



CERMAQ

Your salmon farmer

**Sustainability is
in our nature**

Our commitment to sustainability



It is not only about supplying sustainable seafood to consumers; it is about becoming stewards of the world's ocean and aquaculture environments.

— The Seafood Business for Ocean Stewardship initiative (SeaBOS)

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CEO perspective



Responsible aquaculture and salmon farming is a part of the solution, and Cermaq has the ambition to contribute both by producing more high-quality healthy seafood and by working in partnerships to improve ocean health and governance.

The Sustainable Development Goals (SDGs), agreed on in 2015, set the agenda for where we want to be in 2030. To achieve these goals by then we need to act, we need to improve, and we need to change. And above all; we must all contribute.

In Cermaq, we have identified five SDGs where we truly can make a difference and we have integrated these goals in our strategy. These are first and foremost Goal 14: Life Below Water, but also Goal 2: Zero Hunger, Goal 8: Decent Work and Economic Growth, Goal 12: Responsible Consumption and Production, and Goal 13: Climate Action. For each of these, we have identified actions and priority areas in our operations and in our value chain.

Cermaq's approach is based on the pillars of transparency, partnerships and performance. We believe a company which openly reports its results has a stronger basis for dialogue with stakeholders, developing trust and a better ability to actually make progress on material topics. In 2017, Cermaq was ranked as the most transparent salmon farming company in the world. We will continue our work to enhance transparency in our own operations, in our industry and in our value chain.

It is time to step up our actions and make ocean sustainability a global priority.

Partnership is crucial to develop solutions to the SDGs and make progress on ocean sustainability.

In 2018, Cermaq was the first company to join the UN Global Compact Action Platform for Sustainable Ocean Business. For the first time, business is taking a leading role in developing solutions for the sustainable use of the ocean in the UN. The Platform engages UN partners, businesses, governments, academia and NGOs to develop solutions by 2020, over a period of three years. With our partners, we are actively working to drive the necessary change and progress needed to put ocean sustainability at the top of priorities globally.

Research and innovation are the basis for improvement in the salmon industry. It is also a driver for sustainable performance over time. Our R&D work is described on page 20, with concepts such as iFarm being explored as one of our solutions for the future.

Our farming operations belong in their local communities. That is where our value creation takes place and that is where our employees live. The Cermaq team of dedicated and engaged colleagues makes me proud of all we have achieved. It also makes me hopeful that we will succeed not only in continually improving our production of healthy and sustainable food but also collaborating with partners and stakeholders to strengthen ocean management on a local and global scale.

A handwritten signature in black ink that reads "G. Molvik". The signature is written in a cursive, slightly slanted style.

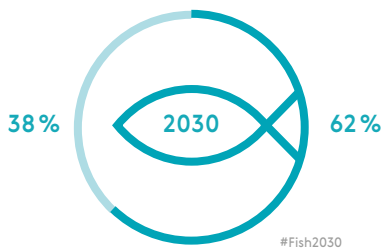
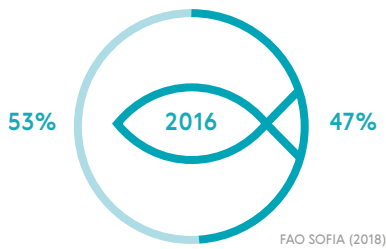
Geir Molvik,
CEO Cermaq Group

Global megatrends

A profound change of the global food and agriculture system is needed to nourish today's 765 million hungry and the additional 2 billion people expected by 2050.

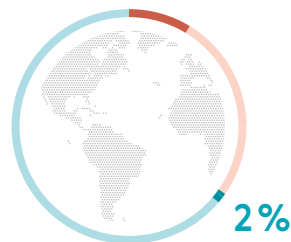
— UN Sustainable Development Goal #2

Aquaculture will play a larger role in seafood consumption in the coming decade



● Wild catch ● Aquaculture

71 % of the planet is ocean but only 2 % of the world's food production comes from the sea



● 71 % ocean ● 29 % land
● 2 % seafood production ● 11 % arable land

Unbalanced diets contribute to health challenges worldwide



Over 1.9 million adults are overweight and could benefit from a more nutritious and balanced diet

— World Health Organization (2014)

With a population of 8.3 billion people by 2030, we'll need...



50%
more energy



40%
more water



35%
more food

— National Intelligence Council (2012)
— United Nations

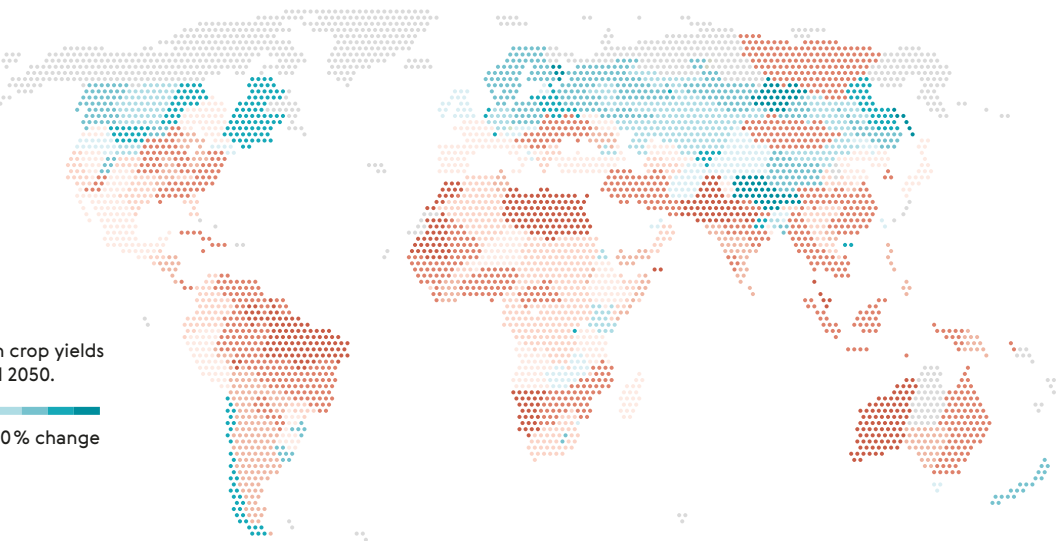
The global food challenge: Adverse impacts on agriculture due to climate change

Percentage change in crop yields between present and 2050.



● No data

— World Resources Institute
3°C warmer world scenario



The solution

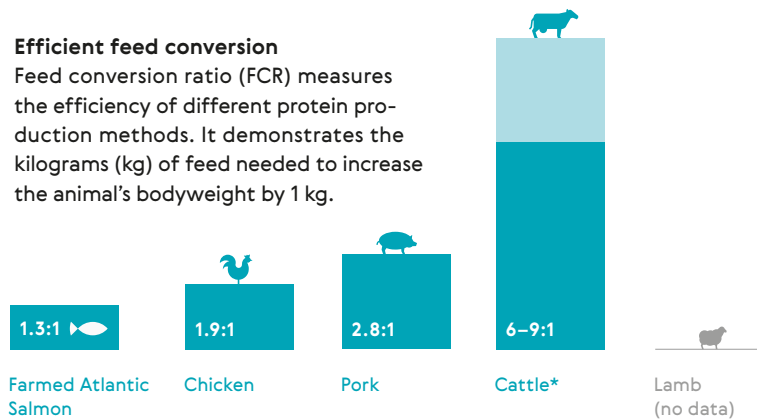
Fish farming is central to being able to cope with climate change, ensure social responsibility, sustainability goals and while reducing environmental impact.

— Former UN Secretary General Ban Ki-Moon (AquaVision 2018)

Benefits of farmed salmon

Efficient feed conversion

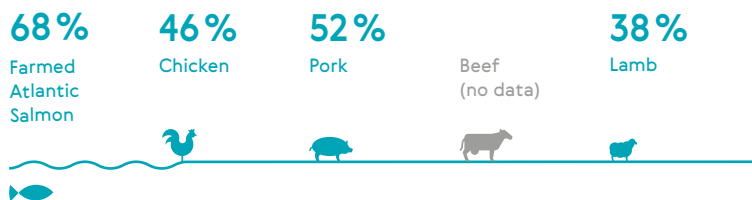
Feed conversion ratio (FCR) measures the efficiency of different protein production methods. It demonstrates the kilograms (kg) of feed needed to increase the animal's bodyweight by 1 kg.



* The FCR of cattle production has a larger range due to the varying types of feed used. Varying feed costs for the industries considered above have an influence upon the feed conversion ratios.
— Global Salmon Initiative

High edible yield

Edible yield is calculated by dividing edible meat by total body weight.



These calculations take into account differences in FCR, differences in edible yields, and the cost of progeny.
— Global Salmon Initiative

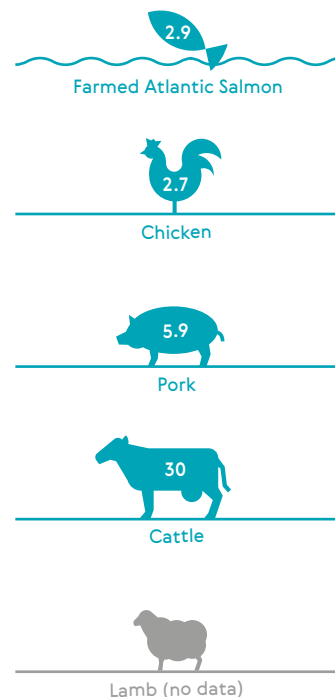
Low fresh water use



— United Nations
— International Salmon Farmers Association
— Marine Harvest Salmon Industry Handbook (2018)

Small carbon footprint

A carbon footprint measures the total greenhouse gas emissions caused directly and indirectly by the production of one kilo of edible product.



A carbon footprint is measured in kilograms (kg) of carbon dioxide equivalent (kgCO2e) per kg edible part of the product.
— Global Salmon Initiative

“Worldwide, nearly 60 million people (14 percent of them women) are directly employed in the fisheries and aquaculture sector”

— FAO 2018

Cermaq's strategy

Our sustainability work
is based on five focus
areas, each aligned with
a corresponding SDG.



Focus areas



Healthy and nutritious food

- Product quality
- Fish health & welfare
- Feed ingredients



Thriving oceans

- Biodiversity
- Biosecurity
- Blue economy



People leadership

- Safety & workplace
- Community relations
- Human rights



Responsible production

- Value chain approach
- Certifications
- Beyond compliance



Climate action

- Adaptation
- Emissions
- Innovation



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By aligning our work with the SDGs which we can significantly impact, we can achieve more progress and pursue opportunities in collaboration with our customers, local communities, public and private partners.

Sustainability in Cermaq means producing healthy and nutritious salmon in an environmentally, socially and economically responsible manner. Producing sustainable salmon means we work continuously to ensure sustainable practices in all aspects of our operations, throughout the value chain. We do this through the means of partnership, transparency, and performance focusing on our highest impact areas, as outlined in our five focus areas.

Being open about results is key to corporate responsibility and is a driver of progress. Our quarterly and annual performance reports can be found on www.cermaq.com

Our approach to achieving progress on our focus areas is based on three pillars:

Transparency *We are transparent in our work to create trust, ensure traceability and be accountable to our stakeholders.*

Our audited annual sustainability reports and quarterly online performance updates are examples of how we work on transparency.

Performance *We work continuously to create sustainable value through operational excellence, research and innovation.*

We focus on our highest impact areas and innovate across disciplines to create shared value with society for the long term. Some measures to achieve this are ASC certification and a dedicated global R&D team.

Partnerships *We share knowledge and engage in partnerships to find solutions to common challenges.*

This means collaborating on key issues, sharing knowledge and engaging in dialogue. Our engagement in the Global Salmon Initiative (GSI), SeaBOS and the UN Ocean platform (see page 22) illustrate some of our partnership activities.



Healthy and nutritious food

Cermaq is committed to quality, traceability and food safety at every level, from broodstock to the delivery of delicious, nutritious food. Salmon is one of the richest sources of omega-3 fatty acids, which are known to help lower the risk of cardiovascular disease. Experts recommend replacing some meat meals with fish, because it is a healthier source of protein and a good source for other essential nutrients. It's a healthy change, and an essential one for our planet.

Transparency In Cermaq, we hold ourselves and our salmon to the highest standards, working with third-party certification bodies to build on the reputation for quality that our customers expect. Transparency and traceability is our promise to our customers. We report our sustainability performance quarterly on our web page and actively provide information related to our many certifications.

Performance Healthy fish is a necessity in all fish farming operations and of crucial importance to Cermaq in delivering a high quality product. We work continuously to ensure optimal conditions for our salmon and the environment in which they live – in Patagonia, Tofino or the Arctic.

Good routines adapted to the different environmental conditions determine the management choices we make on each farm every day, throughout the whole life cycle of the salmon. Keeping the fish in good condition, in a favorable location, are key elements in Cermaq's fish health management. In our operations, we pay great attention to water quality, genetics and stress reducing practices to enhance fish welfare.

Our salmon receive the nutrients they need in each life stage through the feed. This is crucial to ensure a high quality product. We follow strict regulations and measures to ensure that our fish meet the highest safety and quali-

Farmed salmon is rich in healthy nutrients such as marine omega-3, proteins, vitamins and minerals, and is a healthy food choice.

ty standards. The salmon diet consists mainly of protein and fats. About 30 percent of the feed comes from marine sources, such as forage fish, fish trimmings and byproducts. By increasing the share of vegetable ingredients in the feed, the environmental impact on marine resources is reduced without compromising nutritional value. Certified soy, gluten (from wheat) and rapeseed oil are some of the ingredients used. However, most marine omega-3 today comes from fish oil, and Cermaq is engaged in research and initiatives with the salmon industry and feed producers to develop novel sources responding to future needs.

Partnerships We work actively with our customers and partners to deliver high quality salmon and create awareness of the role of sustainable seafood in healthy diets. As business partners to initiatives such as UN Global Compact Action Platform for Sustainable Ocean Business and the FRESH program (see page 22), we work together with companies in the food sector, research institutions and civil society to integrate both health and sustainability aspects into global food production and consumption.

SDG2 importance



In a growing world population with challenges related to obesity and hunger, farmed salmon may provide a solution to the growing demand for protein and healthy diets. Farmed salmon is a healthy food choice and is rich in nutrients such as omega-3, proteins, vitamins and minerals.



Cermaq's fish welfare index (CWI)

Fish quality depends on fish health and welfare. Cermaq has a holistic approach to fish welfare and recognizes the importance for our salmon to meet its needs at any given time, both physiological but also behavioral, in order to have good welfare. Based on this recognition, Cermaq Norway has chosen to develop a welfare index which can be used to classify the fish welfare status in each stage of the production. The Cermaq Welfare Index (CWI) is based on measurable criteria of the physical environment in which the salmon lives (including water quality parameters) and scoring of the fish at an individual level and at a population level.

Salmon as superfood

Health authorities and nutrition advisors recommend eating more seafood. Salmon contains marine omega-3 fatty acids, vitamin D, iodine, and selenium; nutrients which are rare in other types of food. In addition, salmon provides highly digestible protein. According to NOFIMA, farmed salmon today contains over 20 times more essential fatty acids (EPA and DHA) compared to chicken, red meat and eggs. Farmed salmon have one of the highest omega-3 levels of any seafood in the grocery store, with between one and five grams of omega-3 per 100 gram serving.



Thriving oceans

To grow our salmon, Cermaq and the salmon industry rely on thriving oceans and healthy marine ecosystems. Ecosystem integrity and access to marine resources are necessary for us to grow our salmon and for our industry to provide the world with healthy seafood. We work through partnerships and with strong commitment to transparent reporting to build trust, share best practice and drive progress on SDG14.

Transparency Responsible sourcing is a key measure to preserve biodiversity and natural resources, and to strengthen resilience to climate change. Our biodiversity impact is monitored and reported on our web page, where we also map species present on the IUCN red list in areas of operation. Cermaq monitors the benthic impacts of fish farming, and ensure that we comply with or exceed all following requirements and have good benthic status. Wildlife interaction and sustainability indicators are reported monthly and in some cases weekly for our ASC certified sites. This information can be found on the ASC Dashboard on our webpage.

Performance If fish farming is to be sustainable, the industry must depend on sustainable feed resources. To reduce impacts on marine resources, an increasing share of the fish feed comes from agriculture (approximately 70 percent). Responsible sourcing in the agricultural sector is therefore increasingly relevant for fish farming. We impact fisheries through our feed supply and to manage risks in our feed supply chain, we have established a Supplier Code of Conduct specifically for feeds suppliers. Measures include certified sources of the feed ingredients used and R&D on optimal fish diets.

Partnerships We work with our suppliers and the industry to eliminate any Illegal, Unreported and Unregulated (IUU) fishing from the supply chain and promote trans-

Cermaq depends on healthy oceans to produce sustainable salmon, both in our operations and through our feed supply. Ocean stewardship and SDG14 is at the top of our agenda.

parency and sustainable practices in fisheries and aquaculture. One example of this is through our participation in the Seafood Business for Ocean Stewardship (SeaBOS) initiative, established in 2016, together with some of the world's largest seafood companies regarded as keystone actors in marine ecosystems.

In our operations and through our engagement in the Global Salmon Initiative (GSI) we work together with the industry to find solutions to key sustainability challenges in salmon farming, including feed and nutrition, bio-security impacts and implementation of best practices through standardization.

SDG14 importance



The farming practices in the salmon farming industry are more technologically advanced than any other fish farming practice. The salmon farming sector may offer knowledge and technology transfer to other aquaculture areas to enhance and encourage a sustainable use of the ocean in the rise of the blue economy.



Responsible sourcing of fish feed

Cermaq's Code of Conduct for feed suppliers specifies requirements to our feed suppliers on quality, traceability and sustainability, including social standards. Requirements include that fishmeal and fish oil should only be sourced from regulated and certified fisheries, and raw materials used should be accompanied by certifications (e.g. MSC). No ingredients shall originate from IUU catch or vulnerable or endangered species, and all soy purchased shall be certified by the Round Table on Responsible Soy (RTRS) or equivalent. Type of raw material, country of origin and name of supplier is to be reported regularly. The Code is available on www.cermaq.com

Seafood Business for Ocean Stewardship

Initiated in 2016, the Seafood Business for Ocean Stewardship (also referred to as Keystone Dialogues) is an initiative that, for the first time, connects the global seafood business to science, connects wild capture fisheries to aquaculture, and connects seafood companies all over the world. The ambition is to lead a global shift towards sustainable seafood production and a healthy ocean, actively contributing to the UN SDGs – in particular SDG14. In the first dialogue, a joint statement was produced by eight of the world's largest seafood companies, including Cermaq, committing to working for ocean stewardship on a set of key areas.



People Leadership

Salmon farming is often performed in remote coastal areas, and our operations provide employment in local communities. Cermaq contributes to local value creation in many ways: we provide jobs, we purchase from local businesses, support community activities and events, and provide education and learning opportunities in our areas of operation.

Transparency Cermaq aims to be a responsible community partner with a long term perspective. People leadership involves establishing good relations with our stakeholders including employees, customers, local communities and suppliers. Establishing and maintaining good relationships based on dialogue, transparency and mutual understanding is important to us. Our stakeholder dialogue is reported on our webpage and we provide quarterly health and safety updates for all our operations. We conduct community meetings and reach out to different stakeholders including trade unions, environmental organizations and authorities, discussing our performance and activities, and responding to requests for information.

Performance Important elements of our people leadership include ensuring a safe and motivating workplace. Our performance depends on the wellbeing of our people, and it is our goal to be an employer of choice, attracting and retaining skilled and motivated employees who want to be part of a growing and innovative industry. We strengthen our health and safety awareness through a clear tone at the top of the importance of safety and visible leadership. 'Health and safety first' is reflected in Cermaq's Leadership Principles and performance is reported monthly to Cermaq's management.

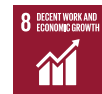
Partnerships An important part of being a responsible partner is being a responsible employer. This implies

In Cermaq, we rely on motivated employees and we want to be a responsible partner for the local communities where we operate, to earn the trust we need to grow fish in our common waters.

ensuring safe working conditions, respecting human rights and indigenous peoples' rights, and working to ensure good labor standards in our operations and supply chain. One example of such dialogue is Cermaq Chile's CSR committee, established with members from Cermaq Chile's management team and trade unions to discuss key topics on a regular basis.

Cermaq is a member of the UN Global Compact and we work to ensure adherence to the ten Principles in our operations and supply chain, covering the topics of Human Rights, Labour, Environment and Anti-corruption. We encourage our suppliers to do the same and to integrate the UN Sustainable Development Goals in their strategies. An example of how we work on indigenous peoples rights, is the agreement between Cermaq Canada and the Ahousaht First Nation, which is based on Cermaq Canada's Principles for First Nations relations.

SDG8 importance



Salmon farming contributes to rural jobs and local value creation. According to the UN, fisheries and aquaculture support the livelihoods of 12 percent of the world's population, and the market value of marine and coastal resources and industries accounts for about 5 percent of global GDP (FAO 2016). 60 million people are directly employed, with 140 million employed in the value chain.



Community outreach and CSR committee, Cermaq Chile

The Cermaq Puertas Abiertas program opens our Chilean facilities to allow the community to learn about our salmon farming practices. In 2017, Cermaq received eighteen student visits, held fifteen open community seminars with aquaculture expert speakers, and hosted five visits from local authorities.

Cermaq Chile has also established a CSR committee chaired by the Chief Operating Officer and including Cermaq representatives from the human resources, environment, CSR, and quality fields and four representatives from company unions.

Principles for First Nation Relations, Cermaq Canada

To guide the development of respectful relationships and agreements with the Indigenous peoples in whose territory we operate or propose to operate, Cermaq has established a set of principles for First Nations Relations. The 10 principles include a recognition of traditional territories and respecting the diversity of cultures among First Nations, as well as a common commitment to sustainability.

Developing a mutually beneficial protocol agreement was the goal between the Ahousaht First Nation and Cermaq Canada. To achieve this goal, the Cermaq Canada Principles of First Nation relations were used to guide the agreement. The principles are available on www.cermaq.com



Responsible production

Current practices in food production do not provide sufficient responses to properly address natural resource constraints or the growing demand for food, water and energy. A transformation of the global food system is needed, and the ocean will contribute to a larger share of our food production in the future. Farmed salmon is an efficient food source, providing a high content of healthy nutrients with a small ecological footprint compared with other animal proteins.

Transparency Customers and stakeholders can be confident that Cermaq is working actively to meet environmental requirements and operate in a socially responsible manner. To lower our environmental footprint, we work to optimize our value chain by identifying, managing and monitoring risk. We seek to build trust and improve our sustainability performance by adhering to the most advanced standards for sustainable food production and being transparent about our choices.

Performance A natural premise for sustainable growth is demonstrating our efforts for responsible farming through certifications and practices beyond compliance with laws and regulations. Aquaculture Stewardship Council (ASC) certification, Best Aquaculture Practices (BAP) and Global G.A.P. are some of the third party certifications which drive our commitment to contin-

Our aim is to be a responsible salmon farmer with a small environmental footprint contributing to a sustainable blue economy.

uous improvement. All our certifications are approved and third party audited by certification bodies we work with including DNV GL, Deloitte and Bureau Veritas. Examples of other standards where Cermaq can supply certified products include the Aboriginal Principles for Sustainable Aquaculture (APSA) certification in Canada, Halal certification in Chile and Kosher certification in Chile and Norway.


Cermaq has a goal to achieve ASC certification on all our sites by 2020.

Partnerships To address the challenges in our global food system, Cermaq has become a member of the FReSH program, initiated by EAT and the World Business Council on Sustainable Development (WBCSD). Our goal of advancing the role of sustainably produced seafood in the global food supply is a key element in this work.



SDG12 importance

Farmed salmon is an efficient food source, providing a high content of healthy nutrients with a small ecological footprint compared with other animal proteins. High energy and protein retention, high edible yield and a relatively small carbon and freshwater footprint makes sustainably farmed salmon a responsible food choice.





Aquaculture Stewardship Council (ASC) certification

Cermaq has ASC certified sites in all production regions, and was the first Company that obtained ASC certification in Chile. The standard includes more than 150 indicators related to seven principles:

1. Comply with all applicable national laws and local regulations
2. Conserve natural habitat, biodiversity and ecosystem function
3. Protect the health and genetic integrity of wild populations
4. Use resources in an efficient and responsible manner
5. Manage disease and parasites in an environmentally responsible manner
6. Develop and operate farms in a socially responsible manner
7. Be a good neighbor and conscientious citizen



The UN Global Compact Action Platform for Sustainable Ocean Business

Cermaq is a founding partner of the UNGC Ocean platform which focuses on growth, innovation and sustainability, exploring how to best protect the health of the ocean in the rise of the Blue Economy. It aims to mobilize the private sector to take tangible action, make investments and form partnerships to leverage the ocean as a resource to deliver on the SDGs.





Climate action

The production of food is a major part of our climate challenge and contributes to a significant amount of global greenhouse gas emissions. Emissions from food production and impacts of climate change on agriculture and the food system will deeply affect the way we produce food in the future. Currently only 2 percent of our food consumption comes from the sea. Sustainable aquaculture will need to play a larger part to respond to climate change and to reach the UN Sustainable Development Goals.

Growing sustainably is Cermaq's long term strategy. This involves adapting to climate change and increasing resilience while, at the same time, playing a natural part in the low carbon future by providing climate friendly food to our customers.

Transparency We communicate our energy use and emissions in our annual report and conduct annual reporting to the Carbon Disclosure Project (CDP), describing our strategy and initiatives, targets, risks and opportunities. In addition, our ASC certified farms provide climate accounting at a farm level.

Performance Growing sustainably means that we need to farm our fish within the environmental boundaries of the ecosystems in which we operate, build resilience to climate change and anticipate developments in environmental conditions. Our fish is directly affected by climate risks such as rising sea water temperatures, algae blooms, ocean acidification and extreme weather events. We therefore engage heavily in research and development initiatives e.g. working together with partners in the development of closed cage solutions, environmental monitoring, and vaccine development.

Farmed salmon is a climate friendly food source, providing a solution to the world's food needs in the coming years.

Efficient energy use is important to Cermaq and we are taking steps to lower emissions on our sites. Initiatives include connecting to land based electricity from hydro-power on sea water sites in Norway, implementing low emission solutions on hatcheries, implementation of a carbon and energy management program in Canada and use of renewable energy on sites in Chile. In line with global climate agreements, we are working to reduce our emissions by setting a science based emission target.

Partnerships A large part of emissions from salmon production is in the supply chain, through the feed production and in transportation to markets. Cermaq is working with feed suppliers to encourage climate friendly feed solutions, and engage with partners in the Global Salmon Initiative (GSI) to encourage the production of oils rich in marine omega-3 from novel sources to build resilience. Increasing filletation instead of transporting whole fish is one way to reduce transport emissions as well as encouraging low carbon solutions in our supply chain.

SDG13 importance



Being at the forefront of sustainable aquaculture, salmon farming has the potential to drive innovation in climate friendly seafood going forward. The production of food accounts for a significant part of global greenhouse gas emissions. Farmed salmon has a small carbon and water footprint compared to other sources of protein, and can contribute to a solution to the climate challenge.



Carbon and Energy Management Program, Cermaq Canada

Cermaq Canada has developed a Carbon and Energy Management Program (CEMP) for its entire operation in alignment with the ISO50001 Energy Management Standard. The main objectives are to reduce GHG emissions and energy use, enhance social license to operate, and lower operating cost.







The plan includes a company wide target of 5% of emission reductions in 2018 based on a 2014 baseline, the program has identified KPIs and assigned a dedicated Energy Team to drive progress on specific activities. The program also uses an energy tracking tool, where energy consumption and emissions is recorded for tons of fish biomass produced by year, facilities, group of fish, growth stage and feed consumption, to enable measurement of progress.

Replacing diesel with hydropower, Cermaq Norway

Many salmon farming sites are located in remote areas, depending on diesel generators for their power supply. In Cermaq Norway, a project is ongoing to implement hydropower electrification on farms with proximity to the shore and access to power connection. In 2017, five farming sites were connected to the grid, leading to an decrease in CO₂ emissions by 804 tons annually. Of the five sites, one is located in Nordland, the Oksøya farm, and four are located in Norway's northernmost county, Finnmark: the Ytre Koven, Skinnstakkvika, Kråkevik and Slettnes farms.

Cermaq's material topics

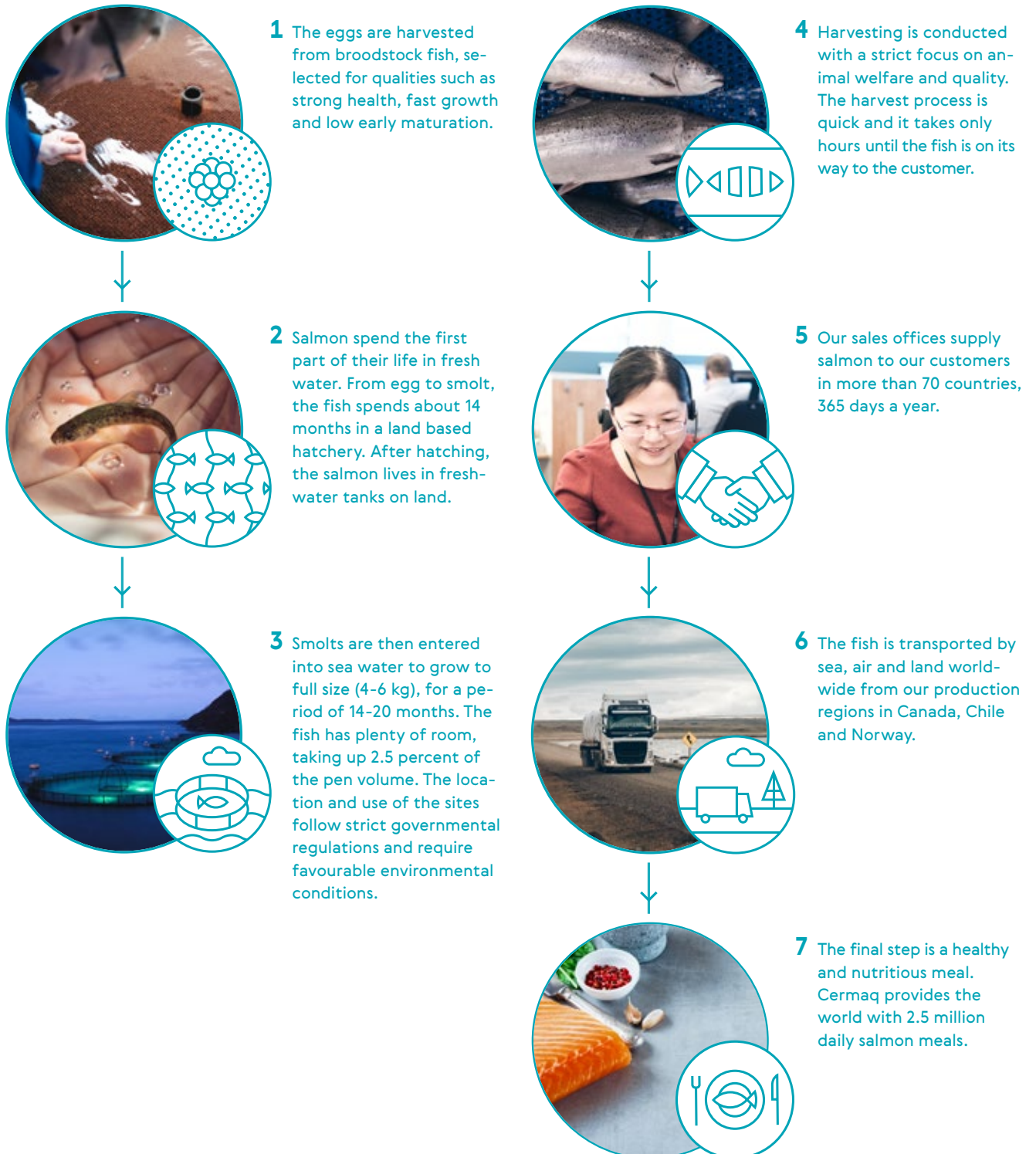
The table below provides a summary of each of Cermaq's five focus areas with material topics, their importance to each corresponding SDG and indicators that we report on. Our performance is available on www.cermaq.com

	 Healthy and nutritious food	 Thriving oceans	 People leadership	 Responsible production	 Climate action
Material topic	<ul style="list-style-type: none"> Product quality Fish health and welfare Feed ingredients 	<ul style="list-style-type: none"> Biodiversity Biosecurity Blue economy 	<ul style="list-style-type: none"> Safety and workspace Community relations Human rights 	<ul style="list-style-type: none"> Value chain approach Certifications Beyond compliance 	<ul style="list-style-type: none"> Adaptation Emissions Innovation
Importance for SDGs and Cermaq	<p>In a growing world population with challenges related to obesity and hunger, farmed salmon may provide a solution to the growing demand for protein and ensure healthy diets. Farmed salmon is rich in nutrients such as omega-3, proteins, vitamins and minerals, and is a healthy food choice.</p> <p>Healthy fish is a necessity in all fish farming operations of crucial importance to Cermaq in delivering a high quality product. A healthy fish given nutritious feed increases the quality of the salmon.</p>	<p>The salmon farming industry is more technologically advanced than most other fish farming practices. Our industry may offer knowledge and technology transfer to other parts of aquaculture to enhance and encourage a sustainable use of the ocean in the rise of the blue economy.</p> <p>As a salmon farming company, Cermaq depends on healthy oceans to produce sustainable salmon, both through our operations and through our feed supply. Sustainable farming is at the core of our operations.</p>	<p>Salmon farming contributes to rural jobs and local value creation. According to the UN, fisheries and aquaculture is supporting the livelihoods of 12 percent of the world's population and contributes to about five percent of global GDP (FAO 2016).</p> <p>Cermaq relies on motivated employees and a good dialogue with local communities. We seek to contribute to local value creation in many ways: by providing jobs, purchasing from local businesses, supporting community initiatives, and providing education and learning opportunities.</p>	<p>Farmed salmon is an efficient food source, providing a high content of healthy nutrients with a small ecological footprint compared with other animal proteins. High energy and protein retention, high edible yield and a relatively small carbon and water footprint makes sustainably farmed salmon a responsible food choice.</p> <p>Efficient use of resources and responsible practices are prerequisites for sustainable growth. Through advanced certifications, Cermaq demonstrates high standards and builds trust.</p>	<p>The production of food is a major part of our climate challenge and contributes to a significant amount of global greenhouse gas emissions. Farmed salmon has a low carbon footprint compared to other sources of protein. Salmon as a sustainable food source offers a solution to balancing the global food system.</p> <p>Being at the forefront of sustainable aquaculture, Cermaq and the salmon farming has the potential to drive innovation in climate friendly seafood going forward. Cermaq and the industry engage actively in research and innovation to respond to the needs of the future.</p>
Material indicators (Cermaq specific and GRI)	<ul style="list-style-type: none"> Raw material ingredients Customer health and safety assessment Fish mortality Medicine use Animal species and breed type Non-compliance with product health & safety Fines for product non-compliance 	<ul style="list-style-type: none"> Feed sourcing and supplier assessment IUCN red list species with habitats in areas of operation Wildlife interactions Vaccination program Fish escapes Sea lice counts Area Management Agreements 	<ul style="list-style-type: none"> Injuries, lost days, absence Senior management hired from local community Local community engagement programs Community complaints Non-compliance with societal regulations Incidents of violations involving indigenous peoples's rights Economic value generated and distributed Country-by-country financial and organizational data 	<ul style="list-style-type: none"> Fallow time, benthic impact Water withdrawal and recycled input materials Non-compliance with environmental regulations Climate change risks and opportunities Whistle blowings Anti-corruption training Incidents of corruption ASC certification 	<ul style="list-style-type: none"> Energy consumption GHG emissions (Scope 1, 2 and 3) Energy reduction initiatives Financial implications, other risks and opportunities due to climate change
UN SDG					

More details can be found in our sustainability report on www.cermaq.com

Value chain

Salmon farming follows the same life cycle that take place in the wild. Eggs are harvested from broodstock fish and are grown in fresh water to smolt size. Smolts are entered into sea water to grow to full size. Then they are carefully harvested and processed, and shipped to customers worldwide.



Research and innovation

When we solve a problem or overcome an obstacle, everyone benefits.

We encounter many challenges and opportunities as we deepen our knowledge in sustainable salmon farming, and as an industry leader it is our responsibility to take a proactive approach to meet these challenges. Our research focuses on fish health, farming technology, fish genetics and nutrition/feed to ensure that our salmon is strong and healthy and our operations are at the forefront of sustainable salmon farming.

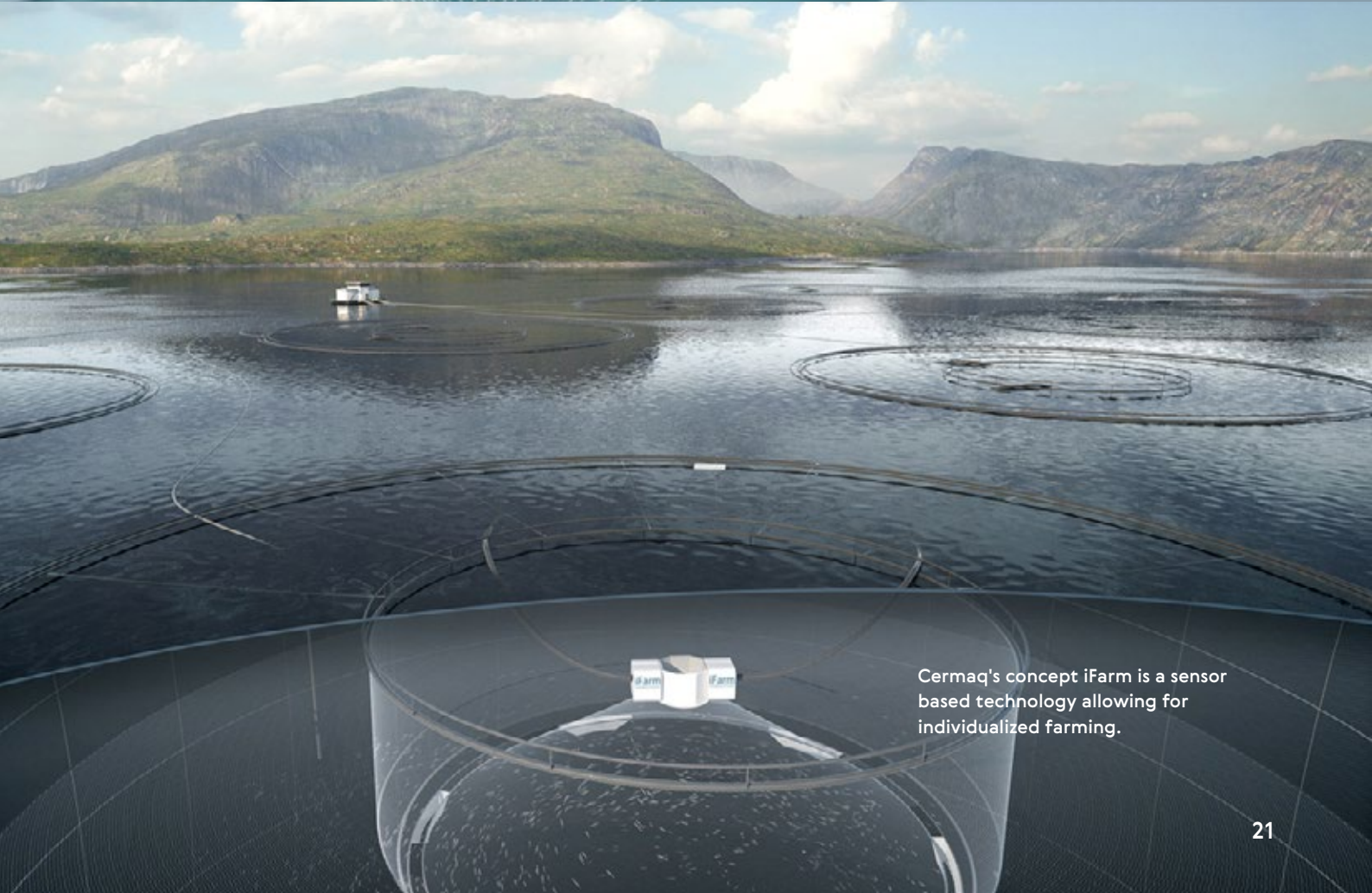
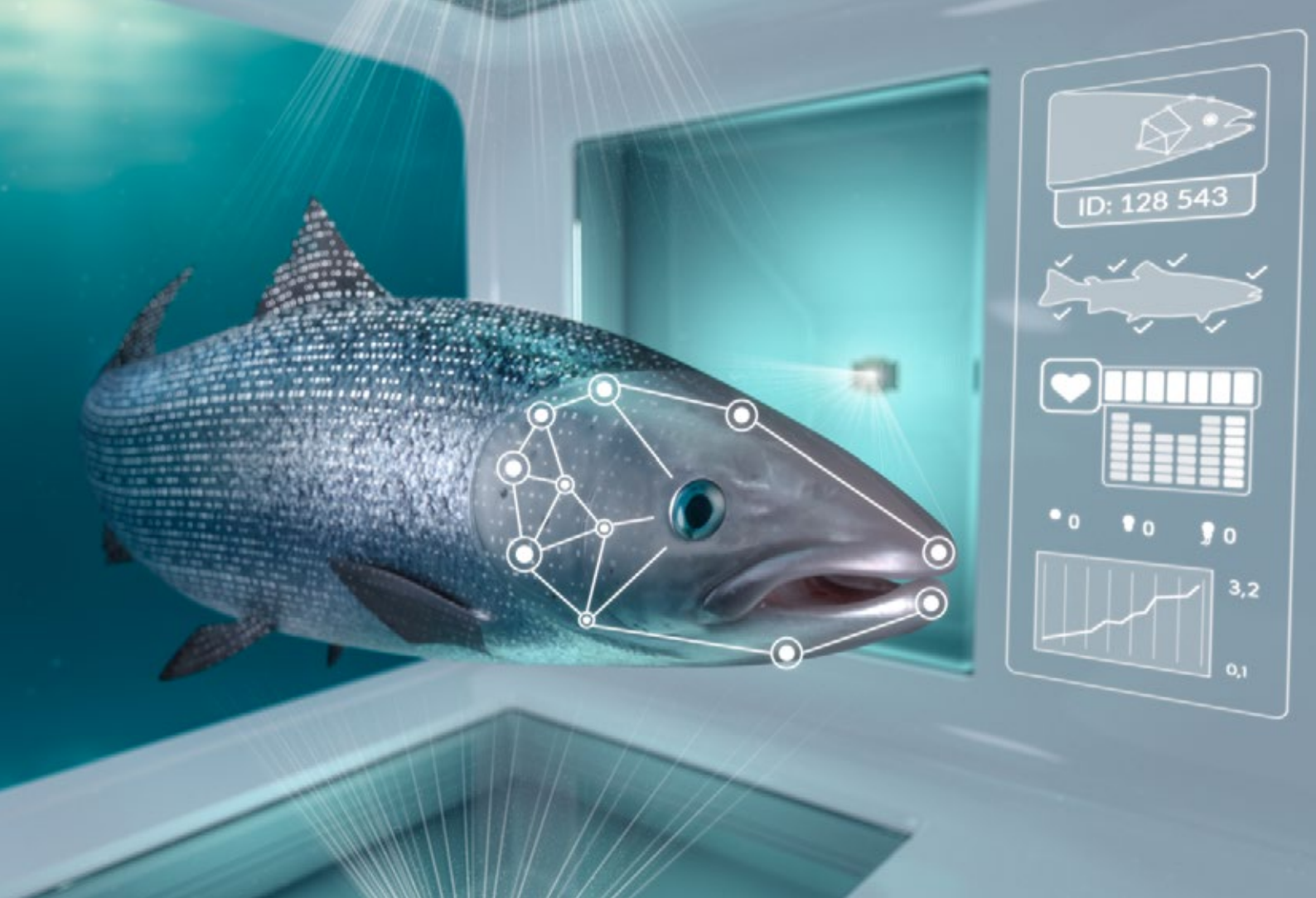
Cermaq runs more than 50 research projects on an annual basis. We have our own R&D site in Colaco (region X) in Chile, in Bergen and in Finnmark, Norway. The projects are run by dedicated R&D teams, including six researchers in Cermaq's global R&D team who works closely with research personnel and operational experts in each of the operating companies.

Our global team takes part in setting the overall research agenda for the industry through participation in industry research funds and national research organizations. Cermaq is a partner in two Centers of Research Based Innovation (SFI) established by the Research Council of Norway: CtrlAqua and EXPOSED. A main objective of these centers is to enhance innovation through long term research and close cooperation between research-intensive enterprises and prominent research groups. CtrlAqua focuses on research on closed containment systems, and EXPOSED explores opportunities for expansion into new areas currently unavailable for fish farming.

Some of our research

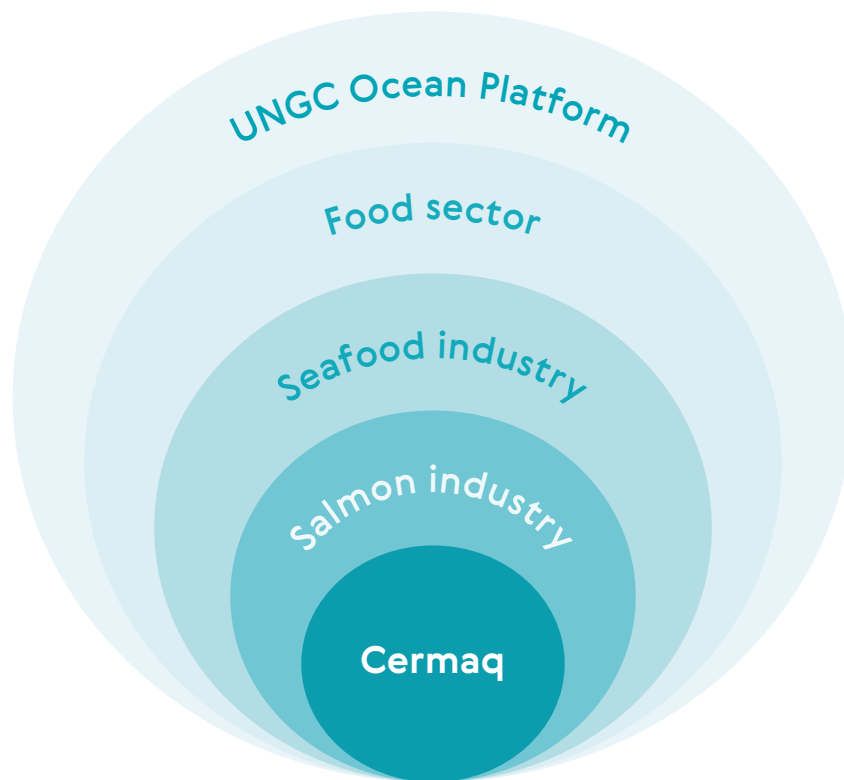
We are seeking innovative ways to use new technology to drive sustainability and efficient use of resources in our operations. Initiatives and research capabilities include:

- The concept iFarm is a sensor based technology which take an individualized approach to raising fish by using automatic image processing. This technology would give us comprehensive information about each individual salmon, while lowering fish stress through reduced handling.
- In Finnmark, Cermaq has four R&D licenses for the Arctic Salmon Research Centre for the period 2015-2020. The center does research on optimal feed for salmon farming in an Arctic environment, and is a cooperation between Cermaq, EWOS, NOFIMA, the University of Nordland, and the Norwegian University of Life Sciences.
- Cermaq's R&D Center in Colaco has offices, laboratory and net pens of semi-commercial size. The facility can be used for trials on fish feed, vaccines, non-pharmaceutical treatments, genetics and technology assessment.



Cermaq's concept iFarm is a sensor based technology allowing for individualized farming.

Cermaq's partnerships on different levels



	Partners	Objective
Global	UN Global Compact Action Platform for Sustainable Ocean Business 	Cermaq was the first Patron to join this initiative in February 2018, with the goal of developing holistic global solutions for the sustainable use of the ocean. The first business driven initiative of its kind in the United Nations, the initiative aims at developing roadmaps for the maritime industries in close dialogue with governments, academic institutions, NGOs and the UN. https://www.unglobalcompact.org/take-action/action-platforms/ocean
Food sector	FReSH program   	The Food Reform for Sustainability and Health (FReSH) initiative is a joint program between EAT and the World Business Council on Sustainable Development (WBCSD). Launched in January 2017, the program is designed to accelerate transformational change in global food systems. www.wbcscd.org/Projects/FReSH
Seafood industry	Seafood Business for Ocean Stewardship (SeaBOS)	Established in 2016, SeaBOS represents ten of the world's largest seafood companies with the ambition to lead a global shift towards sustainable seafood production and a healthy ocean focusing on SDG14. www.keystonedialogues.earth
Salmon industry	Global Salmon Initiative (GSI) 	Cermaq is a founding member of GSI, which was established in 2013. GSI is an industry initiative aiming to find solutions to common sustainability challenges in the salmon industry. As of August 2018, it represents 15 companies accounting for 50% of global salmon production. The objective is to solve industry challenges on three key areas: feed and nutrition, biosecurity and standardization. www.globalsalmoninitiative.org

We want to make a difference –
and with local and global partners,
it is possible to achieve more
progress on set priorities.

Partnership is crucial to finding solutions to the SDGs and making progress on ocean sustainability -which is what our business depends on.

In our partnerships, we work on five levels to strengthen sustainability performance and drive change: in our own operations; in the salmon industry; through the seafood value chain; and in the wider food sector. Additionally, we work to enhance ocean governance and sustainability at a global level with the UN Global Compact.

Our approach to driving SDG progress in business

Cermaq's partnerships grow out of our operations, where the closest level is the salmon industry, which collaborates on key sustainability issues in the Global Salmon Initiative (GSI). The GSI aims to strengthen sustainable operations in the industry by sharing good practice and knowledge, improving industry transparency, and collaborating to enhance the ASC certification process.

The next level of engagement is the seafood value chain. In the Seafood Business for Ocean Stewardship (SeaBOS) initiative, ten of the world's largest seafood companies have

committed to ten principles for ocean stewardship. This initiative connects the global seafood business to science, wild capture fisheries to aquaculture, and European and North American seafood companies to Asian companies.

Our third level of partnerships is the food sector through the FReSH program, led by the World Business Council for Sustainable Development (WBCSD) and EAT. In FReSH, companies in the food sector work to define how the food system can incorporate both the health and sustainability aspects of food production and consumption.

We also engage in global partnerships to support the sustainable use of the ocean. In 2018, Cermaq was the first company to join the UN Global Compact's Action Platform for Sustainable Ocean Business, addressing key challenges and opportunities for ocean health and productivity. The Platform engages UN partners, private sector partners, governments, academia, and NGOs in an ambitious three-year program. At the same time, Cermaq remains committed to the UNGC Principles and is an active member, engaging both in building local UNGC networks and global initiatives.

We must plant the sea and herd its animals using the sea as farmers instead of hunters. That is what civilization is all about – farming replacing hunting.

— Jacques-Yves Cousteau, Oceanographer