



# GRI-REPORT 2013

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LERØY SEAFOOD GROUP



# LERØY – IN EVERY KITCHEN

Lerøy Seafood Group is the leading exporter of seafood from Norway and the world's second largest producer of Atlantic salmon and trout. Our vision is "... to be the leading and most profitable global supplier of sustainable seafood", and every day we supply the equivalent of three million seafood meals to more than 70 markets worldwide.

The Group supplies a total range of seafood products from Norway including salmon, fjord trout, cod, saithe, mackerel, herring and shellfish. Lerøy Seafood Group is a wholly integrated company, carefully following each step throughout the entire value chain, from salmon egg to finished product.



Company	Licences	Mill. smolt individuals	2011 GWT	2012 GWT	2013 GWT	2014E GWT
Lerøy Aurora AS	17	7.5	18 100	20 000	24 200	25 000
<b>Region North</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 West/Lerøy Sjøtroll</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 (consolidated)</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>Total</b>	<b>138</b>	<b>59.1</b>	<b>147 500</b>	<b>167 000</b>	<b>158 200</b>	<b>178 500</b>

● Associated companies

GWT = Gutted Weight Tons

\* Lerøy Midnor AS and Lerøy Hydrotech AS merged in 2013 to form Lerøy Midt AS

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

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

1. VILLA ORGANIC AS  
NO. LICENCES: 17 • 2013 GWT : 24 200
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



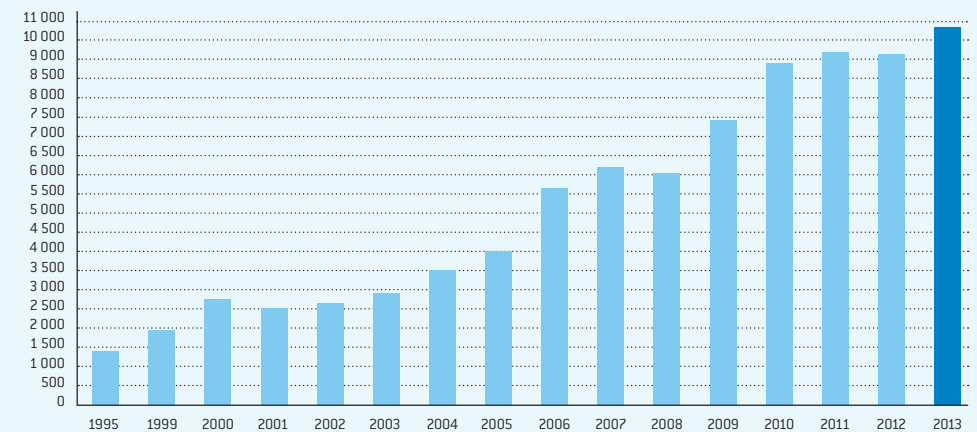
The Group's core activities are production of salmon and fjord trout, processing of seafood, product development, sale, marketing and distribution of seafood. Lerøy Seafood Group has grown significantly both organically and through acquisitions over the last 15 years. In 2013, the Group had activities in 13 countries and 49 municipalities in Norway. 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 Smögen. In other countries, the Group has a global sales network made up of subsidiaries in Finland, Denmark, the Netherlands, France, Spain, Portugal and Turkey, and sales offices in China, Japan and the USA. In addition, the Group provides national distribution of fresh fish to the Norwegian market through wholesalers in Bergen, Oslo, Stavanger and Trondheim. Moreover, the Group has 14 processing facilities located in different European countries.

The Group aims to take good care of the environment, the fish we produce, and all people involved in our business. High quality is ensured by control systems and Lerøy is committed to food safety and delivers full traceability on all of its 2,500 products. In a global perspective, the production of Atlantic salmon and fjord trout is one of the most sustainable and environmentally friendly methods of food production that exists. However, the Group maintains a strong focus on the potential challenges represented by point pollution and other environmental impacts of the business. The Group's business is closely related to the natural conditions in Norwegian and international sources of fresh water and marine areas, and access to clean water and clean sea is a prerequisite for the Group's operations. The Group makes continuous investments to minimise its impact on the environment, and to maintain correct environmental attitudes among management and employees. At year-end 2013, the Group had 2,067 employees. In 2013, the Group produced 145,000 tons of salmon and trout, and exported seafood for more than NOK 10.8 billion.



TURNOVER LSG (NOK MILLION)



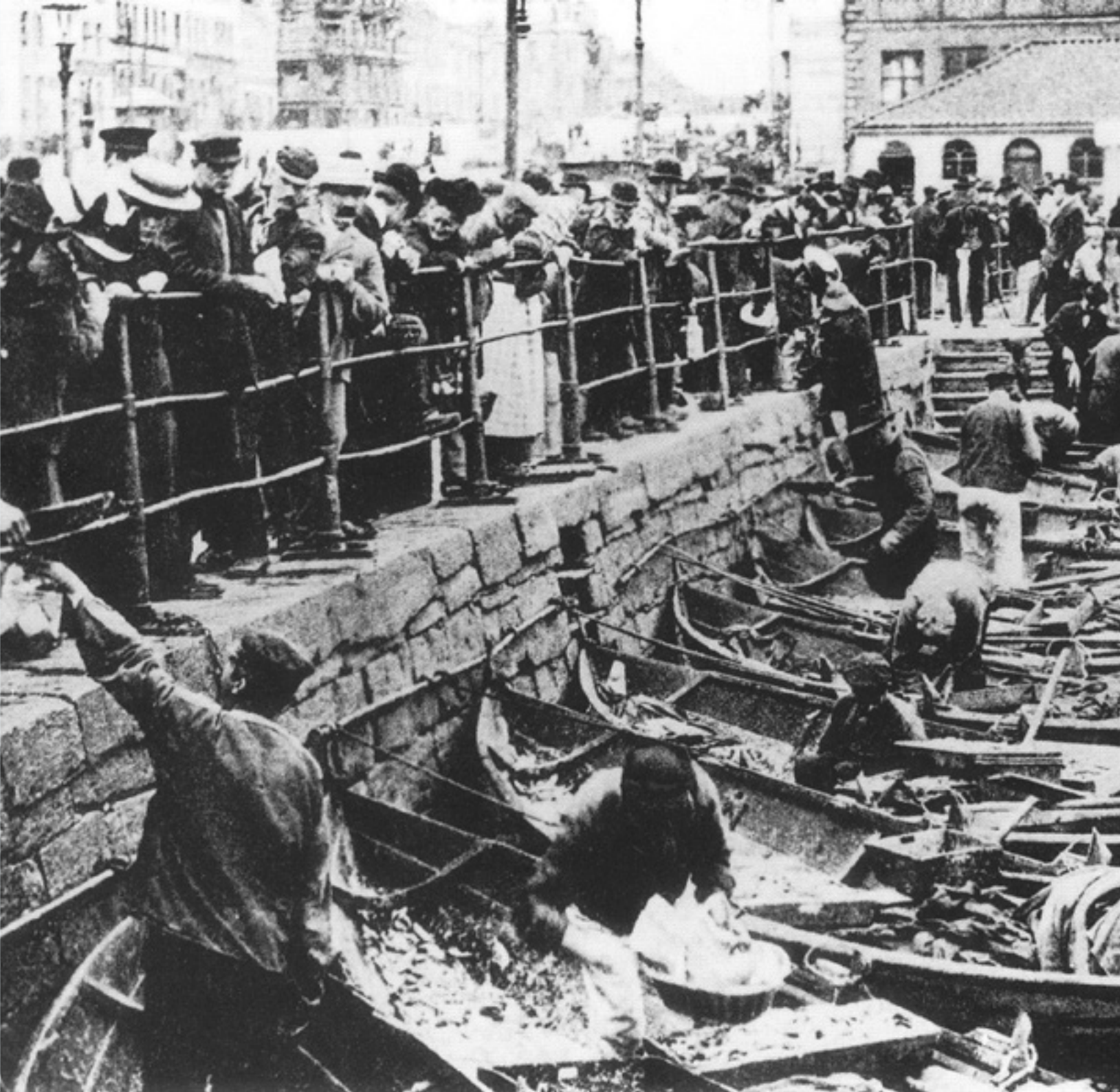
# LERØY SEAFOOD GROUP, VALUE CHAIN AND THE DIFFERENT COMPANIES

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 & 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 are a major employer along the Norwegian coastline and other areas, and strive to be visible and supportive in all operating regions. The Sales & Distribution segment has a global reach, comprising sales, marketing, product development and distribution of both the Group's own produced products as well as for external suppliers. From the start of 2014, the Group plans to report for three segments; Fish Farming, Processing and Sales & Distribution, in order to more clearly illustrate the substantial investments made in Processing, particularly in 2012 and 2013.

PRODUCTION				SALES & DISTRIBUTION
FARMING			OTHER PRODUCTION	
SMOLT	HARVEST	PACKING/SLAUGHTERING	PROCESSING	
LERØY AURORA			HALLVARD LERØY	
LERØY MIDT			HALLVARD LERØY - JAPAN	
LERØY VEST		LERØY FOSSEN	HALLVARD LERØY - CHINA	
SJØTROLL HAVBRUK			HALLVARD LERØY - FRANCE	
			LERØY USA	
			LERØY PROCESSING SPAIN	
			LERØY FISKER'N	
			RODE BEHEER BV GROUP	
			LERØY SMØGEN	LERØY SWEDEN
			SAS FISHCUT	SAS HALLVARD LERØY
			SAS EUROSALMON	SAS NORDVIK
			BULANDET FISKEINDUSTRI	LERØY PORTUGAL LDA
				LERØY FINLAND OY
				SJØMATGRUPPEN

Segments 31.12.2013



## HISTORY AND 2013

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. The fish was hauled to market in a corf behind Ole Mikkel Lerøen's rowing boat, a journey that could take between 6 and 12 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 one of the Group's principal sales companies – Hallvard Lerøy AS. Since its establishment, the company has been a pioneering enterprise in a number of fields in the Norwegian fishing industry. The company's main focus has constantly been on development of markets for seafood, and the pioneering spirit is still very much alive in the Group.



Sjomathuset AS started production on 25 March 2014. This is Norway's largest producer of packed fresh fish and sushi.

## 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. Read more here: [Group/The value chain of fish farming](#)

- January: start-up of construction of Seafood House in cooperation with Norgesgruppen in Oslo. The ambition with Seafood House 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 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 in 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.



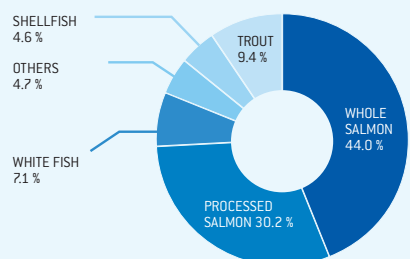
# THE PRODUCTS

The Group divides its products into four main areas: salmon products, whitefish, pelagic fish and shellfish. The distinction between farmed species and wild fish is significant and requires different logistics and working methods. These products are distributed on the Norwegian market and more than 70 other markets worldwide.

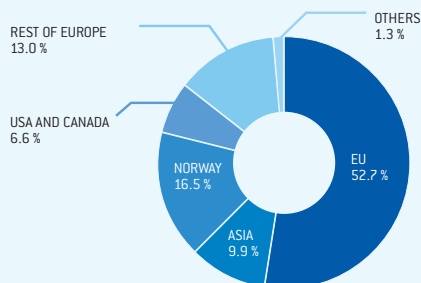
The Group's strategy is to meet the market's ever-increasing demands for food safety, quality, product range, cost efficiency and continuity of supply. This is achieved by coordinating the various elements in the value chain: the production units, the Group's sales network and established strategic alliances with sea farms, fishing vessels and fish processing plants primarily along the coast of Norway.

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%. After Atlantic salmon and trout, whitefish is the largest product area. In recent years, this product area has developed favourably through cooperation with a number of small and medium-sized companies. Lerøy Seafood Group is also a supplier of shellfish and fresh pelagic fish to Norwegian and European markets. The sale of shellfish and fresh pelagic fish represents a small but interesting niche product area.

SALES PER PRODUCT



SALES PER MARKET 2013





## LETTER FROM THE CEO: A RECORD-BREAKING YEAR!

Last year, I concluded the annual report 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 outstanding 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 all Lerøy's employees who have made this possible!

Looking back over the year that has passed, it is immediately obvious that we achieved a lot in 2013 and that our achievements have boosted the further growth of our company.

The success of investments made in processing, further processing, processing close to the market and distribution all require predictability, stability and flexibility. 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 rolling MAB system. This will provide a higher level of flexibility and the potential to tailor production to the market and maintain stable employment at 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 the most sustainable form 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 problems presented by salmon lice and accidental release, the two most significant challenges identified 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 players.

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 key 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, sale, 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. ASC-certified products are exported to Japan, Sweden, the Netherlands, France and Germany, and demand is already high 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 is contributing – 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, and will hopefully be a year of even further growth!

Henning Kolbjørn Beltestad  
CEO

Lerøy Seafood Group

# GOVERNANCE

When recruiting board members, the Group's owners have already for many years taken into consideration the Group's need for varied expertise, continuity, renewal and changes in ownership structure.

In 2013, the Board of Lerøy Seafood Group had Helge Singelstad as the Chairman, and the six Board members were Arne Møgster, Britt Kathrine Drivenes, Hege Charlotte Bakken, Hans Petter Vestre, Marianne Møgster and Didrik Munch. Read more about the board members in the Group's annual report ([link: page 27](#)). Neither the CEO nor other senior executives in Lerøy Seafood Group ASA are members of the company's Board of Directors.



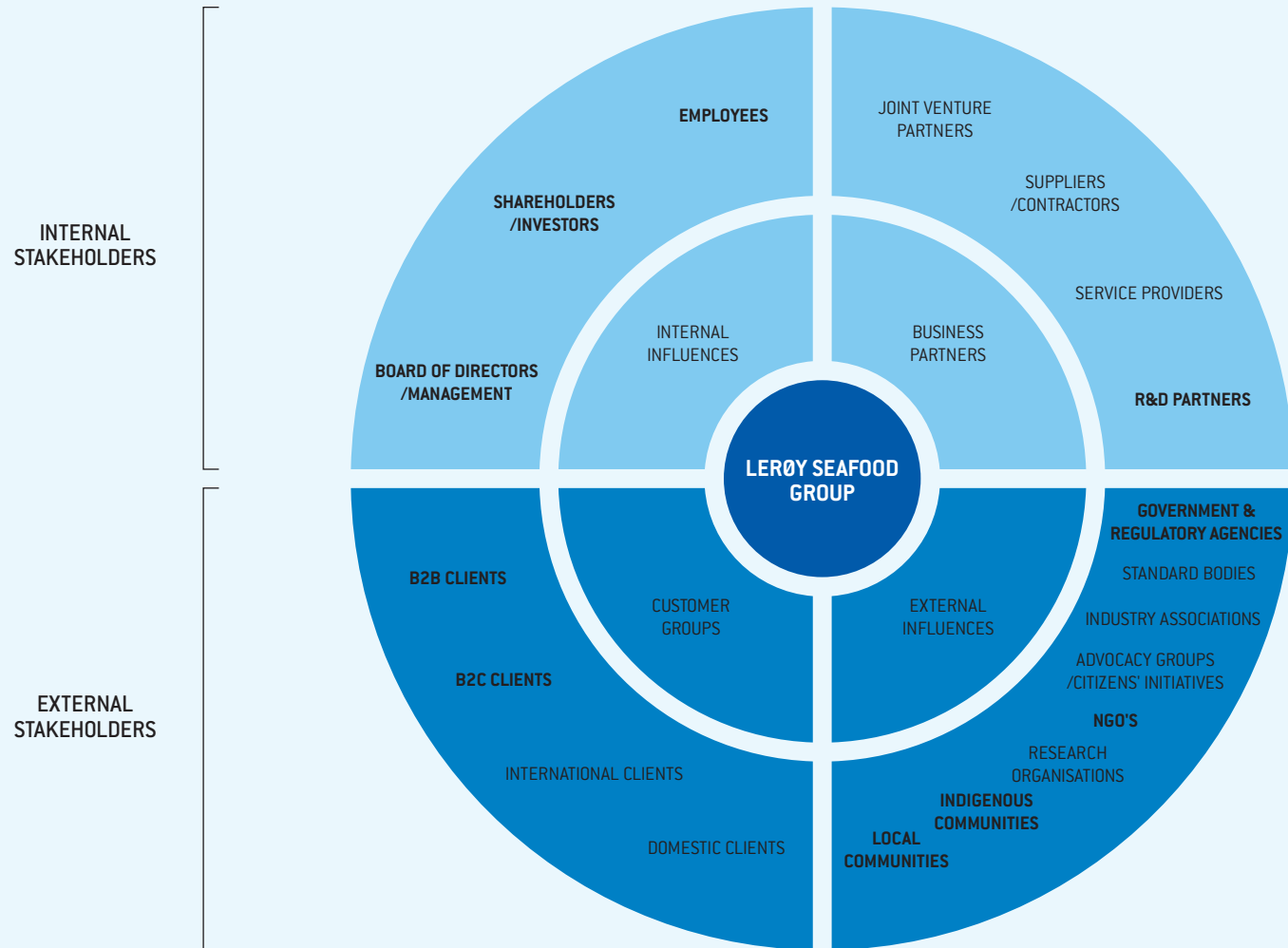
# STAKEHOLDERS

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



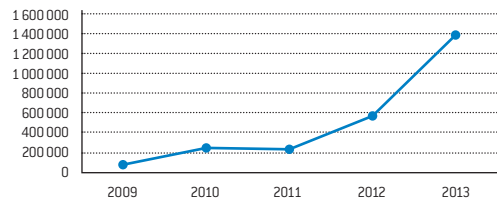
# LERØY WORLDWIDE

## 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.

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



### 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.

### FISHCUT AND EUROSALMON TARGETS AND PERFORMANCE IN 2013

Fish Cut	Target 2013	Result in 2013
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%

EuroSalmon	Target 2013	Result in 2013
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%

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 a change in product range.



# ENVIRONMENTAL AND SUSTAINABILITY MANAGEMENT

The CEO of Lerøy Seafood Group has main responsibility for the environment and sustainability, whereas the Corporate Social Responsibility (CSR) is responsible for coordinating the efforts of all companies within the Group. 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. The Managing Directors of each subsidiary are responsible for their companies' performance, and are supported by the Quality Managers who perform daily follow-up within the companies.

In order to develop internal competencies, a number of competency groups have been set up in Lerøy Seafood Group. The competency group for quality and the environment is made up of Quality Managers and led by the CSR Supervisor. In addition, the CSR Supervisor 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

## 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 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 that 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.

## ETHICAL GUIDELINES

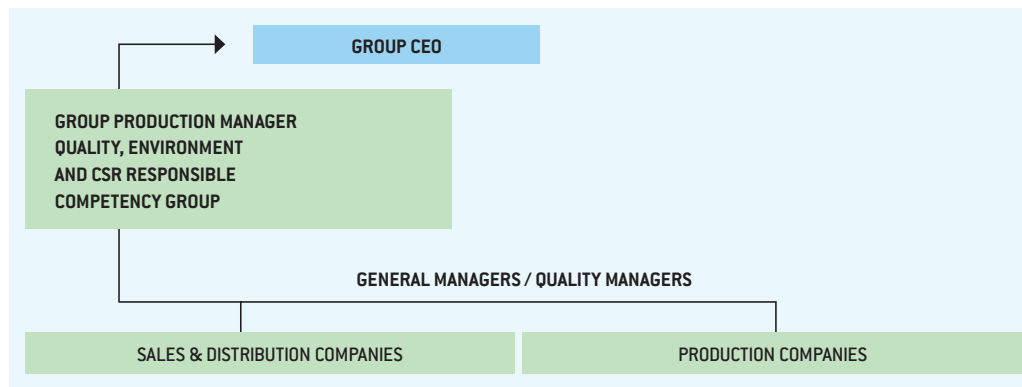
Lerøy Seafood Group is a corporation involved in global business and working relationships with suppliers and subcontractors worldwide. In order to safeguard all our activities, we have prepared a set of ground rules which apply to us and our partners on a daily basis. Our ethical guidelines have been reviewed by the Board of Directors and implemented in every Group company. The Group is responsible for ensuring practice of these ethical guidelines, but each employee also bears an individual responsibility to follow the guidelines when carrying out tasks for the Group. The company management is responsible for ensuring full practice of and compliance with the ethical guidelines. The set of ground rules has been divided into two separate areas and comprises the following:

- Part 1: Factors relating to the company, suppliers and subcontractors.
- Part 2: Factors relating to the individual employee.

Our goal is to combine healthy business management with a clear responsibility for society and the environment. As a general rule, Lerøy Seafood Group together with its suppliers and subcontractors shall fully comply with legislation in respective countries. 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.

The Group's goal is to contribute towards improving human rights, labour rights and environmental protection, both within the Group, in relation to our suppliers and subcontractors and in relation to trading partners. Lerøy Seafood Group does not support individual political parties or individual politicians, but the Group takes part in public debate when in the interests of the Group. 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 Group's own activities. All attempts shall be made to safeguard local, regional and global environmental aspects. Aspects regarding animal ethics shall also be taken into full consideration.



Lerøy focuses on a good working environment, where job satisfaction is essential for the performance of important tasks. The photo above is from Lerøy Midt's new hatchery facility in Belsvik, Sor-Trøndelag.

# SUSTAINABILITY FOCUS AREAS AND TARGETS

For Lerøy Seafood Group, 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 concluded 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 works hard to constantly improve the interaction between fish farming and the environment, aiming at generating positive and lasting environmental benefits. The Group has five main elements related to environmental work within fish farming activities:

- 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 salts from premises

The Group's fish farming companies have established a clearly defined set of goals for each

operational segment and have developed operating procedures to ensure that they can reach these goals. The Group also carries out regular internal and external audits to ensure full compliance between operating procedures and proper conduct. In addition, the Group has implemented advanced technology to secure and monitor performance, and environmental requirements on our suppliers.

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.

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 G	6%	Not official
LS G KPI 4: Density	Max 25 kg/m <sup>3</sup>	??
<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



## THE VALUE CHAIN OF FISH FARMING

It is important for Lerøy Seafood Group to focus on the areas where the Group has the greatest impact in terms of sustainability. Based on a critical evaluation of the value chain and the Group's processes, we have concluded that we currently can make the greatest impact by working on aspects related to our aquaculture business.

Our work on the environment and sustainability will therefore focus on the impact of aquaculture. Lerøy Seafood Group plays an active role in all parts of the value chain, which consists of roe and smolt production, fish farming, harvesting, processing, distribution and consumption.



### REQUIREMENTS FOR SUPPLIERS

The Group's main suppliers are fish feed suppliers. In 2013, Lerøy Seafood Group mainly purchased feed from EWOS and Skretting. The main target is to ensure that the raw materials used in the Group's feed are both fished or harvested in an ethically sound manner and in compliance with legal frameworks and based on sustainable harvest or fishing. The Group cooperates with feed suppliers in the work required to meet this target.

The Group has established requirements for its suppliers of fish feed to make sure that raw materials are managed in a satisfactory manner. Moreover, the Group will require its suppliers to closely monitor how quotas are established and respected, and how the catch is utilised. Lerøy Seafood Group requires that the raw materials in its fish feed must come from 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, such as ICES, FAO, IMARPE, SERNAPESCA\*.

The Group requires that all of its feed suppliers prioritise use of raw materials certified in accordance with IFFO's standard for sustainability, or raw materials with MSC certification or similar. The supplier's certification scheme should be a member of ISEAL and have guidelines for sustainability requirements also for small pelagic fisheries. Palm oil should not be used. Raw materials based on soya require "Roundtable on Responsible Soy" RTRS, certification or similar.

MSC - Marine Stewardship Council – a standard for sustainability for fish caught in the wild  
 ICES - International Council for the Exploration of the Sea – an organisation for enhanced ocean sustainability  
 FAO - Food and Agriculture Organization of the United Nations  
 IMARPE – Instituto del Mar del Perú  
 SERNAPESCA – Servicio Nacional de Pesca y Acuicultura (Chile)  
 IFFO – The Marine Ingredients Organisation  
 ISEAL - International Social and Environmental Accreditation and Labelling Alliance  
 RTRS - Roundtable on Responsible Soy





### ROE PRODUCTION

Lerøy Seafood Group has capacity to produce 130 million fertilised eggs per year. In 2013, the Group's production volume was 102 million fertilised eggs and the Group imported 12.5 million fertilised eggs.

The majority of the Group's production activities are certified according to Global Gap 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 from October to 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 subsidiaries. In 2013, the amount of smolt produced was 40.6 million. 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 regionalised its production of smolt in order to ensure optimal adaption of smolt quality.

Lerøy Seafood Group is mainly self-sufficient with smolt from its own young fish facilities. Selection of the smolt produced by Lerøy is based on traditional breeding methods, which are very similar to traditional breeding methods for livestock and poultry. The breeding programme for salmon is family-based, using a systematic measurement of the 22 different properties of Atlantic salmon. By measuring and keeping control of these properties, there is a good basis for selection for maximum genetic progress and minimal degree of inbreeding. New selection methods based on genetic markers have also been implemented in recent years.

### FISH FARMING

Production of salmon takes place in carefully selected locations in the sea. An optimum environment must have good flow of water and the correct temperature range, topography, oxygen content and exposure. Once the location has been approved by fishery, environmental and 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 in accordance with a specified Norwegian standard: NS 9415 for floating fish farming installations.

Once the smolt are 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, genetic potential and the quality of the farming and care of the fish during this period. Production is monitored in the individual cages, where cameras and sensors ensure optimal feed and control to ensure optimal growth, fish health and welfare, and to prevent discharges to the environment.

### PRODUCTION

Production at Lerøy is defined as slaughtering and processing. These processes take place in modern factories designed for the production of food and approved by the proper authorities. The fish is anaesthetised and put to death in accordance with set rules to avoid unnecessary suffering and to ensure high product quality. Lerøy Seafood Group has six facilities in Norway involved in slaughtering, packing and processing of salmon and trout. In addition, the Group has two plants that produce sushi and whitefish. Abroad, the Group has 14 plants that produce various seafood products where salmon products are the main focus. All of the facilities meet prevailing requirements regarding discharges to the external environment.

# WORLD'S BIGGEST HATCHERY OPENED IN BELSVIK, NORWAY

In August 2013, Lerøy opened one of the world's biggest smolt plants, in Belsvik, Norway. The plant is also foremost in the world when it comes to recycling, as it reuses 98% of all water in the plant. The facility has a flow-through system and is able to produce 14 million smolt a year. The plant is strategically located in Belsvik, with short distances to Lerøy's aquaculture farms in Central Norway.

Concern for the environment has influenced the design, development and operation of this new facility, resulting in major changes to production systems and to new and eco-friendly methods:

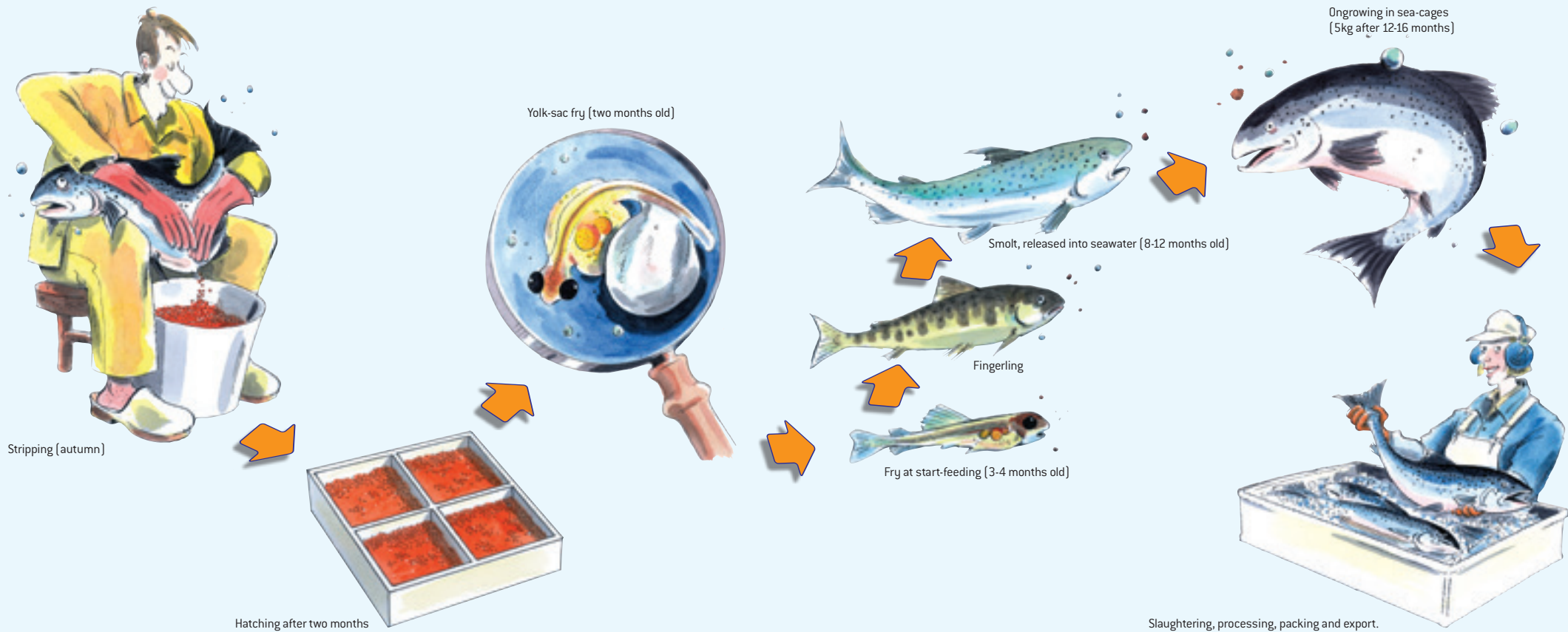
- **Water consumption:** Use of recycling technology throughout the facility enables a 98-99% reduction in water consumption compared with conventional "flow-through" facilities, thereby preventing the need for major installations in the landscape, such as dams and pipelines. There is also very little impact on the biological diversity in the water source when compared with a flow-through facility. Water consumption in 2013 in Belsvik was 1.3 million m<sup>3</sup> compared to the average amount of 65 million m<sup>3</sup> required for corresponding production in a conventional facility.
- **Energy:** The consumption of energy is lower in a facility using recycling technology compared to a flow-through facility. Although energy is required

to pump and purify water, there are substantial savings to be made through utilising the energy of heated water. Heat energy at the Belsvik facility is based on the exploitation of seawater heat by using heat pumps. Energy consumption in 2013 in Belsvik was 5,600 GWh.

- **Sludge:** Sludge generated in the mechanical filtering of water is set aside and preserved at the recycling facility. Sludge is a by-product, which can be used as soil improvement or fertiliser, or for the production of biogas. In 2013, the volume of sludge collected was approx. 60 tons, consisting usually of approx. 25% solid materials.
- **Spills:** Waste waters in a recycling facility pass through several filters and treatment 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 Group's environmental goals in 2013 focused on the transition to more eco-friendly operations, based on renewable energy sources and improved energy re-use. The opening of the Belsvik facility is a huge step forward in the right direction for Lerøy, with its high focus on energy efficiency.





## FROM ROE TO PLATE

**Stripping:** The brood stock 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 80°C 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 start-feeding, when it gradually begins to take dry feed.

**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 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.

**On-growing in the sea:** After just over two years in the sea cages, the salmon have grown to a weight

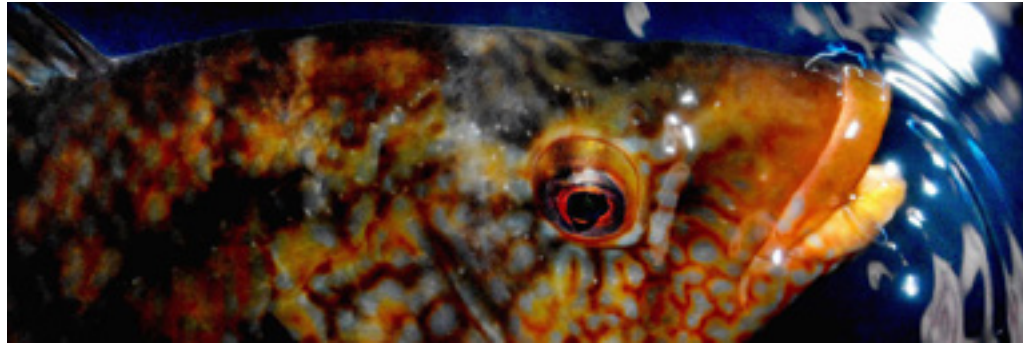
of about 5 kg. The rate of growth depends, among other factors, on the water temperature.

**Well-boats:** Well-boats are used to transport both smolt from the hatchery to the on-growing farms and fully-grown live salmon from farms to the slaughterhouse. All salmon are slaughtered in specialised fish-processing plants. They are anaesthetised before they are slaughtered and are then immediately cleaned, sorted, chilled and processed for further transport. Some fish

are smoked or turned into fillets or "table-ready" products, 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.

# RESEARCH, DEVELOPMENT AND INNOVATION – FISH FARMING



Research, development and innovation are key elements in the work to further develop the entire value chain in Lerøy Seafood Group. The Group has implemented R&D&I projects with a long-term perspective, and also participated in various projects through its subsidiaries. In 2013, Lerøy Seafood Group took part in some 70 – 80 different projects related to fish farming (approximately 90 projects in 2012). These include internal and external innovation projects, and participation in major research projects such as the Research Council of Norway's Centre for Research-Based Innovation (SFI).

In recent years, R&D&I has focused on the following four main subjects:

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

## SALMON LICE

The Group's approach to fighting salmon lice follows the so-called "Integrated Pest Management" system, which requires implementation of a number of measures to prevent and fight salmon lice, and where treatment with medication is the very last measure.

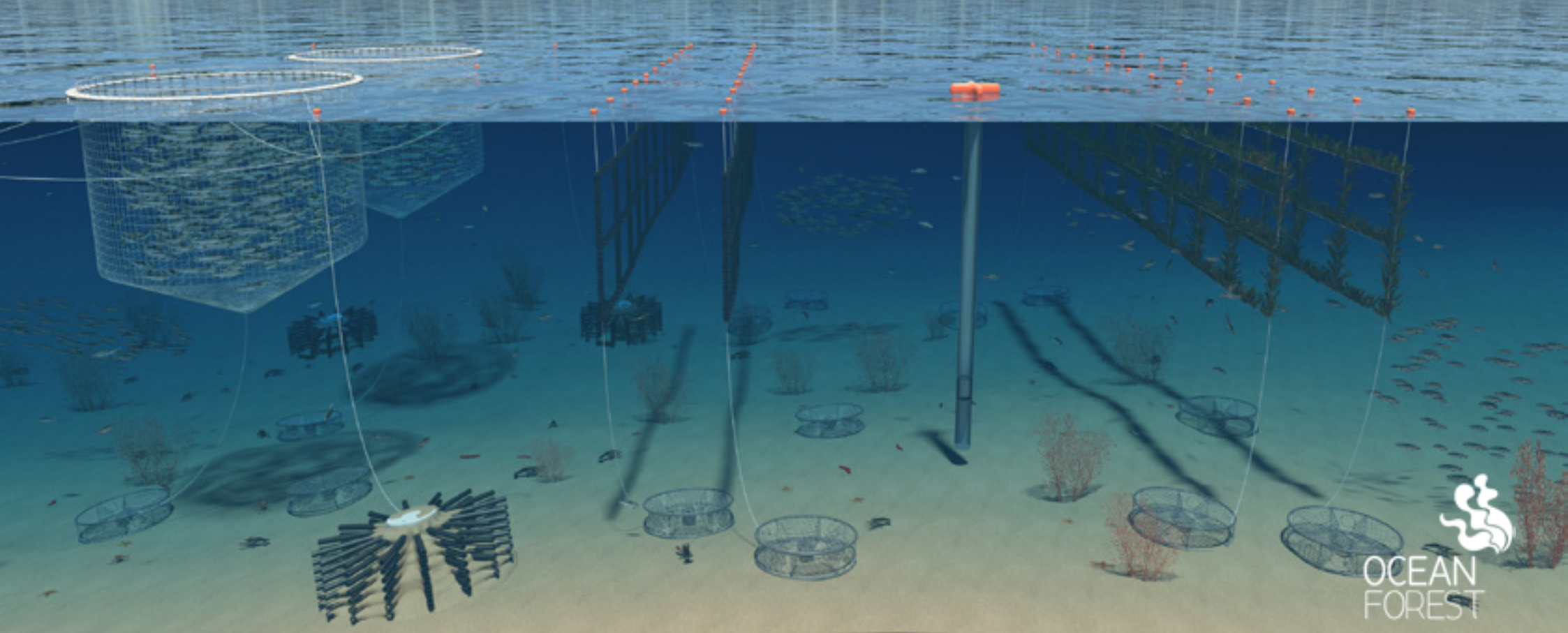
Lerøy Seafood Group utilises various initiatives to fight salmon lice, such as cleaner fish (ballan wrasse, goldsinny wrasse and/or lumpfish) which eat the lice from salmon, functional feed to reinforce fish resistance to lice, efficient and systematic cleaning procedures for nets to allow the cleaner fish to feed properly, combined with a coordinated and selective use of medicinal treatment when required. Hydrogen peroxide, which has no negative impact on the environment, is also used substantially where appropriate.

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 of wrasse, 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). 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.

## FEED AND FEED UTILISATION

Feed is the largest individual raw material utilised by Lerøy Seafood Group, and the Group places a significant focus on optimal and cost-efficient utilisation of feed. The Group works closely together with the feed suppliers and has an active role in the development of feed composition.

New innovative projects and research are critical in order to find new and successful sources of marine raw materials for a growing aquaculture industry and to feed an increasing global population. In 2013, Lerøy Seafood Group along with the environmental organisation Bellona started an ambitious project that focuses on using products we have in excess to produce products we are lacking.



## OCEAN FOREST

In 2013, Lerøy in co-operation with Bellona founded a new company; Ocean Forest AS. The purpose of this new company is to conduct research and development based on integrated multi-trophic aquaculture (IMTA). The first test facility has been established on the island of Rongøy outside Bergen.

Ocean Forest's vision is to create large-scale production of sustainable seafood biomass and energy along the Norwegian coast, and to research synergies between integrated solutions. The results will be used to develop business concepts

for commercial deployment of new solutions for large-scale seafood biomass production. This will be achieved by integrating a range of technological solutions and unique ecological cycles. In the sea, the ecological interactions between a number of species and the environment they live in will develop naturally. The results are harvested in the form of higher production output and a better environment.

Seaweed, in technical terms called macro algae, can be grown on a large scale alongside salmon. This is the same for mussels, seabed creatures

and microalgae. Large-scale cultivation of algae and shellfish will help reduce climate change through their ability to absorb CO<sub>2</sub>. Ocean Forest aims to design and construct production plants that remove more CO<sub>2</sub> than they generate and to develop future solutions through synergies between biology and technology. The theoretical potential to link production facilities to offshore wind installations is substantial.

Ocean Forest will cooperate broadly with various research and technology institutes. The focus will be to employ existing knowledge in a new and

innovative way, and to be the driving force behind procuring new knowledge where this is lacking. Ocean Forest will develop solutions that reduce costs for bio-production in the ocean and develop economic profit by utilising biomass for products.

## FISH HEALTH

Lerøy Seafood Group maintains a constant focus on fish health. The fish farming industry faces a number of health-related challenges which cannot currently be solved by vaccination or medication – viruses in particular – but also faces other less specific 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 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 was a target area for Lerøy Seafood Group in 2013. Read more here: [Environment/Fish health and welfare](#)

## 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. The concept, however, brings certain challenges, for example the risk of accidental release. Lerøy Seafood Group is actively involved in several research projects to challenge 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 related to lice and accidental release of salmon will be solved. One major technological challenge is to identify and utilise locations with the highest possible degree of biological sustainability. Such locations may set new requirements on equipment and forms of operations that are not faced today. At the same time, the Group needs licences to operate in such locations from local municipalities.

The accidental release of farmed salmon represents a challenge to the sustainability of the industry in addition to economic losses and impairment of the Group's reputation. Both in-house projects and participation in R&D projects have helped the Group to optimise its production equipment and operating procedures, resulting in zero accidental release in 2010-2012. In 2013, the Group unfortunately recorded four occasions of accidental release, totalling 31,980 fish.

For detailed information on the accidental release of fish in 2013: [Environment/Accidental release of fish](#)



**FOOD SAFETY**



The target for Lerøy Seafood Group is to ensure, together with the Group's feed suppliers, that the raw materials used in the Group's feed are fished and harvested in an ethically sound manner and in compliance with legal frameworks and based on sustainable harvest and fishing. In addition, the Group is actively involved in all parts of the value chain in order to ensure supply of safe products to the consumer.

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 making analyses and monitoring operations. Our quality team carries out between 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 risk related to product, volume purchased, customer requirements, history of complaints and results of audits.





# TRACEABILITY AND PREPAREDNESS

Lerøy Seafood Group has full traceability for all products from boat/cage to customer. For species related to fish farming, such as salmon, trout and cod, customers can go to Hallvard Lerøy's website 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 customers log on to the system, they receive detailed information on the product throughout the entire value chain. The system provides information on fish from parent fish stage to slaughter, such as location, treatments and also quality information such as fat, colour and condition.

Every year, recall tests are carried out by the Group's major manufacturers to ensure traceability for all products from boat or cage to customer. In 2013, Hallvard Lerøy carried out seven recall tests. These tests involve contacting the manufacturer about a fictional matter, tracing the products from production and identifying which customers have received the product. A risk assessment is always carried out to determine whether the product should be recalled and which bodies are to be notified.

The typical procedure for recall of products consists of the following phases:

1. Written explanation of nonconformity
2. Classification:
  - Class I: Need for information
  - Class II: Other faults/nonconformities in the product
  - Class III: Products representing a health risk
3. Notify manufacturer and management /preparedness team
4. Tracking product, verify nonconformity
5. Notify customers
6. Written explanation of what is to be withdrawn
7. Inventory / Destruction
8. Corrective action to prevent recurrence

Lerøy Seafood Group has compiled a directive for preparedness and recall of products. The preparedness group comprises representatives from management, production, market, quality and environment.


Creating Tasteful solutions

Lot: 132155      Specie: Norwegian Atlantic Salmon

## Trace Information

### Broodstock

Broodstock:	Aalvik
License:	12800
Strain:	AquaGen

### Juvenile

Hatchery:	Laksefjord	Smolt Plant:	Laksefjord
License:	FLB0003	License:	FLB0003
Hatching Period:	- 2011-08-01	Wellboat:	
Smolt Weight:	61 g		

### Farm

Fish Farm:	1112 Gourtebjella	Last Day of Feeding:	2013-02-04
Farm License:		Temp. Last Day of Feeding:	2,5 C
Location License:	10734	Date of Sea Transfer:	2011-07-30
Name of Fjord:	Kilfjord, Lyngen	Wellboat:	
Cage Density:	3 kg/m <sup>3</sup>	Duration of Transport:	0 hours
Cage Number:	1208		

### Packing Station

Packing Station:	Lerøy Aurora AS T126	Packing Date:	2013-02-15
License:	T-126	Cone Temperature:	2,0 C

### Processing

Processing Plant:	Lerøy Aurora As Skjervøy
License:	T-126
Processing Date:	2013-02-15

Lot: 132155      Specie: Norwegian Atlantic Salmon

Feed			Treatment		
Supplier	Type	First Day	Type	Name	Period
<b>Juvenile</b>					
Skretting	Nutra XP 0,5, 0,5 mm	2011-01-14	Juvenile		
Skretting	Nutra XP 0,7, 0,7 mm	2011-01-21	Vaccination	Alpha Ject Micro 6	2011-06-23 - 2011-06-24
Skretting	NUTRA XP 1,0, 1 mm	2011-02-23	Vaccination	Autogen ERM	2011-03-15 - 2011-03-16
Skretting	Nutra Olympic 1,2, 1,2 mm	2011-03-18			
Skretting	Nutra Olympic 1,5, 1,5 mm	2011-04-13			
Skretting	Protec 1,5, 1,5 mm	2011-04-15			
Skretting	Nutra Olympic 2,0, 2 mm	2011-05-12			
Skretting	Protec 2, 2 mm	2011-06-02			
Skretting	Nutra Supreme 2, 2 mm	2011-06-25			
Skretting	OXOCLINSYRE 5G/KG 2,0, 2 mm	2011-07-06			
<b>Farm</b>					
Skretting	Spirit 75 50A, 3 mm	2011-07-31			
Ewos	ADAPT MARINE 50 40A 500, 3 mm	2011-09-04			
Ewos	Opal 200 40A, 4 mm	2011-10-09			
Ewos	Opal 110-500 50A, 5 mm	2011-11-25			
Ewos	Robust-110 50A 500, 7 mm	2011-12-11			
Ewos	Opal 500 50A, 6 mm	2012-01-06			
Ewos	Opal 110 1000 50A, 9 mm	2012-02-23			
Ewos	OPAL-110 Ice 500 50A 500, 8 mm	2012-02-27			
Ewos	OPAL-110 Ice 1000+ 50 A 500, 9 mm	2012-03-12			
Ewos	Opal-110 2500 30A 500, 9 mm	2012-04-02			
Ewos	Opal 120 1000 50A, 9 mm	2012-06-07			
Ewos	Opal-110 1000 50A, 9 mm	2012-08-30			
Ewos	Opal 120 2500 50A, 12 mm	2012-09-16			
Ewos	Opal-120 2500 30A 500, 9 mm	2012-10-29			
Ewos	ROBUST-120 1000+ 30A, 9 mm	2012-11-14			
Ewos	Opal-120 ICE 1000 50A 500, 9 mm	2012-12-19			
Ewos	Opal-120 1000 20A, 9 mm	2013-01-03			

Lot: 132155      Specie: Norwegian Atlantic Salmon

Quality	
Sampling Date:	2013-02-15
Fat Content:	20,0%
Colour	Salmofan: 28,0
	Mg/kg: 9,0
Condition Factor:	

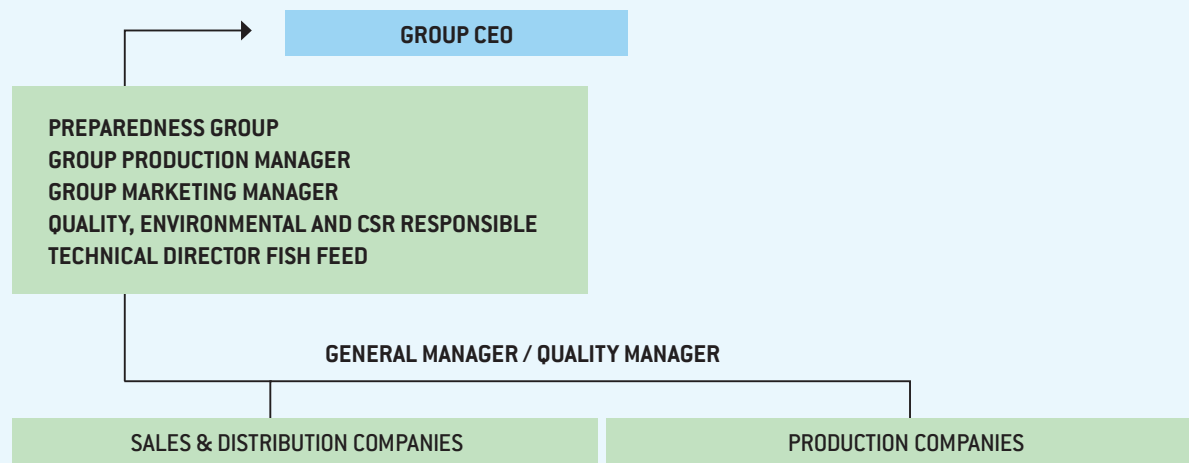
# ORGANISATION OF THE PREPAREDNESS GROUP

The preparedness group comprises representatives from management, production, market, quality and environment. The group has primary responsibility, both internally and externally, for communications, handling and execution of relevant challenges/crises which occur in relation to different bodies which enforce requirements on the Group.

These may be:

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

A separate directive has been compiled for preparedness and recall of products



## QUALITY

Based on experience gained over many years, Lerøy Seafood Group has developed a quality system containing routines and procedures to ensure supply of safe products. As a part of the quality assurance routines, the Group carries out control and monitoring of manufacturers and partners. This involves setting requirements on their quality systems and procedures, and analysing and monitoring their operations.

Lerøy Seafood Group's quality team carries out 150 to 200 external quality audits every year (166 audits in 2013). This is required to ensure the purchased products are in compliance with the same requirements set on the Group's own products. Moreover, the products are controlled by the Group at all stages throughout the entire production process, from egg or processing plants to finished product in a box and even up to delivery to the customer.

All products are marked in relation to prevailing marking regulations in Norway or the EU and in import countries and in relation to customer requirements. Experience gained from individual cases of poor food safety 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 the Group is in compliance with its own strict requirements and the externally set food safety requirements.





### QUALITY IN THE SUPPLY CHAIN

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

### QUALITY AND ENVIRONMENTAL 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 the "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



**GLOBAL GAP (GOOD AGRICULTURAL PRACTICE)**

Global GAP is a standard for environmental conditions involving the Group’s production activities and employees’ working environment. The standard covers the production process from roe stage to fish slaughter.

Focus areas within Global GAP:

- Food Safety: The standard is based on criteria for food safety developed from the generic HACCP\* principles.
- Environment: The standard has two parts, one for environmental protection and one for good aquaculture practice to minimise the negative environmental impact of aquaculture.
- Employees’ health, safety and welfare: The standard sets global criteria for workers’ health and safety in the production facilities, and contains guidelines for social issues.
- Fish welfare: The standard sets forth global criteria for fish welfare in production facilities.

\*HACCP (Hazard Analytical Critical Control Point) – Risk analysis containing critical control points

**ASC (AQUA STEWARDSHIP COUNCIL)**

The ASC is a certification and labelling programme for responsibly farmed seafood. The ASC has various standards compiled for fish farming, while the MSC (Marine Stewardship Council) compiles standards for fish caught in the wild. To date, the ASC has compiled eight standards, covering 12 species, all based on the same principles:

- Comprehensive legal compliance
- Conservation of natural habitat and biodiversity
- Conservation of water resources
- Conservation of species diversity and wild population through prevention of escapes
- Use of feed and other inputs that are sourced responsibly
- Good animal health (no unnecessary use of antibiotics and chemicals)
- Social responsibility for workers and communities impacted by farming

**FIRST ASC CERTIFICATION**

Lerøy Seafood Group has been involved in the development of the ASC standard since 2004 and was the very first company in the world to offer the market salmon produced according to the new environmental standard – ASC, Aquaculture Stewardship Council.

The three first facilities in the world to gain certification according to this standard all are connected to Lerøy.

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

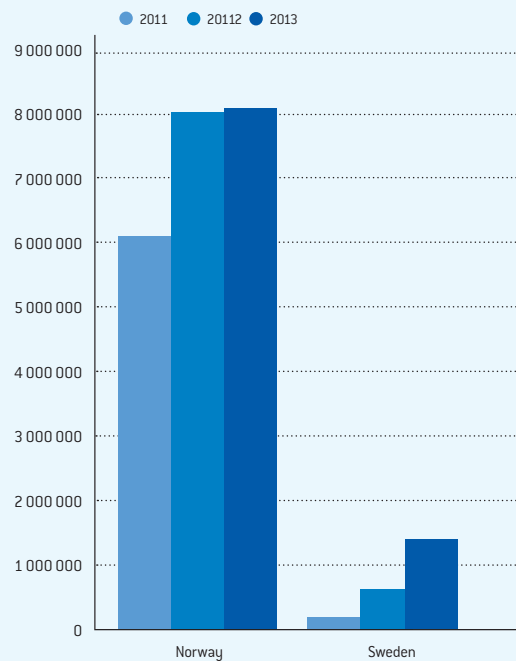
The goal is to gain ASC certification for all our fish farming facilities. By the end of 2014, all fish sold by Lerøy Aurora will have ASC certification.

Furthermore, Lerøy has achieved ASC chain of custody for its sales, distribution and value added processing chain, and is now able to offer the Japanese, American and European markets a variety of ASC certified salmon products.

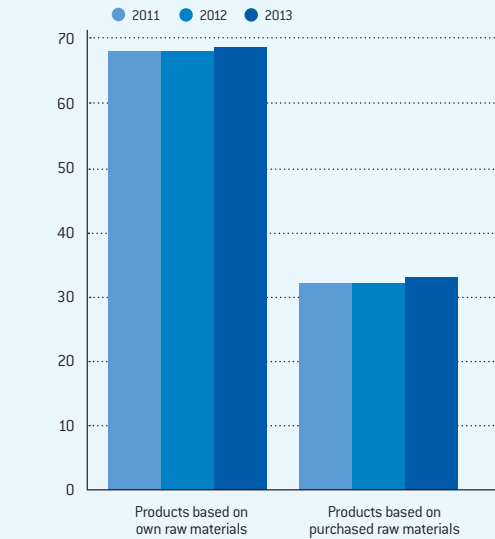
## LABELLED PRODUCTS

In 2013, Lerøy Seafood Group's sales of products based on own fish represented 67.4 % of turnover (66.6% in 2012). All products sold from Norway are produced according to MSC certification, but are not labelled or sold as MSC products. Moreover, the salmon certified according to Global GAP are not marked with the Global GAP label, due to the additional costs related to labelling the end products. There has been a significant increase in the volume of salmon production with environmental certificates from 2011 to 2013.

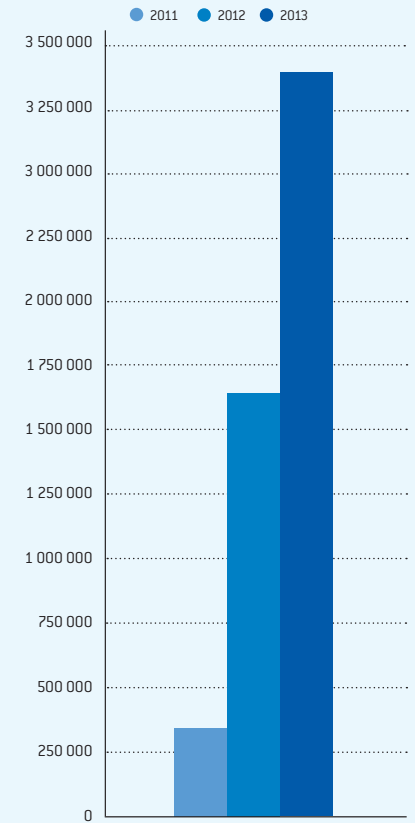
SALE OF MSC/KRAV BRANDED PRODUCTS SOLD THROUGH HALLVARD LERØY AS AND LERØY SVERIGE AB



SALE OF PRODUCTS BASED ON OUR OWN RAW MATERIAL (% OF TURNOVER)



SALE OF GLOBAL GAP CERTIFIED SALMON THROUGH HALLVARD LERØY AS



## HEALTHY PRODUCTS

“Fish is good for your health, all year round”. This Norwegian saying has repeatedly been confirmed by research in recent years. It has been shown that eating seafood lowers the risk of cardiovascular disease. Consumption of fish and other seafood is also important for development of the foetus, particularly as regards weight gain and neurological development. According to the Directorate of Health in Norway, it is recommended to eat seafood 2-3 times a week.

Fish is rich in protein and Omega 3, and does not contain sugar. It is generally believed that marine n-3 fatty acids – such as Omega-3 – play an important role in generating positive health benefits. There are lots of these fatty acids in fat fish such as salmon and trout.

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. An average person can eat ten salmon meals containing 200 grams of fish without exceeding the recommended maximum weekly values.





# THE ENVIRONMENT



Lerøy Seafood Group believes that aquaculture activities must be conducted with an "eternal perspective" as a condition for exploitation of coastal resources. The Group works hard to constantly improve the interaction between fish farming and the environment, aiming at generating positive and lasting environmental benefits.

The Group's environmental vision – "Take action today for a difference tomorrow" – is a clear signal from every employee that every day we will be pushing for environmental improvements to benefit the environment, aquaculture and our coastal communities.



# ENVIRONMENTAL GOALS

The Group's seafood companies have set clear goals for each of the operational key areas and developed operating procedures that are particularly designed to ensure achievement in these key environmental areas. Through internal and external audits, we can ensure that there is consistency between operating procedures and good action.

## THE GROUP HAS FIVE MAIN ELEMENTS RELATED TO ENVIRONMENTAL WORK:

1. Work to prevent accidental release of fish
2. Measures to reduce salmon lice
3. Fish health and fish welfare
4. Efficient utilisation of land and sea areas
5. Reduced discharge of nutrient salts from premises

These five elements are closely monitored through key performance indicators that are measured on a monthly basis and utilised internally in order to achieve improvements within individual companies and for benchmarking between comparable companies.

See the targets and results in 2012 – 2013 on page [Group / Sustainability focus areas and targets](#)



# ACCIDENTAL RELEASE OF FISH

## MAIN GOAL: "ZERO ACCIDENTAL RELEASE".

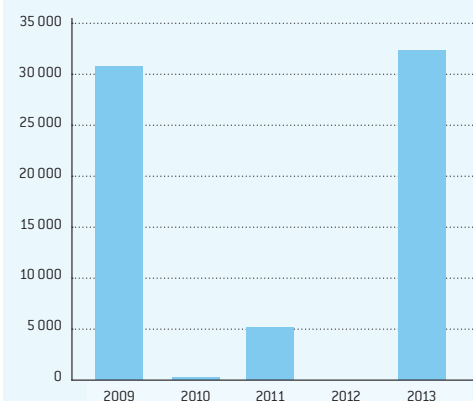
Prevention of accidental release of fish is an essential and high priority area for Lerøy Seafood Group. The Group invests a considerable amount of work in optimising equipment and routines to avoid any accidental releases. Even more importantly, the management and all employees are aware of their own responsibility for ensuring zero accidental release within the company. All incidents of and events that can lead to accidental release are reported to the Fisheries Authorities. Securing against accidental release is a question of maintaining a focus on actions, good planning of all operations in order to ensure safe execution and efficient re-examination of operations.

In 2013, four cases of accidental release were registered in Lerøy Seafood Group – a total of 31,980 fish, which corresponds to 0.03% of all fish we had in the sea in 2013. There were no releases from any of our hatcheries in 2013. In 2012, Lerøy Seafood Group's facilities could report zero accidental release.

Date	Company	Location	Species	No. of fish
06.06.13	Lerøy Vest	11611	Trout	50
21.10.13	Lerøy Vest	28976	Salmon	1 929
04.11.13	Lerøy Aurora	30877	Salmon	1
29.11.13	Lerøy Midnor	12383	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.
- 21.10.13: Hole in net detected three days after AGD treatment.
- 04.11.13: One fish captured from net for control was accidentally released to sea.
- 29.11.13: Contact between net and chain utilised to keep bottom ring in position caused a hole in the net.

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



Subsequent to an incident involving accidental release, it is important that all information regarding the reasons and actions 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. The increased focus on accidental release over the past years has resulted in a number of changes at our facilities.

Specific measures to avoid accidental releases:

- Replacement of nets
- All facilities shall be in compliance with the new Nytek standard for floating fish farms
- All facilities shall have certification according to NS 9415 (standard for floating fish farming installations)
- Active participation in 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 assemble a haul rope where there is no cross rope
- Marking of nets
- Extensive use of cameras or divers during and after work on nets
- New procedures for net handling
- New log form for all work involving nets
- Continual work on attitudes
- Control/re-examination – always
- Continual revision of procedures
- Assessment of suppliers
- Use of new technology for monitoring

It is important that incidents which result in accidental release of fish result in the 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 companies and competencies are shared among the parties involved. In order to improve preparedness, the Group also collaborates with other fish farming companies in its vicinity and participates actively in activities coordinated by the Norwegian Seafood Federation. Moreover, the fish-farming companies of Lerøy Seafood Group maintain close contact and communication with the authorities regarding prevention of accidental release of fish.

Read more here: [Group / R&D](#)

# MEASURES TO REDUCE SALMON LICE

## MAIN GOALS:

- Zero female salmon lice of reproductive age during emigration period for wild salmon
- Reduce the use of chemicals to combat lice

Salmon lice have a natural co-existence with salmon, but are practically absent from the Group's 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 Authority on a regular basis. These measurements have indicated salmon lice levels well below the requirements set by the Authority. In the period from January to September, which is important for the migration of wild fish, the results in 2013 were the lowest ever in the Group.

The Group has a desire and a goal to avoid the use of chemicals to combat salmon lice where appropriate in relation to regulations and fish health. Chitin inhibitors shall not be used unless necessary, due to problems with resistance. No chitin inhibitors were used in 2011-2013.

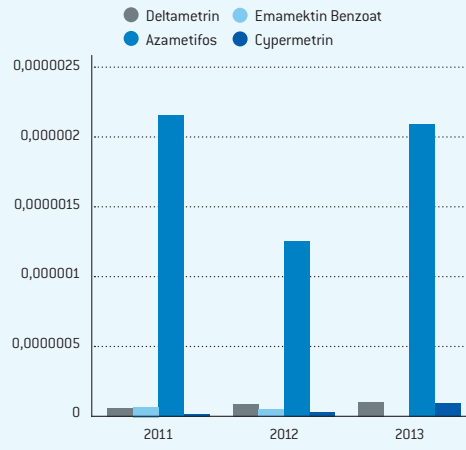
Both management and production technicians have maintained a strong focus on salmon lice treatment. The target is to avoid salmon lice of reproductive age. In order to reach the target, the Group focuses on preventive actions, monitoring and improved internal and external communication and co-operation, utilising various treatment methods and following-up and taking corrective actions.

In the future, the focus will be especially on:

- More intensive use of wrasse
- Use and monitoring of alternative deployment patterns and locality structures
- Continuous monitoring of deployment and localities
- Treatment with approved treatment agents
- Coordination among facilities
- Testing mussels in relation to delicing

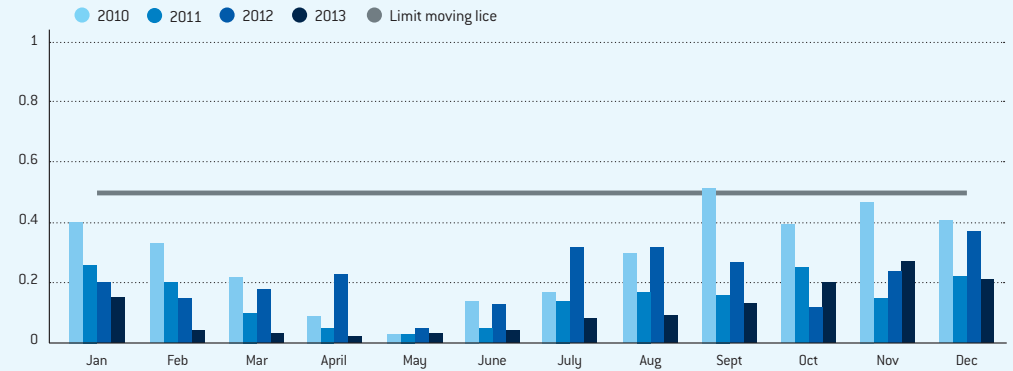
The volume of chemicals utilised for delicing in 2013 increased from 2012. This was due to high death rates in hatcheries.

**CHEMICALS USED FOR DELICING  
(KG/KG FISH GROSS GROWTH)**

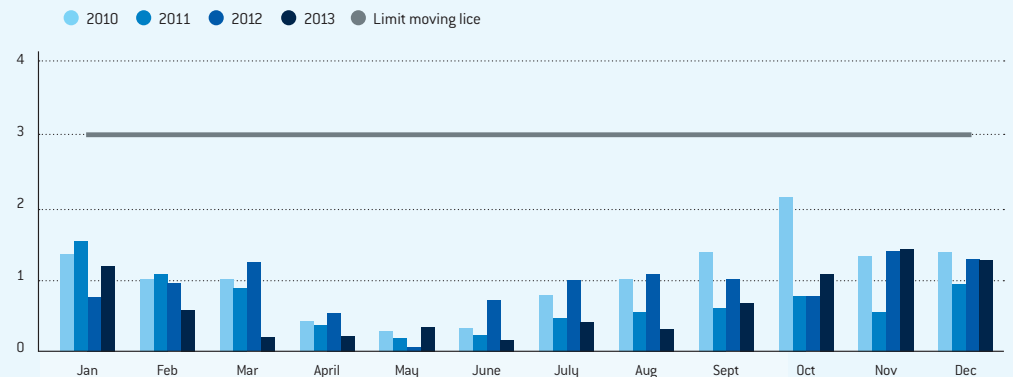


[Read more here: Group / R&D](#)

**DEVELOPMENT OF FULLY DEVELOPED FEMALE SEA LICE WITH EGG STRINGS, LERØY SEAFOOD GROUP**



**DEVELOPMENT OF MOVING SALMON LICE, LERØY SEAFOOD GROUP**



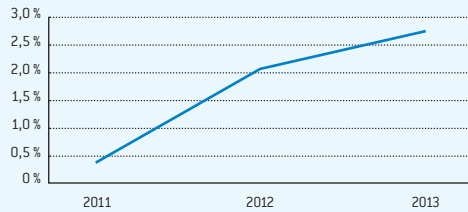
# FISH HEALTH AND WELFARE

## Target: Increase survival rate from release to slaughter

- KPI 3 Death rate per generation 6%
- KPI 4 Density max 25 kg / m<sup>3</sup>

The main target for fish health and welfare is to increase fish survival rate from release to slaughter. All employees involved in fish farming are participating in training focusing on fish welfare. The accumulated fish survival rate has increased by almost 3% from 2011 to 2013, and is now at a very good level.

### ACCUMULATED FISH SURVIVAL 2011 - 2013

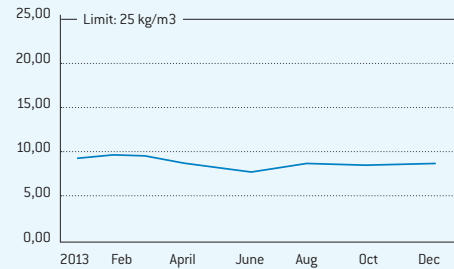


Fish welfare is also developed and monitored by keeping use of medicines at a minimum, with careful assessment of use, using only approved medicines which have documented environmental impact in accordance with the requirements of SLV, monitoring and documenting tolerance and following up biological feed factors.

Read more about biological feed factors:

[Environment / Feed factors](#)

### DENSITY IN CAGE, KG/M<sup>3</sup>, ALL LOCATIONS LERØY SEAFOOD GROUP 2013



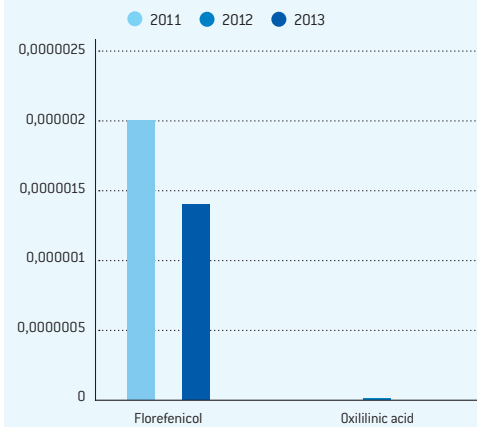
Furthermore, cage density, i.e. how much space the fish have in the cages, influences fish welfare. The maximum limit is 25 kg/m<sup>3</sup> but the results in 2013 were far below this limit, indicating that the fish have enough space in the cages.

## USE OF ANTIBIOTICS

Salmon is by far the healthiest “farmed animal” among the species from which food is produced in Norway. In 2013, a total 215,561 tons of fish feed (223,013 tons in 2012) and 0.65 kg antibiotics active agent (3.7 kg in 2012) were utilised by Lerøy Seafood Group. This constitutes a mere 0.000 000 30% of fish feed including antibiotics. Antibiotics are only utilised for young fish, and not used for fish in the sea destined for consumption.

Lerøy Seafood Group reduced the use of antibiotics in 2012 by 99% compared to usage in 2011. The goal for the use of antibiotics in 2013 was to sustain the same level as in 2012. We reached our goal for all our hatcheries, except one. This facility had an abnormally high proportion of mortality which led to the decision to use medical treatment on the fish to try to increase the survival rate.

### MEDICATION USED IN FARMING (KG/KG FISH GROSS GROWTH)



Read more about R&D activities related to fish health: [Group / R&D](#)



## EFFICIENT UTILISATION OF LAND AND SEA AREAS

**Target: Avoid harmful impact on species caused by intervention in natural environment in fjord systems, including sedimentation/sea beds.**

- KPI 5: Average MOM-B max 1.5 per location

All the locations utilised by Lerøy Seafood Group are approved for fish farming by various Norwegian authorities. Before starting operations at a location, approval is required from a number of official and private bodies. Furthermore, approval requires compliance with numerous analyses, requirements and local conditions.

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-B stands for:

- M – matfiskanlegg (production facility)
- O – overvåkning (monitoring)
- M – modellering (models)

A MOM-B evaluation is carried out by a third party

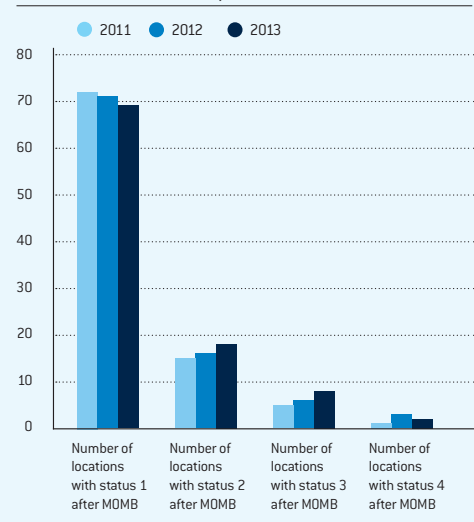
and involves extraction of samples from the seabed under cages and around the cages in a facility.

The analysis has three parts:

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

All parameters are given points according to how much sediment is influenced by the organic substance. The distinction between acceptable and unacceptable sediment condition is set to the largest accumulation that allows burrowing benthic organisms living in the sediment. The analyses are executed when production of one generation is at peak. On the basis of these investigations, the individual location receives a score, which also provides an indication of when the next MOM-B investigation should be carried out. A poor score often requires more frequent seabed investigations than a good score.

**STATUS OF LOCATIONS, LERØY SEAFOOD GROUP, 2011 - 2013**



Score 1 is the best score you can get and score 4 is the poorest score you can get.

In addition to MOM-B, analyses are also conducted locally at individual facilities. These include measurement of density, oxygen level in the sea, currents, water quality, visibility, dives under the facility etc. Each facility is also linked with neighbouring facilities in a zone-based cooperation to cooperate on topics such as lice and preventing accidental release, spread of disease, outbreaks of disease etc.

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, 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.

## DISCHARGE OF NUTRIENT SALTS

**Target: Reduction of nutrient salts discharged from premises**

The farming of salmon and trout results in discharges of nutrient salts, such as phosphorus and nitrogen. The production of algae and mussels results in intake and elimination of these nutrient salts. This provides the potential for a lifecycle that is beneficial from a sustainability perspective, where algae, mussels and fish for consumption are farmed in an MTA (multi-trophic aquaculture) process.

In 2013, Lerøy cooperated with Bellona to found a new company – Ocean Forest AS – to conduct research and development based on integrated multi-trophic aquaculture (IMTA). Ocean Forest will develop solutions that reduce costs for bio-production in the ocean and develop economic profit by utilising biomass for products.

Read more about Ocean Forest:  
[Group/R&D - Fish farming](#)

As with the algae, the Group also aims for industrial production of mussels. 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 elimination of phosphorus and nitrogen from seawater. An additional benefit with mussels is that they absorb CO<sub>2</sub> in their shells.







## RAW MATERIALS

### FISH FEED

Target: KPI 9 Fish feed

- FishSource scores for marine raw materials, separated species,  $\geq 6$  biomass score  $\geq 8$   
What are the FishSource scores?  
<http://www.fishsource.org/>

FishSource does not have its “own” sustainability rating system, rather providing the user with straight forward, clear, information on how international, accredited systems would rate/have rated the fisheries. Scores make use of commonly reported numbers from stock assessments but they do not define a fishery as “good” or “bad”. Fisheries can be ranked against one another and give insights into how other groups would score a fishery against current measures of sustainability. Scores currently relate to the Marine Stewardship Council (MSC) standards, which in turn rely on international organisations’ criteria – e.g. International Council for the Exploration of the Sea – ICES. Scores have been developed in a way that a score of 8 has a parallel of an 80 MSC rating – i.e., an “unconditional pass” on that criteria, towards MSC certification. The same rationale applies to,

e.g., a FishSource score below 6 “the fishery will be ineligible for certification” [MSC standards].

- FFRDm < 1.35, Forage Fish Dependency Ratio
- Increased usage of raw materials, which are certified according to a sustainability standard

	FIFO meal	FIFO oil
2010	0.85	2.5
2011	0.55	1.99
2012	0.38	1.74
2013	0.44	1.41

Fish feed is the most important raw material for seafood production, and quality assurance of the feed is therefore of great importance. There are no requirements for use of specific feed for fish, but there are clearly defined nutritional requirements for the content of raw materials. In nature, fish is a part of the salmon’s diet, therefore salmon feed contains both fishmeal and fish oil. In 2013, the main raw materials in fish feed in Lerøy Seafood Group were capelin, herring and anchovy in addition to fish cuttings. These raw materials mainly come from wild fish which is not suited for human consumption or not in demand.

### MARINE INGREDIENTS IN FISH FEED 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>

In 2013, the main feed suppliers for the Group were EWOS and Skretting. The Group has an extensive sampling programme for the control of feeds with regard to chemical composition, dust, contaminants etc. The feed suppliers audit their own suppliers, and Lerøy Seafood Group conducts annual audits of feed companies. This, together with the feed suppliers' self-monitoring and traceability systems, means that we have control of feed content and quality. Furthermore, our target is to ensure, together with the feed suppliers, that the raw materials used in the Group's feed are both fished and harvested in an ethically sound manner and in compliance with legal frameworks and based on sustainable harvesting or fishing.

Read more about the supplier audits here: [Group / The value chain of fish farming](#)

In general, salmon farming has traditionally depended on a supply of wild fish for fish feed as a large volume of fish oil is consumed by the industry. In recent years, this has significantly reduced, as fish oil has been replaced by vegetable oils, mainly originating from soya and rapeseed. Originally, fish feed had a 70% content of marine raw materials, whereas the fish feed used in the Group in 2013 contained approx. 30% marine and 70% vegetable raw materials. The transition to vegetable raw materials is mainly attributed to access to raw materials, but also due to the increased focus on sustainable production.

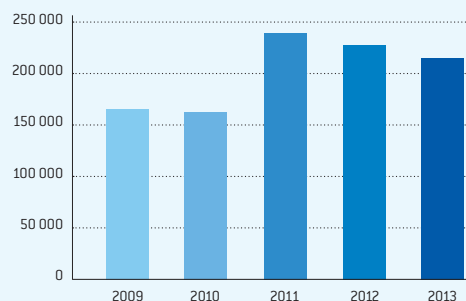
Fish as meal and oil will provide much more sustainable utilisation if supplied directly for human consumption compared to feed for animals. We try to supply wild fish directly to consumption and produce fish feed from the cuttings, where possible. Raw materials from wild fish are used as an ingredient in many different types of animal feed. Salmon is the one species that most efficiently converts raw materials into an edible product.

### "FISH IN – FISH OUT" – FIFO

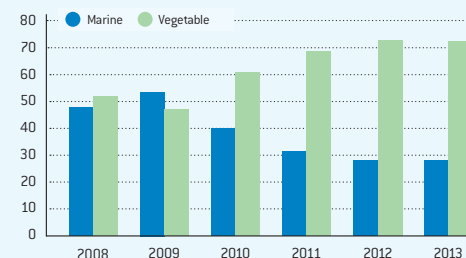
There are many ways of assessing sustainability within the seafood industry. The concept of "fish in – fish out (FIFO)" is very common in relation to fish feed, i.e. how much wild fish it takes to produce one kilo of farmed salmon. The targets set in the ASC standard are: FIFO protein lower than 1.31 and FIFO oil lower than 2.85. It is natural to calculate a FIFO value separately for protein and oil, as these two raw materials have very different performance.

In 2013, the FIFO value for protein at Lerøy Seafood Group was 0.44 (0.38 in 2012) while the value for fish oil was 1.41 (1.74 in 2012). This implies that we require 1.41 kg of wild fish to produce enough oil so that we can 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 an excess of fishmeal which can be utilised in other products.

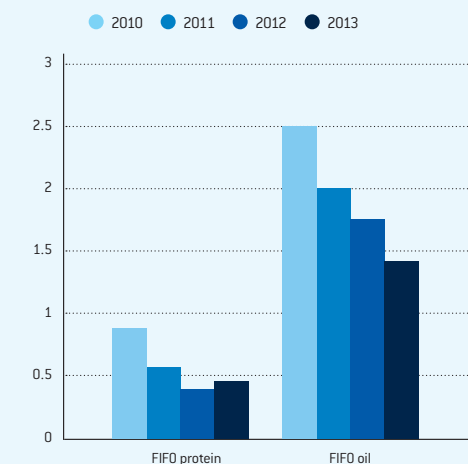
### CONSUMPTION OF FISHFEED IN LERØY SEAFOOD GROUP



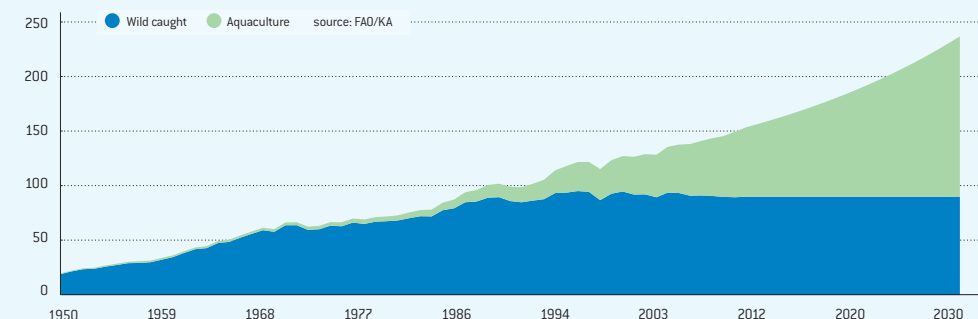
### DEVELOPMENT OF RAW MATERIALS IN FEED



### FISH IN - FISH OUT • LERØY SEAFOOD GROUP



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

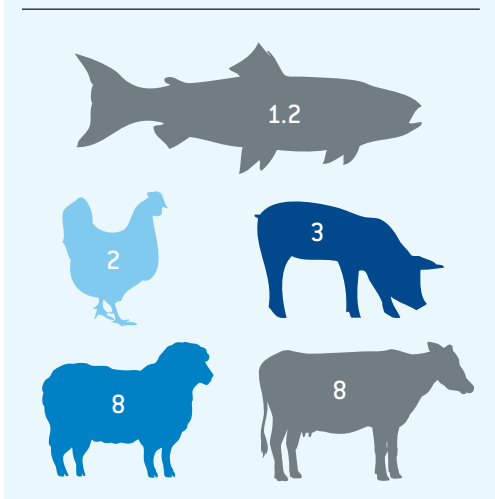


## FEED FACTOR

Target: Biological feed factor of 1.1

The feed factor is an important indicator of how efficiently we convert feed into fish. Salmon farming is exceptionally efficient compared with domestic animals. The feed factor for poultry is approx. 2 and for pork approx. 3.5, while for salmon Lerøy Seafood Group's fish farming companies reported a feed factor of 1.18 in 2013 (1.18 in 2012).

### AMOUNT OF FEED TO GROW 1 KG (KG)

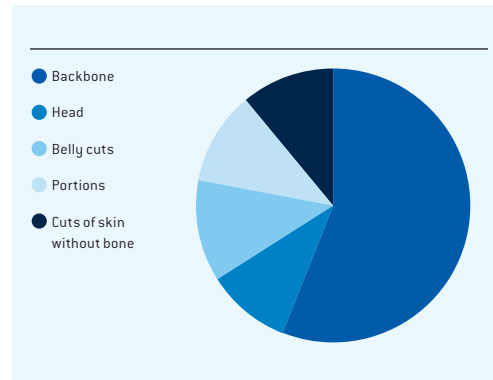


The following actions have been initiated in order to minimise the feed factor:

- 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

## BY-PRODUCTS

The major by-products in Lerøy Seafood Group's operations are:



Lerøy Seafood Group works hard to achieve the highest possible rate of utilisation of raw materials produced or caught. This implies a goal of 100% utilisation of all nutritious raw material not used in the main production process. The by-product share depends on the type and specification of the processed products. The most important processed products are fillets and salmon and trout portions with or without skin. The utilisation rate for fillets is between 55 – 74%, while the residual products become by-products. For portions, the utilisation rate is between 45 – 68% depending on the specification.



# EMISSIONS

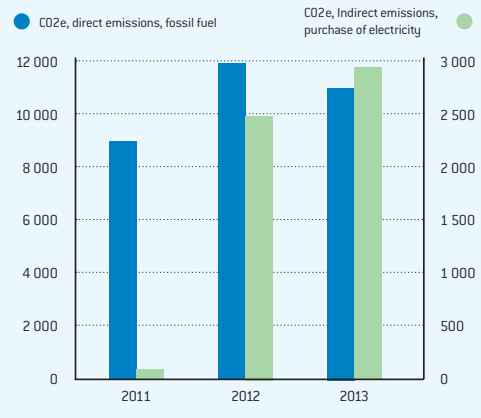
Lerøy Seafood Group has participated in various projects for analysing greenhouse gas emissions from the production of salmon, both as whole fish and as fillets. For example, the Group participated in a committee in Norway to formulate a standard for climate labelling of seafood. The standard “NS 9418 Carbon footprint for seafood” was published in 2013 and will be submitted as an ISO standard – the objective is for this to be an international standard for climate labelling of all types of food products. When the carbon footprint of a seafood product is calculated, all phases of the life cycle must be taken into account. For aquaculture products, this involves calculating greenhouse gas emissions from pre-production, farming of fish, transporting fish to harvest, waste management, cooling and transport to the retailer etc.

The main sources of greenhouse gas emissions in Lerøy Seafood Group’s operations derive from energy consumption for the Group’s operations and from fish feed. The purchase of products and services, of which fish feed and transport services make up a major share, are not at the moment included in the calculations as the 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.

	2013	2012
Total consumption of fossil fuels, litres	3,927,876	4,464,489
Total consumption of electricity, GWh	58.0	53.1
Total CO2 emissions, tCO2	13,909	14,404

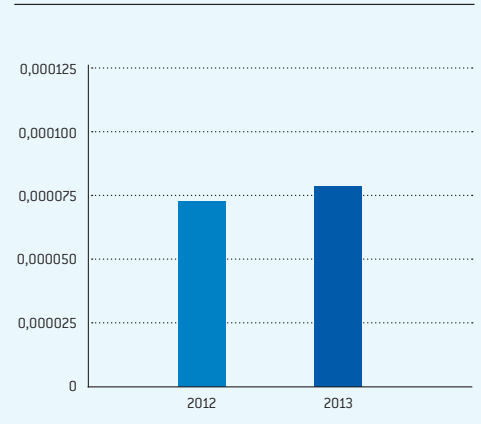
The emission factors are based on IPCC-2006 overview of factors for the fish farming industry.

## GREENHOUSE GAS EMISSIONS, USE OF FOSSIL FUEL AND PURCHASE OF ELECTRICITY, (TONS CO2E) FARMING DIV.



Calculations are in accordance with ISO 14064/GHG protocol

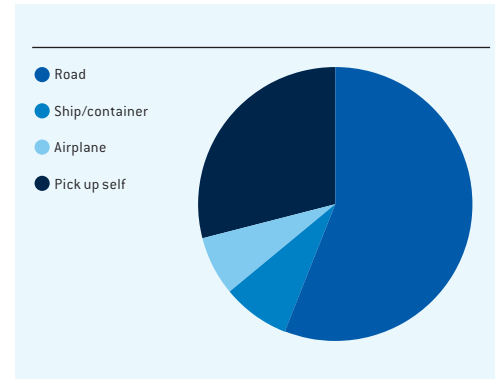
## CO2 EMISSIONS TOTAL PER KG FISH PRODUCED GROSS INCREMENT



## EMISSIONS FROM LOGISTICS

Lerøy Seafood Group can influence its greenhouse gas emissions through developing logistics solutions. Identifying the optimal transportation solution is beneficial for the environment while at the same time contributing to Group profitability. More than 80% of the Group’s products are distributed fresh. This places stringent requirements on proximity to the market and effective logistics solutions.

Hallvard Lerøy AS is the largest sales and distribution company within the Lerøy Seafood Group. The transport methods utilised by Hallvard Lerøy AS are road transport, airplanes, ships and containers. In 2013, over 55% of product distribution was by road. In addition, almost 30% of products were picked up by customers.



## ROAD TRANSPORT

The majority of distribution still takes place on road. This is mainly due to the 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. The Group continuously looks for new distribution solutions that are still price competitive and generate the same level of service as before; for example, by changing parts of the road transport over to rail transport, where possible. This has reduced both costs as well as emissions. By making use of rail transport on parts of the route between Trondheim and Rotterdam, the CO2 emissions were reduced by 68.5%. Major transport companies have developed services involving rail transport of entire articulated trailers to Germany and Holland, which provides Lerøy Seafood Group with new potential to make extensive use of rail transport.

## AIR TRANSPORT

The volume of fish transported by air has increased in the past year, due to increased sales to Asia, Australia and the USA. The Group works closely with the air transport suppliers in order to identify the best air cargo systems and the best solutions for the environment. For example, the Group has actively co-operated with a large airline company that has scheduled passenger flights covering all Lerøy Seafood Group's markets. The Group makes use of the cargo capacity on these planes. By consciously focusing on this type of air cargo, the Group is able to meet market demand while utilising the most modern and least polluting aircraft.

## RAIL TRANSPORT

Lerøy Seafood Group's products from Northern Norway are transported to Southern Norway mainly by rail. This system works well during the summer months. During the winter there are sometimes delays due to weather conditions etc. that force the Group to make use of uneconomical solutions that may also be less than optimal for the environment.

## SEA TRANSPORT

The Group's frozen seafood is currently transported by ship. The Group will maintain its focus on environmentally friendly logistics and will collaborate closely with the main suppliers of distribution services in order to help reduce environmental impact in this area.



# SOCIAL AND ECONOMIC WELFARE



## WHERE DO OUR EMPLOYEES WORK ?

### NUMBER OF EMPLOYEES

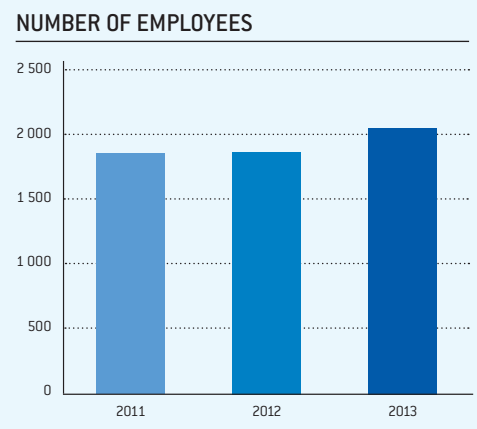
- 0 - 100
- 100 - 500
- 500+



## 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 2013, there were 2,067 employees (1,883 in 2012) in the Group, including 669 women and 1,398 men.

Of the Group's total number of employees, 1,486 work in Norway and 581 abroad. The



Group has always placed decisive emphasis on individual skills, performance and responsibility in its recruitment policy and salary systems. Furthermore, the Group ensures at all times equal employment opportunities and rights for all employees and works hard to prevent discrimination based on any reason. 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.

As the Group is involved in a global industry

which faces continuous development in general conditions, it is essential 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 in the business environment, the Group relies on employees who are dynamic, flexible and willing to learn. In recent years, development has been possible because the Group has been an attractive employer for talented people. One of several important prerequisites for the Group to sustain its positive rate of development is that the Group can offer attractive jobs to a number of skilled workers.

## EMPLOYEE WELFARE

In 2013, only minor injuries were reported among employees. The Group's Norwegian subsidiaries reported an accumulated sick leave of 5.3% (4.8% in 2012). This figure comprises 2.7% long-term and 2.6% short-term sick leave. The Group works actively to keep sick leave rates as low as possible. Comparable sick leave statistics are not available from our foreign subsidiaries. However, the organisations in the individual subsidiaries are subject to continuous development and all employees within the Group complete training in health and safety. The Group takes particular responsibility in relation to children and the young, to ensure good guidance and follow-up, helping avoid accidents or other negative incidents.

The different companies in Lerøy Seafood Group have their own employee representatives who take care of the formal cooperation between company and employee. All employees are entitled to join or establish trade unions as they choose. Each company has different types of events they organise. These may be family days, social gatherings, motivation meetings or events involving sports. The majority of our subsidiaries offer different types of sporting activities for their employees.





# ECONOMIC IMPACT

## ECONOMIC VALUE GENERATED AND DISTRIBUTED

Lerøy Seafood Group is strongly involved in the local communities in the areas we are located, and aims to contribute to local incomes in the form of purchasing goods, services and supplies locally whenever possible. The total purchases of goods and services by the Group's companies in Norway amounted to NOK 8.4 billion in 2013, and these purchases were made in 296 municipalities in Norway. In 2013, the Group's operations were located in 49 municipalities in Norway. Our employees contributed NOK 204 million in taxes to 118 municipalities. Based on our business over the last five years, the Group has contributed NOK 1.2 billion in taxes. As such, we contribute to the maintenance of a number of communities and workplaces around Norway.

## LOCAL COMMUNITIES

Lerøy Seafood Group's companies are often located in decentralised areas, making significant contributions to employment and income in the local communities. The Group aims to develop positive, close cooperation with these communities and makes contributions through sponsoring and supporting local sports clubs and festivals/various events. The Group supports various local activities related to children and young people. Diet, health and healthy eating are important common values in this collaboration. It is therefore rewarding to see children and young people enjoying healthy food at different events supported by the Group.

With our decentralised locations, we also make contributions to investments in buildings, infrastructure, quays, floating quays and modern equipment in small, local communities. These form the grounds for local commerce. In fact, we

represent 25-80% of the economical basis for certain suppliers in the municipalities in which we have facilities.

According to SINTEF's study\* in 2009, every job in aquaculture creates nearly two jobs in other parts of Norwegian industry, and every Norwegian krone created generates NOK 1.43 in other areas of the Norwegian economy. We can therefore conclude that the indirect socio-economic impact of Lerøy Seafood Group in 2013 represented approximately 4,000 full-time equivalents.

In terms of value creation per full-time equivalent, the figure for Aquaculture is much higher than the average for Mainland Norway. Value creation (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 creation 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 total contribution towards value creation of NOK 2,005 million. The supply industry is experiencing growth and the choice of suppliers and subcontractors will become increasingly important for the future development of the seafood industry. Examples of suppliers already benefiting from the spin-off effect of the aquaculture industry include fish feed suppliers, professional, advisory and technical service providers, financial service providers and insurance firms.\*\*

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

\*\*SINTEF rapport A26088 (2014) – Verdiskaping og sysselsetting i norsk sjømatnæring

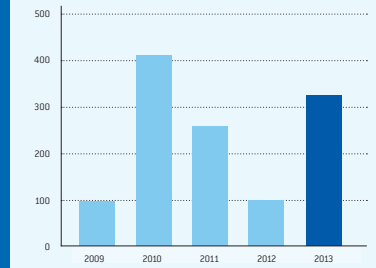
## LERØY SEAFOOD GROUP HELPS MUNICIPALITIES AND LOCAL COMMUNITIES IN MANY DIFFERENT WAYS.

The map shows the municipalities in Norway where Lerøy Seafood Group purchased goods, equipment and services in 2013. Lerøy Seafood Group purchased goods, equipment and services in Norway in 2013 for NOK 8.4 billion.



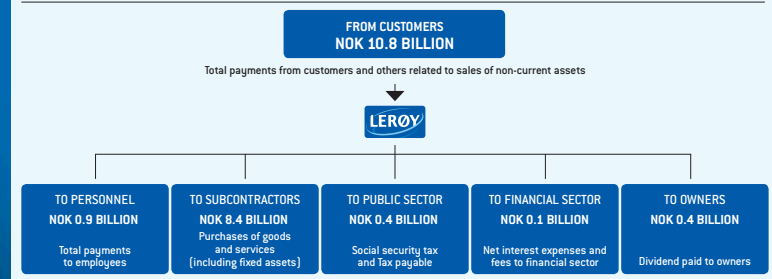
As a corporation, Lerøy Seafood Group has decided to support activities related to children and young people in local communities.

LERØY SEAFOOD GROUP HAS CONTRIBUTED WITH A TOTAL AMOUNT OF NOK 1.2 BILLION IN TAXES DURING THE LAST 5 YEARS (TAX PAYABLE 2009-2013)

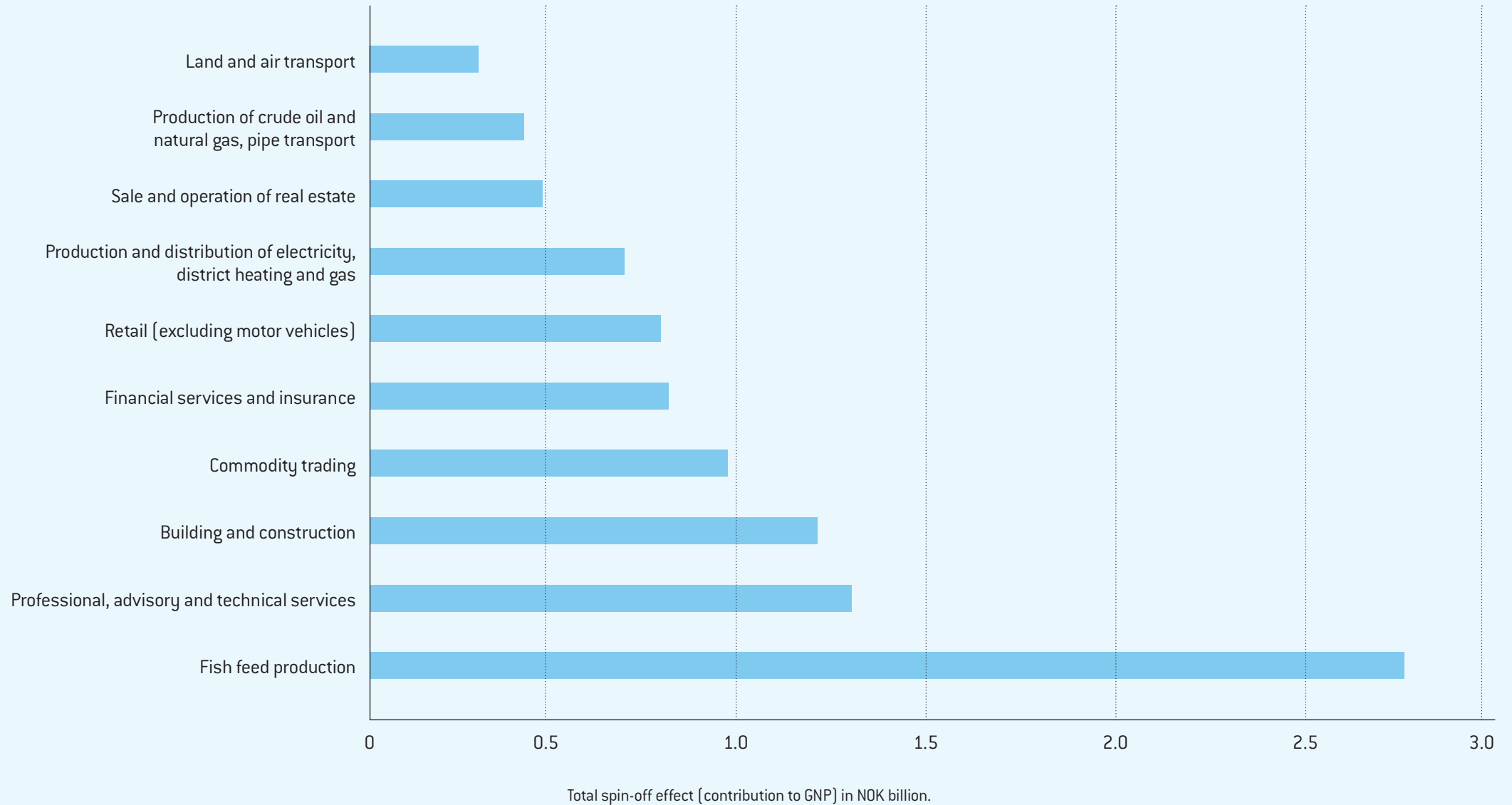


Summer students from UIB visiting Lerøy Vest.

## ECONOMIC VALUE GENERATED AND DISTRIBUTED

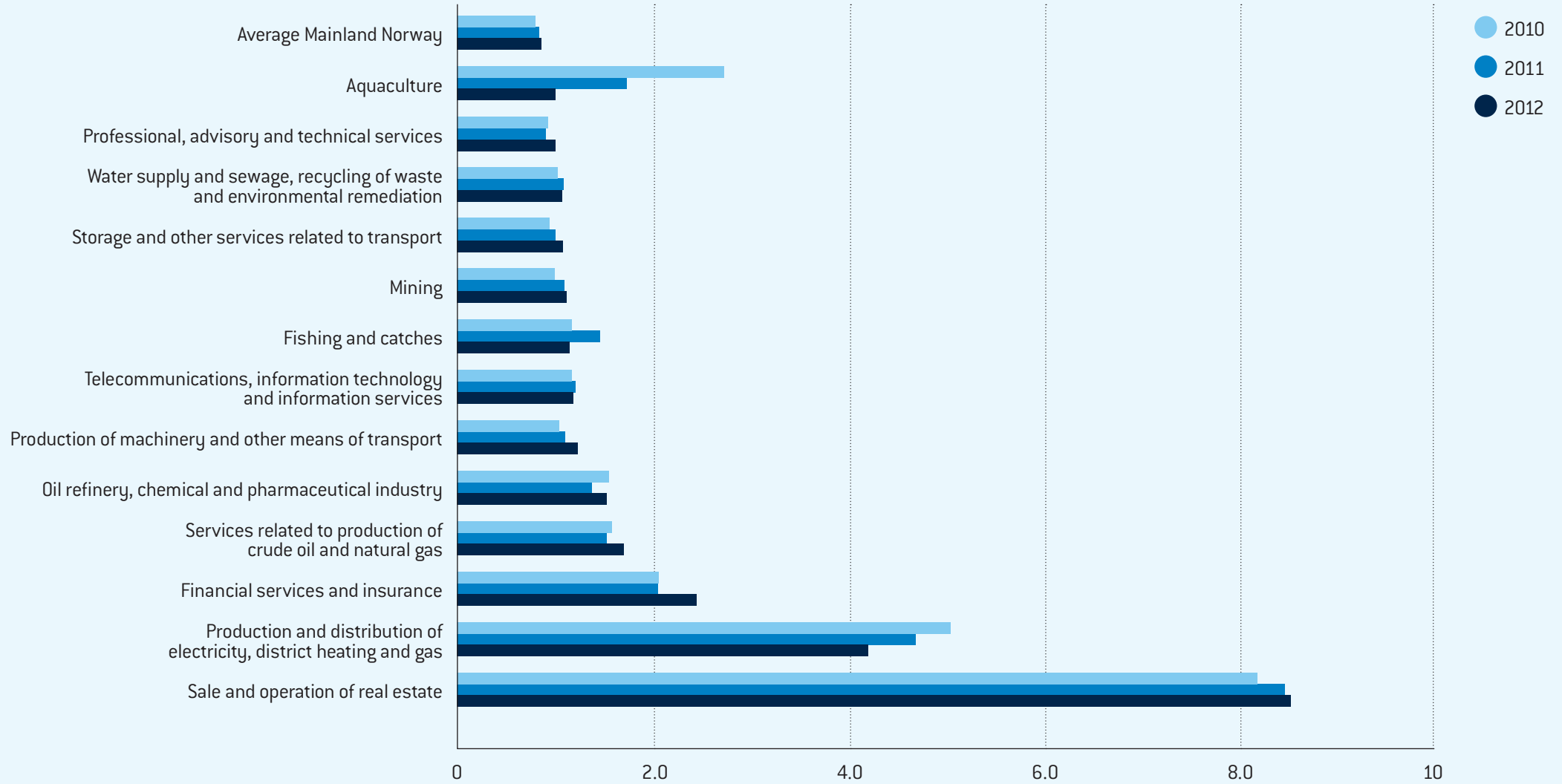


**THE TEN INDUSTRY GROUPS WITH THE HIGHEST SPIN-OFF EFFECT (CONTRIBUTION TO GNP) GENERATED BY THE VALUE CHAIN BASED ON AQUACULTURE IN 2012**



Sandberg et al. (2014)

VALUE CREATION (IN NOK MILLION) PER FULL-TIME EQUIVALENT FOR THE 14 INDUSTRY GROUPS IN NORWAY WITH THE HIGHEST VALUE CREATION 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) Verdiskaping og sysselsetting i norsk sjømatnæring – en ringvirkingsanalyse med fokus på 2012. SINTEF Fiskeri og havbruk og SINTEF Teknologi og samfunn, Rapport A26088

# LERØY SEAFOOD GROUP, GRI-TABLE 2013

This is Lerøy Seafood Group's first GRI-report, covering activities in 2013. The report uses the GRI (Global Reporting Initiative) G4 reporting framework as a reference. In addition, the report includes GRI's Food Processing Sector Supplement indicators, where applicable. Sustainability expert Solutions Agency Vinha has reviewed the report and confirms its compliance with GRI G4.

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