenses in 2013. The Group is therefore now the second largest producer of salmonoid species in the world. Production takes place in three regions in Norway. The northernmost region is Troms County where Lerøy Aurora produces Atlantic salmon from 17 licenses. In Central Norway, the companies Lerøy Midnor AS and Lerøy Hydrotech AS were merged with Lerøy Midt AS, and now produce salmon and trout from 54 licenses. The last and largest region is West Norway where the companies Lerøy Vest AS and Sjøtroll Havbruk AS produce Atlantic salmon and trout from 59 licenses. In 2013, the Group acquired 49.4% of the shares in Villa Organic AS, thereby jointly controlling with the other main shareholder, Salmar, as good as 100% of the company's shares. In 2014, Villa Organic AS will be demerged into two parts, with one part for each of the main shareholders. Subsequent to the demerger, the Group will have eight licences in the region of Finnmark.

**1. VILLA ORGANIC AS**

**2. LERØY AURORA AS**

NO. LICENCES: 17 • 2013 GWT : 24 200

**3. LERØY MIDT AS**

(LERØY HYDROTECH AS AND LERØY MIDNOR AS)

NO. LICENCES: 54 • 2013 GWT : 58 900

**4. LERØY VEST AS**

NO. LICENCES: 34 • 2013 GWT : 34 400

**4. SJØTROLL HAVBRUK AS**

NO. LICENCES: 25 • 2013 GWT : 27 300



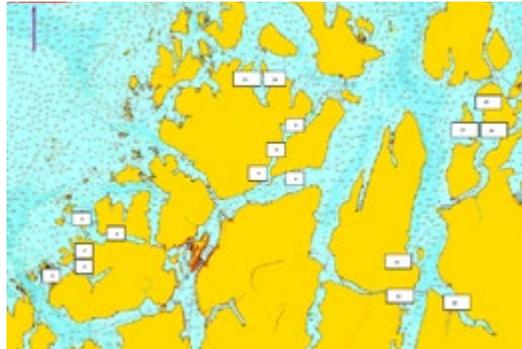
The Group's production of salmon in Scotland is effectuated through the affiliated company Norskott Havbruk AS. One central aspect of the company's strategy for growth has been to maintain a well-balanced growth rate for all parts of the production process. The Group follows a principal strategy to remain self-sufficient when it comes to quality smolt. It is also important for the Group to avoid transporting smolt over long distances. The transport of smolt and other live stock over long stretches of the Norwegian coast is considered by the Group as a major contributing factor to biological risk in Norway. The sea temperatures in Norway were low in the winter of 2013 and this had a negative impact on growth conditions. Group production of Atlantic salmon and trout fell from 153,000 tons in 2012 to 145,000 tons in 2013. The total production of salmon in Norway saw a corresponding decline in 2013, a major contributing factor to the record-high prices for salmon and trout.

At the start of 2013, the Group had a very positive outlook towards price developments and entered the year with a low share of contracts for in-house produced fish. The Group expected to see a decline in prices in the second half of 2013 which did not materialise. For the year in total, the Group had a 33% share of contracts, while the share of contracts in Q4 was as high as 45%. As a result of this contractual coverage, the prices achieved by the Group for salmon in 2013 were 36% higher than those in 2012. This is substantially lower than the increase in spot price of 49% for the same period.

Lower volume combined with substantially higher prices generated turnover for the Production segment of NOK 6,522 million, an increase from NOK 5,242 million in 2012. At the same time, the significant increase in prices achieved provided a considerable boost to operating profit prior to biomass adjustment for the segment, from NOK 287 million in 2012 to NOK 1,447 million in 2013. In 2013, the Group also experienced a considerable increase in production costs per kilo, primarily caused by higher feed costs and lower average slaughter weight. When compared with 2012, costs per produced kilo of salmon were up 6% in 2013.

# FACILITIES

## Lerøy Aurora



- |                 |                  |
|-----------------|------------------|
| 1. Saltholmen   | 10. Dåvøy        |
| 2. Tussøy       | 11. Karanes      |
| 3. Angstauren   | 12. Gourtesjohka |
| 4. Klokkardalen | 13. Stigen       |
| 5. Sessøy       | 14. Årøy         |
| 6. Solheim      | 15. Kåvika       |
| 7. Glimma       | 16. Kågen        |
| 8. Strandmo     | 17. Skarvestein  |
| 9. Futnes       |                  |

## Lerøy Midt



## Lerøy Sjøtroll



Company	Licences	Smolt (in mill.)	2011 Tons	2012 Tons	2013 Tons	2014E Tons
Lerøy Aurora AS	17	7.5	18 100	20 000	24 200	25 000
<b>Region Nord</b>	<b>17</b>	<b>7.5</b>	<b>18 100</b>	<b>20 000</b>	<b>24 200</b>	<b>25 000</b>
Lerøy Hydrotech AS (merged)	24	7.0	26 400	27 500	26 000	27 000
Lerøy Midnor AS (merged)	30	15.0	35 900	34 400	32 900	36 000
<b>Lerøy Midt AS *</b>	<b>54</b>	<b>22.0</b>	<b>62 300</b>	<b>61 900</b>	<b>58 900</b>	<b>63 000</b>
Lerøy Vest AS	34	14.2	34 500	38 700	34 400	39 000
Sjøtroll Havbruk AS (50,7 %)	25	8.4	21 700	32 900	27 300	30 000
<b>Region Vest</b>	<b>59</b>	<b>22.6</b>	<b>56 200</b>	<b>71 600</b>	<b>61 700</b>	<b>69 000</b>
<b>Total Norway</b>	<b>130</b>	<b>52.1</b>	<b>136 600</b>	<b>153 400</b>	<b>144 800</b>	<b>157 000</b>
Villa Organic AS (49,4 %) ***	8					9 000
Norskott Havbruk AS (UK) 50 % **		7.0	10 900	13 600	13 400	12 500
<b>Sum total</b>		<b>59.1</b>	<b>147 500</b>	<b>167 000</b>	<b>158 200</b>	<b>178 500</b>

● Consolidated ● Associated company

\* Lerøy Midnor AS and Lerøy Hydrotech AS were merged with Lerøy Midt in 2013

\*\* Lerøy's share (50%) of Norskott Havbruk AS' volumes

\*\*\* Lerøy's share (49.4%) of Villa Organic AS' volumes



## **SALES AND DISTRIBUTION**

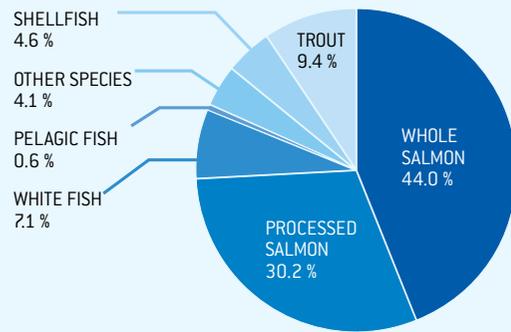
A central aspect of Lerøy Seafood Group's strategy for growth is to offer new products to new markets. This requires knowledge of and proximity to both customer and market. Lerøy Seafood Group has a long, proud history within the sales and distribution of seafood. Today, the Group sells its products to more than 70 markets and has a vast network of customers on the majority of these markets. This affords the Group a unique expertise on market trends, while also facilitating substantial risk diversification for the Group's major customer portfolio.

The Group divides its products into the main sectors of salmon products, white fish, pelagic fish and shellfish. On the market for salmon products, the Group sells and distributes its own production volume but also has alliances with a number of other companies involved in sales and distribution. The market for white fish also shows significant potential. In recent years, this product area has developed favourably through cooperation with a number of small and medium-sized companies, and the Group intends to develop these partnerships for the future. Lerøy Seafood Group is also a supplier of shellfish and fresh pelagic fish to Norwegian and European markets, although this represents a small but interesting niche product area.

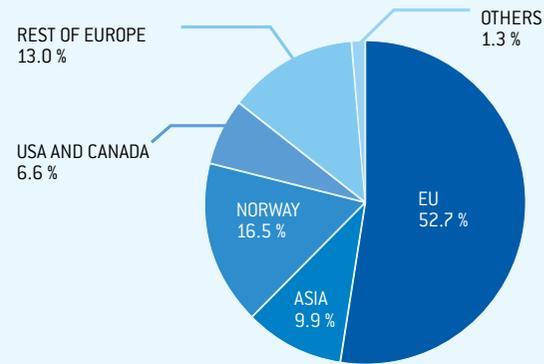
The Sales and Distribution segment operates with a clear distinction between farmed species and wild fish, and these require different logistics and working methods. In addition, more than 80% of the goods distributed are fresh, placing extremely high requirements on market proximity and efficient logistics.

Lerøy Seafood Group has a long-term goal for growth of the Sales and Distribution segment so that it can in time generate an operating margin of between 2.5 and 3.0% per year. In 2013, the segment reported turnover of NOK 10.2 billion, a significant increase from the figure of NOK 9.0 billion reported in 2012. The operating margin in 2013 was 2.0%, a slight decline from 2012 when the margin was 2.1%. 2013 was a very different year to 2012 for the sales and distribution of salmon products. Whereas 2012 reported a record-high growth in global supply, 2013 showed only marginal growth globally and an entirely different price level. The corporate management is of the opinion that the intensive efforts invested in 2012 to identify new markets and new products has generated higher demand and is one of the most important factors behind the extremely high prices achieved for the Group's main products, Atlantic salmon and trout, throughout 2013.

### TURNOVER BY PRODUCT



### TURNOVER BY MARKET



These products are distributed on the Norwegian market and more than 70 other markets worldwide. This is achieved by coordinating the various elements in the value chain – the production units, the Group’s sales network and established strategic alliances with sea farms, fishing vessels and production plants primarily along the coast of Norway. The Group’s business systems are under constant review and development. The Group works actively to develop systems and routines that safeguard and support its requirements for profitability. In an industry in rapid growth, the demand for risk management is particularly stringent in certain areas. Traditionally, the Norwegian and large parts of the international seafood industry have been seriously undercapitalised, with an ensuing high level of financial risk. This is not compatible with the cyclical nature of the industry. Lerøy Seafood Group has always emphasised the need to secure the confidence of its financial partners, thereby gaining access to necessary external financing on viable terms. The company’s financial contingency planning, both present and future, will allow the Group to take part in the value generating structural reorganisation now taking place.

The Lerøy Seafood Group has a large portion of fresh fish products in its product range. At present the share of fresh fish products is more than 80% and this will be maintained in coming years. In addition, there is a clear trend towards a rising level of processing for our full range of products.

Through many years of systematic marketing of processed salmon, Lerøy Seafood Group has built up a sound position within this product area. As the degree of processing rises, regardless of the type of raw material, increasingly stringent demands are made on the actors involved.

The Group has several criteria for the selection of potential alliance partners and investment objects, placing an emphasis on factors such as the alliance partner or investment object's qualifications for ensuring satisfactory operations. We make careful assessment of management competency and, of equal importance, the expertise within the organisation as a whole. It is important that the investment object's balance sheet with adjustments is acceptable in terms of the Group's risk profile. Similarly, any potential alliance partner or investment object must understand the significance of continuous, quality-assured, market-oriented production.



# THE SEA PROVIDING FOOD FOR FUTURE GENERATIONS:

With the projected future growth in population, the world will need more food. The estimated global population in 2050 is approximately 9 billion. How will we manage to feed all these people?



- There will be a shortage of agricultural areas on land
- We believe we will suffer a shortage of fresh water
- People will need more space to build their homes
- How will our future energy supply be and how can we make use of the available energy supply in the most efficient manner with a view to availability and emissions?
- More than 70% of the earth's surface is covered by sea

- In Norway, we only currently make use of 0.5% of our offshore waters for aquaculture
- A mere 5% of current food consumption comprises marine proteins

## Current consumption of foodstuffs:



## A WHOLE NUMBER OF FACTORS REVEAL THE IMPORTANCE OF THE SEA AS A SOURCE OF FOOD FOR FUTURE GENERATIONS.

- The sea is home to numerous species about which we still know very little and the importance of the sea as a source of food which are sure to provide a healthy diet in the years to come. The sea is home to numerous species; not only fish but plants, shellfish and new species which most probably will help us cover the future requirement for food.
- Those species we are familiar with in current aquaculture have a low CO2 footprint and a very efficient feed exploitation rate. The edible portion of the animal/fish is high. You get a lot of meat in relation to the amount of feed used per kg fish.
- The different species do not require a lot of fresh water.
- No heating energy is required (in comparison to e.g. barns for animals on land).
- Many of the species currently found in the sea will contain marine fatty acids that are highly beneficial for nutrition and diet.
- The WHO (World Health Organisation) encourages us to eat less Omega 6. Seafood has a low content of Omega 6.
- Seafood also has a high content of important vitamins and minerals.
- There is much to support the claim that a

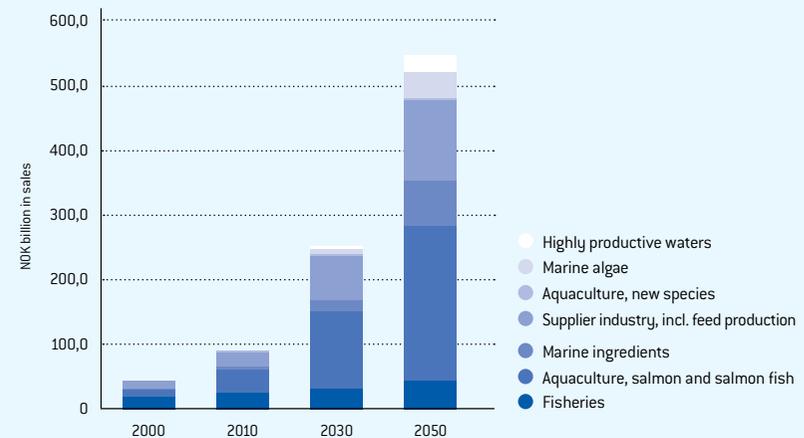
higher consumption of seafood will improve health for many populations, and boost social economics.

In 2012, SINTEF published a report entitled “Value created from productive oceans in 2050” in Norway.

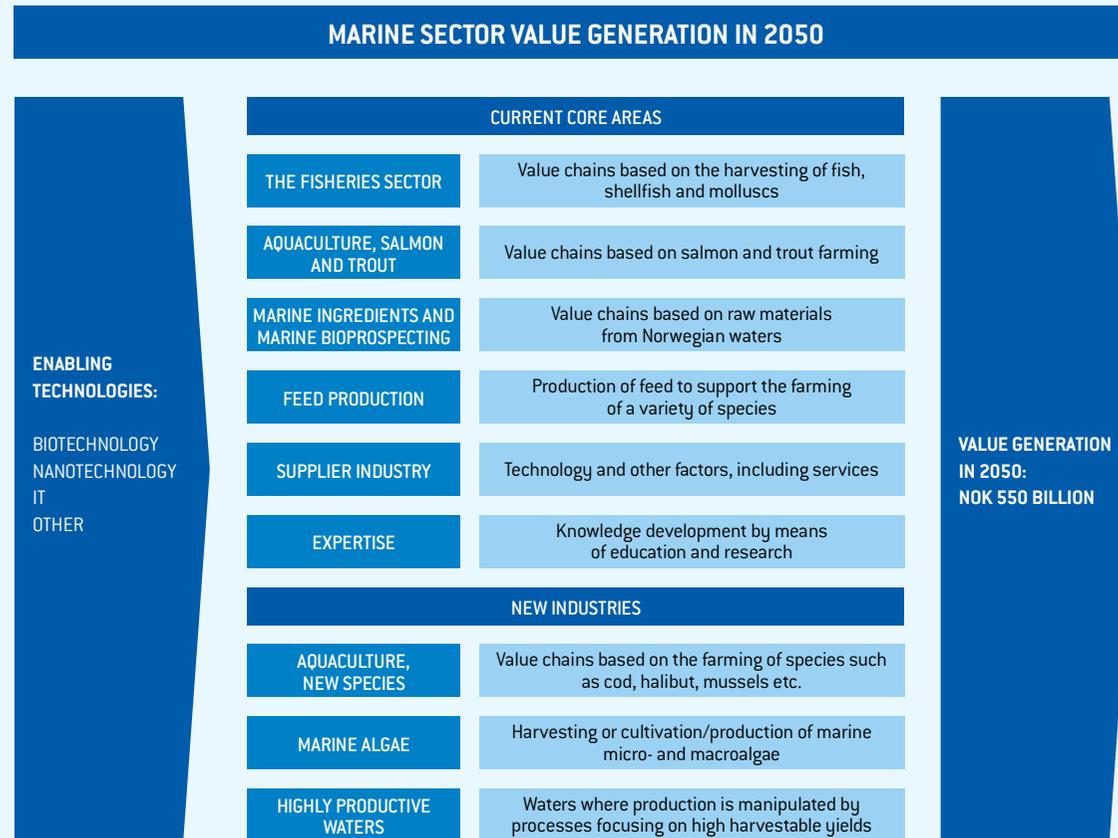
The report was commissioned by DKNVS and NTVA (The Royal Norwegian Society of Sciences and Letters and the Norwegian Academy of Technological Sciences) and inspired many exciting ideas about the sea as a source of food for future generations.

As the figure indicates, there is room for growth within the current fish farming of salmon and salmon fish, but also for new species, marine algae and marine ingredients.

SCENARIO 2050: VALUE GENERATION POTENTIAL IN THE MARINE SECTOR



This may also pave the way for a number of new industries in Norway:

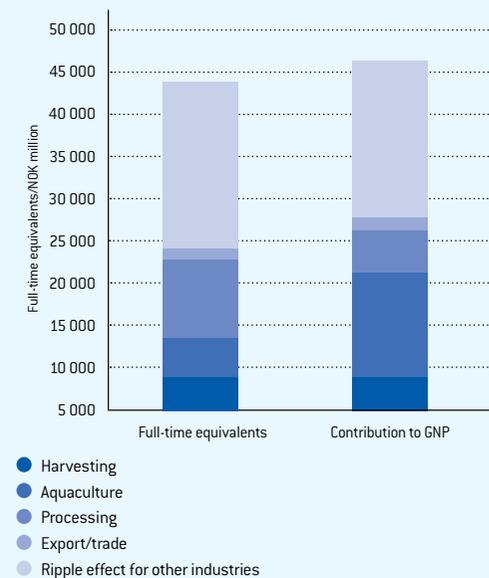




Not least, new jobs and income for Norway as a nation.

We are therefore confident that the further development of marine resources is of great importance both for the Group, for Norway and for the world at large.

VALUE GENERATION FOR NORWEGIAN SEAFOOD INDUSTRY 2010 (SINTEF REPORT A23089)





## THE BOARD OF DIRECTORS

In its central position between owners and management, it is the Board of Directors' function to safeguard the shareholders' need for strategic governance and operational control. The function and focus of the Board will always vary somewhat depending on circumstances within the company and on developments in the external business environment.

Chairman of the Board, Helge Singelstad, was appointed to the Board by the extraordinary general shareholders' meeting on 26 November 2009. Helge Singelstad holds a degree in computer engineering, a degree in Business Administration from the Norwegian School of Economics and Administration (NHH) and a 1st degree of law from the University of Bergen. Helge Singelstad was previously CEO, Vice CEO and CFO of Lerøy Seafood Group over a number of years. Consequently, he has broad knowledge of the Group and the industry.

Helge Singelstad is Chairman of Austevoll Seafood ASA and Member of the Board of DOF ASA. In addition, he is the Managing Director of Laco AS. Helge Singelstad owns no shares or options in Lerøy Seafood Group ASA as per 31 December 2013, but as a shareholder in Austevoll Seafood ASA he indirectly owns shares in the Group.

Pursuant to the Norwegian Public Limited Liability Companies Act, a company's CEO is not permitted an office as board member. The Norwegian Code of Practice for Corporate Governance (NUES) also clearly recommends that neither the CEO nor other senior executives in a company should be board members. Neither the CEO nor other senior executives in Lerøy Seafood Group ASA are members of the company's Board of Directors

For several years, as well as during the seven meetings held in 2013, the Board has maintained a particular focus on the connection between practical operations and strategic business development. The Board and company management have since 1997 worked purposefully to develop the Group into a fully-integrated leading and profitable seafood group.

The Group's activities are varied, depending on each unit's position in the value chain, and consequently require differentiated forms of management and follow-up. Good internal management systems are essential for success, but these must be continuously developed in order to accommodate fluctuating economic conditions. The Group's regional structure with independent units, also in respect of short-term reporting, facilitates good control and a powerful focus. Internal control is based on daily and weekly reports that are summarised into monthly reports tailored to the individual company, while at the same time providing satisfactory reporting at group level. The Group places an emphasis on developing a uniform procedure and format for reports in order to ensure correct reports from all units and up to corporate level.

The Group structure, with autonomous units in different regions, is supervised through participation by Group staff in the administrative bodies in the various companies. Also the employees, through their representatives on the boards of the subsidiaries, contribute to satisfactory operational development. The Audit Committee performs a quality audit of the internal control and reporting system and is responsible for the Board's dialogue with and monitoring of the external auditor. The audit committee held five meetings in 2013.

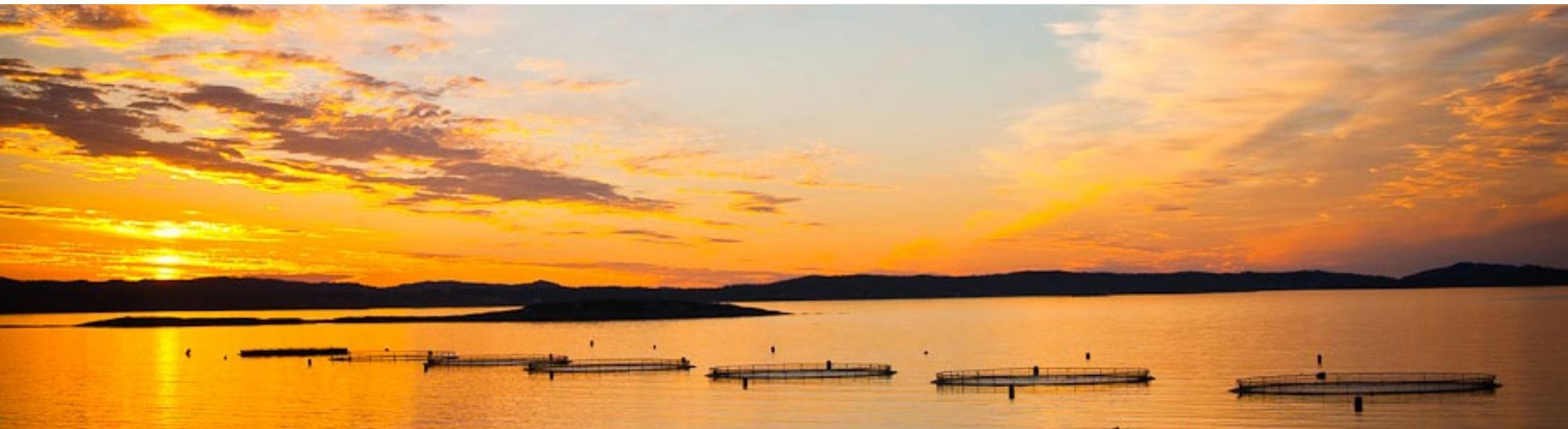
One of the board members is allocated principal responsibility for the environment and sustainability. An extensive review of the company's activities in relation to the environment and sustainability is carried out prior to meetings held by the audit committee.

The annual general meeting on 25 May 2005 voted to change Article 5 of the company's Articles of Association to give the company a permanent nomination committee consisting of three members elected by the AGM for a period of two years. The company's nomination committee is charged with preparing suggestions for the composition of an owner-elected Board of Directors and to submit recommendations to the AGM for appointments to the Board of Directors.

Lerøy Seafood Group aims to supply high-quality products, thereby developing a profitable, efficient and binding cooperation network within both supply and marketing. The Board of Directors will continue to assist the corporate management in their endeavours to develop and adapt the company's environmental management system and business system in accordance with national and international requirements.

The Board of Directors underlines the need for strategic, forward-looking models for the Group's business, and this may involve acquisitions and mergers both upstream and downstream. The Board of Directors is also actively involved in securing the financial and structural conditions required for the Group to achieve its long-term goals.

Based on continued growth and improved profitability, Lerøy Seafood Group aims to create financial values for its shareholders, staff and society in general. Lerøy Seafood Group aims to provide a satisfactory rate of return from all its activities.





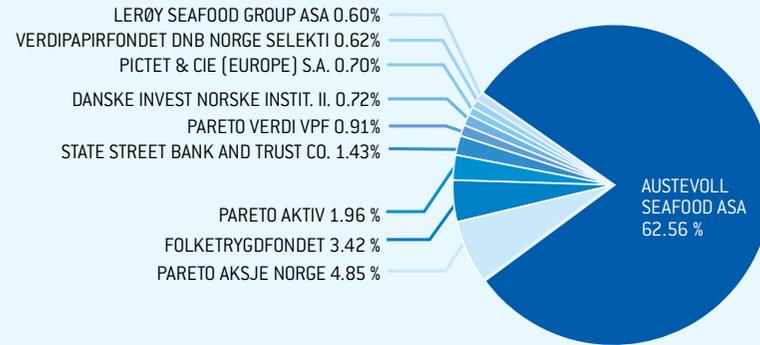
## RISK

As Lerøy Seafood Group is an international seafood corporation with decentralised operations and a significant volume of biological production, the company is exposed to a number of risk factors. The Board of Directors therefore works hard to ensure that the Group implements all measures required to control risk, limit individual risk and keep risk as a whole within acceptable constraints. This is of particular importance for:

- Operational risk
- Market risk
- Currency risk
- Credit risk
- Interest rate risk
- Liquidity risk

The Group's fish farms are located in relatively open seas which provide the best conditions for fish farming in terms of the environment and fish health. However, this places significant demands on both personnel and equipment. The production plants are continuously subjected to the forces of nature, representing a certain risk of damage to equipment which, in turn, may result in fish escaping. Furthermore, keeping animals in intensive cultures will always represent the risk of illness. Fish are particularly vulnerable to illness when they start life at sea, as they are exposed to stress during this period and have to adapt to a completely new environment. The risk of illness is reduced by ensuring good conditions and the correct locations for the fish. The Group has also more recently increased its focus on the use of sustainable fish feed.

## THE 10 LARGEST SHAREHOLDERS



## OWNERSHIP

When recruiting board members, the company's owners have already for many years considered the company's needs for varied expertise, continuity, renewal and changes in ownership structure. It will always be in the company's interest to ensure that the composition of the Board varies in line with the demands made on the company and with expectations regarding Group performance. The Board's assessment of itself and of Group management must of necessity be seen in conjunction with the Group's performance. To date, the Board has not issued reports on its assessment of its own work; this is a conscious priority decision and must be viewed in connection with other announcements in the company's communications to the public. Moreover, external assessments of the Board's work are probably the most influential and are likely to remain so in the future.



## STAKEHOLDERS

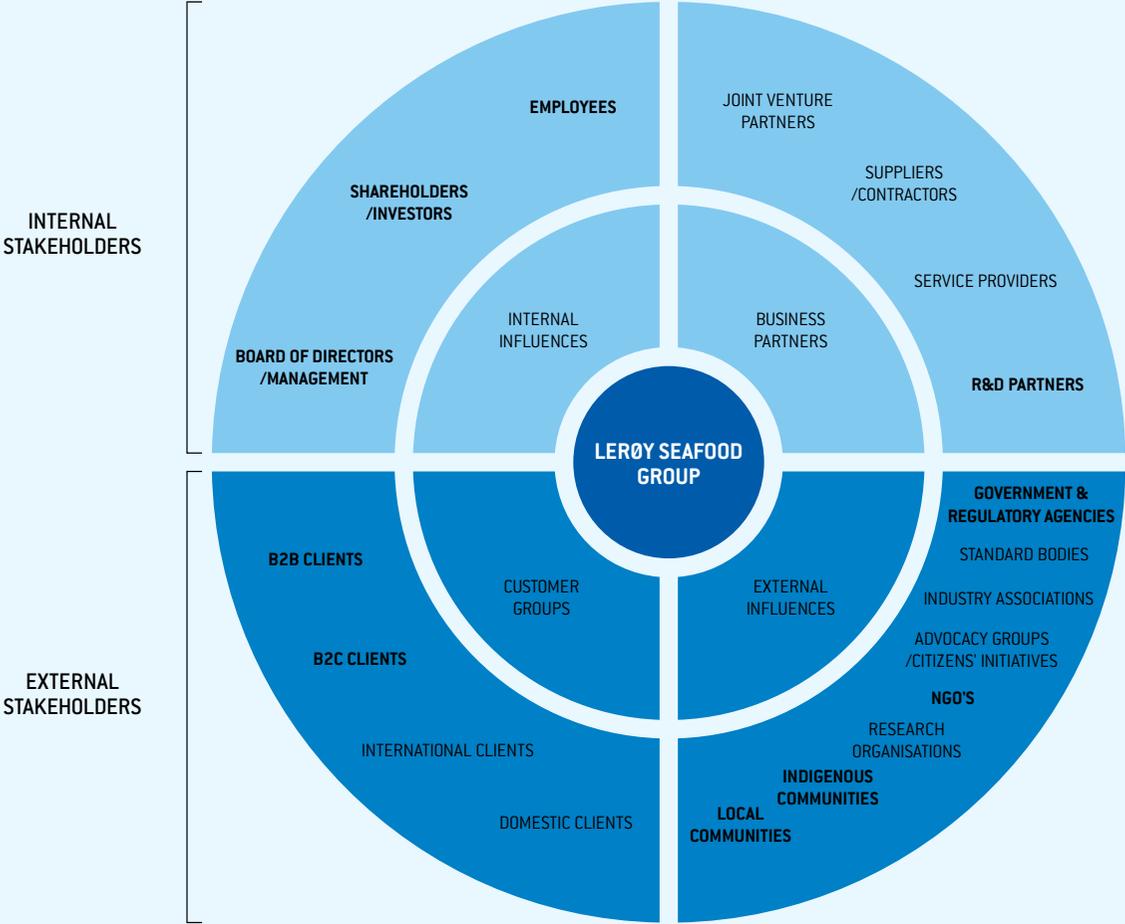
A Stakeholder is an accountant, group, organisation, member or system who affects or can be affected by an organisation's actions. Lerøy Seafood Group has different stakeholders and communicates with these via meetings, annual reports, environmental reports, GRI reports, CDP reports, communication in media, announcements, registrations, public reporting, joint projects, partnership agreements, stock exchange, websites etc.

Good communications with stakeholders is important in our daily work. In a new process, we analyse our stakeholders on the basis of their influence on our organisation. This helps us to identify how to engage them more effectively, yet more importantly ensures shared value on both sides of the table.

Keywords:

- Acceptance of topics chosen
- Different perspectives on impacts
- Problem identification
- External impression
- Knowledge

# STAKEHOLDERS





## A RECORD-BREAKING YEAR



In 2012, I concluded my statement by predicting a very positive development in the year to come. I was right! 2013 will now go down in the history books as a record-breaking year for Lerøy Seafood Group ASA. We can take great pride and satisfaction in the figures reported; turnover of NOK 10,765 million and an operating profit before value adjustment of biomass of NOK 1,626 million. It was particularly satisfying to finally break through the NOK 10 billion threshold. We can authentically claim that our company has successfully sustained an impressive rate of development as one of the world's leading seafood corporations. Over the past ten years, our average growth has been as high as 15%

and we aim to continue at the same rate. I am also full of gratitude and admiration for every one of the 2,067 Lerøy employees who have made this possible!

Looking back over the year that has passed, it is immediately obvious that we have executed a number of actions in 2013 which have helped towards the further growth of our company.

In the very first week of 2013 and according to schedule, the first roe was released in Lerøy Midt's facility in Belsvik. This facility was planned to be the foremost and most modern smolt facility in the world and, with a total investment of NOK 350 million, the plans have been realised. Production at the facility has been very successful and the first smolt were released in October with excellent results reported from the facility. I am very much looking forward to the autumn of 2014 when we can finally see the end result as fish for consumption are produced from the facility.

In April 2013, we acquired a significant percentage of the shares in Villa Organic AS. This is a company with 16 licences for fish for consumption in Finnmark and a total production of 13,100 tons in 2013. The 16 licences will be distributed between SaMar ASA and Lerøy Aurora AS, providing the latter with eight new licences and a strong position in a region full of potential. We now have a total of 138 wholly-owned licences in Norway with the following geographical distribution: 25 in North Norway, 54 in Central Norway and 59 in West Norway.

In 2005, Lerøy Seafood Group opened its very first fish cut facility in Arras, France. This was the starting point for the development we have now witnessed on the French and European markets for freshly packaged salmon products. The growth in sales for these products has been quite impressive. By 2012, we realised that we would have to expand. This resulted in a highly modern facility – built for the future – in Arras which opened in July 2013.



In a move to achieve further development of our strong downstream business segment, we opened a new facility in the centre of Madrid, Spain in September 2013. This facility is a processing and distribution plant for fresh seafood products for both the Spanish and Portuguese markets. We have achieved a gradual increase in production during the autumn of last year and are very satisfied with the developments to date. We also plan to implement production of fresh sushi at this facility in the spring of 2014.

Another Group objective is to achieve a stronger position within production of processed products and we therefore decided in 2012 to invest NOK 50 million in expanding capacity at Lerøy Smögen Seafood AB in Sweden. We moved into the new premises in Sweden in October 2013 and can already report a very positive development in sales in Smögen. With the new facility in Smögen, we are now in a much stronger position to invest in innovation and product development of high quality processed products for the Nordic and European markets. Lerøy Smögen is now recognised as a highly modern facility.

We also commissioned the development of Lerøy Fossen on the island of Osterøy outside Bergen in the spring of 2013. This project required an investment of NOK 50 million. Our goal with Lerøy Fossen is to double capacity for high processed products made using Fjord Trout.



The development work is scheduled for completion in the summer of 2014, and the new facility will be the largest and most modern facility for smoked and cured products in Norway.

In recent years, Lerøy has built up a strong market position in Norway, Sweden and Finland. Our goal is to play a leading role within the distribution of fresh seafood on the Nordic markets.

In 2013, we signed a cooperation agreement with Brødrene Schlie in Denmark and founded the company Lerøy Schlie AS located in Hirsthals, Denmark. Lerøy Schlie was established to produce freshly packaged seafood for the Danish and German grocery market. Production at the new company started at the end of January 2014.

In January 2013, we started work on the construction of Sjømathuset in Kalbakken, Oslo, in cooperation with Norgesgruppen. Our aim with Sjømathuset is to establish a complete and highly modern processing and distribution plant for fresh seafood, targeting the grocery and catering markets in Norway. Sjømathuset will produce and distribute fresh seafood by weight, freshly packaged seafood and top quality sushi. Japanese specialists were invited to design and install the new machines in the facility. As a result, Sjømathuset is now confirmed as one of the best plants in the world for industrial production of sushi. Total production capacity is an impressive 20 million pieces of sushi! No other country in the world can boast such fresh fish produce as Norway. Production at Sjømathuset started on 17 February 2014.

The investments made in processing, further processing, distribution and processing close to the market all yield the level of predictability, stability and flexibility required for success. The success of the seafood industry as a whole relies on correct framework conditions. The current MAB regime (maximum allowable biomass) makes it very difficult to increase competitiveness due to the huge fluctuations in raw material supply for salmon throughout the year. We believe that the current regime is outdated and requires amendment, and we fully support the proposal to implement a variable average MAB system. This will provide a higher level of flexibility and the potential to tailor production to the market, along with stable employment for our facilities throughout the year.

Sustainable growth is also a fundamental premise for the future development of our company and the industry in general. Lerøy Seafood Group is currently involved in the production of salmon and trout and this is one of the most sustainable forms of food/protein production to be found. As with other industries, we face challenges but are confident that they can be solved.

We are fully dedicated to research and technological developments to help us identify solutions to challenges presented by salmon lice and accidental release, the two most significant challenges defined for our industry. Lerøy and other major enterprises are at the forefront of such developments. Our success in achieving an even higher degree of sustainability hinges upon our collaboration with the authorities, suppliers and other organisations. Lerøy aims to play a leading role in the process to identify more eco-friendly methods for fish farming and can report a high level of activity within this area in 2013:

- Over a number of years, Lerøy has played a central part in the development of the ASC environmental certification scheme (Aquaculture Stewardship Council). We were the very first company in the world to implement production, sales, distribution and marketing of ASC certified salmon. We have achieved approval for several facilities and are in the process of applying for approval for a number of other locations. Products with ASC certificates are sold in Japan, Sweden, the Netherlands, France and Germany. We are already starting to notice high demand for these products.

- In 2013, Lerøy entered into a cooperation with Bellona to found "Ocean Forest", a company set up to carry out research and development based on integrated multi-trophic aquaculture (IMTA). This is set to be a very exciting cooperation and I have high expectations for the results it will produce. The first test facility has already been opened on the island of Rongøy outside Bergen.
- Moreover, Lerøy makes a contribution – via Preline AS – towards the development and integration within the industry of closed containment production at sea. Our first full-scale unit for closed containment production at sea is scheduled for implementation in the autumn of 2014.

I would like to conclude by reiterating that 2013 has been a wonderful year for Lerøy Seafood Group. My sincere thanks to all our employees and partners for their tremendous efforts!

I have high expectations for 2014 and am confident that it will be just as successful as the year which has passed! We already have the business model in place to allow further growth.



Henning Kolbjørn Beltestad

CEO

Lerøy Seafood Group



## VISION, BUSINESS CONCEPT/STRATEGY, ENVIRONMENTAL POLICY

### ENVIRONMENTAL VISION

Take action today – for a difference tomorrow

## **VISION**

Lerøy Seafood Group shall be the leading and most profitable global supplier of sustainable quality seafood.

## **BUSINESS CONCEPT AND STRATEGY**

Lerøy Seafood Group seeks to satisfy the demand for seafood and culinary delights, both at home and abroad. To do so, the company provides high-quality products from fisheries and aquaculture, founded on sustainable principles.

## **ENVIRONMENTAL POLICY**

Lerøy Seafood Group is one of the largest seafood corporations in the world. We live off the natural resources produced in the sea and rely on these resources being properly managed so that we can continue to sell seafood in the future. The management of Lerøy Seafood Group will do their utmost to ensure that the products manufactured and purchased comply with the prevailing rules and regulations of our industry.

We will furthermore strive to find the most environmentally friendly and sustainable systems possible for our products via a close cooperation with our customers and suppliers of fish feed and transport.

Lerøy Seafood Group will continuously seek to introduce improvements which will reduce pollution and help protect the environment.

Our employees will focus on the company's environmental targets. In fact, Lerøy Seafood Group will include the environment as one of its main focus areas in the future, in terms of both employees and our products.

## ENVIRONMENTAL GOALS

As previously mentioned, Lerøy Seafood Group is actively involved in every part of the value chain.

Environmental goals have been established for every part of the value chain. All key performance indicators are measured on a monthly basis and utilised internally in order to achieve improvements within individual companies and for benchmarking between comparable companies.

**The following KPIs have been established:**

- LSG KPI 1: Accidental release
- LSG KPI 2: Lice
- LSG KPI 3: Mortality
- LSG KPI 4: Density
- LSG KPI 5: Location status
- LSG KPI 6: Use of medicines
- LSG KPI 7: Biological feed factor
- LSG KPI 8: Complaints from stakeholders
- LSG KPI 9: Fish feed
- LSG KPI 10: Reduction of discharge of nutrient salts
- Energy consumption kWt/ton produce
- Water consumption m<sup>3</sup>/ton produce
- Utilisation of packaging



THE FOLLOWING KPIS HAVE BEEN ESTABLISHED	TARGET 2014	2013
<b>1. Work to prevent accidental release of fish</b>		
LS G KPI 1: Accidental release	Zero accident release	32/130
<b>2. Measures to reduce salmon lice</b>		
LS G KPI 2: Lice	Max 0.1 female lice of reproductive age during emigration period for wild salmon and char. Max 0.5 female lice of reproductive age during rest of the year	0.06/0.12
LS G KPI 6: Use of medicines	Max 4 chemical de-lousing procedures per G in the south/ max 1 in the north	4.8/1
<b>3. Fish health and fish welfare</b>		
LSG KPI 3: Mortality per Generation	6%	Not official
LS G KPI 4: Density	Max 25 kg/m <sup>3</sup>	7.7
<b>4. Efficient utilisation of land and sea areas</b>		
<b>5. Reduced discharge of nutrient salts from premises</b>		
LS G KPI 5: Location status	Max average MOM-B per location 1.5	1.45
LS G KPI 7: BFF	Biological feed factor 1.1	Not official
LS G KPI 10: Reduction of discharge of nutrient salts	R&D via Ocean Forest	Ongoing project
<b>6. Other</b>		
LS G KPI 8: Complaints from stakeholders	All complaints shall receive a written response	N/A in 2013
LS G KPI 9: Fish feed	<ul style="list-style-type: none"> <li>• Increase content of MSC-certified raw materials</li> <li>• Fish source score for marine raw materials individual species &gt;6 Biomass score &gt;8</li> <li>• FFDRm &lt; 135</li> </ul>	N/A in 2013
Energy consumption kWh / ton produce	Individual companies stipulate their own targets here	Set within each company
Water consumption m <sup>3</sup> /ton produce	Individual companies stipulate their own targets here	Set within each company
The share of packaged raw materials shall be increased [the term packaged raw materials is defined as products for sale]	Individual companies stipulate their own targets here	Set within each company



## IN 2013, THE MAIN DEVELOPMENT ACTIVITIES WITHIN THE GROUP WERE:

- January: start-up of operations in the new Belsvik hatchery, which is the most modern smolt facility in the world, equipped with recycling systems and with a high environmental focus.
- January: start-up of construction of Lerøy Sjømathuset in cooperation with Norgesgruppen in Oslo. The ambition with Lerøy Sjømathuset was to establish a complete and state-of-the-art processing and distribution facility for fresh seafood targeting retail and catering in Norway.
- April: acquisition of aquaculture company Villa Organic AS, providing Lerøy Aurora with eight new sites located in Finnmark in Northern Norway
- Spring: start-up of the development of Lerøy Fossen outside Bergen. The target is to double capacity within fjord trout products. The plant is expected to open in summer 2014. This will be the largest and most modern facility for smoked and marinated products in Norway.



- July: Lerøy opened a state-of-the-art factory in Arras in France to better respond to the increased demand for freshly packaged salmon products in the French and European markets.
- August: Lerøy in co-operation with Bellona founded Ocean Forest AS founded a company that will conduct research and development based on integrated multi-trophic aquaculture (IMTA). The first test facility has been created at Rongøy outside Bergen. Read more here: [Group / R&D](#)
- October: Opening of the new larger facility for Lerøy Smögen in Sweden to work with innovation and product development of products of the best quality for the Nordic and European markets. Lerøy Smögen is now recognised as a state-of-the-art factory.
- September: Opening of a new plant in central Madrid in Spain to further develop our already well-developed downstream activity. This is a processing and distribution facility for fresh seafood

products, both for the Spanish and the Portuguese markets.

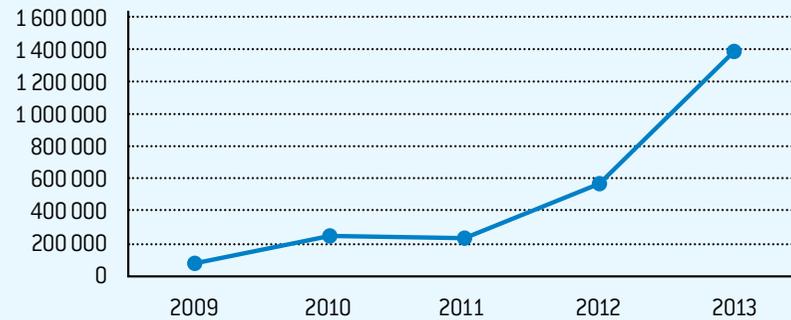
- In 2013, Lerøy signed a partnership with Br. Schlies in Denmark and established Lerøy Schlies AS. Lerøy Schlies focuses on the production of packaged fresh seafood for the Danish and German grocery markets, and started production at the end of January 2014.

The Group's activities in 2013 had a very



positive outcome. On a worldwide basis, the first three facilities to achieve Aquaculture Stewardship Council (ASC) certification were all connected to Lerøy.

## MSC AND KRAV LABELLED PRODUCTS SOLD IN SWEDEN 2011 – 2013 (KG)



## LERØY WORLDWIDE PERSPECTIVES FROM DIFFERENT COMPANIES IN LERØY SEAFOOD GROUP:

### FROM LERØY SWEDEN:

Lerøy Smögen Seafood AB has a fully certified environmental management system in accordance with ISO 14001. In addition to managing environmental aspects of operations, the company strives to further extend its range of eco-labelled products. In 2013, the company more than doubled its sold amount of MSC and KRAV labelled products, totalling 1,405 tons (590 tons in 2012), and representing a 12% share of all sold products. As such, the target for 2013 (15%) was almost achieved. The reason the company did not achieve their goal in 2013 has been attributed to customer segments.

## FISHCUT AND EUROSALMON TARGETS AND PERFORMANCE IN 2013

<b>Fish Cut</b>	<b>Target 2013</b>	<b>Result in 2013</b>
Electricity consumption	0.17 kwh/kg	0.32 kWh/kg product sent
Water consumption	2.2 litres/kg product sent	2.6 litres / kg product sent
Total absence	No target for 2013	3.22%

<b>EuroSalmon</b>	<b>Target 2013</b>	<b>Result in 2013</b>
Electricity consumption	0.4 kwh/kg	0.215 kWh/kg product sent
Water consumption	2 litres/kg product sent	2.26 litres / kg product sent
Total absence	No target for 2013	6.67%

### FROM OUR PRODUCTION COMPANIES IN FRANCE; FISHCUT AND EUROSALMON

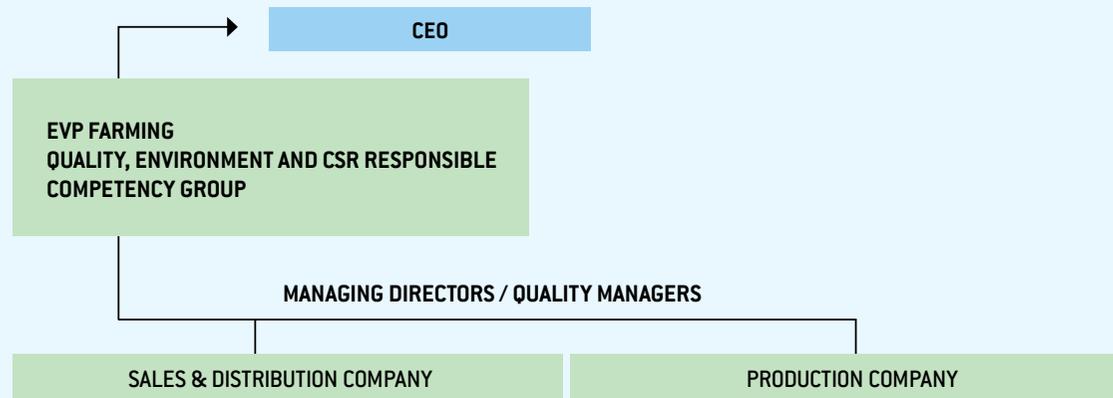
The environment and sustainability are a natural part of the French companies' policies and both companies have worked hard on this area over the past years. As a result, the companies now have clearly defined working targets for both the environment and social responsibility.

Fish Cut was unable to meet its target in 2013 due to the construction of a new factory with more space and higher capacity that is not yet functioning at full capacity. EuroSalmon experienced problems with a machine and also changes to product range.

## **A FOCUS ON THE CUSTOMER ON THE JAPANESE MARKET**

The environment and sustainability are also focus points on the Japanese market. In recent years, international organisations such as WWF, Greenpeace and Sustainable Fisheries Partnership, have all launched campaigns on the market related to seafood. The Japanese consumer is environmentally conscious and an increasing number of consumers prefer to buy products with an eco label. We have witnessed a clear trend over the past years for high sales of MSC and ASC labelled products.





## ORGANISATION OF ENVIRONMENTAL AND SUSTAINABILITY FACTORS

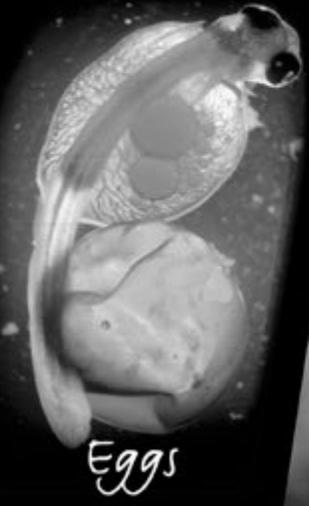
The person in charge is the CEO. The Quality, Environment and CSR, Corporate Social Responsible, is responsible for coordinating work for all companies within the Group. Responsibility is also delegated to the Managing Director of each subsidiary, while the Quality Manager or other delegate is responsible for daily follow-up within the companies. A number of competency groups have been set up in Lerøy Seafood Group. The different Quality Managers make up a competency group for quality and the environment, as illustrated above. This is led by the Quality, Environment and CSR. The Quality, Environment and CSR holds regular meetings with representatives from the other competency groups, where quality and the environment are on the agenda.

Lerøy Seafood Group has established competency groups within:

- Quality and the environment
- Production of fish for consumption
- Production of young fish
- Fish health
- Industry
- Economy

One of the board members is allocated responsibility for the environment and sustainability. An extensive review of the Group's work in relation to the environment and sustainability is carried out during meetings of the Audit Committee.

FULLY  
INTEGRATED  
VALUE CHAIN



Eggs



Smolt



Farming



Harvest



Production



Distribution



Customer



## THE VALUE CHAIN

### WHAT ARE OUR FOCUS AREAS?

For Lerøy Seafood Group as a corporation, it is essential to maintain a constant focus on areas where we have the greatest influence in terms of sustainability. We have therefore carried out a critical evaluation of the value chain and our working processes, and have reached the conclusion that we currently have the greatest influence within the area of our fish farming activities. A major share of our efforts related to the environment and sustainability will therefore focus on fish farming.

Lerøy Seafood Group plays an active role in all parts of the value chain for production of salmon and trout.



## **ROE PRODUCTION**

Lerøy Seafood Group has capacity to produce 130 million fertilised eggs per year.

The majority of the Group's production activities are Global Gap certified and roe production is subject to particularly stringent requirements on fish health and the environment. Roe production involves taking parent fish ashore in May prior to stripping. Production of roe takes place mainly in October, November and December. Roe is delivered from the breeding facilities to the young fish facilities during the hatched larvae stage. The development of hatched larvae takes place at defined temperatures, allowing for flexible delivery times within certain limits. This allows the Group to adapt production, allowing for optimal utilisation of capacity in the young fish facilities.

## SMOLT PRODUCTION

Lerøy Seafood Group can produce 51 million smolt per year in its own subsidiaries. Smolt production takes place in an onshore facility in fresh water, where hatched larvae are delivered from producer to individual young fish facilities. The roe hatch and the fry receive start feed in the young fish facilities. The first smolt are delivered from the young fish facilities to the production facilities 8 to 12 months after hatching. Lerøy Seafood Group has mainly regionalised its production of smolt in order to ensure optimal adaptation of smolt quality. In 2013, the Group produced approximately 40 million smolt.

The companies in Lerøy Seafood Group are mainly self-sufficient with smolt from their own young fish facilities. Selection of the smolt produced by Lerøy is based on traditional breeding methods. However, new selection methods based on genetic markers have also been implemented in recent years.

The smolt delivered in 2013 originated from roe from parent fish which had been selected with genetic markers (QTL) for extra resistance to infectious pancreatic necrosis (IPN). This virus has previously caused major losses after fish have been released to sea. As a result of the new genetic markers, the rate of loss after release to sea caused by IPN in 2013 was lower than previous years. 2013 also saw the use of roe from parent fish selected using genetic markers (QTL) for strong resistance to pancreatic disease (PD) and the company expects to see a corresponding reduction in loss in the years to come as a result.



The new young fish facility in Belsvik, Lerøy Midt, started operations in the first week of 2013. This facility has been established to replace a number of smaller facilities, and production in this region will now feature new and more eco-friendly methods:

**Water consumption:** Use of recycling technology throughout the facility provides a 98-99% reduction in water consumption compared with conventional flow through facilities, thereby preventing the need for major installations in the landscape, such as dams and pipelines. There is also very little impact on the biological diversity in the water source when compared with the impact of a flow through facility. Water consumption at the Belsvik facility will be logged.

**Energy:** The consumption of energy is lower in a recycling facility than in a flow through facility. Although a certain amount of energy is required to pump and purify water, there are substantial savings to be made from recycling the energy found in heated water. Heat energy at the Belsvik facility is based on the exploitation of seawater heat using a heat pump.

**Mud:** Mud generated by the mechanical filtering of water is set aside and preserved at the recycling facility. Mud is a resource which can be used as soil improvement or fertiliser, or for the production of biogas.

**Accidental release:** Outflow water in a recycling plant passes through several filters and purification processes before arriving at the recipient. Outflow water is reduced by 98-99% compared with conventional facilities. This provides for a much higher prevention rate for accidental release than with conventional facilities. The transition to a major recycling plant will result in the gradual closure of small, conventional young fish facilities. All the small young fish facilities make use of water sources which, in time, can either be used for hydropower as an eco-friendly source of energy, or the watercourses can be returned to their natural state.

The environmental goals in 2012 were to phase out traditional sources of energy and make the transition to more eco-friendly operations, based on renewable energy sources and improved energy recycling. The phase-in of the new Belsvik facility is a huge step forward in the right direction for Lerøy, with a view to energy consumption at its young fish facilities.

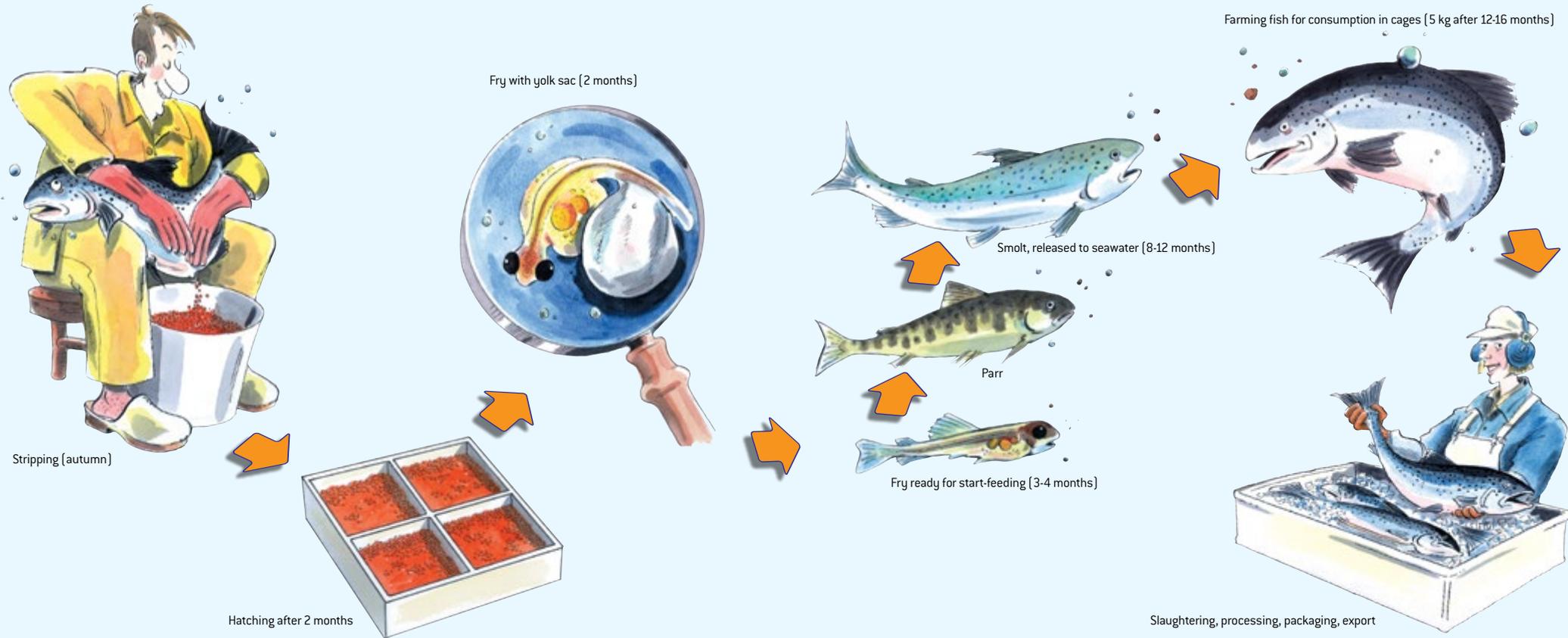
## FARMED FISH

Production of salmon in the sea takes place in carefully selected locations. An optimum location must have good flow of water and the correct temperature range, topography, oxygen content and exposure. Once the location has been approved by the fisheries authorities, environmental authorities and the coastal authorities, the cages (nets and floating devices) are installed at the location so that the fish will have the best possible environment. All parts of the production equipment are certified according to a specified standard in order to ensure that the facilities can withstand exposure to the prevailing environment. Once the smolt have been carefully assessed to determine whether they are ready for sea water, they are released to sea. Production in these facilities takes from 12 to 20 months, depending on temperature and time of release. Production is monitored in the individual cages, where cameras and sensors ensure optimal feed and control to prevent discharges to the environment and to ensure optimum growth, fish health and welfare.

## PRODUCTION

Production is defined as slaughtering and processing, which take place in modern factories designed for production of food and approved by the proper authorities. The fish is anaesthetised with a blow or electric shock and put to death in accordance with applicable rules to avoid unnecessary suffering and to ensure top product quality. Lerøy Seafood Group currently has seven own facilities for full-range production, from whole gutted salmon to processed products within all categories. The facilities meet prevailing requirements regarding discharges to the external environment.





## FROM ROE TO PLATE

**Stripping:** The broodstock fish are stripped of their roe and milt. The inseminated roe are placed in the hatchery, where they take 60 days at a maximum water temperature of 8 degrees Celsius to hatch out.

**Hatching:** When the eggshell breaks, the eggs hatch out, yielding fry with yolk-sacs on their stomachs. The yolk-sac is the fry's "lunch-box" for the first few weeks of its life before it gradually begins to take dry feed. This is known as start-feeding.



**Smolt:** After about one year in a hatchery tank, the salmon have grown enough to be set out in seawater. At this point they have already undergone physiological changes that enable them to live in the sea. An average smolt weighs approximately 80-100 g when it is released into the sea. Smolt used to be set out in the spring, but this now also takes place at other times of the year.

**Ongrowing in the sea:** After just over two years in the sea cages, the salmon have grown to a weight of about 5 kg. The rate of growth depends, among other factors, on the water temperature and light.

**Well-boats** are used to transport live salmon. These boats are used for transport of smolt from the hatchery to the ongrowing farms and fully grown live salmon from farms to the slaughterhouse. All salmon are slaughtered in the company's own salmon slaughtering plants. They are anaesthetised before they are slaughtered and are then immediately cut, gutted, sorted, chilled and made ready for further transport. After slaughter, some parts of the fish are processed into e.g. fillets, smoked salmon or "table-ready" products etc., but most are sold as cleaned whole salmon.

**Transport:** Around every 20 minutes, every day all year round, a trailer fully loaded with salmon crosses the Norwegian border on its way to the market. In addition, salmon is also exported on board its own salmon aircraft. Several companies are now also evaluating the use of sea transport to carry salmon from processing plants to market.



## FISH FARMING

No other country in the world can match Norway's coast in terms of food production. Few nations can boast such a rich coastal culture, where the seafood industry has played such a central role throughout history in providing for vital local communities along the coast. With the global population approaching 9 billion (by 2050), it seems perfectly natural for the increased demand for food production to be satisfied by a significant increase in fish farming.

Lerøy Seafood Group has a strategy whereby their fish farming activities are based on a "lasting perspective" which forms the foundations for the Group's utilisation of coastal resources. Such a perspective requires the involvement of owners, employees and suppliers and is applied daily as we work to produce the best seafood in the world from production activities based on natural resources.

Lerøy Seafood Group is organised with local management for its fish farming activities, and the local management's knowledge of and care for the local environment are of decisive importance. Lerøy Seafood Group shall take a leading role in constantly improving the interaction between fish farming and the environment, aiming at generating positive and lasting environmental gains.

One important aspect in our efforts to reach our environmental goals is certification according to international environmental standards. In 2013, the ASC standard was finally completed and provided the industry with a new and ambitious tool for securing environmentally friendly operations. For Lerøy Seafood Group, an ASC certificate is a natural conclusion of the Group's strong commitment to environmental protection.

It allows us to guarantee and document that our fish farming activities are the foremost in the world in terms of environmentally sustainable production and that we possess both the competencies and capacity to make progress in such an important field.

The following areas are of particular importance for the operational aspects of our environmental work and receive special emphasis within fish farming:

- Work to prevent accidental release of fish
- Measures to reduce salmon lice
- Fish health and fish welfare
- Efficient utilisation of land and sea areas
- Reduced discharge of nutrient salt from premises

Moreover, the Group has invested a significant capacity in development projects which aim to enhance sustainability for fish farming activities, and these include:

- Raw materials for fish feed
  - Ensuring compliance with our requirements for sustainable and regulated fishing
  - Ensuring that fish health, fish welfare and the environment are taken into account when developing new raw materials for fish feed
- Contributing to the production of new marine raw materials for fish feed
- Development of new technology for fish farming in both fresh water and at sea
- Paving the way for improvements in bio-safety throughout the value chain, from parent fish to harvesting.

The Group's fish farming companies have established a clearly defined set of goals for each operational segment and have developed operating procedures specifically to ensure that they can reach the goals set for such important environmental work. The Group also carries out regular internal and external audits to ensure full compliance between operating procedures and proper conduct. The Group has implemented advanced technology to secure and monitor operations and has developed requirement specifications for our suppliers which shall contribute towards active participation by the suppliers in our efforts to achieve our environmental goals.

There is such vast potential off the coast of Norway for increased production of seafood. At the same time, however, we also have a strong obligation to ensure full environmental protection so that we can realise our "lasting perspective" for fish farming.

Our environmental vision, "Take action today for a difference tomorrow" therefore provides a clear statement from every employee within the Group that we fully intend, every day, to take the initiative for environmental improvements, benefiting both the environment, the fish farming industry and our coastal communities.



A handwritten signature in blue ink, appearing to read 'Stig Nilsen', written in a cursive style.

Stig Nilsen  
EVP Farming  
Lerøy Seafood Group



## R&D – FISH FARMING

### RESEARCH, DEVELOPMENT AND INNOVATION

Research, development and innovation are central factors in the work to further develop the entire value chain in Lerøy Seafood Group. The Group has a history of active participation in R&D&I projects via our subsidiaries in order to ensure proximity to and ownership of the projects and maximum exploitation of input factors. In addition, major R&D&I projects are carried out with long-term perspectives at Group level. In 2013, Lerøy Seafood Group participated in between 70 to 80 different projects related to fish farming. These encompass a number of innovation projects in cooperation with internal and external enterprises, to participation in major research projects such as the Research Council of Norway's SFI scheme. (SFI – centre for research-based innovation).

**The Group's R&D&I efforts in 2013 have focused on four main subjects.**

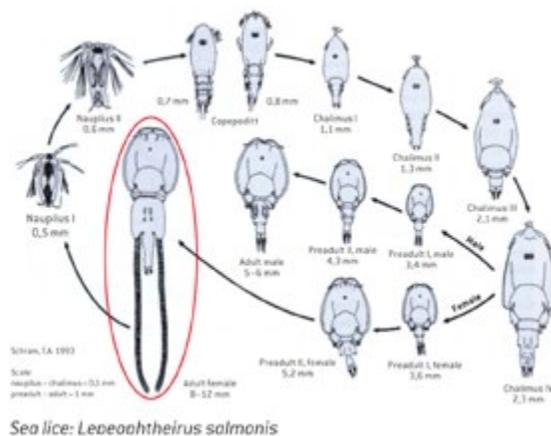
1. Fighting salmon lice
2. Feed/Feed utilisation/Feeding strategies
3. Fish health
4. Technology

An increase in innovation is increasingly underlined as a fundamental element for the future of Norway. Lerøy Seafood Group is recognised for its innovative efforts over the past century. We aim to continue in this way, and have a target to be at the very forefront in terms of innovation within every part of our value chain.

## **SALMON LICE**

The company's principal strategy for fighting salmon lice is based on the principle for "Integrated Pest Management", i.e. the implementation of a number of measures to prevent and fight salmon lice, wherein treatment with medication is the very last measure utilised. Lerøy Seafood Group makes use of a package of initiatives comprising cleaner fish (ballan wrasse, goldsinny wrasse and/or lumpfish) which eat the lice from salmon, functional feed to reinforce fish resistance to lice, efficient and systematic cleaning procedures for nets etc. to allow the cleaner fish to feed properly, combined with a coordinated and selective use of medicinal treatment when required. The "combination method" is also used where necessary and upon agreement with the patent holder in order to minimise use of medicines to a minimum while reducing the risk of resistance to medication. Hydrogen peroxide which has no negative impact on the environment is also used substantially where appropriate.

Lerøy Seafood Group is involved in a number of comprehensive research projects involving the fight against salmon lice. As one of two fish farming companies, Lerøy Seafood Group is part of the prestigious research programme entitled "SFI Salmon Louse Research Center", a 5+3-year research programme with a total financial framework of more than NOK 200 million. The focus in this programme is to strengthen both the unspecific and specific natural defences of fish against salmon lice, the development of precise methods for resistance testing, development of new medicamental methods of treatment and the utilisation of salmon lice genomics in order to develop more precise research tools and treatment techniques. Read the annual report for 2013 here:  
<http://www.slrc.no/files/2012/06/SLRC-Annual-Report-2013.pdf>



The use of Wrasse is an important element in Lerøy Seafood Group’s strategy to fight salmon lice. To date, we have purchased wild Wrasse from professional fishermen, but have also taken part in two different projects relating to farming of wrasse. As a result, we are now able to farm our own wrasse. Experience indicates that wild Wrasse are very vulnerable in terms of handling and injury. A programme of close follow-up has therefore been established in order to prevent local overfishing and to ensure the gentlest possible handling of the fish.

To date, the use of Wrasse has been very successful and Lerøy Seafood Group aims to extend its utilisation of this method.

In order to ensure a regular and predictable supply and correct fishing of the natural stocks, Lerøy Seafood Group takes part in the project financed by the Norwegian Seafood Research Fund for wrasse production (with a total budget of NOK 33.1 million) as the Chair of the project management group. This allows us to ensure that our R&D activities in this area are as industrially related as possible while accumulating new expertise as it emerges.

Lerøy Seafood Group also chairs several other R&D projects which focus on combating salmon lice, in co-operation with research institutions, equipment suppliers and other fish farming companies. The main objective for these projects is to:

- Keep the salmon away from the upper parts of the sea waters where we know there is the highest concentration of salmon lice larvae. We make use of LED lights with a special wavelength or use of physical barriers taking into account the fact that salmon require access to air so they can regulate buoyancy.
- Use of laser to remove lice from freely swimming salmon. Laser treatment of salmon lice.



## **FEED AND FEED UTILISATION**

Feed is the largest individual input factor utilised by Lerøy Seafood Group and the Group places a significant focus on optimal and cost-efficient utilisation of feed. Lerøy Seafood Group works closely together with our feed suppliers and takes an active and influential role in the further development of feed composition in order to ensure that it is as highly adapted as possible to our fish farming environment and fish material.

We maintain a significant focus on the correct use of raw materials with a view to optimal exploitation of marine resources, fish welfare and quality of the end product. FINS (Fish Intervention Studies) is a comprehensive project focusing on the impact of fish consumption for human health. The project has a total budget of more than NOK 60 million. It is financed by the Norwegian Seafood Research Fund (FHF) in direct cooperation with companies such as Lerøy Seafood Group, and project management is provided by the National Institute of Nutrition and Seafood Research (NIFES) in Bergen. Lerøy Seafood Group also plays an active role in the project focusing on the nutritional quality of the end product and its importance for the medical and mental health of the consumer.

The Group also follows an active strategy to further optimise the feeding phase, both in the form of optimal use of feeding equipment and the development of knowledge and equipment to allow improved control of the actual feeding process. The Group also places a particular emphasis on the technical quality of the pellet and how it is handled in the feed plants. Measurements have indicated that a significant volume of feed can suffer damage when making its way through the feed systems, due to the technical quality of the feed and unsatisfactory feeding systems. This area has been subject to significant attention in 2012 as part of a close collaboration between feed manufacturers and equipment suppliers.

## **FISH HEALTH**

Lerøy Seafood Group maintains a constant focus on fish health and control of health at our facilities. The fish farming industry faces a number of health-related challenges which cannot currently be solved by vaccination or medication - in particular viruses - but also faces other more unspecific problems such as gill problems and ulceration during the winter. Together with the Department of Biology at the University of Bergen, Lerøy Seafood Group has established a PhD in nutrition in order to introduce systematic research into problems with fish gills. We are also actively involved in work with vaccine suppliers to solve the problems relating to ulceration.

Fish health has been a target area for Lerøy Seafood Group in 2013, and a new corporate managerial position covering fish health has now been established.

## **TECHNOLOGY**

The current production practice, with the use of open cages located in waters close to the coast, represents the greatest advantage for the Norwegian fish farming industry, but the concept brings certain challenges, for example the risk of lice and accidental release. Lerøy Seafood Group is actively involved in several research projects challenging current technology in order to further develop the industry to become as environmentally and financially sustainable as possible.

Lerøy Seafood Group believes that the problems relating to lice and accidental release of salmon will be solved. One major technological challenge is to identify and implement locations with the highest possible degree of biological sustainability. Such locations may place new requirements on equipment and form of operation which we currently do not face today. At the same time, we rely on the good will of our local communities so that we can make use of such locations.

Lerøy Seafood Group is involved in several projects targeting both offshore fish farming and use of closed containment fish farming technology for parts of the production phase.

The accidental release of farmed salmon represents a challenge to the sustainability of the industry in addition to an economic loss and impairment to the industry's reputation. Both in-house projects and participation in R&D projects have allowed the Group to optimise its production equipment and operating procedures. However, we are fully aware that none of our facilities (whether sea or land based, open or closed) can guarantee 100% against accidental release, as indicated by the report issued by the Board of Technology, entitled "Salmon farming in the future". We are therefore strongly involved in several R&D projects (financed by both the Research Council of Norway and the Norwegian Seafood Research Fund) which aim at producing a sterile salmon which is just as robust and has the same production qualities as today's salmon. It will only be when this type of sterilisation technology is available that we can fully prevent any unacceptable environmental impact from accidentally released fish. There are currently several closed containment production concepts being tested. Lerøy Seafood Group ASA is confident that these closed containment floating systems may provide a solution for areas with high exposure, from smolt stage until the fish have reached a weight of approximately 1 kg. We participate on several R&D projects within this field (the OPP project - Optimal Post-smolt Production).

In 2013, Lerøy Seafood Group initiated a new, large-scale project together with other major fish farming enterprises in Norway. The project's goal is to trace accidentally released salmon to its original fish farm. New technology involving the analysis of fish scales will now allow salmon to be traced back to its fish farm, and identification of the owner of any accidentally released fish.

Lerøy Seafood Group also played an active role in implementing the review financed by the Norwegian Seafood Research Fund and led by the Department of Biology at the University of Bergen into "How can charting salmon genomics help solve the challenges of the Norwegian fish farming industry?". There is no doubt that this project opens the door to a number of unknown methods now that the genomics of the salmon have been charted, and this will have a substantial impact on salmon welfare, combating illness and optimising operations.

Lerøy Seafood Group, together with enterprises such as the Norwegian Seafood Research Fund and the Research Council of Norway, is fronting an initiative to establish a common knowledge platform to gain a more extensive perspective on knowledge of genomics (system biology), and to make a "salmon base" available to the industry.



## GSI, GLOBAL SALMON INITIATIVE

To meet growing demand as an industry, we must ensure all our actions are sustainable. The Global Salmon Initiative (GSI) has identified three main pillars of sustainability; environmental impact, social responsibility and economic stability. The GSI confirms that the key to strength within environmental efforts lies in cooperation. Together, and with the support of our stakeholders, we aim to put sustainability at the forefront of our operations in order to make significant industry improvements.

### **BIOSECURITY**

The GSI has prioritised our immediate biosecurity efforts on the issue of sea lice, which represents a significant challenge to the farmed salmon industry. We have developed a series of global sea lice management best practices through a programme for increased research and knowledge sharing, which we aim to implement across all farms. Through wider application and adherence to the best practices, we seek to make significant improvements in sea lice management across the industry.

### **FEED AND NUTRITION**

In partnership with the Food and Agricultural Organisation (FAO) of the United Nations, the GSI is reviewing projects to support the expansion of sustainable aquaculture. Current projects include obtaining sustainable sources of raw materials and developing a global understanding of sustainable aquaculture through increased knowledge transfer.

### **STANDARDS**

The GSI recognises the importance of transparency and understands that progress in achieving our sustainability goals requires evaluation. The industry has already made great improvements in sustainability and has met the requirements of many demanding standards, but we are always looking to improve.

The GSI is working to adopt the Aquaculture Stewardship Council (ASC) as its framework for guidance and progress reports. While the ASC standard will be difficult to achieve, we hope that through the principle of collaboration, the GSI can have all member farms certified by 2020.

The GSI is a leadership initiative by global farmed salmon producers, and focuses on making significant progress towards providing a highly sustainable source of healthy protein to feed a growing population, while minimising our environmental footprint and continuing to improve our social contribution.

### **2013 PROGRESS HIGHLIGHTS**

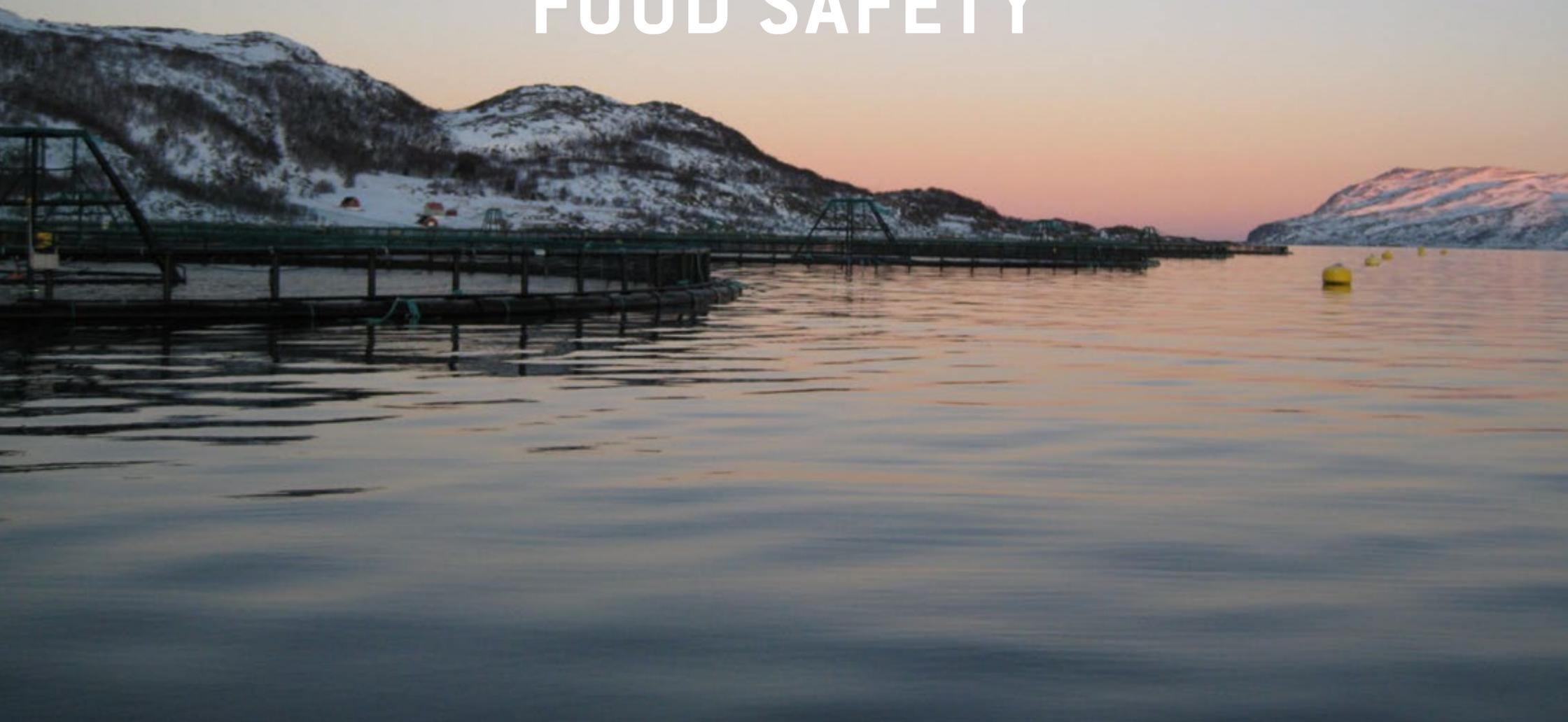
- Farms owned by GSI members Lerøy Seafood Group, Marine Harvest and SalMar ASA achieved ASC Certification
- GSI hosted a global sea lice best practices workshop and tour to share knowledge on sea lice management
- Key partnerships established with WWF, FAO and industry feed companies EWOS, BioMar and Skretting to support accelerated progress



GSI welcomes membership from all farmed salmon producers who share its vision and are willing to work to achieve its objectives. Please get in touch at [GSI@axon-com.com](mailto:GSI@axon-com.com) for more information.



# FOOD SAFETY



## FOOD SAFETY

Lerøy Seafood Group is actively involved in all parts of the value chain in order to ensure supply of safe products to the consumer. Based on experience gained over many years, we have developed a quality system which contains routines and procedures to ensure supply of safe products. As a part of our quality assurance routines, we carry out control and monitoring of our manufacturers and partners. This involves making requirements on their quality systems and procedures, and carrying out analyses and monitoring operations. Our quality team carries out from 150 to 200 external quality audits every year. This is required so that we can feel safe that the products we purchase are in compliance with the requirements we place on our own products. Moreover, the products are controlled by Lerøy Seafood Group at different stages throughout the entire production process, from egg/processing plants to finished product in a box and, in certain cases, up to delivery to the customer.

Lerøy Seafood Group currently has a large number of manufacturers of fish and shellfish. Our audit system includes a risk analysis of manufacturers in order to determine how often the individual manufacturer is to be audited. The analysis covers product risk, volume purchased, customer requirements, history of complaints and results of audits.

A specific audit form is utilised during an audit, based on Lerøy Seafood Group's requirements. An audit involves auditing the manufacturer in relation to: HACCP, different certification schemes, customer specifications, in-house specifications, legislation, traceability, marking, hygienic design, fish welfare and bacteriological analyses of equipment, product and water. After the audit, the manufacturer receives a deviation report, based upon which the manufacturer is obliged to prepare a plan for measures. The deviations are to be resolved within a specified deadline.

All products are marked in relation to prevailing marking regulations in Norway/EU and customer requirements and import countries. Experience from individual cases of poor food safety within different protein groups in different parts of the world over recent years has resulted in an increased focus on food safety. Lerøy Seafood Group takes this work very seriously and has invested significant resources in developing satisfactory procedures and systems in order to ensure that we are in compliance with the strict requirements we have established and the requirements we must fulfil from the bodies responsible for food safety.



## PREPAREDNESS

### RECALL

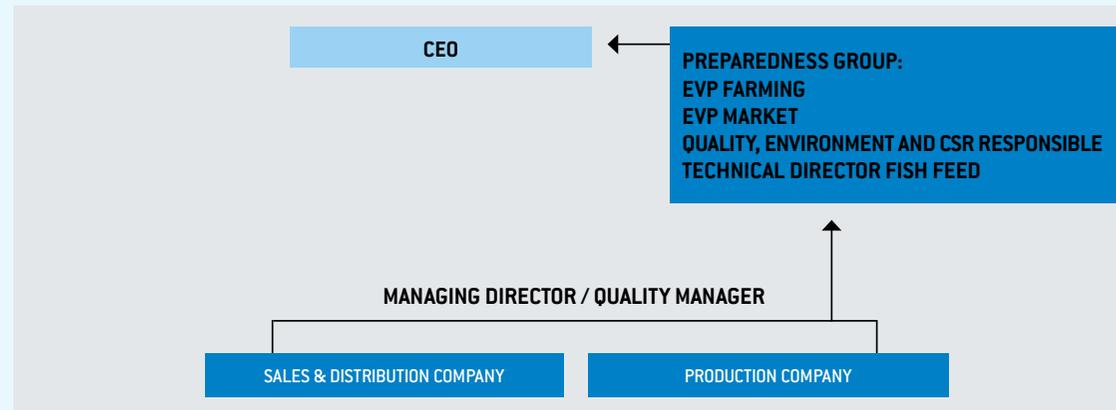
Lerøy Seafood Group has full traceability for all products from boat/cage to customer. Every year, recall tests are carried out in relation to our major manufacturers.

In 2013, Hallvard Lerøy AS carried out seven recall tests. These involve contacting a manufacturer about a fictional matter and tracing the products from production, identifying which customers have received the product. A risk assessment is carried out to determine whether the product should be recalled and which bodies are to be notified.

### PREPAREDNESS GROUP

The preparedness group comprises representatives from management, production, marketing, R&D, fish feed, quality and environment. The group has primary responsibility, both internally and externally, for communications, handling and execution of any relevant challenges/crises.

## ORGANISATION OF THE PREPAREDNESS GROUP



The bodies which enforce requirements on the Group may be:

- Media
- Customers
- Authorities
- Organisations
- Consumers
- In-house, accident/crises which affect employees

A separate set of instructions has been compiled for preparedness and recall of products.

## EXAMPLE OF A RECALL TEST



**Feedback detail overview**

Claim no.	25361	Team	Quality
Source	Production	Claim Type	Recall test
Producer	Austevoll Fiskeindustri AS		

**Case history**

Description	Registered by	Date	Status
Årlig tilbakekallingstest H-72	RJJ@leroy.no	13.04.2010 14:48:50	New

Dølse startet kl. 13.30

Myndighetene i Vietnam har påvist medisinrester i et parti frysede laksehoder Y cut pakket hos H-72 22.10.2009. Kunden ABO CO. Ltd har kjøpt 50 kasser med totalt 1 0273 kg. myndighetene har gitt kunden og oss pålegg om å trekke tilbake all fisk som samsvarer med dette partiet.

På bakgrunn av dette er det viktig at vi får vite hvilken lokalitet fisken stammer fra, slik at vi kan spore opp hvem som har mottatt samme fisken.

Test startet 13.04.2010 kl 13.30, parti identifisert og sporet kl. 13.51.	RJJ@leroy.no	13.04.2010 14:48:50	New
Totalt 2 940 kg laksehoder produsert i partiet, alt leveret til samme kunde i Vietnam [Sjøf2]. Laksen kommer fra Søøy Merd B og 14, partinummer 121129. Mattiløynet er informert om test.	RJJ@leroy.no	13.04.2010 14:48:50	New
Automatically approved when closed.	RJJ@leroy.no	13.04.2010 14:48:50	Approved
Sporingstest tok 21 minutter- Partinummer kontrollert og samsvarer med Søøy Merd B og 14. Suksess.	RJJ@leroy.no	13.04.2010 14:48:50	Closed



## TRACEABILITY

Lerøy Seafood Group aims for 100% traceability of all products. For species related to fish farming, such as salmon, trout, cod etc., the customer can go to Hallvard Lerøy AS' website, [www.leroyseafood.com](http://www.leroyseafood.com), to download traceability information for products sold via Hallvard Lerøy AS.

The current traceability system follows a fish from roe stage to finished, packaged product. When the customers log on to the system, they receive detailed information on the product throughout the entire value chain. All data is entered in the Group's database and can subsequently be downloaded on request via the traceability system. Individual customers are allocated user accounts where they have access to traceability information in relation to specific invoices. Each LOT provides the customer with traceability information from parent fish to slaughter, regarding factors such as location, treatments and quality information such as fat, colour and condition.

# EXAMPLE OF TRACEABILITY DOCUMENTATION

Creating Tasteful solutions

Lot: 132155    Species: Norwegian Atlantic Salmon

### Trace Information

**Broodstock**  
 Breedstock: Aulvik  
 License: 7269  
 Strain: Aquadon

**Juvenile**  

Hatchery: Lakeford	Smolt Plant: Lakeford
License: FL8003	License: FL8003
Hatching Period: 2011-08-01	Wellboat:
Smolt Weight: 87 g	

**Farm**  

Fish Farm: 1112 Gourtepin	Last Day of Feeding: 2013-03-04
Farm License:	Temp. Last Day of Feeding: 2.3 C
Location License: 10734	Date of Sea Transfer: 2011-07-30
Name of Fjord: Kjøfjord, Lange	Wellboat:
Cage Density: 3 fish/m <sup>3</sup>	Duration of Transport: 0 hours
Cage Number: 1208	

**Packing Station**  

Packing Station: Lerøy Aurora AS 7128	Packing Date: 2013-03-13
License: 7-128	Core Temperature: 2.0 C

**Processing**  
 Processing Plant: Lerøy Aurora AS Sjøenøy  
 License: 7-128  
 Processing Date: 2013-03-13

Creating Tasteful solutions

Lot: 132155    Species: Norwegian Atlantic Salmon

Feed	Treatment				
Supplier	Type	First Day	Type	Name	Period
Juvenile			Juvenile		
Seedling	Nutra XP 0.5, 0.5 mm	2011-01-14	Vaccination	Alpha Jekt Micro 8	2011-06-23 - 2011-06-24
Seedling	Nutra XP 0.7, 0.7 mm	2011-01-21	Vaccination	Autogen DVM	2011-03-15 - 2011-03-16
Seedling	NUTRA XP 1.0, 1 mm	2011-02-23			
Seedling	Nutra Olympic 1.0, 1.0 mm	2011-03-18			
Seedling	Nutra Olympic 1.5, 1.5 mm	2011-04-13			
Seedling	Prolec 1.5, 1.5 mm	2011-04-15			
Seedling	Nutra Olympic 2.0, 2 mm	2011-05-12			
Seedling	Prolec 2, 2 mm	2011-06-02			
Seedling	Nutra Supreme 2, 2 mm	2011-06-25			
Seedling	CICLANSVRE SGAKS 2.0, 2 mm	2011-07-06			
Farm					
Seedling	Spelt 75 SGA, 3 mm	2011-07-31			
EWSS	ADAPTMARINE 50 45A SGA, 3 mm	2011-09-04			
EWSS	Opal 200 45A, 4 mm	2011-10-06			
EWSS	Opal 110 500 SGA, 6 mm	2011-11-25			
EWSS	Robust 110 SGA SGA, 7 mm	2011-12-11			
EWSS	Opal 500 SGA, 8 mm	2012-01-05			
EWSS	Opal 110 1000 SGA, 9 mm	2012-02-23			
EWSS	OPAL-110 for 500 SGA SGA, 9 mm	2012-02-27			
EWSS	OPAL-110 for 1000+ 50 A SGA, 9 mm	2012-03-12			
EWSS	Opal 110 2500 30A SGA, 9 mm	2012-04-02			
EWSS	Opal 120 1000 SGA, 9 mm	2012-06-07			
EWSS	Opal 110 1000 SGA, 9 mm	2012-08-30			
EWSS	Opal 120 2500 SGA, 12 mm	2012-09-18			
EWSS	Opal 120 2500 30A SGA, 9 mm	2012-10-29			
EWSS	ROBUST-120 1000+ 30A, 9 mm	2012-11-14			
EWSS	Opal 120 ICE 1000 SGA SGA, 9 mm	2012-12-19			
EWSS	Opal 120 1000 30A, 8 mm	2013-01-03			

Creating Tasteful solutions

Lot: 132155    Species: Norwegian Atlantic Salmon

**Quality**

Sampling Date:	2013-02-15
Fat Content:	20.2%
Colour:	Salmon: 26.0
	Mg/kg: 8.0
Condition Factor:	

# QUALITY ASSURANCE AND CERTIFICATION

An important tool in the Group's quality and environmental efforts is certification according to international standards. In 2013, Lerøy Seafood Group was the first company worldwide to be certified according to the ASC standard which ensures that our aquaculture business is conducted in an environmentally sound and sustainable manner.

The Group has worked for many years to assure high quality and has developed control systems based on Global Gap, MSC, ASC, ISO 9000; 14000 and 22000, BRC, IFS, Label Rouge, NS 9415 and HACCP. These standards are applied where appropriate, for example:

- Fish farming is covered by Global GAP and ASC certificates
- All the Group's production plants have BRC certification
- The sales department at the Bergen headquarters is certified in accordance with ISO 9001 and has "chain of custody" for ASC, MSC and Global Gap
- All fish farming production equipment is certified in accordance with the NS 9415 standard for floating fish farming installations.

**Global GAP** (Good Agricultural Practice)  
– Voluntary standard for the certification of agricultural products

**MSC** (Marine Stewardship Council)  
– Standard for sustainability for fish caught in the wild

**ASC** (Aqua Stewardship Council)  
– Standard for sustainability for farmed fish

**ISO 9000** – Standard for quality management system

**ISO 14000** – Standard for environmental management system

**ISO 22000** – Standard for food safety

**BRC** (British Retail Consortium) – Quality standard with focus on food safety

**IFS** (International Featured Standard)  
– Quality and food safety standards

**Label Rouge** – Quality assurance in France

**NS 9415** – Norwegian standard for floating fish farming installations

**HACCP** (Hazard Analytical Critical Control Point)  
– Risk analysis principles



## **LERØY THE FIRST COMPANY WORLDWIDE TO ACHIEVE ASC CERTIFICATE FOR SALMON**

We are extremely proud to confirm that the three first facilities in the world to gain certification according to this standard are all linked to Lerøy.

- No. 1 Jarfjord - Villa Organic**
- No. 2 Hogsneset Nord - Lerøy Midt**
- No. 3 Årøya - Lerøy Aurora**

Our goal is to gain ASC certification for all our fish farming facilities. By the end of 2014, all fish sold by Lerøy Aurora will have ASC certification.

For Lerøy Seafood Group, an ASC certificate is a natural conclusion of the Group's strong commitment to environmental protection.

It allows us to guarantee and document that our fish farming activities are the foremost

in the world in terms of environmentally sustainable production and that we possess both the competencies and capacity to make progress in such an important field.

The ASC standard implies requirements within the following seven areas:

- Legal requirements
- Conservation of natural habitat and biodiversity
- Conservation of water resources
- Conservation of biodiversity
- Fish feed
- Fish health
- Social responsibility

Lerøy Seafood Group is the very first company in the world to offer the market salmon produced according to the new environmental standard – ASC, Aquaculture Stewardship Council.





## GLOBALG.A.P.

GLOBALG.A.P. is a standard for environmental conditions involving both production activities and the working environment for employees.

- The Global Partnership for Safe and Sustainable Agriculture

### Scope of the standard:

Roe - Smolt - Fish for consumption - Production

The standard covers the production process from roe stage to fish slaughter

### The GLOBALG.A.P. standards relate to the following areas:

- Fruit and vegetables
- Flower and ornamental shrubs
- Integrated agriculture, module for sheep, pigs, cattle, poultry and dairy produce
- Coffee
- Integrated aquaculture - salmon and trout
- In the pipeline: pangasius, shrimp, tilapia



## FOCUS AREAS

**Food Safety:** The standard is based on criteria for food safety developed from the application of generic HACCP principles (Hazard Analysis & Critical Control Points).

**Environment:** The standard comprises environmental protection and Good Aquaculture Practices (GAP) developed to minimise negative environmental impacts of aquaculture.

**Employees' health, safety and welfare:** The standard sets forth global criteria for working environments and for workers' health and safety in the production facilities. The standard also contains guidelines for increased awareness and responsibility for social relations in the workplace. However, this should not be seen as a substitute for thorough audits of ethical social responsibility.

**Fish welfare:** The standard sets forth global criteria for a minimum level of fish welfare in production facilities.

**GLOBALG.A.P.**

## BRAND PRODUCTS

In recent years, Lerøy Seafood Group has targeted the sale of their own brand products under the Lerøy brand. The Group also has other brands such as: Aurora Salmon, Poseidon, Smögen Seafood, Fossen, Finest, Aurora Seafood, Catch and Fossen Fjord Fish.

In 2013, the percentage of products based on raw materials owned by the Group was 67.4%, compared with 66.6% in 2012.

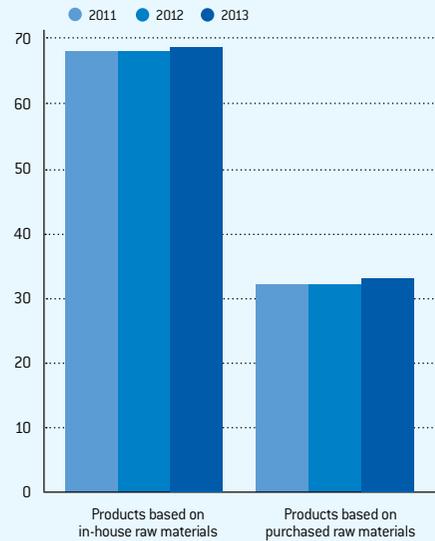
The Group also sells a number of products with certification according to various sustainability standards, such as ASC, MSC, Global Gap and Debio/KRAV. The volume of



certified fish sold is higher than the volume labelled with certification. The reason for this is that production volume is currently higher than market demand for these products. However, there has been a significant increase in demand for certified products from 2012 to 2013.

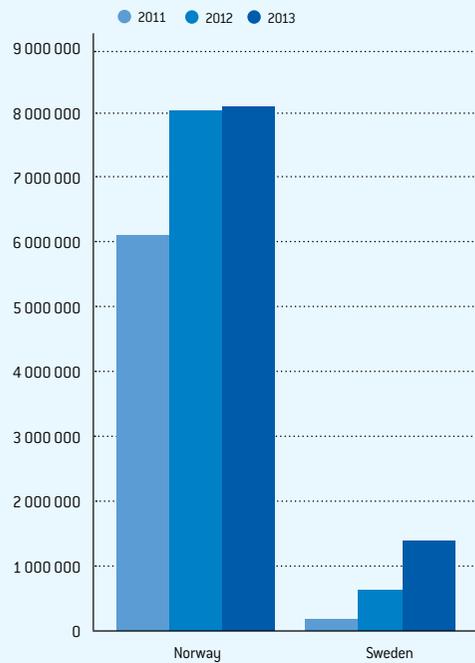


**SALE OF PRODUCTS BASED ON IN-HOUSE RAW MATERIALS [%]**



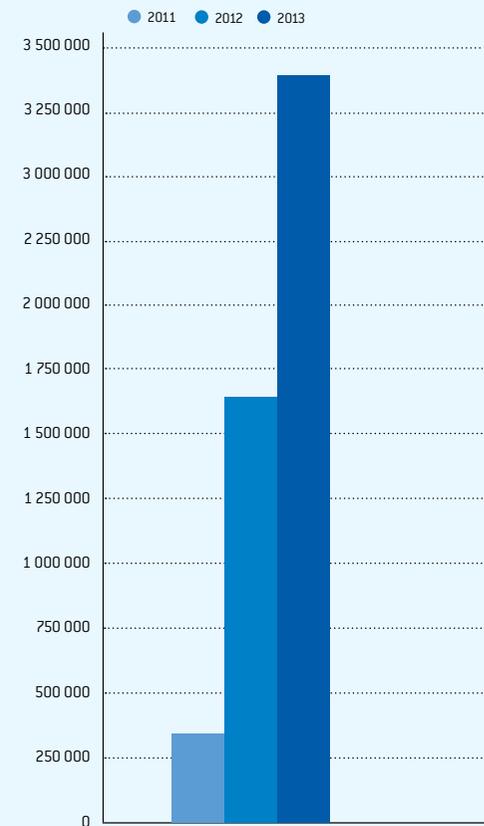
The volume of products sold via Lerøy Seafood Group and based on in-house raw materials in 2012 corresponded to the volume in 2011.

**SALE OF MSC/KRAV LABELLED PRODUCTS SOLD VIA HALLVARD LERØY AS AND LERØY SVERIGE AB**



The products sold from Norway have MSC certificates, but are not labelled or sold as MSC products.

**SALE OF GLOBALG.A.P. CERTIFIED SALMON VIA HALLVARD LERØY AS [KG]**



The same applies to salmon with Global Gap certification. The salmon has Global Gap certification but the products will not always be labelled with the Global Gap product label.



## EAT FISH – STAY HEALTHY!

“Fish is good for your health, all year round.” This Norwegian saying is confirmed by research in recent years. It has been shown that eating seafood lowers the risk of cardiovascular diseases. Norwegian health authorities and the WHO, the World Health Organisation, recommend that everybody should eat more seafood. The Directorate of Health in Norway has published new dietary advice where they recommend eating seafood 2-3 times a week.

### KEY ADVICE FOR A HEALTHY DIET

What you eat and drink has a direct influence on your health. The Directorate of Health recommends a varied diet with a lot of vegetables, fruit, berries, whole-grain corn products and fish, and limited amounts of processed meat, red meat, salt and sugar. Products carrying the keyhole symbol are also recommended.

- You should eat at least five portions of vegetables, fruit and berries every day.
- You should eat whole-grain corn products every day.
- Your daily diet should also include low-fat dairy products.
- Eat fish for dinner two to three times a week. Fish is also recommended as sandwich fillings. This corresponds to a total 300-450 grams of pure fish a week.
- Six portions of sandwich filling with fish equals around one dinner portion.
- At least 200 grams of this should be fatty fish such as salmon, trout, mackerel or herring.
- We recommend fish products carrying the keyhole symbol.
- Choose lean meat and lean meat products.
- Limit the amount of processed and red meat you eat.
- Choose cooking oils, liquid and soft margarine instead of hard margarine and butter.
- Choose foods with low salt levels and limit the use of salt when cooking and on food.

- Avoid daily intake of food and drink with a high sugar content.
- Drink water to quench your thirst.
- Keep a good balance between your energy intake in the form of food and drink, and the energy you use in various activities.

### LOOK FOR PRODUCTS WITH THE KEYHOLE SYMBOL!

The keyhole symbol makes it easier for customers to choose healthy products. The Directorate of Health and the Norwegian Food Safety Authority are behind the keyhole system.

When compared with other foods of the same type, products with the keyhole symbol fulfil one or more of the following requirements:

- Lower and healthier fat content
- Less sugar
- Less salt
- More fibre and whole-grain



Lerøy Seafood Group places a focus on the keyhole symbol when developing new products. We aim to provide our customers with healthy and safe products which also have health-related benefits.

## LIFESTYLE RELATED DISEASES ARE EXPECTED TO REPRESENT A GLOBAL CHALLENGE FOR THE FUTURE

### THE WHO HAS ESTIMATED THAT:

80% of all heart attacks  
90% of all cases of type 2 diabetes  
30% of all cancer cases



### CAN BE PREVENTED BY:

Improved diet  
Physical activity  
Not smoking

### CARDIOVASCULAR DISEASES

Overweight  
Diabetes  
Osteoporosis



### 1999:

60% of all deaths  
43% of all illnesses

### 2025:

73% of all deaths  
60% of all illnesses

Fish is rich in protein and Omega 3, and does not contain sugar. There is a current trend for diets rich in sugar and excessive levels of Omega 6. By replacing parts of your diet with seafood, you gain a double benefit. You eat less sugar and less Omega 6 while at the same time consuming more Omega 3 and other important nutrients. Omega 3 and Omega 6 are different types of n-3 and n-6 fatty acids. It is generally believed that it is the marine n-3 fatty acids - such as Omega-3 - that provide positive health benefits. We find a lot of these fatty acids in fat fish such as salmon and trout.

The most important Omega-3 fatty acids are Docosahexaenoic Acid (DHA) and Eicosapentaenoic Acid (EPA). These are essential fatty acids, meaning that the body needs them for the maintenance of several vital functions. These essential fatty acids are only found in seafood.

The Omega-3 type of fatty acid can only be obtained through the food we eat since the body does not produce it. It is therefore vitally important to supply the body with enough of the right type of Omega-3.

Lack of essential fatty acids shows up as skin ailments, nerve disorders and reduced growth in children. Present day discussion about nutrients focuses to a considerable degree on the importance of fatty acids in preventing, for example, cardiovascular diseases and arteriosclerosis.

Imbalance between Omega-3 and Omega-6 fatty acids contributes to lifestyle diseases such as heart disease, type 2 diabetes, cancer and mental ailments.

The ratio of these two acids in the blood should be 2:1, i.e. more Omega-3 than Omega-6. There is also a growing body of evidence indicating that people with rheumatic ailments, such as inflammation of the joints, are able to reduce the inflammation reaction with ingestion of fish oils - preferably together with vitamin E and the trace element Selenium.

EFSA, the EU's Food Safety Authority, recommends that healthy people have a daily intake of 0.25 grams EPA and DHA, 1.75 grams per week, in order to prevent cardiovascular disease. On average, 100 grams of salmon contains 2.1 grams of EPA and DHA.

So by eating 100 grams of salmon, you consume the recommended volume and more.

A varied diet with different types of seafood is the best guarantee for providing your body with essential nutrients. Eating fish is a good investment in your own health. What's more, it is delicious and can be prepared in a whole number of different ways - on the barbecue, in the oven, boiled, fried or just raw.

Research has shown that a combination of fat and sugar may lead to obesity. And of interest to weight watchers, the data indicate that it makes a difference if the fat in your food is combined with sugar rather than with protein. An investigation carried out at the National Institute for Nutrition and Seafood Research shows that diets composed of sugar in combination with fat resulted in significantly more obesity than a diet composed of protein and fat. The diet composed of protein and fat also resulted in less weight gain than a diet with less calories. The reason is probably that when limiting the supply of sugar, production of sugar for energy to the brain and other organs must come from consumption of fatty tissue.

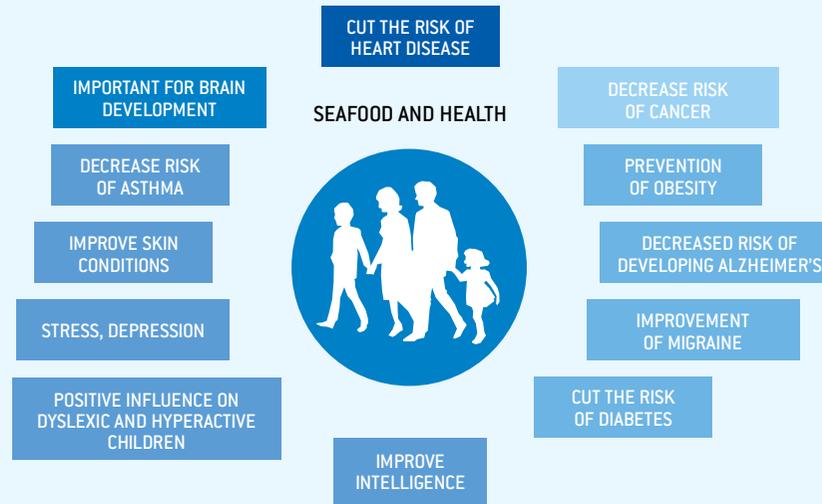
The increasing incidence of obesity will be one of our greatest challenges in the years ahead, in part because it may cause diabetes. Diabetes is a growing health problem both nationally and globally. It has been estimated that 300 million people will suffer from type 2 diabetes by 2025. Meanwhile, other studies suggest that fish protein can protect against the risk of diabetes. Correct food intake is extremely important in the prevention of disease.

There is overwhelming documentation that, generally, eating fish is good for our health. Also, there are strong indications that consumption of fat fish slows and prevents the development of heart and cardiovascular diseases. Consumption of fish and other seafood is also important for development of the foetus, particularly as regards weight gain and neurological development. Other investigations have shown positive effects on illnesses such as dementia, post-partum depression, osteoporosis, skin problems, migraines and hyperactivity.

What eventually could limit the consumption of fat fish is its content of dioxins and similar substances like PCB, but with today's control of raw materials in fish feed and the fish itself, the limits for environmental toxins in fish are far below recommended values. Tolerable, weekly intake (TWI) of dioxin and dioxin equivalents like PCB is 14 pg TE per kg bodyweight per week. This means that a person weighing 70 kg can eat 980 pg TE per week, (TE - toxic equivalents / pg = Pico gram).



THE RESULTS OF VARIOUS STUDIES IN DIFFERENT PARTS OF THE WORLD INDICATE THAT EATING SEAFOOD, PARTICULARLY FATTY FISH, HAS A POSITIVE IMPACT ON VARIOUS DISEASES



*The darker the colour of the box, the higher the number of studies concluding that seafood has a positive impact.*

Tests of Lerøy Seafood Group's salmon show that in 2012 the fish contained approx. 0.49 pg TE/g. A portion of salmon normally weighs 200 grams. This means that when eating a salmon meal with 200 grams of fish, the intake is approx. 98 pg TE. In other words, we can eat 10 salmon meals with 200 grams fish each without exceeding the recommended maximum intake of TE. Recommended limits are usually set with a considerable safety margin. With seafood we also cover the daily needs for other vital nutrients such as vitamins B12, D and E.

**Nutritional content of salmon**

**(National Institute of Nutrition and Seafood Research) (NIFES):**

Product	Ash g/100g	Energy g/100g	Fat g/100g	Protein g/100g	Carbohydrate g/100g	Dry substance g/100g
Salmon, farmed	0.9–1.3	784–1202	9–23	14–26.1	0	30–42

Water soluble vitamins	Fat soluble vitamins	Minerals	Trace elements	Amino acids
Biotin	Alpha tocopherole (Vitamin E)	Phosphorus (P)	Fluoride (F)	Alanine
Folic acid	Gamma tocopherole (Vitamin E)	Potassium (K)	Iron (Fe)	Arinine
Cobalamin (B12)	Vitamin A1 (Total retinol)	Calcium (Ca)	Iodine (I)	Aspartic acid
Niacin	Vitamin A2(3,4 didehydro-all-trans-retinol)	Magnesium (Mg)	Copper (Cu)	Glutamine acid
Pantothenic acid	Vitamin D (D3)	Natrium (Na)	Selenium (Se)	Glycine
Pyridoxine (B6)			Zinc (Zn)	Histidine
Riboflavin (B2)				Hydroxyproline
Thiamine (B1)				Isoleucine
				Leucine
				Lysine
				Methionine
				Phenylalanine
				Proline
				Serine
				Taurine
				Threonine
				Tryptophan
				Tyrosine
				Valine

# EXTERNAL ENVIRONMENT





## LERØY SEAFOOD GROUP'S TARGET AREAS FOR THE EXTERNAL ENVIRONMENT:

- Accidental release
- Lice
- Fish health
- Locations
- Fish feed with raw ingredients
- Greenhouse gases
- Residual raw ingredients
- Distribution



## ACCIDENTAL RELEASE

Prevention of accidental release of fish is an important and high priority area for Lerøy Seafood Group. Lerøy Seafood Group invests a considerable amount of work into optimising equipment and routines to avoid accidental release of fish. Actual incidents of accidental release and all events that can lead to accidental releases are reported to the Fisheries Authorities. Securing against accidental release is a question of maintaining a focus on execution/action, good planning of all operations in order to ensure safe execution and efficient re-examination of operations. Key words such as: ATTITUDE, ACTION and RESPONSIBILITY have no impact if not clearly defined by management. Moreover, it is essential that all employees are made aware of their responsibility for ensuring zero accidental release of fish within our company.



Four incidents involving accidental release of fish were recorded by Lerøy Seafood Group in 2013. The number of fish involved was 31,980, representing 0.03% of the total number of fish in the sea in 2013.

**Date Company Facility Species Number**

06.06.13	Lerøy Vest 11611 Trout 50
21.10.2013	Lerøy Vest 28976 Salmon 1 929
04.11.2013	Lerøy Aurora 30877 Salmon 1
29.11.2013	Lerøy Midnor 12 383 Salmon 30 000
06.06.13	Accidental release occurred while changing a net – a small piece of the top rim of the net became submerged in the water so that fish could swim out.
21.10.2013	Hole in net detected three days after AGD treatment.
04.11.2013	One fish captured from net for control was accidentally released to sea.

29.11.2013	Contact between net and chain utilised to keep bottom ring in position caused a hole in the net.
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None of our young fish facilities reported accidental release in 2013. Subsequent to an incident that could have caused, or actually did cause, accidental release of fish, it is of utmost importance that all information regarding factors resulting in the incident are communicated throughout the organisation. Such incidents are used actively for training of personnel and making improvements to procedures and equipment. Our increased focus on accidental release over the past years has already resulted in several amendments to our facilities in order to prevent similar incidents in the future.



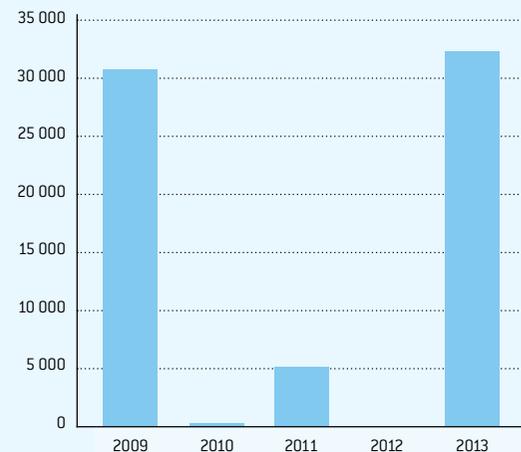
**Specific measures worth mentioning include:**

- Replacement of nets
- All facilities shall comply with the new Nytech standard
- All facilities shall have certification
- Active participation in the further development of solutions to prevent accidental release, with an emphasis on solutions targeting faults in bottom rings, chains and nets
- Modernisation of equipment
- No nets in sea without drawings
- Never assembling a haul rope where there is no cross rope
- Marking of nets
- Extensive use of camera/divers during /after work on nets
- New procedures for net handling
- New log form for all work involving nets

**We can increase our:**

- Continual work on attitudes
- Control/re-examination - always
- Continual revision of procedures
- Assessment of suppliers
- Use of new technology for monitoring

**ACCIDENTAL RELEASE IN LERØY SEAFOOD GROUP  
(NO. OF FISH)**



It is important that incidents which result in accidental release of fish result in exchange of experience between fish farming companies. The companies in the Lerøy Seafood Group participate in groups where experience and expertise are shared among the players, and competencies are shared among the actors. In order to improve our preparedness we also collaborate with other fish farming companies in our vicinity and participate actively in the work to increase expertise and enhance preparedness by taking part in activities coordinated by FHL (the Norwegian Seafood Federation). Moreover, our fish-farming companies maintain close contact and communication with the authorities regarding prevention of accidental release of fish.

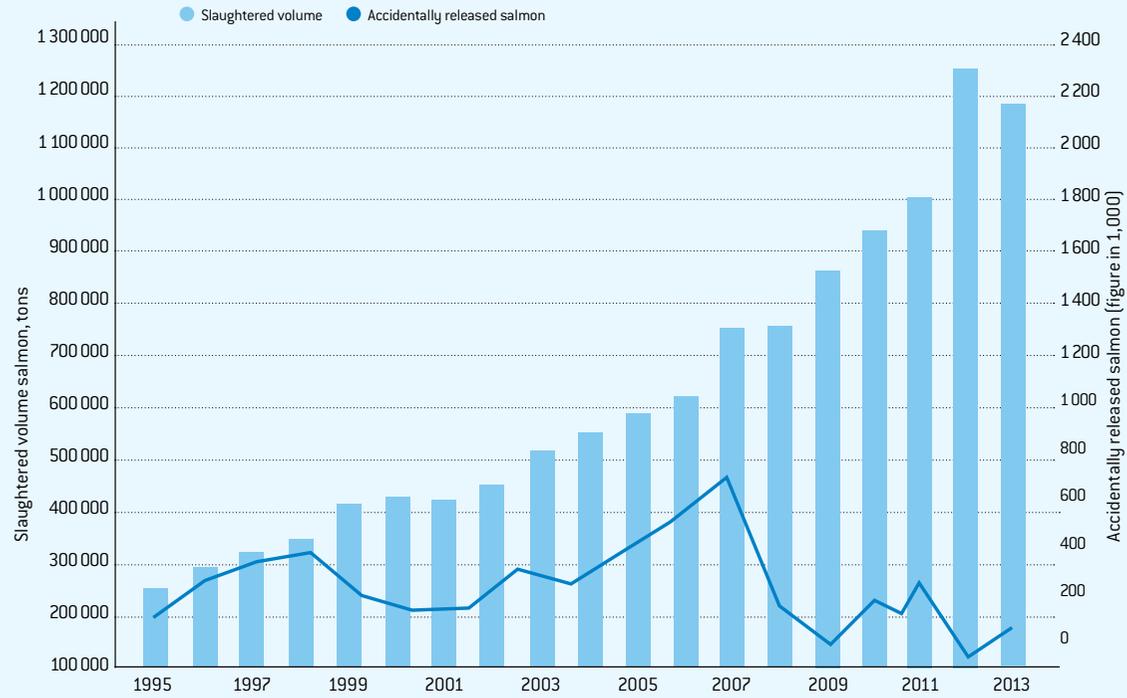
**In addition to public requirements in respect of accidental release of fish, we have also implemented the following measures:**

- Established a collaboration agreement with other major players in Central Norway where each company is obliged to keep a central preparedness stock of 500 retrieval nets to be used by all companies when helping the company experiencing an accidental release situation.
- Established a comprehensive internal control system with a high frequency and scope of internal inspections.
- Routine diver inspections of cages after deployment in sea, as well as throughout the entire production phase.
- Increased requirements for maintenance inspections between each accidental release.
- Participation in various development projects to test new equipment. One example is the GRIP project, which provided important answers to how nets and cages should be built and connected in order to prevent rubbing and wear.
- Surveillance project for unmanned facilities.

The fish farming companies in Lerøy Seafood Group will place prevention of accidental releases among its top priorities in the year to come, and will continue to maintain a focus on work to prevent accidental release.

**Main goal: "Zero – 0 – accidental release".**

### ACCIDENTAL RELEASE OF SALMON AND PRODUCTION GROWTH OVER LAST 15-20 YEARS



*The table shows accidental release of salmon compared with total volume of harvested salmon in Norway.*



## LICE

Salmon lice have coexisted with salmon fish for a long time. The first written record of salmon lice is from the 17th century. In 1837 the zoologist Henrik Nikolai Krøyer described the species and gave it the Latin name *Lepeophtheirus Salmonis*. Salmon lice have a natural co-existence with salmon.

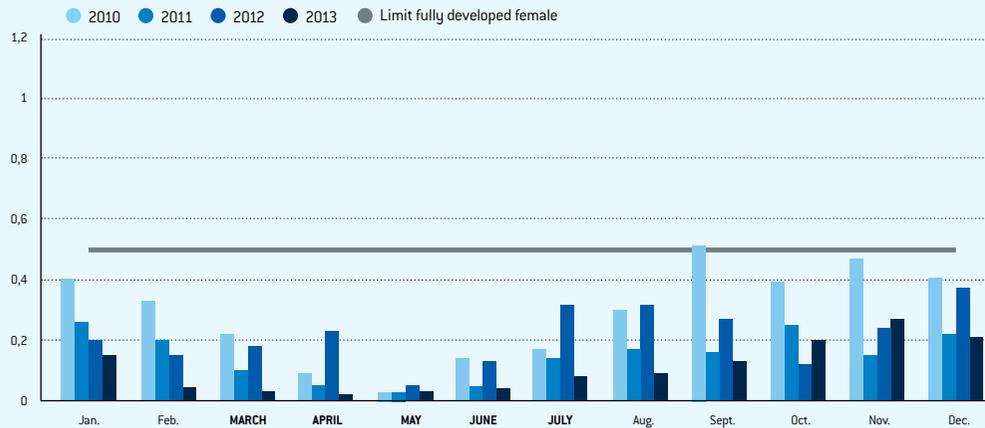
Male and female salmon lice develop at slightly different rates; the male louse grows somewhat faster than the female. The growth rate is influenced by temperature; a higher temperature leads to faster growth.

At 5°C it takes 11 weeks from Copepodite to fully developed female lice.

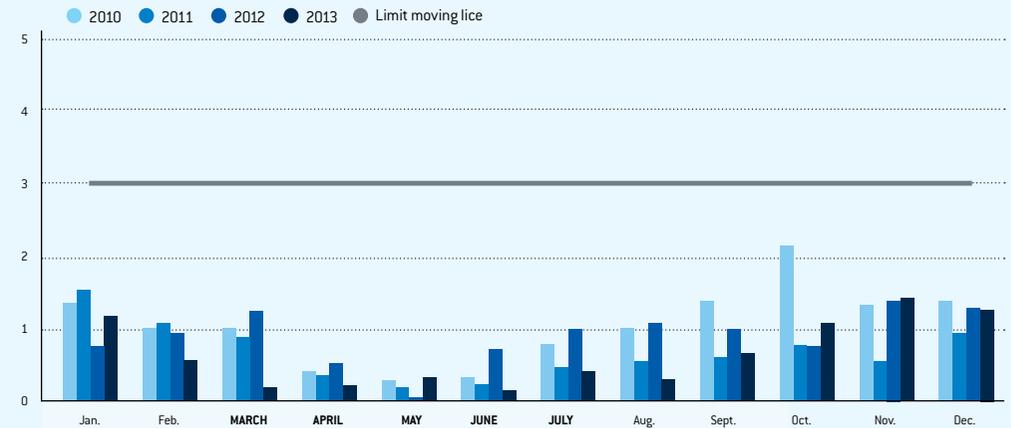
Important background information when combating salmon lice infestations:

- Some areas present greater challenges than others for lice control
- Some salmon farmers have good control, while others have poor control
- Some rivers have a good salmon return rate, while others have a low rate
- Some companies achieve good results with Wrasse while others fail

**DEVELOPMENT OF FULLY DEVELOPED FEMALE LICE WITH EGGS, LERØY SEAFOOD GROUP  
(AVERAGE NO. LICE PER FISH)**



**DEVELOPMENT OF MOVING SALMON LICE, LERØY SEAFOOD GROUP (AVERAGE NO. LICE PER FISH)**



## LICE CONDITIONS IN THE COMPANY'S FACILITIES IN 2013

Salmon lice are practically absent from our facilities in the north. The number of moving salmon lice and fully grown female lice with eggs is measured and reported to the Food Safety Authorities on a regular basis. These measurements indicate levels which are well below the requirements made by the Food Safety Authorities. During the period from January to September, which is an important season for emigration of wild fish, the measurements taken in 2013 had the lowest results for Lerøy Seafood Group since these types of measurements were implemented. Lerøy Seafood Group aims to avoid the use of chemicals to combat salmon lice where appropriate in accordance with regulations and fish health. Chitin inhibitors shall not be used unless necessary, due to problems with resistance. Specific approval is required for any use of chitin inhibitors. The use of chitin inhibitors was not required in the period from 2011 to 2013.

**Main goal: "We aim to avoid salmon lice of reproductive age".**

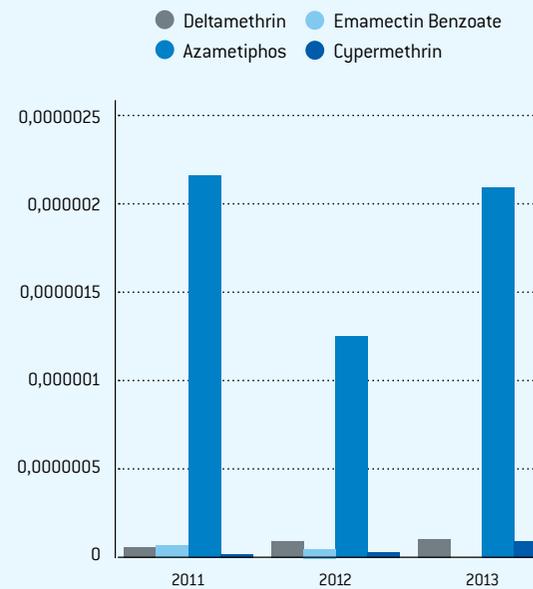
Both management and production technicians have maintained a strong focus on salmon lice treatment and will continue to do so in the future. We have met all public requirements as to counting, registration and treatment.

Lerøy Seafood Group has a very positive outlook to the use of Wrasse to combat salmon lice, and has in recent years invested significant resources in learning more about Wrasse, in terms of farming of the species, utilisation and survival.

**In order to succeed with the use of Wrasse, the following points should be noted:**

- Plenty of shelter in the cages
  - Lerøy Seafood Group has made use of sports clubs and school children to create shelters for Wrasse in the cages.
- Cleaning of nets - demanding work but necessary. The cages are hosed down every 10th day. The nets are cleaned using cleaning boats. Start-up in early July.
- Goal for 5% Wrasse in all cages.
- Reduction of mesh size in nets, from 22 omfar to 28 omfar for larger fish. This means that we can use somewhat smaller Wrasse for larger fish.
- Registration of dead Wrasse and refilling throughout the season.

**CHEMICALS USED IN DELOUSING AGENTS  
(KG/KG FISH GROSS GROWTH)**



**The following areas will be focused on in the time ahead:**

- More intensive use of Wrasse than before
- Use of alternative deployment patterns and locality structures
- Continuous monitoring of deployment and localities
- Treatment with approved treatment agents
- Coordination among facilities
- Test of mussels in relation to delousing

We aim to achieve this goal by focusing on three main areas:

**Prevention:**

- Good locations
- Good smolt
- Clean nets
- Common plan for fallow areas

**Monitoring:**

- Counting of lice
- Notification of lice counts to neighbouring facilities
- Better communication between neighbouring facilities
- Effectuate good monitoring for correct and timely treatments in order to reduce treatment frequency

**Treatment:**

- Use of delousing bath
  - tarp and well boat
- Feed
- Wrasse
- Rotation of medicines
- Common treatment in certain areas correctly timed to suit emigration of wild smolt
- Treatment during optimum weather conditions
- Follow-up and corrective action

The volume of chemicals used for delousing by Lerøy Seafood Group has been substantially reduced in recent years, while the volume nationwide has increased. There has been a particularly high increase in the use of chitin inhibitors nationwide. Lerøy Seafood Group has decided to implement a precautionary approach to the use of chitin inhibitors and has therefore not utilised these substances in recent years as we await new information on their impact on shellfish.

## PLANS – GOALS FOR 2014

Main goal: "We aim to avoid salmon lice of reproductive age".

- Coordination of delousing.
- Optimal utilisation of Wrasse.
- Strategic utilisation of treatments.
- Introduce new methods.
- Limit infestation pressure.
- Farming of Wrasse.
- Improved rotation of use of medication over larger areas.
- Large Wrasse for parent fish and in areas with more than one generation.
- The capacity to execute treatments within authority deadlines in all locations and coordinated throughout generations.
- Compliance with authority requirements in the regulations regarding lice and zone regulations.
- Participation in collaborative work.





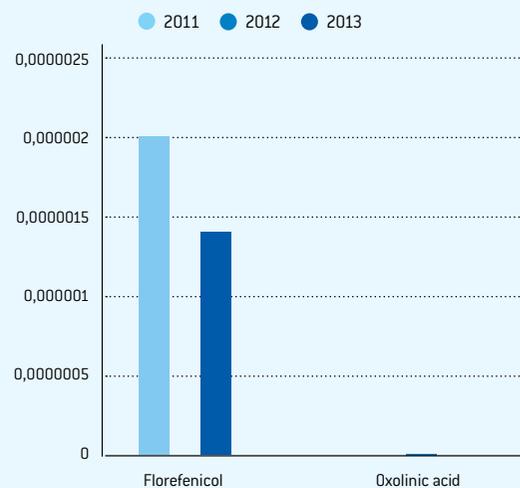
## BACTERIAL TREATMENT

Salmon is by far the healthiest "farmed animal" among the species from which food is produced here in Norway. No antibiotics have been administered for fish in the sea in recent years. Any antibiotics utilised have been administered to young fish to prevent disease.

In 2013, Lerøy Seafood Group utilised a total 215,561 tons of fish feed and 0.65 kg of antibiotics, active substances. This represents a 0.00000030% proportion of antibiotics in our fish feed.

Lerøy Seafood Group's goal is to restrict the use of medicines

MEDICATION USED FOR FISH FARMING  
(KG/KG FISH GROSS GROWTH)





## LOCATIONS

All the locations utilised by Lerøy Seafood Group are approved for fish farming by a number of Norwegian bodies. Before starting operations at a location, approval is required from a number of official and private bodies. Furthermore, a number of analyses need to be carried out and numerous requirements and local conditions have to be fulfilled before a location can be approved.

One of the assessments carried out both prior to approval for operations at a location and during fish farming at the facility is a so-called MOM-B evaluation.

MOM stands for:

M – matfiskanlegg (production facility)

O – overvåkning (monitoring)

M – modellering (models)

A MOMB evaluation is carried out by a third party enterprise and involves extraction of samples from the seabed under cages and around the cages in a facility.

The investigation has three parts:

- Fauna investigations
- Chemical investigations (pH and oxidation-reduction potential)
- Sensory investigation (gas, colour, odour, consistency, dredge volume and mud depth)

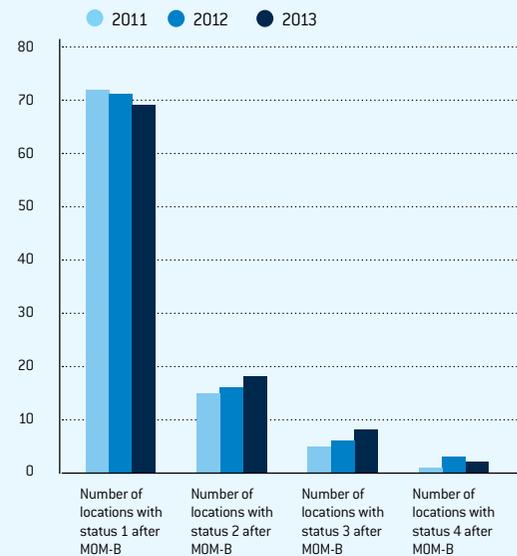
All parameters are allocated points according to how much sediment is impacted by organic materials. The difference between acceptable and unacceptable sediment condition is established as the largest accumulation which allows for survival of digging bottom fauna in the sediment. The investigation is executed when production of one generation is at peak.

On the basis of these investigations, the individual location receives a score from 1 to 4, where 1 is the most positive.

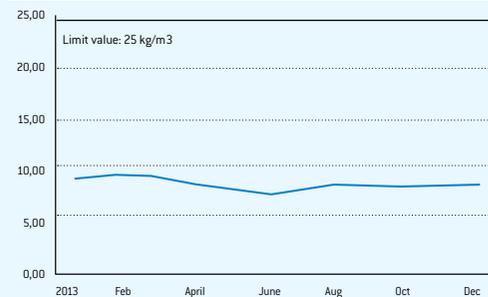
The score achieved also provides an indication of when the next MOMB investigation shall be carried out. A poor score often requires more frequent seabed investigations than a good score.

In addition to the MOM investigations carried out by third party companies, investigations are also conducted locally at individual facilities. These include measurement of density, oxygen level in the sea, currents, water quality, visibility and dives under the facility.

STATUS OF LOCATIONS, LERØY SEAFOOD GROUP AS OF 2011-2013 (NUMBER)



CAGE DENSITY, KG/M3, ALL LOCATIONS LERØY SEAFOOD GROUP 2013



Each facility is also linked with neighbouring facilities in a zone-based cooperation where the different facilities cooperate on factors such as lice, protecting against accidental release, preventing the spread of disease, outbreaks of disease etc.

## **GOAL FOR LOCATION CONDITIONS IN 2014**

MOM-B samples shall always be taken before releasing fish to a location. Fish must not be released when the score is 3 or 4 without an additional evaluation of the status of the location being carried out, where the reason for the lack of restitution is described. If a score of 3 or 4 is reported for a location, an MOM-C sample shall be taken.

## **FACTS**

### **MOM-investigations**

The MOM-system (Production Facility - Monitoring - Models) comprises two types of investigation of the soft seabed.

### **MOM-B**

The MOM-B investigation indicates impact on the seabed under a facility and classifies this from "good" to "very poor" (1-4). It provides a trend investigation that is risk-based and is carried out at scheduled intervals. The investigation must be performed by a professional body that can document their expertise and that are independent of the customer. All MOM-B investigations shall be reported to the Directorate of Fisheries, who monitor and carry out quality assurance of the reports.

### **MOM-C**

The MOM-C investigation is applied to the area influenced by a fish farming facility. It must be performed by a company accredited to take samples from seabed sediments, carry out taxonomy analyses and make professional evaluations. The county council is entitled to order a MOM-C investigation upon receipt of an application for a location licence. The Directorate of Fisheries is entitled to order a MOM-C investigation during operations if, for example, conditions are unacceptable or as an alternative investigation. In a number of situations, local county governors have stipulated a MOM-C as a condition for the issue of discharge licences.

## LERØY FIRST TO ACHIEVE ASC

Lerøy Seafood Group is the very first company in the world to offer the market salmon produced according to the new environmental standard – ASC, Aquaculture Stewardship Council.

We are extremely proud to confirm that the three first facilities in the world to gain certification according to this standard are all linked to Lerøy.

**No. 1 Jarfjord – Villa Organic**

**No. 2 Hogsneset Nord – Lerøy Midt**

**No. 3 Årøya – Lerøy Aurora**

Our goal is to gain ASC certification for all our fish farming facilities. By the end of 2014, all fish sold by Lerøy Aurora will have ASC certification.

For Lerøy Seafood Group, an ASC certificate is a natural conclusion of the Group's strong commitment to environmental protection.

It allows us to guarantee and document that our fish farming activities are the foremost in the world in terms of environmentally sustainable production and that we possess both the competencies and capacity to make progress in such an important field.

The ASC standard implies requirements within the following seven areas:

- Legal requirements
- Conservation of natural habitat and biodiversity
- Conservation of water resources
- Conservation of biodiversity
- Fish feed
- Fish health
- Social responsibility



Proud employees at Hogsneset Nord, Lerøy Midt, as they receive their ASC certificate.



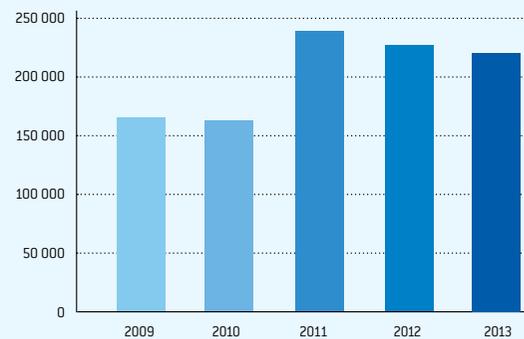
## FISH FEED

### EXPLOITATION

Lerøy Seafood Group plays an active role together with fish feed suppliers in ensuring that the raw materials used in our feed are:

- fished/harvested in an ethically sound manner
- fished/harvested in compliance with legal frameworks
- based on sustainable fishing/harvesting

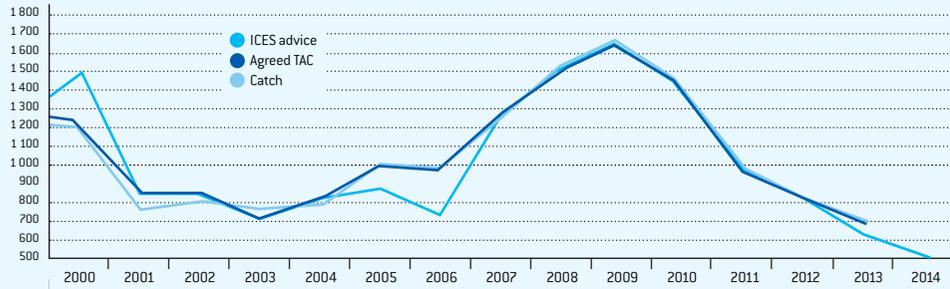
CONSUMPTION OF FISH FEED  
IN LERØY SEAFOOD GROUP (TONS)



### MARINE RAW INGREDIENTS IN FISH FEED, LERØY SEAFOOD GROUP 2013

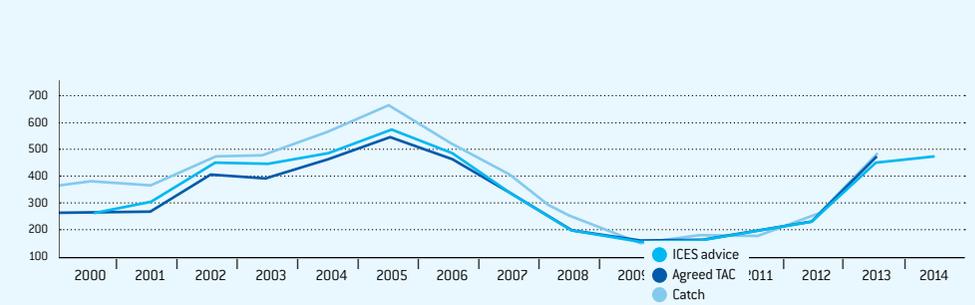
English	Latin	Norwegian	% Fish meal	% Fish oil
Blue whiting	<i>Micromesistius poutassou</i>	Kolmule	5.93	2.89
Boar fish	<i>Capros aper</i>	Villsvinfisk	0.19	1.18
Capelin	<i>Mallotus villosus</i>	Lodde	11.74	5.15
Herring	<i>Clupea harengus</i>	Sild	3.01	3.04
Horse mackerel	<i>Trachurus trachurus</i>	Hestmakrell		0.38
Jack mackerel	<i>Trachurus murphyi</i>	Stillehavsmakrell		0.43
Menhaden	<i>Brevoortia patronus</i>	Beinfisk		13.60
Norway pout	<i>Trisopterus esmarkii</i>	Øyepål	3.75	0.87
Peruvian anchoveta	<i>Engraulis ringens</i>	Ansjos	22.79	17.76
Pilchard	<i>Sardina pilchardius</i>	Sardin		3.40
Sandeel	<i>Ammodytes marinus</i>	Tobis	6.47	8.77
Sprat	<i>Sprattus sprattus sprattus</i>	Brisling Nordsjøen	1.64	2.78
Sprat	<i>Sprattus sprattus balticus</i>	Brisling Østersjøen	1.57	7.15
Whitefish		Hvitfisk	0.93	0.25
Capelin trimmings	<i>Mallotus villosus</i>	Loddeavskjær	3.24	0.61
Herring trimmings	<i>Clupea harengus</i>	Sildeavskjær	29.75	24.13
Mackerel trimmings	<i>Scomber scombrus</i>	Makrellavskjær	1.50	2.34
Whitefish trimmings		Hvitfiskavskjær	7.51	5.27
<b>Total</b>			<b>100.00</b>	<b>100.00</b>

### NSS HERRING, COMPARING SCIENTIFIC ADVICE, AGREED TAC AND ACTUAL CATCH (1 000 TONS)

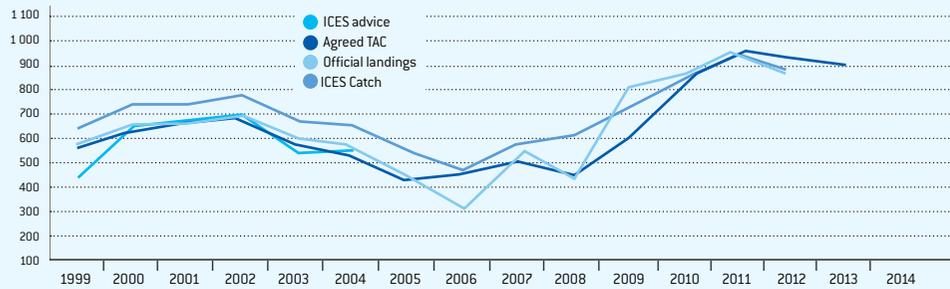


There was no agreement on the TAC from 2003 till 2006. The number is the sum of quotas from the individual parties.

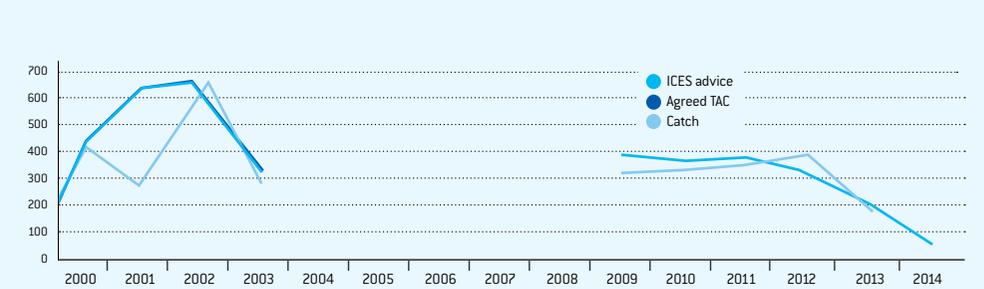
### NORTH SEA HERRING, COMPARING SCIENTIFIC ADVICE, AGREED TAC AND ACTUAL CATCH (1 000 TONS)



### ATLANTIC MACKEREL (1 000 TONS)



### BARENTS SEA CAPELIN, COMPARING SCIENTIFIC ADVICE, AGREED TAC AND ACTUAL CATCH (1 000 TONS)

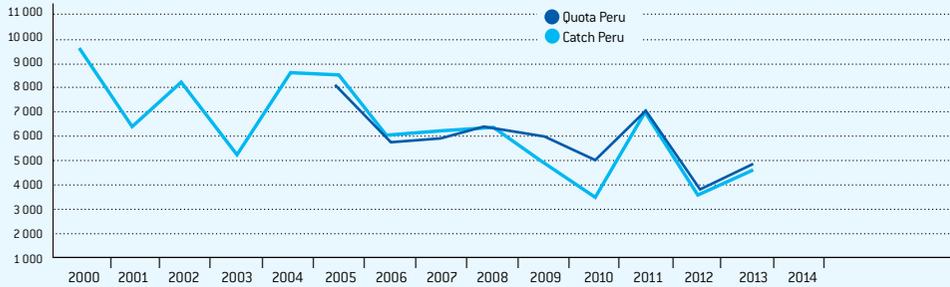


The fishing of Barents Sea Capelin was stopped between 2004–2009.

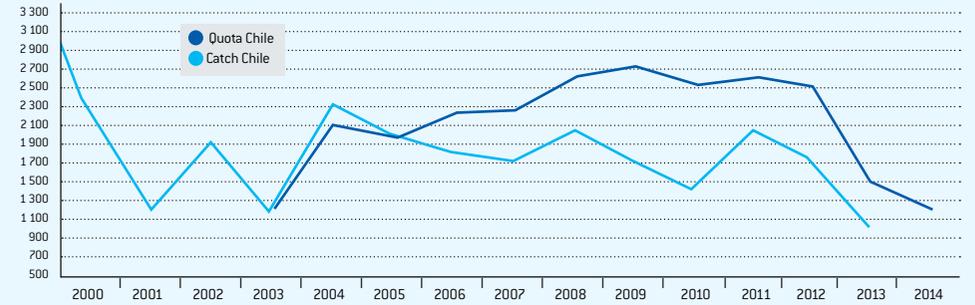
### BLUE WHITING (1 000 TONS)



**PERUVIAN ANCHOVETA, COMPARING SCIENTIFIC ADVICE/QUOTA AND ACTUAL CATCH (1 000 TONS)**



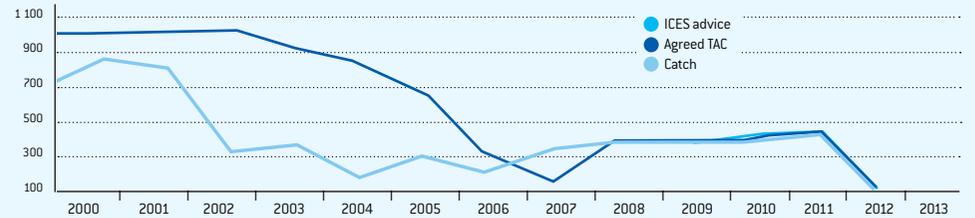
**CHILEAN SARDINE/ANCHOVY, COMPARING SCIENTIFIC ADVICE/QUOTA AND ACTUAL CATCH (1 000 TONS)**



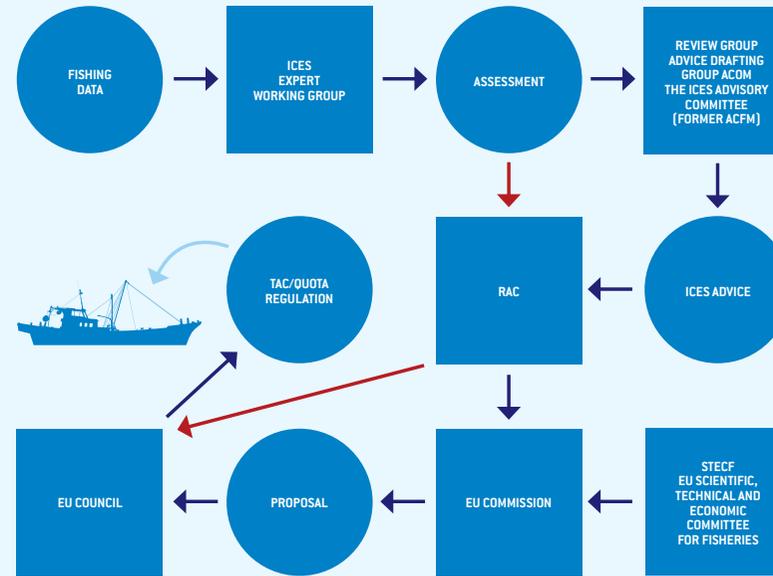
**CHILEAN JACK MACKEREL, COMPARING SCIENTIFIC ADVICE/QUOTA AND ACTUAL CATCH (1 000 TONS)**



**SANDEEL, COMPARING SCIENTIFIC ADVICE, AGREED TAC AND ACTUAL CATCH (1 000 TONS)**



The process for determining annual quotas for wild fish in the North Atlantic:



Lerøy Seafood Group has established requirements for its suppliers of fish feed to make sure that raw materials for the fish feed are managed in a satisfactory manner. Lerøy Seafood Group requires all suppliers to closely monitor how quotas are established and respected, and how the catch is used. Lerøy Seafood Group requires that the raw materials in its fish feed must come from geographic areas regulated by national quotas for the respective species, and where the quotas are allocated as far as possible in conformance with accepted scientific recommendations (reference is made to ICES, FAO, IMARPE, CERNAPESCA etc). We require that all our feed suppliers prioritise use of marine raw materials which have been certified in accordance with the IFFO (International Fishmeal and Fish Oil Organisation) standard for sustainability or raw materials with MSC (Marine Stewardship Council) certification or similar. Certification schemes shall be members of ISEAL and have guidelines for sustainability requirements also for small pelagic fisheries.

Use of palm oil is prohibited and any raw materials based on soy shall be certified by the “Round Table for Responsible Soy (RTRS),” or similar.



## FISH FEED

Fish feed is the most important input factor for production, and quality assurance is absolutely essential. In 2013, Lerøy Seafood Group purchased most of its fish feed from EWOS and Skretting. Lerøy Seafood Group has introduced a comprehensive sampling programme for re-examination of feed in terms of chemical content, dust, presence of foreign agents etc. The feed supplier carries out audits of own suppliers and Lerøy Seafood Group executes annual audits of the feed companies. These measures, combined with internal control by feed suppliers and traceability allow us to maintain control of feed content and quality.

Access to raw materials for fish feed is good, despite a number of external factors which impact on supply. There are no requirements for use of special raw materials for fish feed (e.g. fishmeal) but there are clearly defined nutritional requirements for the content of raw materials.

Lerøy Seafood Group provides full traceability back to species and origin for raw materials used in fish feed.

In 2013, there has been an increasing demand for raw materials from wild fish and this is very likely to become even more prevalent in the years to come. By introducing a cost-efficient optimisation of feed composition, the volume of fishmeal and fish oil in fish feed saw a slight reduction in 2013, without this having a measurable impact on growth or fish health.

Fish oil is the only Omega 3 rich source of oil available when it comes to the essential fatty acids, EPA and DHA. The aquaculture industry currently uses up to 80% of the worldwide production of fish oil. Rapeseed oil is used as a source of oil/energy in fish feed, in combination with fish oil. Demand for rapeseed oil also saw an increase in 2013 primarily because rapeseed oil is also utilised for biodiesel production.

The continued growth in global aquaculture production combined with a standstill in the worldwide stocks of wild fish and an increasing level of direct consumption will require us to further optimise our utilisation of fish oil in fish feed. The Omega 3 fatty acid requirement for fish is more than amply covered by current feed. However, a reduction in the mix of Omega 3 rich fish oil will result in a slight reduction in the level of Omega 3 in the fish.

#### **Country of origin, most popular raw materials:**

##### **Marine raw materials**

Fishmeal	Iceland, Norway, Denmark, Peru
Fish oil	Iceland, Norway, Denmark, Peru, USA, Mexico, Panama, Chile

##### **Vegetable raw materials**

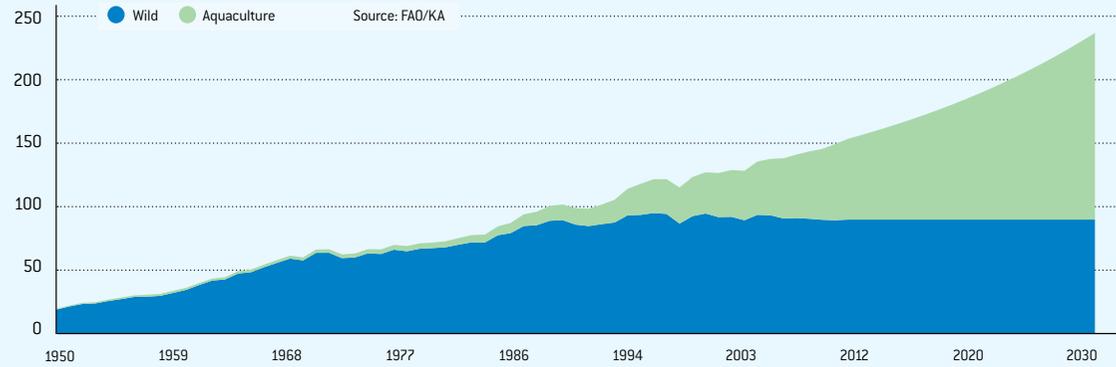
Soya protein concentrate	Brazil, Europe
Rapeseed oil	Russia, Belarus, the Netherlands, UK, Germany, Poland, EU
Wheat	Germany, Poland, EU
Wheat gluten	UK, Poland, Belgium, France, China
Sunflower flour	Ukraine, Russia
Faba beans	France, UK



**Catch methods for the most common marine species:**

Capelin:	Ring net, floating trawler, trawler
Herring:	Ring net, trawler
Mackerel:	Purse seine, trawler
Sand eel:	Fine-mesh trawler
Blue whiting:	Ring net with pelagic trawler, industrial trawler
Spratt:	Industrial trawler, coastal net vessel
Norway pout:	Small-mesh trawler

## DEVELOPMENT AND ESTIMATES - WILD FISH AND AQUACULTURE PRODUCTION 1950 - 2030 (MILLION TONS)



Researchers from the National Institute of Nutrition and Seafood Research in Bergen, among others, have proven that salmon stores the Omega 3 rich fatty acids when the level of these substances is reduced in fish feed. Irrespective of this, fish such as Atlantic salmon will have a level of Omega 3 which is several times higher than any other high-volume foodstuff.

In recent years, a new major consumer of Omega 3 rich fish oils has emerged on the market - the Omega 3 industry producing pills and capsules. In 2013, this industry utilised approx. 20% of the worldwide supply of fish oil for production. The retention and biological value of Omega 3 fatty acids will in the majority of cases be higher in the use of fish feed than via capsules.

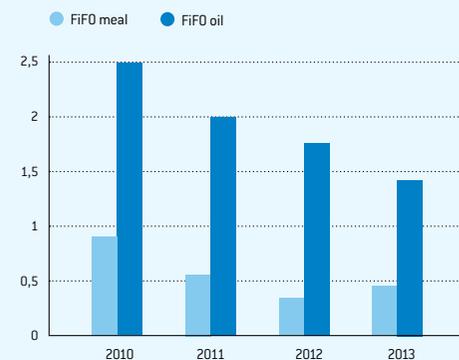


## FIFO (FISH IN – FISH OUT)

FIFO is the volume of wild fish used to produce 1 kg of salmon. The targets set in the ASC standard are: FIFO protein (fishmeal) lower than 1.31 and FIFO oil lower than 2.85.

In 2013, the FIFO value for protein at Lerøy Seafood Group will be approx. 0.44 while the FIFO value for fish oil will be approx. 1.41. It is natural to calculate one FIFO value for protein and one FIFO value for oil, as these two raw materials have very different performance. We require 1.44 kg of wild fish to produce enough oil to produce 1 kg of salmon, but we only need 0.44 kg of wild fish to gain enough protein for 1 kg of salmon. In other words, we have a surplus of fishmeal that can be utilised in other products.

DEVELOPMENT OF FIFO  
IN LERØY SEAFOOD GROUP (KG)



## FEED FACTOR

The feed factor is an important indicator of how efficiently we convert feed into fish. Salmon farming is exceptionally efficient compared with other species. The feed factor for chickens is approx. 2, for pork approx. 3.5 while for salmon in 2013, Lerøy Seafood Group's fish farming companies reported a feed factor of 1.18. This implies 1.18 kg feed required to produce 1 kg of salmon, compared to 3.5 kg feed to produce 1 kg of pork.

The following actions have been initiated in order to reduce the feed factor:

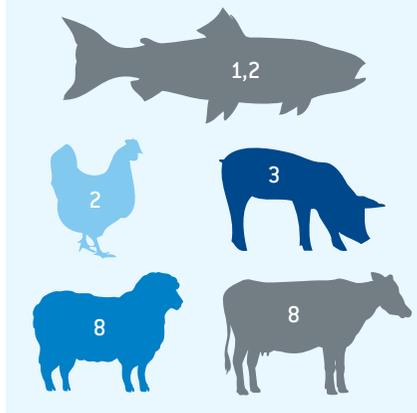
- Investment in better monitoring equipment
- Training of personnel
- Implementing new location structures
- Improved fish health with special focus on salmon lice
- Oxygen adapted feeding
- Increased focus on clean nets

In 2013, the largest input factors among raw materials in fish feed were capelin and anchoveta in addition to fish cuttings. The highest input factors among vegetable materials were soya and rape.

In recent years, there has been a marked increase in vegetable sources of raw materials for fish feed. This leads to a reduction in the utilisation of marine raw materials and, thereby reduced utilisation of different fish species.

Within the farming of salmon and trout, fish feed is the most important individual component in relation to both environmental accounting and costs. Lerøy Seafood Group relies on sustainable production of the fish used in fish feed in order that the Group can continue to produce tasty and healthy seafood in the foreseeable future. In principle, it is desirable that all fish suitable for consumption is used as human food, but in practice this is not always possible. Fishermen will first try to deliver their catch for human consumption. However, capacity onshore to process the fish is often insufficient. A large volume of the parts of the fish used for fish feed come from by-products from the actual fish. Demand for raw materials is a prerequisite for sale of fish for human consumption. In this context it is important to remember that fish not suited for direct human consumption is best used in production of other fish species.

### VOLUME OF FEED REQUIRED TO GROW 1 KG (KG)





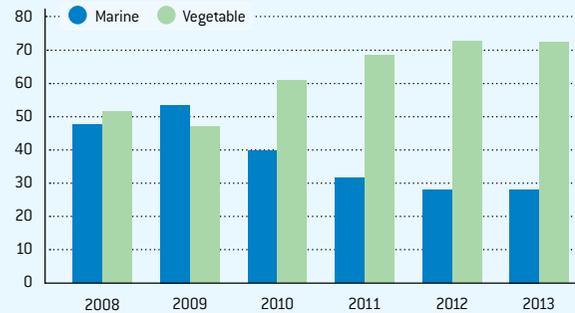
It is paradoxical to maintain that salmon farming is a problem in the use of industrial fish as long as we know that 50% of all fish meal is used for raising other domestic animals such as pigs, chickens and other warm-blooded species. Salmon and trout are champions when it comes to recycling of industrial fish. At the same time, they bring the healthy and vital fatty acids into human consumption.

In nature, fish is a part of the salmon's diet and farmed salmon is therefore a fantastic vector for introducing valuable marine proteins and oils into the human diet. We feel privileged to be part of this, and to be able to participate in its future development.

## **OTHER RAW MATERIALS**

Salmon feed contains both fishmeal and fish oil. These raw materials mainly come from wild fish which is not suited for human consumption or not in demand. Salmon farming has traditionally depended on a supply of wild fish due to its high consumption of fish oil. In recent years this dependency has been significantly reduced, since much of the fish oil has been replaced with vegetable oils. Today, more than half of the oil used comes from vegetable sources.

## DEVELOPMENT OF RAW MATERIALS IN FEED



## CHALLENGES ON THE RAW MATERIALS MARKET

There are a number of challenges to be faced on the market for raw materials and these inspire creative and sustainable solutions. In the future, the fish farming industry will require alternative sources of raw materials for fish feed. Originally, fish feed had a 70% content of marine raw materials. In recent years, this percentage has been gradually reduced and replaced by vegetable raw materials. Today, the fish feed we utilise contains approx. 70% vegetable raw materials and approx. 30% marine raw materials.

This change was mainly brought about due to the supply of raw materials, but also because of an increased focus on sustainable production. Fish for fishmeal and fish oil will achieve much more sustainable utilisation if supplied directly for human consumption than for feed for farm animals. Today, we prefer to produce fish feed from cuttings from the wild fish industry and to supply wild fish directly to consumption, where possible. Raw material from wild fish is utilised as an ingredient for numerous different types of animal feed.

Raw material from salmon is the simplest to process into consumable goods.



The volume of wild fish caught and utilised for fishmeal and oil remains relatively stable and is most likely to increase in the near future.

The steady growth of the fish farming industry, particularly in Asia, and the vast increase in direct consumption by humans, for example Omega 3 capsules, have resulted in higher prices and a reduced supply of marine raw materials for other markets such as the animal feed market. In line with our objective to increase our production of salmon and trout in the future, we therefore have to work hard to develop alternative and sustainable sources of raw materials which can be used in fish feed in the years to come. On the following pages, you can read about a selection of the projects we have worked on in 2013 to achieve this objective.



## FOUR SIGNIFICANT PROJECTS FOR SUSTAINABILITY

### PRODUCTION OF MACROALGAE AND MUSSELS

Lerøy Seafood Group is taking part on a project entitled DYMALYS in the Lysefjord in Rogaland county, which involves the farming of macroalgae in the fjord. This is a cooperation project between Lysefjorden Forskningsstasjon, Rogaland County Council, Bicotec, Sylter Algenfarm, IVAR, EWOS Innovation, Bellona and Lerøy Seafood Group, with Blue Planet acting as Project Manager. The objectives for the project are as follows:

To establish production of high-quality kelp in the Lysefjord.

The end product shall be utilised for:

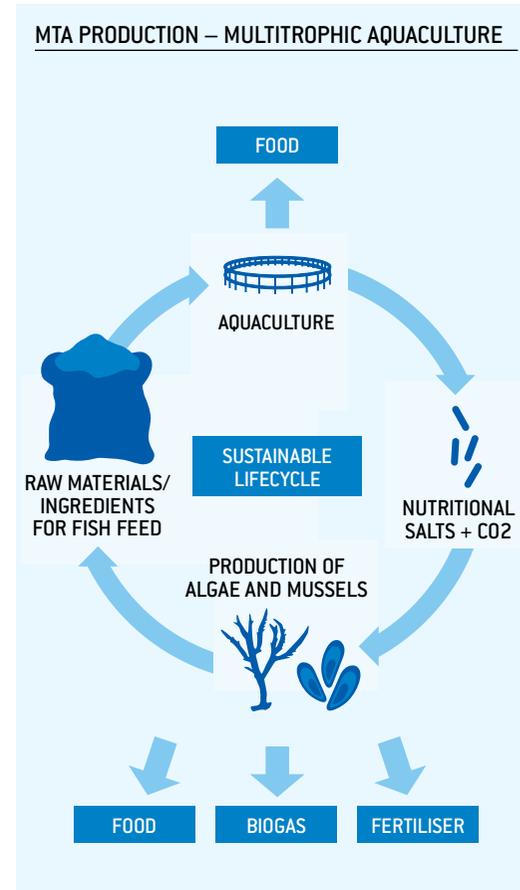
- Human consumption
- Ingredients and raw material for feed
- Intake of nutritional salts and CO<sub>2</sub> from other industry (on and offshore)
- Biogas

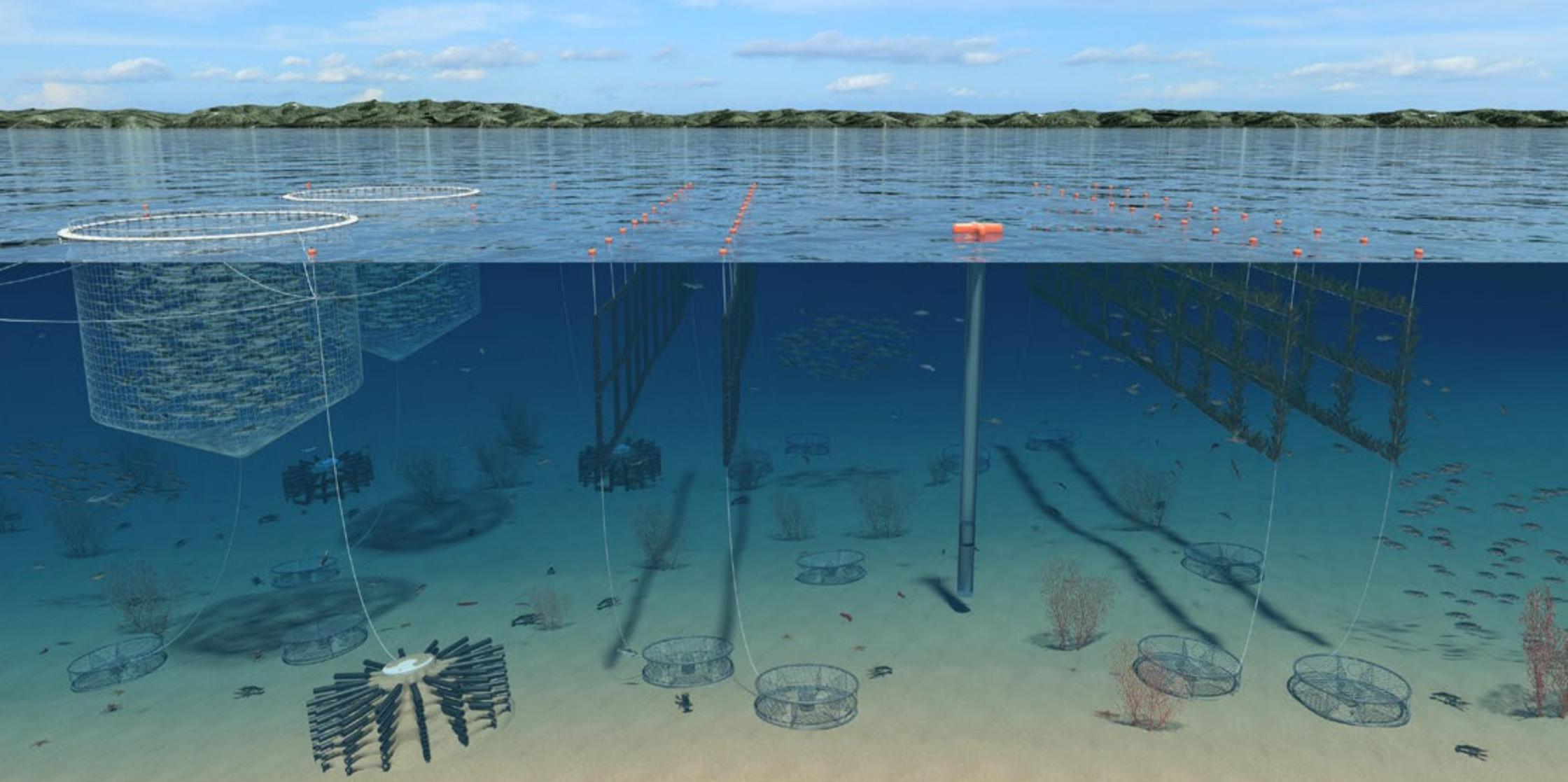
This project was founded in 2012 and has involved the production of high-quality sweet tangle for three seasons. The sweet tangle has now been tested for the HORECA market – for biogas production and in relation to the intake of nutritional salts – with extremely positive results. We still have to test algae as a raw material or ingredient for fish feed.

As with the algae, we are also aiming for industrial production of mussels. Mussels may have a very low fat content, but the fat is rich in essential fatty acids which are currently added to fish feed via fish oil. Not only do mussels have a high content of Omega 3 fatty acids, they also contain other important nutrients which are of value for salmon.

Industrial production of mussels could prove an important and sustainable source of raw materials for the feed industry. Mussel farming could also represent a substantial benefit in the reduction of phosphorus and nitrogen from sea water. An additional benefit with mussels is that they absorb CO2 in the shell.

The production of salmon/trout results in discharges of nutritional salts. The production of algae and mussels results in the intake and elimination of these nutritional salts. This provides the potential for a life cycle which is beneficial from a sustainability perspective, where algae, mussels and fish for consumption are farmed in what is known as an MTA process or multi-trophic aquaculture. This is a very exciting project in terms of sustainability.





## OCEAN FOREST

Sustainable fish farming is a high priority for Lerøy Seafood Group. New innovative projects and innovation play a decisive role in identifying new, good sources of marine raw materials for the ever-increasing fish farming industry, and in order to feed the growing population. In 2013, Lerøy Seafood Group and Bellona, an environmental organisation, started on an ambitious project principally targeting utilisation of those products we have in excess in order to produce those products we are lacking.

The project's vision is to generate sustainable large-scale production of biomass. Lerøy Seafood Group and Bellona together with national and international R&D groups aim to research how the organic interaction between different species can help solve the environmental problems created by fish farming, while at the same time attempting to achieve a significant value generation by taking a leading role to find new sources of biomass for human consumption, fish feed and bio-energy.

The cultivation of kelp, shellfish and invertebrates together with fish is a new concept within the history of Norwegian fish farming. Waste produced by one species becomes a resource for another species, creating an eco-system of value-generating species interacting in harmony with their environment. Mussels, kelp and other invertebrates filter large organic particles from fish feed or in the water flow, such as small lice larvae. At the same time, these organisms absorb excess nutritional salts and large volumes of CO<sub>2</sub>. By increasing production of these new and valuable species, we can enhance value generation, while also producing high quality raw materials that can be utilised to produce fish feed, for consumption or energy production. The opportunities in this field are vast, and we are very much looking forward to continuing our research in the years to come.

Ocean Forest has been established as an independent company and now has its own research plant on the island of Rongøy in the municipality of Øygarden off the coast of Bergen. The plant currently produces salmon, mussels and sweet tangle. Artificial reefs have also been installed to investigate the opportunities represented by developing a reef habitat surrounding the reefs.

## A SUSTAINABLE FISH FARMING INDUSTRY

### OCEAN FOREST HAS THE FOLLOWING AMBITIOUS GOALS:

- Production of sustainable raw materials and clean energy
- Production of marine raw materials for feed
- Absorption of large volumes of CO<sub>2</sub>
- Minimise environmental impact from Norwegian fish farming



## PRELINE

In recent years, Lerøy Seafood Group has been working on a project to produce large smolt in a semi-closed facility. The project has resulted in a pilot facility named Preline, now under full-scale construction. The facility will produce larger and more robust smolt, and will be able to achieve 2-3 production cycles per year.

The facility will be made of polyethylene and have a volume of 2,000 m<sup>3</sup>. It will have an ablong shape and the fish will be able to swim against the current, like in a river. Water is sourced from depths of 25-30 metres and is replaced every 3-4 minutes. The plan is to test the full-scale facility in 2014/2015. Construction of the facility complies with NYTEK and NS 9415.

The goal with this facility is to achieve the following:

- Improved control of biological and physical factors (current, temperature, O<sub>2</sub>, pathogens etc.)
- Minimise infection by using deep-sea water (25-30 metres.)
- Minimise risk of salmon lice and requirement for lice treatment.
- Lower mortality rate.
- Minimise accidental release.
- Improved biomass control.
- Improved growth, improved feed factor.
- Minimise loss.
- Delivery of autumn smolt in the spring and spring smolt in the autumn.
- Improved utilisation of fish for consumption facilities, including equipment.
- Boost economic gains and reputation.

## **ENSILING OF RESIDUAL RAW MATERIALS FROM FISHING OF WHITE FISH**

As shareholders of Austevoll Seafood, Lerøy Seafood Group has identified the potential of exploiting raw materials which were previously dumped at sea by the deep sea fishing fleet. Over the past years, Hordafôr, a company within the AUSS Group, has invested time and resources in utilising raw materials previously regarded as waste. This included not only fish guts and heads, but also by-catches etc. Hordafôr is currently working on a major project in cooperation with the white fish industry and fleet in North Norway, with the support of the Norwegian Seafood Research Fund.

In 2011, the Norwegian and foreign deep sea fishing fleet delivered around 580,000 tons of white fish (round weight) to Norwegian harbours (statistics provided by the Norwegian Directorate of Fisheries). Assuming that approximately 30% of this round weight can be utilised as ensilage, there is a total potential 175,000 tons of raw materials available from the deep-sea fishing fleet for white fish which can be utilised for example as a raw material in fish feed.





## GREENHOUSE GAS EMISSIONS

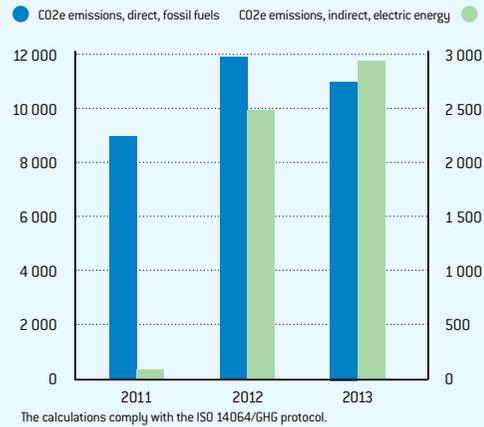
Below is a brief summary of the general framework and assumptions made when calculating greenhouse gas emissions for Lerøy Seafood Group in 2013.

The framework selected for calculating emissions includes emissions from combustion processes involved in the operation of the Group's fish farming companies and the related processing activities. This is referred to in total as Direct Emissions. The Group also wanted to gain an overview of the indirect influence on global warming from the company's activities and has therefore included CO<sub>2</sub> emissions from the production of electricity consumed by the company's production units in Norway.

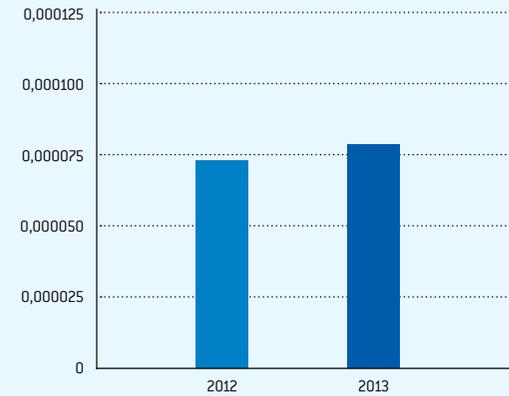
Significant sources of greenhouse gas emissions from Lerøy Seafood Group's core activities in Norway have been included in the calculations. The purchase of products and services, for example fish feed and transport services, has not been included in the calculations. Lerøy Seafood Group is currently working on obtaining a good basis for calculating the above.

The table below provides a summary of consumption of fossil fuels, electricity and greenhouse gas emissions.

**TOTAL GREENHOUSE GAS EMISSIONS 2012-2013  
(TON CO2E) - PRODUCTION FISH FARMING**



**CO2E EMISSIONS PER KG FISH PRODUCED,  
GROSS GROWTH**



**DIRECT EMISSIONS**

Direct emissions of CO2, CH4, and N2O are calculated on the basis of available data and information. CO2 emissions are only calculated from combustion of diesel, heating oil and undefined fossil fuels. Undefined fossil fuels in this context are diesel/heating oil.

Emissions from combustion of petrol are assumed to come from passenger vehicles and this has allowed for calculation of CO2, CH4, and N2O-emissions.

Emissions from combustion of marine gas oil are assumed to come from boats and this has allowed for calculation of CO2, CH4, and N2O-emissions.

All CH4 and N2O emissions are converted to CO2 equivalents in order to allow total reporting. The factors on which calculation of direct emissions of CO2, CH4 and N2O are based are factors specified in the IPCC-2006 overview of factors for the fish farming industry.



## **INDIRECT EMISSIONS**

Consumption of electricity also results in the emission of greenhouse gases. We have calculated our emissions of CO<sub>2</sub> based on a Norwegian mix of electricity. The consumption of electricity is classified as indirect emissions.

## **GLOBAL WARMING POTENTIAL (GWP)**

Different greenhouse gases have a different potential when it comes to global warming. GWP provides an indicator with which to weigh all greenhouse gas emissions in comparison with each other and to produce total potential CO<sub>2</sub> equivalents. Over the perspective of the next 100 years, for example, the emission of 1 ton CH<sub>4</sub> will have just as large an impact on global warming as the emission of 25 tons CO<sub>2</sub>.

Lerøy Seafood Group has reported greenhouse gas emissions to the CDP, Carbon Disclosure Project.



## ENVIRONMENTAL ACCOUNTING

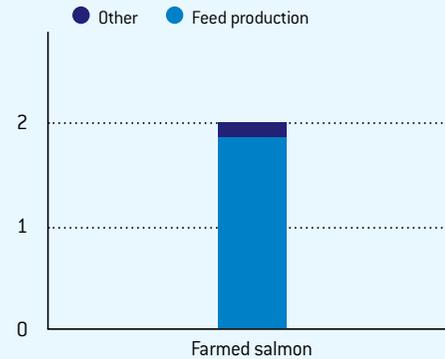
Lerøy Seafood Group has until further notice decided not to prepare separate accounting for CO<sub>2</sub> equivalents discharged into the environment from our production using the LCA method. We have, however, participated in various projects for analysing discharges of environmental gases from production of salmon, both as whole fish and as fillets.

On assignment from FHL (the Norwegian Seafood Federation) and Norges Fiskarlag, SINTEF Fiskeri og Havbruk AS together with SIK, Institutet för Livsmedel och Bioteknik AB carried out a study of Norwegian seafood in 2009 under the heading "Carbon footprint and energy use of Norwegian seafood products". This study is representative of the products we produce.

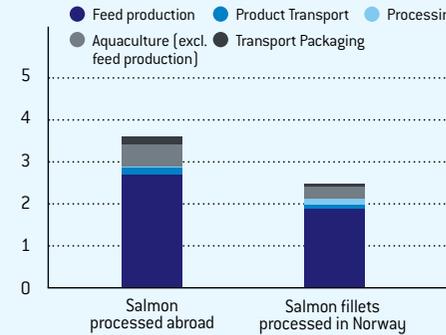
The result from this study shows that greenhouse gas emissions for whole salmon are 2.0 kg CO<sub>2</sub>e per kilo live weight.

Lerøy Seafood Group has decided to focus on processed products with an emphasis on processing in Norway. One of the reasons for setting this goal was to achieve a reduction in greenhouse gas emissions per kg edible seafood.

### GREENHOUSE GAS EMISSIONS (KG CO2E/KG LIVE-ROUND WEIGHT)



### PROCESSING IN NORWAY VERSUS ABROAD GREENHOUSE GAS EMISSIONS (KG CO2)

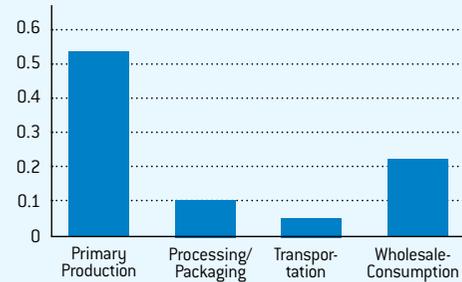


## ENVIRONMENTAL LABELLING

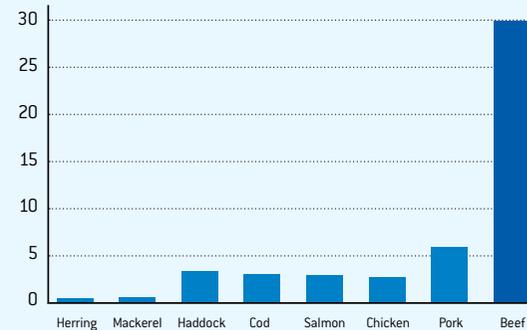
A few countries have started to label a number of products with their CO2 footprint. However, as of today there is no established standard for how this is to be implemented. As we see it, without a standardised label for CO2, we risk confusing the consumer when trying to compare the various CO2 labels on different products. For this reason we have decided to postpone the labelling of our products until a standard procedure is established.

We input various resources to the value chain and at the same time greenhouse gases are emitted from the production chain. The resources used and the gas emissions are converted to CO2 equivalents that are used in the environmental accounts. The volume of CO2 impacting on the environment varies according to the different stages of the production cycle. It is important to remember that the product's impact on the environment is the sum total of CO2 equivalents throughout the entire cycle.

**GHG EMISSIONS (KG CO2 E) PER 8 OZ FRESH SALMON FILLET FARMED IN BC DELIVERED TO SAN FRANCISCO**



**GREENHOUSE GAS EMISSIONS (KG CO2E/KG EDIBLE PART AT SLAUGHTER/LANDING)**

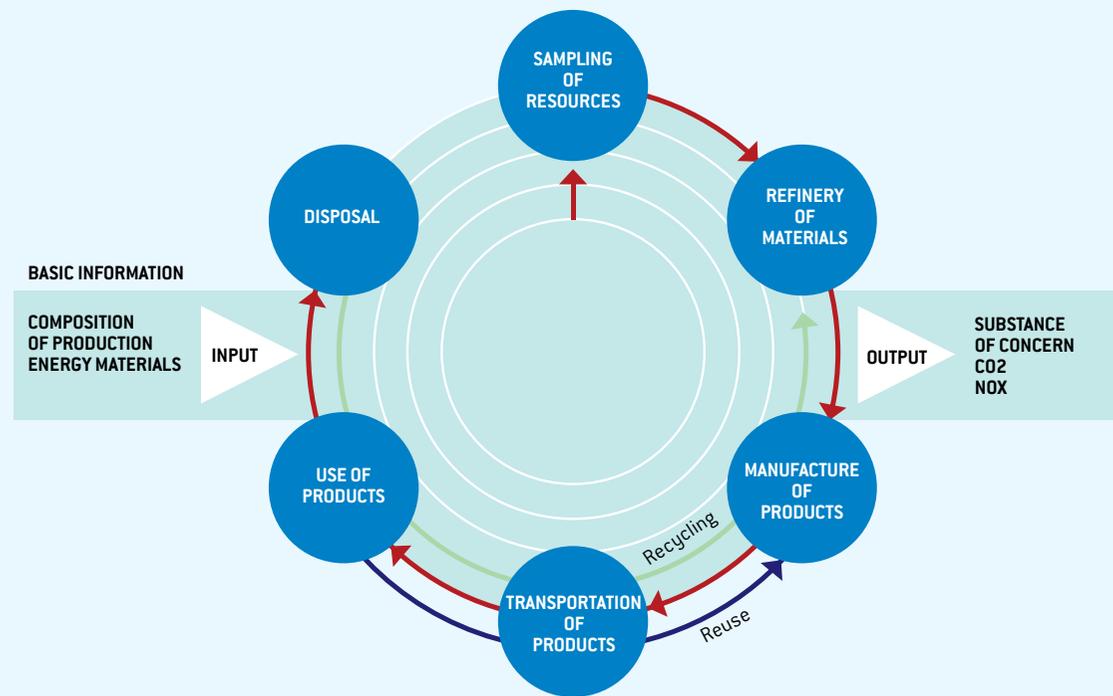


For example: if we label a product as it is taken out of the shop, a raw portion of salmon will be labelled with a lower CO2 value than a heated salmon portion taken from the hot food counter. However, if we look at the entire cycle, the warm salmon portion will normally score better than the cold one because it is probably heated in an industrial oven in the shop. If you bring a cold salmon portion home to the kitchen and heat it in an average household baking oven, the CO2 value will be higher.

The average consumer will probably not be able to consider these factors. It will therefore be to everybody's advantage if a standard is established for how far in the cycle we should go when calculating the CO2 value that subsequently will be reported on the product label.

LCA MOTHOD  
LIFE CYCLE ASSESSMENT

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In 2010, a committee was appointed in Norway to formulate a standard for environmental labelling of seafood. Lerøy Seafood Group is participating in this work, together with other representatives of the Norwegian fishing industry. The standard was completed and launched in the summer of 2012. It will be promoted as an ISO standard, and the objective is to establish the standard internationally for environmental labelling of all types of foods.

The majority of products and services do not in themselves contaminate to any great degree. However, the factories that manufacture products, the lorries that transport them, the consumers who consume them and the incineration plants where waste is burned all cause pollution. Life cycle analyses will help a company understand how their products and services impact on climate change, and which parts of the processes require a focus in order to reduce environmental impact.

A life cycle analysis of a product may help a company:

- Reduce greenhouse gas emissions
- Identify cost savings options
- Integrate climate impact as a factor when selecting suppliers, materials, product development and production processes
- Display environmental and social responsibility
- Provide information to customers and consumers on the environmental impact of a product/service

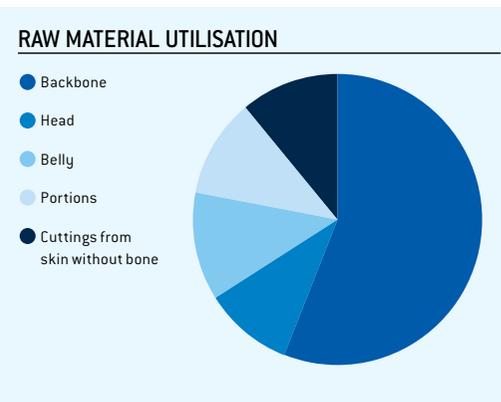




## BY-PRODUCTS

Lerøy Seafood Group works to achieve the highest possible rate of utilisation of raw materials produced. This implies a goal of 100% utilisation of all nutritious raw material not used in main production. The by-product share depends on the type and specification of our main processed products and their specification. The most important processed products are fillet and salmon and trout portions with or without skin.

The utilisation rate for fillet is between 55% and 74%. This implies that between 55% and 74% of the salmon (gutted weight) becomes main products while the rest becomes by-products. For portions the utilisation rate is between 45% and 68% depending on the specification.





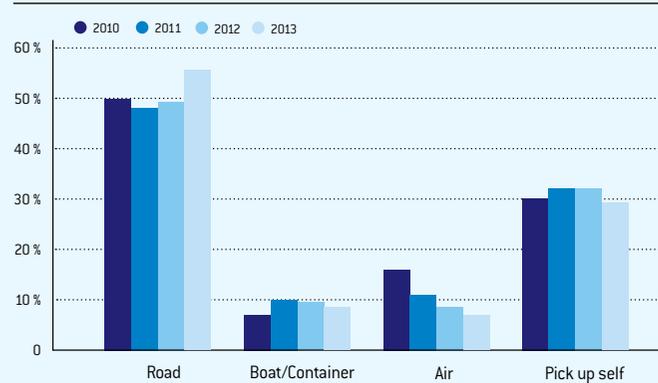
## DISTRIBUTION

How can we contribute to environmental protection by thinking green for all our logistics? By being environmentally conscious in our choices of logistics solutions, we will contribute to reduction of CO<sub>2</sub> emissions. Carbon dioxide is a colourless and odourless gas. It is produced naturally by humans and animals and in connection with human activities such as combustion of petrol, diesel oil, coal, fuel oil and wood.

In our practice, we are often bound by requirements on both environmental protection and profitability. Expensive transport which at the same time damages the environment is, of course, a solution we do not want. If the solution is kind to the environment but not profitable for the company, the environment is protected but the solution is bad for the company. The optimal transportation solution is good for the environment while at the same time contributing to the company's earnings. Such solutions also have a strong motivational factor and are therefore easier to implement. We often discover that environmentally friendly solutions do not cost as much as we thought, and that a focus on the environment in fact contributes to increased profitability.

Hallvard Lerøy AS is the largest sales and distribution company within the Lerøy Seafood Group. In 2013, transport was distributed as illustrated on the following page.

DISTRIBUTION IN HALLVARD LERØY 2010-2013

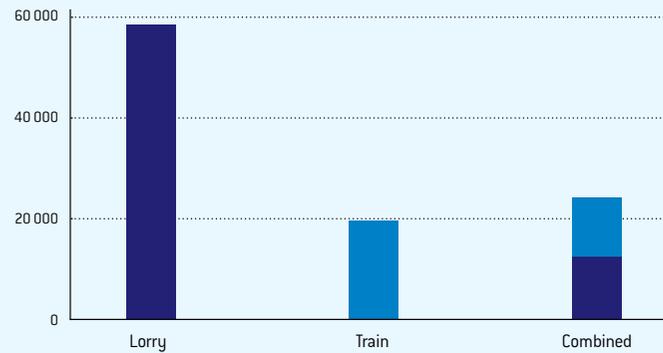


## ROAD TRANSPORT

The majority of distribution still takes place by road. This is mainly due to the limited logistic systems currently available for transport in regional areas. A number of our customers choose to provide transport themselves and therefore pick up products directly from our facilities. We work closely together with our transport suppliers, reinforcing the importance of environmental protection for all transport. All told, the vehicles we use for transport are far younger and better than those most of our customers have been using for distribution. By switching some of the transportation to our distribution network, we achieve a reduction in total CO<sub>2</sub> emissions.

We continuously look for new distribution solutions that still are price competitive and generate the same level of service as before. For example, in 2009 we altered our most heavily used route to France. Earlier we had transported salmon fillets in fully loaded trucks from Norway to Arras in France, while now we use rail transport for part of the journey. This has allowed us to increase profitability as well as reduce our CO<sub>2</sub> emissions. Solutions like this will make it easier for us to contribute positively to environmental protection.

#### PRIMARY ENERGY RESOURCE CONSUMPTION (MEGAJOULES)



By making use of rail transport on parts of the route between Trondheim and Rotterdam, we have achieved a reduction in CO<sub>2</sub> of 68.5%. Our CO<sub>2</sub> emissions have been reduced from 3.91 to 1.23 tons.

The new services developed by major transport companies involving rail transport of entire articulated trailers to Germany and the Netherlands provides us with new potential to make extensive use of rail transport.

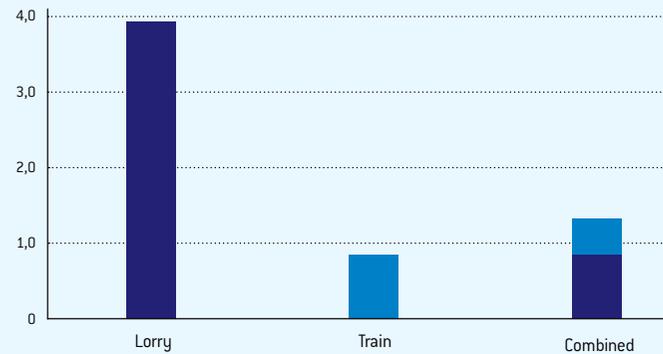
### AIR TRANSPORT

The volume of fish transported by air has seen an increase in the past year, due to increased sales to Asia, Australia and the USA. We work closely with our air transport supplier in order to identify the best air freight systems and the best solutions for the environment.

We have worked closely on air distribution with a large airline company that has scheduled passenger flights covering all our markets. We make use of the cargo capacity on these planes, which are modern and mainly fly the shortest distance possible from A to Z.

By consciously focusing on this type of air freight, we are able to meet our market demands using the most modern and least polluting planes. Conscious choices and an emphasis on environmental attitudes enable us to fly less product volume with dedicated cargo planes.

#### CARBON DIOXIDE GREENHOUSE GAS, GLOBAL WARMING (TONS)



### RAIL TRANSPORT

Our products from Northern Norway are transported to Southern Norway mostly by rail. This system works well during the summer months. During the winter we sometimes experience delays of varying magnitude that force us into uneconomical solutions that may also be less than optimal for the environment.

### SEA TRANSPORT

Our frozen seafood is currently transported by ship. We will maintain our focus on environmentally friendly logistics in the years ahead and will collaborate closely with our main suppliers of distribution services in order to contribute to an environmentally-friendly development in this area.

Our increased focus on processed fish and the fact that we process the main part of our products in Norway allow us to make positive contributions to environmental protection.

### CUSTOMERS

We aim to achieve closer cooperation with our customers to maintain a sustainable industry. Our goal for the future remains "Lerøy in every kitchen".

# SOCIAL RESPONSIBILITY





## EMPLOYEES

The parent company Lerøy Seafood Group ASA has its main offices in Bergen, Norway. In addition to the Group's CEO, the parent company has seven employees. Administratively, all personnel functions are handled by the wholly-owned subsidiary Hallvard Lerøy AS. At the end of the year there were 2,067 employees in the Group including 609 women and 1,398 men, compared with a total of 1,833 at the same time in 2012.

Of the Group's total number of employees, 1,486 work in Norway and 581 abroad. Independently of the demand for equal opportunities for men and women, the Group has always placed decisive emphasis on individual skills, performance and responsibility in its recruitment policy and salary systems. Furthermore, the Group aims at all times to provide equal employment opportunities and rights for all employees and works hard to prevent discrimination based on national origin, ethnicity, colour, language, religion or personal philosophy. One of the company's goals is to provide a workplace without discrimination due to disabilities. For employees or work applicants with disabilities, the company will arrange for individually adapted work tasks and environments.

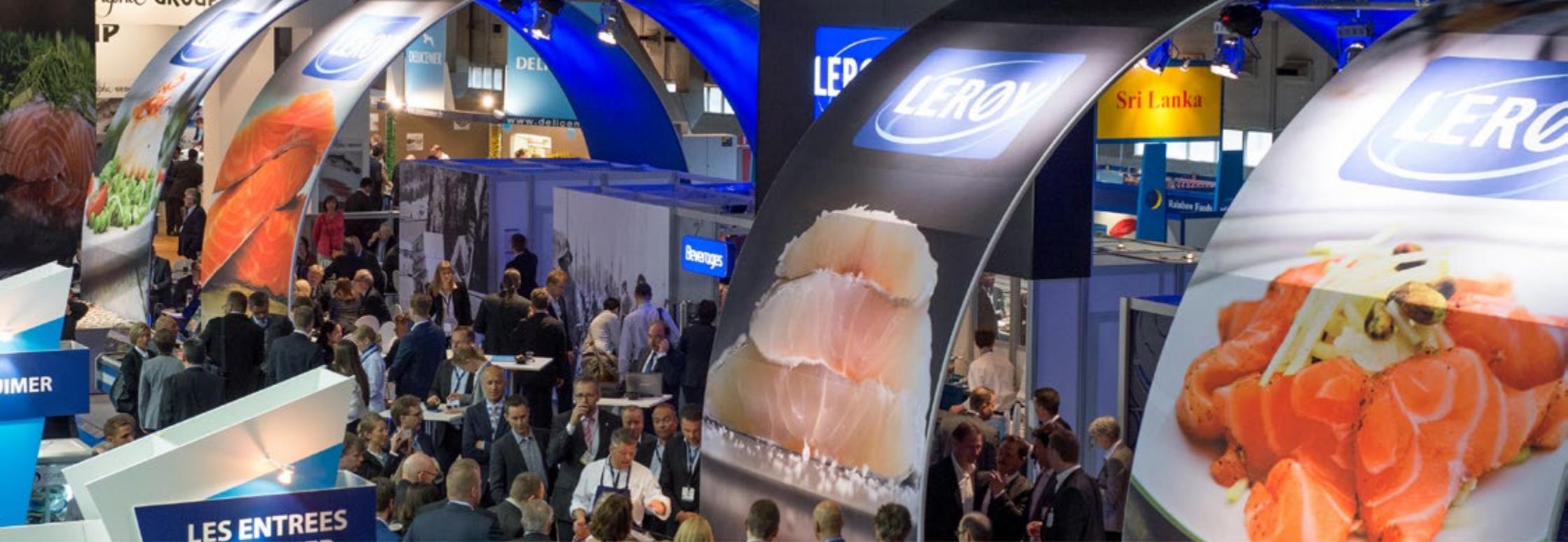
The company is part of a global industry and the constant changes in framework conditions require flexible employees who are dynamic, willing to adapt and learn.

In 2013, only minor injuries were reported for employees. A total sick leave of 5.3% was reported, up from 4.8% in 2012. Sick leave comprises 2.7% long-term sick leave and 2.6% short-term sick leave. The Board is pleased to observe that the Group works actively to keep sick-leave as low as possible. Comparable sick leave statistics are not available from our foreign subsidiaries. However, the organisations in the individual subsidiaries are continuously being developed to ensure that they can deal with new challenges and changes in framework conditions. The working environment and cooperative atmosphere are good.

The individual companies in Lerøy Seafood Group all have employee representatives to take charge of the formal cooperation between company and employees. Lerøy Seafood Group also aims to create an open organisation and to ensure the best possible working environment for all employees.

The Group's personnel are highly skilled, and the working environment is positive, cheerful and one where employees display enthusiasm for their work. Our employees are good at their jobs and are inspired by the "Lerøy spirit".

The different Group companies arrange different types of events for employees. These include family events, social gatherings, motivation meetings and sports events. The majority of our subsidiaries offer different types of sports and activities to employees.



## ETHICAL GUIDELINES

Lerøy Seafood Group is strongly committed to its social responsibility. Our goal is to combine healthy business management with a clear responsibility for society and the environment.

Employees shall behave in a manner which displays social awareness and professionalism, and shall show respect for colleagues and other partners. As a general rule, Lerøy Seafood Group with suppliers and subcontractors shall fully comply with legislation in respective countries and the company's own/Lerøy Seafood Group's quality systems/procedures. The Group has a principal rule that the strictest requirements shall be met.

In the event of deviations, measures shall be implemented to improve the situation. Our goal is to contribute towards improving human rights, labour rights and environmental protection, both within our own Group, in relation to our suppliers and subcontractors and in relation to our trading partners.

Lerøy Seafood Group's business information will be precisely and elaborately communicated, both internally and externally. All accounting information shall be correct, fully registered and presented in accordance with laws and regulations, including relevant accounting standards. In relation to prevailing laws regarding securities and standards for stock exchange listing, Lerøy Seafood Group is obliged to ensure complete, precise, accurate and understandable information in the interim financial statements and other documents.

In order to safeguard all our activities, we have prepared a set of ground rules which apply to us and our partners on a daily basis. Our ethical guidelines have been reviewed by the Board of Directors and implemented in every Group company. Individual companies are responsible for ensuring practice of our ethical guidelines. In addition, each employee has an individual responsibility while performing their own jobs. The company management is responsible for ensuring compliance with the ethical guidelines.

The ethical guidelines have been divided into two parts and comprise:

Part 1: Factors relating to the company, suppliers and subcontractors

Part 2: Factors relating to the individual employee.

Keywords for the content of the ethical guidelines:

- Ethical requirements on suppliers and subcontractors
- Requirements on regulation of working conditions for employees
- Employee rights in the Group, among our suppliers and our subcontractors
- HSE
- Forced labour/discrimination
- Use of resources and impact on local environment
- Corruption
- Notification of censurable conditions
- Ethical guides for employees representing the company externally



Management group in Lerøy Sjøtroll



Any form of forced labour, slave labour or involuntary labour is strictly prohibited. Employees shall not be obliged to submit a deposit or identity papers to the employer and shall be free to terminate their employment with a reasonable period of notice.

Employees shall be entitled to join or establish trade unions as they choose, and the employer shall not discriminate against trade union representatives, or prevent them from carrying out their trade union tasks.

We have a particular responsibility in relation to children and youths, to ensure good guidance and follow-up, helping avoid accidents or other negative incidents. We shall pave the way for children and youths to attend school and gain an education.

All forms of discrimination at work based on ethnicity, religion, age, disability, gender, civil status, sexual orientation, trade union membership or political beliefs are strictly prohibited. Measures shall be established to safeguard against sexual harassment, threatening, insulting or exploitative behaviour and to prevent discrimination or dismissal on unfair grounds, e.g. marriage, pregnancy, parental status or status as HIV infected.

Physical cruelty or punishment or threats of physical cruelty are strictly forbidden. The same applies to sexual or other abuse or different types of humiliation.

Lerøy Seafood Group does not accept purchase of or acceptance of sexual favours on occupational trips or other assignments on the company's account. This also applies to employees' leisure time when on such assignments.

Employees shall have a safe and healthy working environment. Necessary measures shall be implemented to prevent and minimise accidents and damage to health as a result of, or in relation to, conditions at the workplace. Employees shall complete regular and documented training in health and safety. Health and safety training shall be repeated for new recruits.

Employees shall have access to clean sanitary facilities and clean drinking water. If the employer provides accommodation, this shall be clean, safe and sufficiently ventilated and with access to clean sanitary facilities and clean drinking water.

Salaries paid to employees shall as a minimum comply with the national provisions regarding minimum wage or the industry standard, and shall always be sufficient to cover basic needs. Payroll conditions and payment of salary shall be agreed upon in writing before employment starts.

This agreement shall be in a format which the employer can understand. Disciplinary deductions from salary are not permitted. Working hours shall comply with national legislation or the industry standard, and shall not exceed working hours in accordance with prevailing international conventions. Employees shall have a minimum of one day off a week. Overtime work shall be voluntary and should be limited to a maximum of 12 hours per week. Employees shall always receive overtime pay, at the minimum rate in compliance with prevailing agreements and legislation.



Obligations in relation to the employees, in line with international conventions and/or national legislation and regulations regarding regulatory employment shall not be evaded via utilisation of short-term positions (such as use of contract workers, casual workers and day workers), subcontractors or other employment relationships. All employees are entitled to an employment contract in a language they understand. The apprenticeship programme shall be clearly defined in terms of duration and content.

Lerøy Seafood Group encourages employees to show moderation when travelling, entertaining etc. Transactions entered into on behalf of Lerøy Seafood Group shall be documented in line with good business practice. Employees must be able to explain and document any expenses, and these must be signed by a supervisor.

All employees have a duty of confidentiality regarding information of a sensitive, private or confidential nature which relates to Lerøy Seafood Group's business. All employees shall protect sensitive and confidential information and shall store documents, data and telephony in a safe manner. No individual shall use, or help others use, information regarding Lerøy Seafood Group or other companies which is of a sensitive, private or

confidential nature, to subscribe to or trade securities, whether on a private basis or on behalf of Lerøy Seafood Group.

Lerøy Seafood Group does not accept payments/other remuneration which contravene Norwegian legislation, whether directly or via an intermediate, pursuant to section 276 of the General Civil Penal Code. Gifts, payments or offers of entertainment which may affect the integrity of the recipient shall not be accepted or offered.

Participation in social gatherings is a part of the company's activities and a natural part of courteous business relationships. The extent of such gatherings must not be allowed to develop to a stage where they may impact decision-making processes or give an impression of such to external parties.

Lerøy Seafood Group encourages all employees to notify the company of conditions they find worthy of criticism.





## FACTORS OUTSIDE THE WORKPLACE

The employees shall refrain from all types of environmental crime or ruthless exploitation of resources in the local environment. The local environment surrounding the production facilities shall not be damaged by pollution. Hazardous chemicals and other substances shall be properly and safely managed. Production and selection of raw materials for production shall be organised such that it avoids destruction of resources.

Lerøy Seafood Group shall not directly or indirectly contribute to the removal of the basis of income for marginalised communities, for example by exploiting vast areas of land or other natural resources on which these communities rely. Lerøy Seafood Group shall make a positive contribution to sustaining a good environment in the local communities where our companies are located.

LSG does not support individual political parties or individual politicians. Lerøy Seafood Group has the right to take part in public debate, when in the interests of the Group.



All external communications to media/press etc. that are not of a local nature shall be taken care of by the company's CEO.

Production shall not conflict with national or international legislation and regulations related to the environment. Relevant permits shall be procured where necessary.

Environmental aspects shall be taken into consideration throughout the production and distribution chain, from production of raw materials to sales, and shall not be delimited to the company's own activities. All attempts shall be made to safeguard local, regional and global environmental aspects.

# ECONOMIC RESPONSIBILITY





## CONTRIBUTIONS TO LOCAL COMMUNITIES

Our companies are often located in decentralised areas, making significant contributions to employment and income in the local communities.

Lerøy Seafood Group has a strong commitment to local communities in the areas where our companies are located, and we aim to make a contribution by purchasing as many goods, equipment and services as possible from local suppliers. In 2013, Lerøy Seafood Group in Norway purchased goods, equipment and services worth NOK 8.4 billion from a total of 296 different municipalities. The Group had locations in 49 different municipalities in Norway last year. Our employees contributed NOK 204 million in income tax to 118 different municipalities. Based on our activities over the past five years, Lerøy Seafood Group has in total contributed NOK 1.2 billion in tax. As such, we can confidently claim that we have helped sustain a number of local communities and workplaces nationwide.



As yet another consequence of our decentralised locations, we make contributions to investments in buildings, infrastructure, quays, floating quays and modern equipment in small, local communities. These form the grounds for local commerce. For certain suppliers in the smaller municipalities in which we have facilities, we represent between 25 to 80% of their economical basis.

Lerøy Seafood Group compiles GRI reports, according to the Global Reporting Initiative. These reports can be downloaded from the company's website, [www.lsg.no](http://www.lsg.no). Lerøy Seafood Group has a company policy to

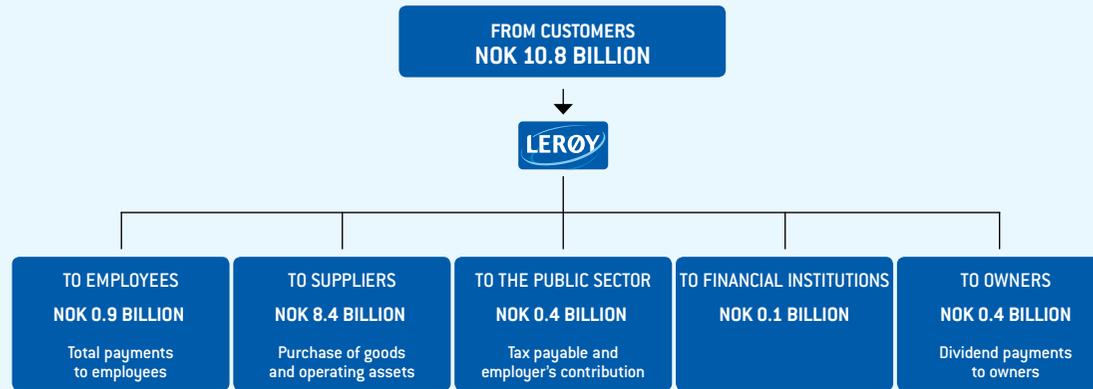


support different activities involving children and young people in local communities. When providing such support, we focus on diet, health and healthy eating – all important factors if you want to do well. We are therefore always happy to see children and young people enjoying healthy seafood at different events.

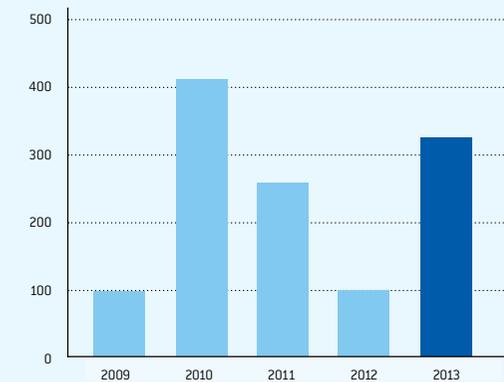
We always strive to develop close relationships with our local communities, and are happy to contribute in a number of areas locally. We sponsor and support local sports clubs and sponsor a number of local festivals/various events, serving seafood products to visitors and participants.

We also take part in a number of activities where our employees and local inhabitants help protect the environment by clearing beaches, picking up rubbish etc. We hold “environmental days” in several municipalities.

ECONOMIC VALUE GENERATION AND DISTRIBUTION PER SECTOR IN 2013



LERØY SEAFOOD GROUP HAS MADE TOTAL CONTRIBUTIONS OF NOK 1.2 BILLION IN TAX OVER THE PAST FIVE YEARS (TAX PAID 2009-2013)



A study executed by SINTEF in 2009 indicated that one person employed within Norwegian fish farming generates close to two other jobs within other industries in Norway. Every Norwegian kroner earned within Norwegian fish farming will generate 1.43 new kroner within other areas of the Norwegian economy. We can therefore conclude that the indirect social, economical impact of Lerøy Seafood Group's activities in 2013 generated approximately 4,000 jobs and approximately NOK 2.3 billion for Norway.

In terms of value generation per full-time equivalent, the figure for Aquaculture is much higher than the average for mainland Norway. Value generation (contribution to GNP) is the value remaining after deduction of expenses related to consumption of goods and services as part of the production process. The average value generation for mainland Norway was NOK 0.83 million per full-time equivalent, while the corresponding figure for Aquaculture alone was NOK 0.97 million per full-time equivalent. A simple calculation tells us that our 2,067 employees in Lerøy Seafood Group make a contribution towards value generation of NOK 2,005 million. The supply industry is experiencing growth and the careful selection of suppliers and subcontractors will become increasingly important for the future development of the seafood industry. Examples of suppliers already benefiting from the ripple effect of the aquaculture industry include fish feed suppliers, professional, advisory and technical services, financial services and insurance.

\*SINTEF "The significance of the fishing and agriculture industries for Norway in 2009 – a national and regional ripple effect analysis."

\*\*SINTEF report A26088 (2014) – Value generation and employment in the Norwegian seafood industry



Lerøy Seafood Group is an active supporter of children and young people by making contributions to local clubs and associations.



Summer students from the University of Bergen visiting Lerøy Vest.

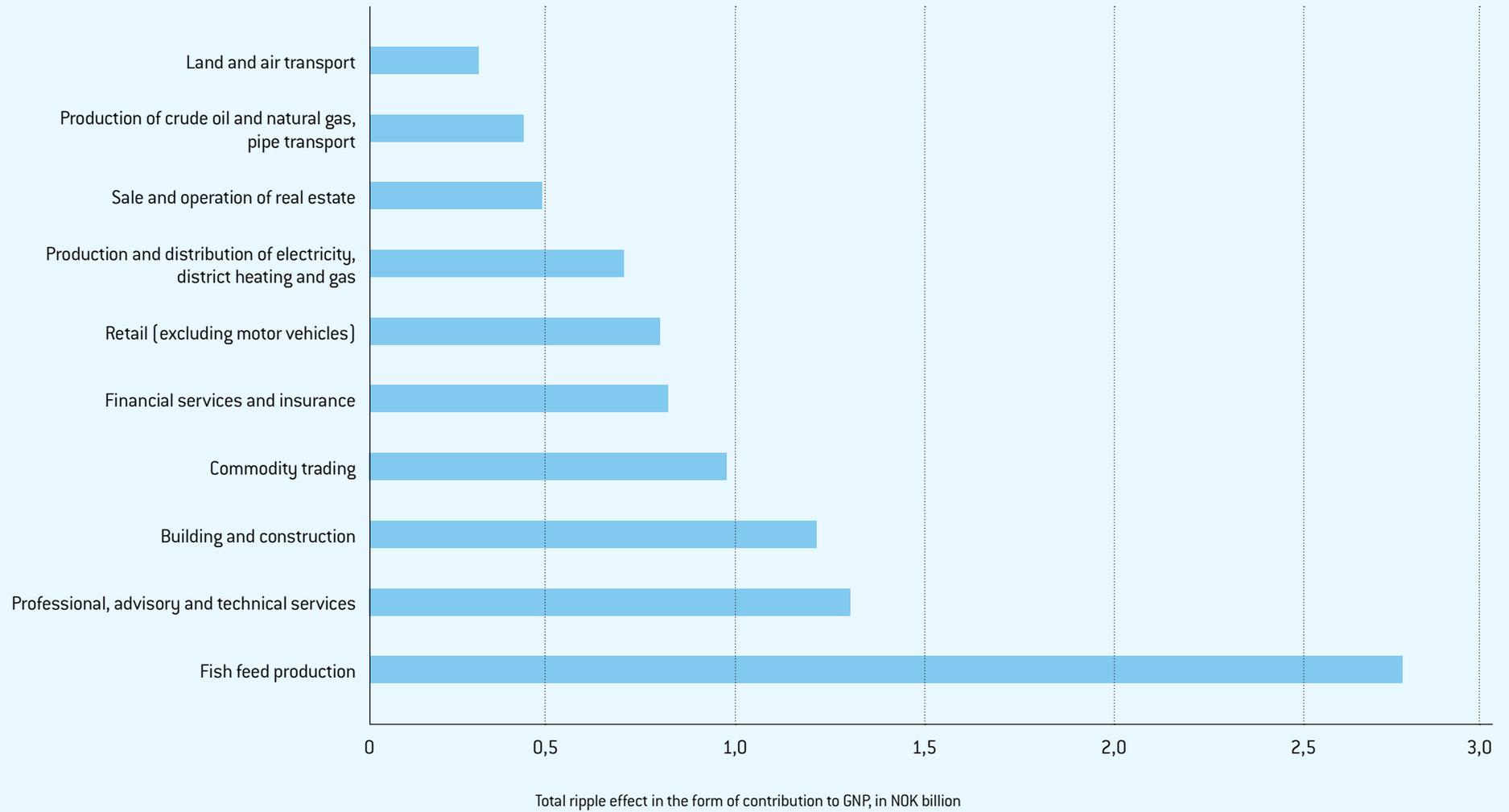
# LERØY SEAFOOD GROUP MAKES MANY DIFFERENT CONTRIBUTIONS TO MUNICIPALITIES AND LOCAL COMMUNITIES.

The map displays municipalities in Norway where Lerøy Seafood Group purchased goods, equipment and services in 2013.

In 2013, Lerøy Seafood Group purchased goods, equipment and services in Norway for a total NOK 8.4 billion.

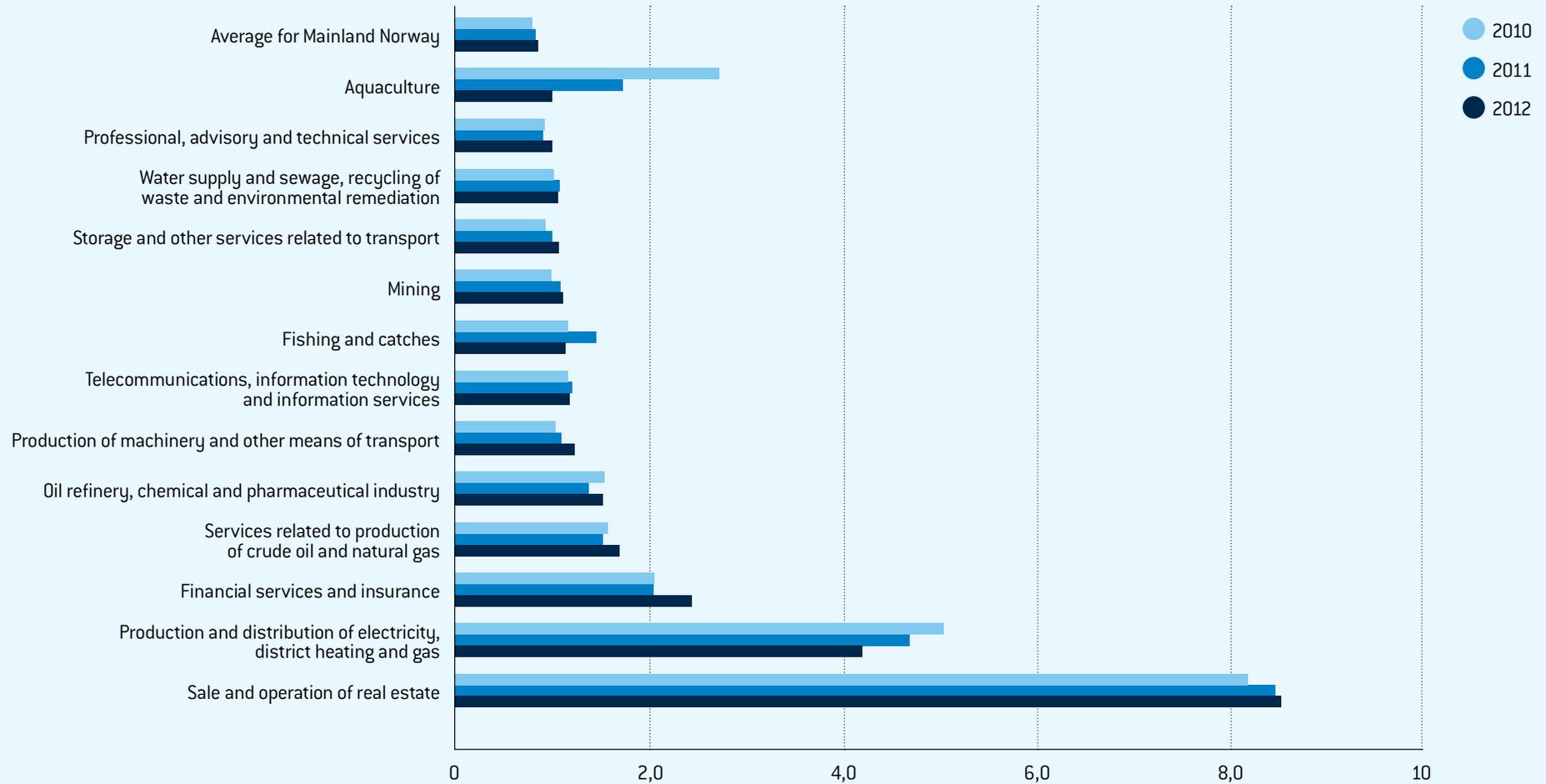


**THE TEN INDUSTRIAL GROUPS WITH THE HIGHEST RIPPLE EFFECT (CONTRIBUTION TO GNP) GENERATED BY THE VALUE CHAIN BASED ON AQUACULTURE IN 2012**



Sandberg et al. (2014)

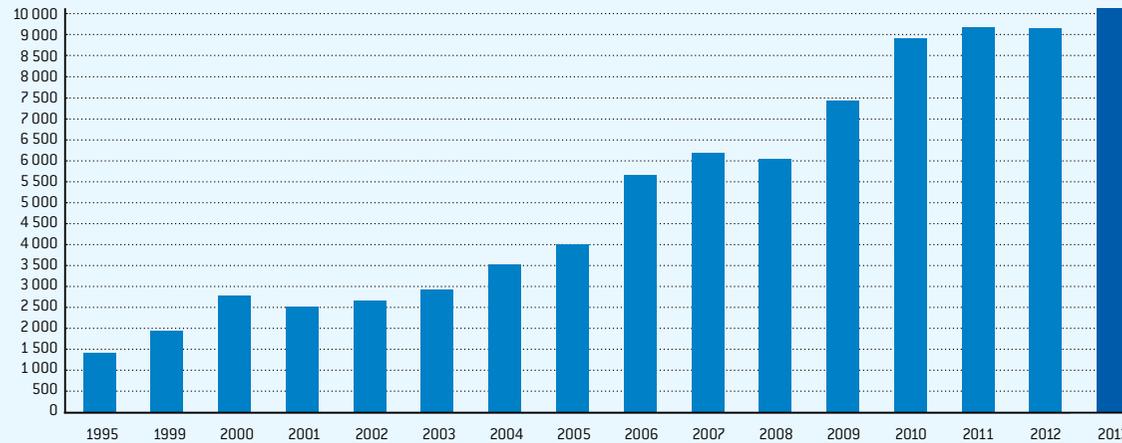
**VALUE GENERATION (IN NOK MILLION) PER FULL-TIME EQUIVALENT FOR THE 14 INDUSTRIAL GROUPS IN NORWAY WITH HIGHEST VALUE GENERATION PER FULL-TIME EQUIVALENT IN 2012\***



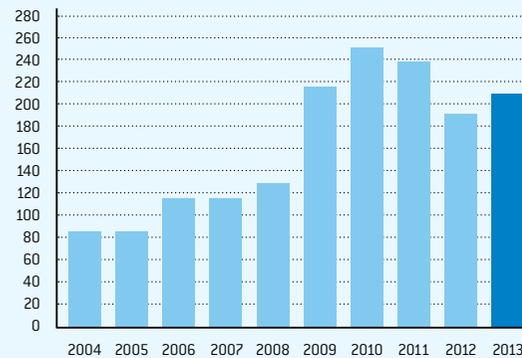
\*based on provisional figures from the public accounts for 2012  
 Sandberg, M., Henriksen, K., Aspaas, S., Bull-Berg, H., Johansen, U. (2014) Value generation and employment in the Norwegian seafood industry – a ripple analysis with a focus on 2012. SINTEF Fisheries and Aquaculture and SINTEF Technology and Society, Report A26088

# KEY FIGURES AND GRAPHS FOR THE GROUP

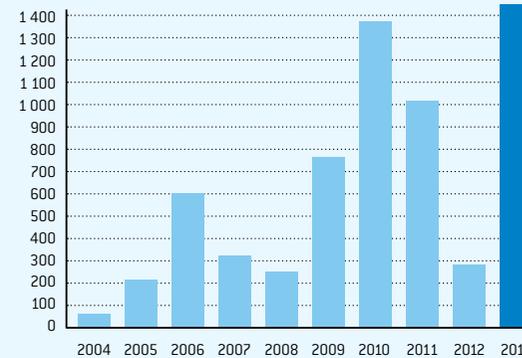
**PROFIT PERFORMANCE (FIGURES IN NOK MILLION)**



**DEVELOPMENT IN OPERATING PROFIT FOR SALES AND DISTRIBUTION SEGMENT (FIGURES IN NOK MILLION)**

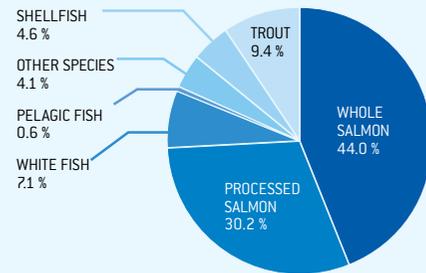


**DEVELOPMENT IN OPERATING PROFIT FOR PRODUCTION SEGMENT PRIOR TO VALUE ADJUSTMENT OF FISH IN SEA (FIGURES IN NOK MILLION)**

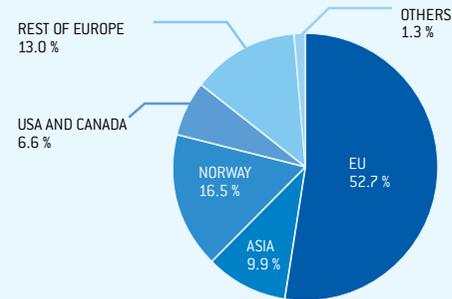


# KEY FIGURES AND GRAPHS FOR THE GROUP

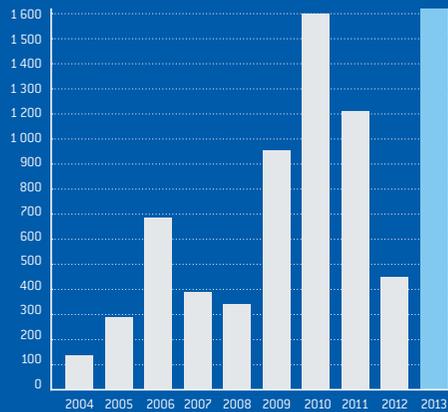
TURNOVER BY PRODUCT



TURNOVER BY MARKET



DEVELOPMENT IN OPERATING PROFIT BEFORE BIOMASS ADJUSTMENT LSG GROUP (FIGURES IN NOK MILLION)



**16.2%** OF THE SEAFOOD DISTRIBUTED BY LERØY SEAFOOD GROUP IS SOLD IN NORWAY. THE REMAINING PERCENTAGE IS SOLD IN MORE THAN 70 COUNTRIES.

