



GREEN BOND REPORT

2021



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ROOTED IN NATURE

Farming the ocean for a better future

Farming the ocean comes with a responsibility. We are dedicated to providing more food from the sea to people around the globe while reducing our footprint and improving fish welfare. People, partnerships, technologies and innovations will help us get there. Step by step.

INTRODUCTION

With a low carbon footprint, low feed conversion ratio, low land and fresh water consumption, and a high edible yield, farmed salmon is one of the most eco-efficient forms of animal protein.

However, our industry must still work to improve co-existence with other species, fish health and welfare, reduce impacts from feed ingredients, cut carbon emissions, recycle more resources and promote human rights. We are committed to play our part in solving these challenges.

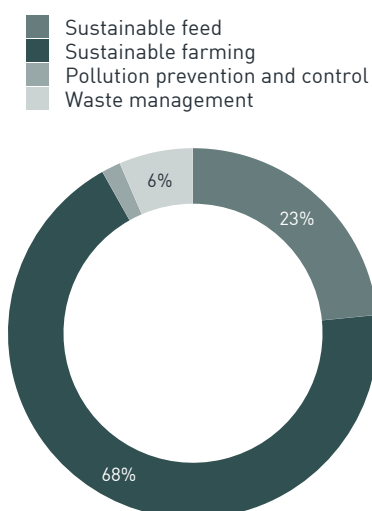


Executive summary

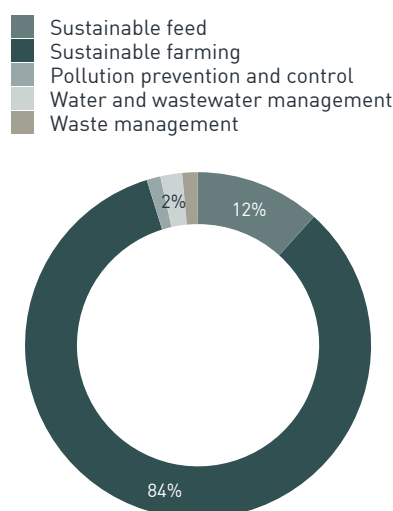
In 2020, Grieg Seafood successfully completed the placement of a green bond of NOK 1.5 billion. The Grieg Seafood Green Bond Framework was rated as Medium Green by CICERO Shades of Green. As at year end 2021, 100% of the proceeds of the bond has been allocated to projects that contribute to sustainable farming practices.

- Grieg Seafood's NOK 1 billion green bond was issued 25 June 2020, followed by a NOK 500 million tap issue in November 2020. The bond is listed on the Oslo Stock Exchange on the Euronext's ESG Bonds section. The green bond accounted for 47% of our total debt financing as at year end 2021.
- [Our Green Bond Framework](#) provides the basis for the allocation of proceeds and for measuring the green projects' environmental impact. Our framework was rated as 'Medium Green' by CICERO Shades of Green, and our governance procedures was rates as 'Excellent'.
- 84% of the proceeds from the green bond was allocated to projects during 2020, and the remaining NOK 238 million of the proceeds were allocated in 2021. The 2021 allocations were mainly to continuing R&D projects within sustainable feed and finalizing our facilities with recirculating aquaculture systems (RAS) in Canada.
- Approximately 60% of the total proceeds of NOK 1.5 billion were spent on investments in RAS - land-based hatcheries and post-smolt facilities that reuse water by cycling it through a filtration system so it can be reused. The highly sustainable nature of these operations reduces the amount of water and space needed for farming salmon, while also providing for a more controlled and predictable production both in freshwater and seawater. The RAS technology is part of our post-smolt strategy, which shortens the time the salmon spend in open sea-pens by several months and thereby reduces the biological risk and environmental impact.
- The remaining proceeds have been allocated to projects within sustainable feed, pollution prevention and control, water and wastewater management, waste management and other environmentally sustainable aquaculture projects.
- With the allocation of our green bond proceeds, we support the Paris Agreement and progress towards UN Sustainable Development Goals #2 on zero hunger, #13 on climate action, #14 on life below water, and #17 on partnerships for the goals.
- Grieg Seafood ranked 2nd in the 2021 Collier FAIRR Protein Producer Index, being one of the top most sustainable animal protein producers in the world on critical environmental, social, and governance issues.

CATEGORY ALLOCATION 2021



TOTAL CATEGORY ALLOCATION



A sustainable food system

Reducing our environmental footprint and improving fish welfare is an ethical responsibility and also key to achieve our operational and financial targets. That is why we invest in projects like reducing the time our fish spend in sea, reducing carbon emissions or help commercialize new feed ingredients with lower impact. Our overall aim is to provide healthy food for a growing population, using fewer resources and with a lower impact than the current food systems use.

Currently, global food systems are estimated to be responsible for 70% of the water extracted from nature, cause 60% of biodiversity loss, and generate up to 33% of human greenhouse gas emissions. A complete transformation of our global food system is needed. We must provide healthy food for a growing population using fewer resources and with a lower impact. If we do it right, aquaculture has the potential to play an important part of the solution. 70% of the Earth is covered by ocean, however, we obtain only about 2% of our food from the sea. While there are limits to the amount of wild fish that can be sustainably harvested, responsible aquaculture can meet the increased demand for seafood in people's diets. With a low carbon footprint, low feed conversion ratio, low land and fresh water consumption, and a high edible yield, farmed salmon continues to be one of the most eco-efficient forms of animal protein.

To utilize the potential of aquaculture in a transformed food system, the salmon farming industry has several challenges to solve in its production and supply chains. Every day is about improvement and finding new ways to reduce our impact. We need to protect biodiversity by using farming methods that allow us to co-exist with other species. We need to develop new feed ingredients in order to grow sustainably. Despite having a low carbon footprint compared to other animal proteins, we still need to cut emissions to meet the Paris Climate Agreement's goals. We need to recycle more resources and develop a circular approach throughout our value chain. Our green bond contributes to finance projects to solve these challenges and help build a more sustainable food system. We are pleased to report that we have allocated NOK 1.5 billion, or 100%, of the proceeds of the green bond to projects contributing to a sustainable global food system, while also advancing several of the UN Sustainable Development Goals. This report describes, amongst others, how our RAS facilities saves water and how our post-smolt strategy plays an important part in protecting biodiversity and reducing our environmental footprint. One of our main investments has been a greenfield project in Newfoundland. As part of issuing our green bond in 2020, we increased our carbon emission targets for our operations and value chain, and committed to the Science Based Targets initiative. By investing in farming operations in Newfoundland, we can supply fresh salmon to the fast-growing North American market without airfreight, one of our biggest sources of emissions.

Our green bond issue has not only provided us with capital to fund important projects aligned with our sustainability strategy, it has also contributed to driving the Brazilian soy industry in a conversion free direction. The Brazilian Cerrado is one of the main deforestation frontiers today, where conversion of vegetation causes loss to biodiversity as well as carbon emissions. We have certified the soy we use in our feed for many years and use only Brazilian soy suppliers with a 2020 cut-off date, including a robust monitoring, reporting and verification system, for all of their soybean business. Due to Cargill Inc's connection to ongoing deforestation in Brazil, we excluded purchase of feed from their subsidiary Cargill Aqua Nutrition from the use of green bond proceeds. In 2021, we initiated a project to evaluate environmental, social and governance risks in salmon feed ingredients in a holistic manner. In the assessment we have included topics previously unexplored in-depth in relation to all ingredients, like land use and biodiversity, carbon footprint and climate risk, circularity, pollution, soil health, fresh water consumption, human rights, governance risk and scalability. The goal of the project is to increase transparency and traceability, to be able to benchmark feed ingredients on material ESG aspects and have the ability to reduce risk and drive change throughout our supply chains. The assessment will also inform what novel ingredients we engage with.

In addition to providing healthy protein with lower impacts compared to other animal protein industries, the salmon farming industry contributes to sustainable global food security by spearheading innovation and technology, benefiting

global aquaculture more generally. Grieg Seafood cannot solve the challenges alone. Collaboration, sharing of knowledge, expertise and technology is necessary, and we are committed to participate. When we solve the challenges, new solutions and farming practices can be transferred to fish farming of other species in rural communities all over the world. That way, we truly farm the ocean for a better future for all.

THE GRIEG SEAFOOD GREEN BOND COMMITTEE

BERGEN, 22 JUNE 2022



Atle Harald Sandtorv

Chief Financial Officer



Knut Utheim

Chief Technical Officer



Tor Eirik Homme

Chief Sustainability Officer

THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

The UN Sustainable Development Goals guide us towards a more sustainable food system. They highlight opportunities to grasp and challenges to solve - both in our farming operations and in our value chain. Read how Grieg Seafood aligns with the various SDGs [here](#).



TOMORROW'S SUSTAINABLE GLOBAL FOOD SYSTEM

- Healthy and nutritious food for 9 billion people
- Nature and biodiversity protected
- Low carbon and low climate risk
- Good animal welfare
- A circular economy with resources recycled
- Social and economic justice for producers in supply chains

Aquaculture and farmed salmon can play an important role in the future food system - if we do it responsibly and right. Read more [here](#).

Sustainability rankings

For farmed salmon to be a part of a sustainable global food system, we must keep improving. We believe that by engaging with ESG rating companies, investors and other stakeholders, and by using relevant indices, we can better understand expectations and accelerate progress towards common goals. Through collaborations and partnerships, we can drive change to facilitate long-term sustainable growth.

INDEX / FRAMEWORK	DESCRIPTION	2021 RESULT	COMMENT
CDP CLIMATE CHANGE	CDP's climate change program aims to reduce companies' greenhouse gas emissions and mitigate climate change risk. CDP requests information on climate risks and low carbon opportunities via its online response system (ORS) once per year. Companies that disclose to CDP are scored using letter grades A to D-.	A	Grieg Seafood has engaged with CDP Climate change since 2018. Grieg Seafood has been on CDP's A List (Leadership) in all four years of participation.
CDP FORESTS	CDP also collects information about the four agricultural commodities responsible for most deforestation, timber products, palm oil, cattle products and soy, where only palm oil and soy are relevant to Grieg Seafood. Data collection and rating work in the same way as for CDP Climate change.	B (Palm Oil) B (Soy)	Grieg Seafood has reported on CDP Forests since 2020.
FAIRR INDEX COLLIER FAIRR PROTEIN PRODUCER INDEX	The Collier FAIRR Protein Producer Index constitutes the world's only comprehensive assessment of the 60 largest animal protein producers on critical material ESG risks. The methodology is based on an annual consultative process. All data used in the company analyses are publicly available.	2nd	Grieg Seafood is engaging with the index to better understand the concerns of our stakeholders and issues we should address in our reporting. In 2021, Grieg Seafood managed to improve its position substantially.
SUSTAINALYTICS ESG RISK RATING	The ESG Risk Ratings by Sustainalytics measure a company's exposure to industry-specific material ESG risks and how well a company is managing those risks. The ESG Risk Ratings are categorized across five risk levels: negligible (0-10), low (10-20), medium (20-30), high (30-40) and severe (40+).	29.0 - medium risk	We have been actively engaging with Sustainalytics during 2021 and managed to achieve a significant improvement in our overall rating, even though the industry's general risk exposure has seen an increase. We will continue our dialogue with Sustainalytics to better understand the concerns and issues we should address.
MSCI ESG RATINGS	MSCI ESG Ratings are designed to measure a company's resilience to long-term industry material environmental, social and governance (ESG) risks. MSCI uses a rules-based methodology to identify industry leaders and laggards according to their exposure to ESG risks and how well they manage those risks relative to peers. The ESG Ratings range from leader (AAA, AA), average (A, BBB, BB) to laggard (B, CCC).	AA	Grieg Seafood started looking into the ESG Ratings' methodology and criteria in 2020 and improved our score during 2021 from A (average) to AA (leader).
POSITION GREEN ADVISORY - ESG 100 - THE OSLO STOCK EXCHANGE	Position Green Advisory (The Governance Group) publishes the "ESG 100 - The Oslo Stock Exchange" report, assessing the 100 largest listed companies on the Oslo Stock Exchange based on commonly reported ESG topics and reporting practices from A (best) to E (no reporting or very incomplete reporting).	A-	Grieg Seafood has been assessed as part of this report since 2019. In 2021, Grieg Seafood maintained an A score for "excellent reporting in line with best practice".

We also engage with, and actively use and support, a diverse range of well-established sustainability reporting standards, frameworks and initiatives. Our integrated annual report is prepared in accordance with the GRI Standards Core Option, and verified by our independent auditor, PwC. Further, we are a founding member and have been reporting to the Global Salmon Initiative (GSI) since 2013. The GSI issues an annual sustainability report covering approximately 40% of the salmon farming industry.

In regard to climate risk, we actively use the framework of the Task Force on Climate-related Financial Disclosures (TCFD), in addition to climate-related scenario analysis. Read our TCFD report and scenario analysis [here](#). In regard to nature risk, Grieg Seafood has joined the Taskforce on Nature-related Financial Disclosures (TNFD) as a Taskforce Member, alongside global financial institutions and businesses. As sea farmers, healthy oceans are at the heart of our operations, and understanding and addressing nature-related risks is important for us. The finalized framework is earmarked for release in late 2023.

Grieg Seafood will be required to report according to the EU taxonomy. Aquaculture has not yet been included in the list of industries covered by the taxonomy, and there are no screening criteria available for any of our activities. We are constantly monitoring developments in this area.

TOWARDS A SUSTAINABLE FOOD SYSTEM

Global sustainability initiatives

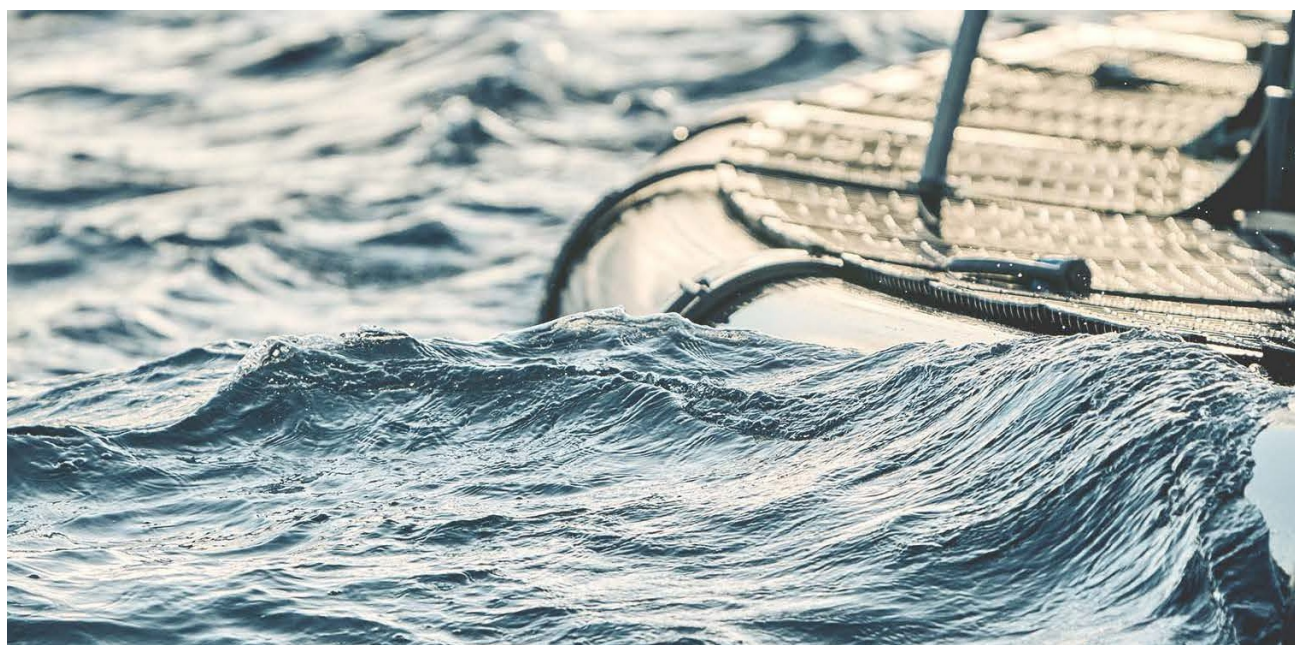
Grieg Seafood has committed to several initiatives related to climate and deforestation that set high standards for our farming operations and value chain. Read more about these initiatives [here](#).

R&D activity

R&D is inherent to delivering on our strategy and targets, such as improvements in fish welfare and sustainability. Read about our efforts [here](#).

Partnerships and collaboration

Collaboration and partnerships with researchers, peers, companies in our value chain, NGOs or other relevant actors are highly valued by Grieg Seafood. Only through collaboration can we drive necessary change, and solve the challenges we have in our industry and in our global food system. Read about our partnerships [here](#).



GREEN BOND PROJECTS

Our green bond projects are aligned with our business strategy and our focus areas. Reducing our environmental footprint and improving fish welfare is key to maintaining the license to operate to achieve our growth targets. Without a profitable business, we will not be able to farm healthy salmon for people to eat all over the world.



Our green bond

In June 2020, Grieg Seafood issued the first tranche of our green bond of NOK 1 billion. In December 2020, we issued a second tranche of NOK 500 million.

The senior unsecured bond of NOK 1.5 billion matures on June 25 2025, and pays an interest at three-month average NIBOR (Norwegian Interbank Offered Rate) plus a margin of 3.4% p.a. The bond was listed on the Oslo Stock Exchange in October 2020, and admitted to Euronext's ESG Bonds section.

The green bond accounted for 47% of our total debt financing at year-end 2021.

ISIN	Bond type	Issue date	Maturity date	Total issued amount (NOK million)	Coupon rate
N00010885007	Senior unsecured	25.06.2020	25.06.2025	1 500	3 month NIBOR + 3.4%

[Our Green Bond Framework](#) describes our approach to sustainable business and how we are committed to long-term value creation for all our stakeholders. The green bond supports our approach and aims to further invest in, and promote, a low-carbon and climate resilient development within the seafood industry to secure a sustainable food system. The proceeds from the green bond has financed investments and expenditures within the following project categories:

- Environmentally sustainable aquaculture - feed and farming
- Pollution prevention and control
- Water and wastewater management
- Waste management

Allocated proceeds

In 2021, we allocated NOK 238 million of the proceeds from the issuance of our green bond to eligible green projects. As of year-end 2021, we have allocated the total amount NOK 1 500 million, or 100%, of the proceeds from the green bond.

The investments and expenditures have taken place in the period from 1 July 2019 to 31 December 2021. The allocation includes all four eligible categories and the projects span all our global farming operations. While project categories may focus on different aspects of our operations, they all share the common goal of building a more sustainable food system.

Green bond proceeds (NOK million)	Proceeds allocated to refinancing (NOK million)	Proceeds allocated to new financing (NOK million)	Unallocated proceeds 31.12.2021 (NOK million)
1 500	0	1 500	0

Project category	Allocated proceeds 2019-2020 (NOK million)	Allocated proceeds 2021 (NOK million)	Total allocated proceeds (NOK million)	% of total allocated proceeds
Environmentally sustainable aquaculture	1 210	219	1 428	95 %
<i>Sustainable feed</i>	120	56	175	12 %
<i>Sustainable farming</i>	1 090	163	1 253	84 %
Pollution prevention and control	15	4	19	1 %
Water and wastewater management	30	0	30	2 %
Waste management	7	15	22	1 %
Total allocated proceeds	1 262	238	1 500	100 %

Environmentally sustainable aquaculture

Sustainable feed

Feed production accounts for a large share of farmed salmon's carbon footprint, and it also puts pressure on wild fish stocks. We only procure feed where the marine ingredients from forage fisheries comply with the sustainability standard set by Marine Stewardship Council (MSC)¹, or the International Fishmeal and Fish Oil Organization's Global Standard for Responsible Supply (IFFO RS)² including Fisheries Improvement Programmes. 100% of soy ingredients that are used in our feed are certified according to the sustainability standards Proterra or Round Table on Responsible Soy (using the segregation model to ensure segregation of certified and non-certified soy). The feed we use also complies with the Aquaculture Stewardship Council (ASC) standard on levels of fish meal and fish oil.

- During a production cycle, salmon go through several different challenges that can be caused by infectious diseases or environmental challenges. A share of our feed volume used in 2021 has been part of research and development projects where the focus has been to optimize nutrition in relation to different fish health and welfare challenges. The general aim has been to investigate if the use of different diets could prevent disease and/or act as nutritional support for diseased fish. Producing a more robust fish will lead to increased fish welfare and reduced mortality. As diseased fish will also have reduced ability to utilize feed optimally and prevention of disease will thereby lead to a better feed utility. An optimal feed uptake and reduced mortality will contribute to a lower carbon footprint.
- Feed from Cargill Aqua Nutrition has not been included in the use of proceed.

Sustainable farming

To reduce our environmental footprint, we need to use farming methods that protect the biodiversity where we operate. One of our main investments is in Recirculating Aquaculture Systems (RAS). RAS technology allows for recycling most of the fresh water used for our land-based farming. The technology provides a high degree of environmental control, biosecurity and provides a more predictable production both in freshwater and seawater. It also allows us to recycle organic waste. Our RAS facilities are an integral component of our post smolt strategy, where the fish is kept in closed containment systems either on land or sea for longer. This will reduce organic emissions and the risk of escape. Combined with new technology, it will also reduce excess feed. The environmental impact per salmon is reduced, as the aim is to achieve better sea lice control and reduce the number of sea lice treatments. This should also reduce the need of well boat for sea lice treatments, thereby contribute to a reduction in carbon emissions. Combined, these measures are expected to improve the feed efficiency and survival rates, thus reducing the carbon footprint of the final product.

- In 2021, proceeds have been spent on completing the RAS facilities in British Columbia and Newfoundland, Canada. The facilities contribute significantly to water efficiency.
- Proceeds are used on projects to promote fish health and welfare with the aim to reduce the use of chemical treatments and avoid unnecessary handling of fish. Such projects also aim to improve feed efficiency and survival rates.
- Other eligible projects in 2021 included post-smolt production, and several other projects to promote fish health and welfare. Eligible projects also included systems to monitor, control and analyze the seawater environment, as well as preparations to become certified by the Aquaculture Stewardship Council. We managed to certify all active farms in Finnmark in 2021, and aim to certify all our active farms by 2023.

¹ The Marine Stewardship Council (MSC) is an international non-profit organization that certifies and rewards sustainable fishing practices, issuing consumer-facing ecolabels.

² The International Fishmeal and Fish Oil Organization Global Standard for Responsible Supply (IFFO RS) certifies marine ingredients. IFFO RS demonstrates compliance with standards related to traceability of fishmeal and fish oil, as well as the exclusion of by-products from IUU catch and vulnerable, endangered, and critically endangered fisheries.

Pollution prevention and control

Our focus and efforts to reduce our carbon emissions also target transportation to the markets. Airfreight can double the farmed salmon's footprint. Our set-up allows for shorter transportation routes and limits use of airfreight to our two main markets, with main part of the supply to Europe from Norway, and to the USA from Canada. With production in Newfoundland, we can transport salmon to the fast-growing US market without airfreight. We also engage in projects to eliminate unnecessary weight from transportation. We also work to reduce carbon emissions from our production, with the aim of eliminating our dependency on finite energy sources.

As part of issuing the green bond in 2020, we revised and improved our carbon emissions target. From a 2018 base year, we have committed to reduce absolute Scope 1, 2, and 3 greenhouse gas emissions by 35% by 2030 and 100% by 2050. Our emission reduction targets are classified as well-below 2°C (2030) and 1.5°C (2050), aligned with the Paris Agreement. The emission targets have been approved by the Science Based Targets initiative.

- Proceeds in 2021 included investments in battery packs to make production sites in Finnmark more independent from fossil fuel.

Water and wastewater management

Our land-based facilities depend on freshwater. It is used for our smolt and post-smolt production, and at our harvesting facilities for hygiene purposes. None of our facilities are located in areas of water scarcity and material freshwater risks. Still, we recognize the importance of minimizing the use of freshwater. We recirculate most of the freshwater due to investment in RAS technology, and aim to improve efficiency of water use at our harvesting facilities. Wastewater management is an integral part, with the aim to reduce discharges to the sea and environment.

- We did not allocate proceeds directly to this category in 2021. Previous eligible proceeds included investments in water and wastewater management infrastructure at our RAS facility in Finnmark, contributing to increased resource efficiency and reduction of wastewater discharges. All effluent water is mechanically filtrated and solids are captured before the water is discharged to the sea. Our RAS facility in Newfoundland is equipped with the latest state of the art effluent treatment technology which allows to reuse close to 100% of effluent water from the RAS and reuse it in the production line. In addition, all solid waste is captured resulting in a facility with zero effluent discharge and full control over waste products as sludge.

Waste management

A circular economy is essential to ensure sustainable food production. Our waste must be properly disposed, recycled where possible, and fed back into the circular economy. Biological waste (dead fish, fish trimmings and organic waste) is collected, recycled, and used as animal feed, biofuel, or fertilizer. A lot of our seawater equipment is made of plastics. Plastic slowly breaks down into microplastics, which may impact ecosystems and wildlife negatively.

- Proceeds in 2021 included investments in infrastructure for handling biological waste in Finnmark and British Columbia, contributing to increased resource efficiency and reduction in waste to landfill and incineration.

Project portraits

One of the key elements of our business strategy is our post-smolt strategy. Keeping the fish longer on land or in closed facilities in the sea and shortening the time they spend growing in open sea-pens, give us better control of the fish's environment for a longer period and reduce the impact we have on the environment. Our RAS facilities provides the basis for a more controlled and predictable production, both in freshwater and seawater, and are an integral component of our post-smolt strategy. These projects make up a substantial part of the allocated proceeds of our green bond.

Post-smolt in Rogaland

Grieg Seafood is piloting our strategy in our Rogaland region in Norway, where the average size of smolt transferred to the sea has increased from 90 grams in 2014 to approximately 460 grams in 2021. In 2022, we aim to transfer fish weighing an average of around 600 grams to our sea farms, increasing to approximately 800 grams on average in 2025. during 2021, we transferred our largest ever batch of post-smolt to the sea, with an average weight of 960 grams. Some fish from this batch were harvested after only ten months at sea, with an average weight of 4.8 kg. This is the first batch that will have a production time at sea of less than 12 months, and hence the first batch to run full-scale in accordance with our post-smolt strategy.

During the first stages of their life, salmon are raised in onshore freshwater facilities. In traditional salmon farming, fish are transferred to the sea once they have undergone the smoltification process, making them physiologically ready for life in saltwater. Traditionally, this has taken place when the fish is about 70 – 100 grams. However, Grieg Seafood's post-smolt strategy means that, after smoltification, the fish are grown for a longer period on land or in closed facilities in the sea, thereby shortening the time they spend in open sea-pens by several months.

Both land-based facilities and a semi-closed containment ocean system, the FishGlobe, deliver post-smolt salmon to our sea farms in Rogaland. Our experience so far with the transfer of post-smolt salmon indicates that they are less vulnerable to disease and need fewer sea lice treatments. In 2021, 40% of the pens with fish harvested did not receive any sea lice treatment. This is a continuation of an ongoing trend, where the region has managed to minimize sea lice treatments (both medical and mechanical) due to the reduction in the time our salmon spend at sea in combination with vaccines.

We strongly believe that post-smolt transfer will improve both the sustainability and profitability. A shorter time in sea reduces exposure to sea lice, diseases, low oxygen, harmful plankton, and other environmental issues. The aim is to reduce the environmental impact, and improve fish welfare, survival, quality and biological control, while also achieve lower costs. In other words, shorter time in sea strengthens ocean-based salmon production.

Grieg Seafood will utilize the best practice developed in Rogaland when expanding post-smolt production in Finnmark, British Columbia, and Newfoundland over the next few years. Read more on our post-smolt piloting region [here](#).

Gold River Expansion Project - RAS 34

Our hatchery in British Columbia is located on the spectacular Muchalaht Inlet on the west coast of Vancouver Island, just outside of the small Town of Gold River. The site is within the traditional territory of the Mowachaht/Muchalaht First Nation whose ancestors have inhabited the area for millennia. The Town of Gold River was initially a fishing village and later the site of a large pulp and paper operations that serviced the forest industry. The hatchery lease is on the land where the pulp and paper plant was previously located.



In 2001, we purchased an existing smolt production facility and undertook several upgrades to increase production to meet the requirements of modern aquaculture. Until the current expansion project, our hatchery produced 500 tonnes of smolt annually, supplying our marine operations. Eyed eggs are reared through incubation to smolt on site. Freshwater is provided from four wells and saltwater from a saline well, all located on the hatchery lease. Production systems are a mix of flow-through and recirculation with a goal of 100% recirculation. Effluent is filtered and removed solids are sent to a renewable compost facility. All discharge is screened to eliminate potential for fish escapes to the environment. Smolt are moved from the freshwater facility to the transport vessel via a closed loop pipeline, ensuring biosecurity by separating the transport vessel from the facility. This has reduced fish handling, improved the transfer process, and reduced the environmental footprint of this operation.

The Gold River Expansion Project was initiated in 2019 and consisted of the construction of a new recirculating aquaculture building (RAS 34) and upgrades to the chemical and hydro power services for both RAS 34 and the rest of the hatchery, as well as installation of state-of-the-art IT and systems for the whole site. The project will increase hatchery production with additional 400 tonnes smolt annually. RAS 34 technology is designed to clean and recirculate 99% of the fish culture water which reduces the volume of new water required to culture each fish and limits the effluent. The advanced technology features a comprehensive online (SCADA) monitoring and management system to ensure the optimal culture environment. RAS 34 also supports the production of larger post-smolt, which will increase survival at sea and shorten the time to harvest. The marine environment has many challenges for salmon production with toxic phytoplankton, low oxygen, turbidity, and warm temperatures, all of which compromise fish health and survival. Producing larger post-smolt can decrease time to harvest by three months, which reduces time at sea and the potential for environmental impacts to our fish as well as decreasing the risks of interaction between farmed fish and naturally occurring Pacific salmon. Though the project completion was delayed due to Covid-19, the first fish were transferred to the RAS 34 facility in April 2022 and are thriving.

Newfoundland RAS facility

Grieg Seafood Newfoundland is the newest addition to our sustainable salmon production. The operations were acquired in April 2020 and contributes to our plans of supplying high quality proteins to the growing North American market. Grieg Seafood Newfoundland has long-term, exclusive farming rights to the Placentia Bay area, an area isolated from the other salmon farmers in the region. The seawater sites have favorable biological conditions for salmon farming and the sites will be equipped with state-of-the-art technology. As a new operation, we are able to implement newer, environmentally friendly technologies than what has been traditionally used in Newfoundland.

Our high-end freshwater and brackish RAS facility in Marystown's marine industrial park, close to Placentia Bay, includes a hatchery, a nursery and a smolt unit. The hatchery and nursery was finalized in spring 2020, while the smolt unit was finalized in late fall 2020. The facility is now fully operational, with fish growing healthy and well. We expect to transfer between two - three million fish to sea during the spring and summer of 2022. The RAS facility is dimensioned to serve future post-smolt modules, with capacity to ensure necessary add-on growth. The current annual production capacity is 600 tonnes of smolt.

The RAS is designed with a focus on low energy consumption and nearly 100% recirculation of water. With an overall maximum water use of only 300 L/minute, the use of freshwater resources is minimized. Additionally, the use of a self-contained RAS for the incubation and early rearing of eggs and alevins also has reduced water consumption at this life stage. Although pumps are required throughout the facility, a large portion of the water is moved utilizing gravity flow and particle removal is done using sedimentation principle. This design reduces electricity demand by the facility as well as improving the work environment with low noise levels. The design of the RAS virtually eliminates the need for discharge of water with near to 100% of the water being retained and reused. A by-product of the RAS is sludge. Even this by-product can be utilized in several ways to reduce waste and disposal. The sludge is further dewatered at the facility using the Bioretur system and may then be used locally as compost, soil amendments, or other agricultural products.

Mortalities from our RAS facility are collected and biosecurely turned into silage. Several options are being pursued locally and internationally for this product. One such local option for the silage is to transport to an anaerobic digester in Newfoundland to be utilized for bio-energy. This essentially recycles our waste into a value added stream, where it produces energy and a high value agricultural product.



Impact overview

We measure the impact of allocated green bond proceeds by calculating water saved at the RAS facilities and estimated avoided emissions from some of our projects. With our allocated green bond proceeds, we and our investors support the overall goal of providing healthy food using fewer resources and with a lower impact than current food systems.

Water saved

The majority of the total green bond proceeds were allocated to our RAS facilities that are reducing the freshwater consumption by almost 100% compared to traditional non-recirculating aquaculture systems.

RAS facility	Project completion	Water saved (%)	Water saved (million m3/year)
Adamselv, Finnmark	2020	99.51%	102
RAS 34, British Columbia	2021	98.83%	41
Newfoundland	2021	99.95%	77
Total			220

Emissions avoided

We have estimated the emissions avoided from some of our projects. The sum of allocated green bond proceeds in the category 'Environmentally sustainable aquaculture' is expected to make important contributions to fish health and welfare. By increasing fish survival, we can improve our feed efficiency and substantially avoid emissions in the future.

The category 'Pollution prevention and control' includes the electrification of sites and installation of battery packs, which has reduced our diesel consumption.

Green project category	Emission reduction initiative	No. of sites converted in the allocation period	Emissions avoided (tCO2e/year)
Environmentally sustainable aquaculture	Increased fish survival	n/a	20 000
Pollution prevention and control	Grid electricity	4	680
Pollution prevention and control	Hybrid solutions/ battery packs	6	1 085
Total			21 765

Other metrics

In addition to water saved and emissions avoided, we expect the following selection of metrics, that we also report on quarterly and annually, to improve in the long run through the use of green bond proceeds.

Green project category	Other impact metrics	2019	2020	2021
Environmentally sustainable aquaculture	Number of ASC certified sites	10	26	30
	Share of net production that is ASC certified	25 %	51 %	62 %
	Number of fish escapes (number of fish)	0	0	3 (4 356)
	Survival rate at sea *	93 %	91 %	93 %
	Use of antibiotics (g per tonne LWE) **	21.6	14.2	13.0
	Sea lice treatments (g per tonne LWE) **	0.27	0.47	1.66
	Use of hydrogen peroxide (kg per tonne LWE) **	5.4	14.7	10.6
Pollution prevention and control	Carbon emissions (kgCO2e per tonne GWT) Scope 1 + 2 location based	428	456	430
	Carbon emissions (kgCO2e per tonne GWT) Scope 3	n/a	5 737	4 900

Other impact metrics were included in our Annual Report 2021, and have been subject to external audit.

* 12 months rolling survival rate calculated according to the GSI standards. ** Amount of active pharmaceutical ingredients (APIs) used (gr/kg) per tonne of fish produced (LWE). n/a: no data available.



PART 03

GOVERNANCE & AUDIT

Our vision 'Rooted in nature – farming the ocean for a better future' demonstrates our commitment to operate with respect for the individual, the society and the environment.

Transparent and reliable governing parameters are fundamental to facilitate long-term sustainable growth.



Green bond governance

To ensure that our Green Bond Framework delivers on its goals, we have established and follow green bond governance procedures.

[Our Green Bond Framework](#) is the basis for the use of proceeds, the evaluation and selection process for green projects, the management of green bond proceeds and for reporting connected to the green bond. The framework is aligned with the ICMA Green Bond Principles.

Proceeds have financed assets and projects according to eligible green projects as defined in our framework. Allocations as described in this report include investments and expenditures made during 2021, and in some tables include projects for the period 1 July 2019 to 31 December 2020, as described in our Green Bond Report 2020. Allocations have not been used for refinancing, although the framework allowed for it. Green bond proceeds have not been used to finance investments linked to technologies running on fossil fuel. The actual cost for back-up diesel generators at our RAS facilities has been subtracted from the allocation.

Our Green Bond Team has assessed eligible green projects and recommended allocation of proceeds, and allocations were given final approval by the Green Bond Committee.

Grieg Seafood's finance department has maintained our green bond register and tracked the allocation of proceeds to approved projects. Despite having allocated 100% of the proceeds from the green bond, additional projects in 2021 have been identified as eligible according to our Green Bond Framework. No funds from the green bond have been allocated to Grieg Seafood Shetland, which was sold in December 2021.

Management and allocation of green bond proceeds have been verified with limited assurance from our independent auditor, PwC. The impact metrics included as 'Other metrics' was included in our integrated annual report which was subject to external audit, please refer to the auditors sustainability report on page 175 in our Annual Report 2021.

We have stated that we would annually publish a Green Bond Report as long as there were green bond proceeds outstanding. As of year-end 2021, Grieg Seafood has allocated all proceeds to eligible green bond projects, and as such, does not expect to publish Green Bond Reports for the current green bond expiring June 2025.

We have obtained a [second party opinion from CICERO Shades of Green](#) to confirm the transparency of our Green Bond Framework and the alignment with the Green Bond Principles. CICERO rated our framework as 'Medium Green'. Furthermore, CICERO Shades of Green found the governance procedures in our framework to be 'Excellent'.

Calculation methodology

In reporting on the impact metrics of the green bond proceeds, we have adopted a set of methodologies, baselines and assumptions.

Water saved

Water savings are calculated by comparing the estimated water usage per kg feed for our different RAS facilities to the water usage of a traditional flow-through facility of the same capacity. The calculations make use of the causal relationship between feed supplied and oxygen required. The amount of oxygen required increases with the amount of feed supplied due to an increased digestive activity. From the required amount of oxygen, the required amount of make-up water can be derived. The calculations are based on the production capacity of the RAS facilities and a feed conversion ratio (FCR) of 1.0 for simplification and comparability, providing us with conservative values. Our RAS projects are designed with different water filtration technologies where the estimated water consumption varies between the projects.

Emissions avoided

Proceeds include investment in battery packs and electrification through grid connection to make the production sites independent from fossil fuel. Investments proceeds encompassed eight production sites, four of which were connected to the grid. The other four production sites were equipped with battery packs. The annual diesel consumption per site varies between 60 000 and 150 000 l, depending on the size of the barge. In total, we estimate these investments to avoid 1 765 tCO₂e per year.

The calculations are based on replaced diesel consumption with grid electricity for each site. The emission factor used for diesel is 2.68 kgCO₂e per liter diesel and the amount of diesel used for the specific sites are based on production data. The emissions related to electricity consumption are also considered in the calculations. The diesel savings from hybrid installation are estimated to be 50%.

At the same time, proceeds include investments in several measures related to fish welfare, research and development, digitalization, ASC certification, and the ecosystems. In the long run, we expect these investments to improve fish survival and contribute to the achievement of a survival rate of 95% in 2025. Calculating with a 4 percentage points increase from our global survival rate in 2020 at 91% and a constant feed footprint of 3.16 kgCO₂e per kg feed, we estimate to avoid 20 000 tCO₂e per year, given a target production volume of 130 000 tonnes GWT in 2025, through the alignment of our economic and biological feed conversion ratio (FCR).



To the Board of Directors of Grieg Seafood ASA

Independent statement regarding Grieg Seafood ASA's Green Bond report

We have been engaged by Grieg Seafood ASA (the "Company") to undertake a limited assurance engagement on selected information about the allocation of net proceeds from the Green Bond issued in June 2020 to Green Projects, as presented in the Company's Green Bond Report 2021, against the relevant criteria in the Company's Green Bond Framework per June 2020.

Assurance scope

The scope of our work was limited to assurance over processes and systems for financing of eligible green projects and allocating proceeds from the Green Bond to such investments and expenditures, as described in the "Green Bond Report 2021" page 10, section "Allocated proceeds". The relevant criteria against which this information was assessed is based on the Company's "Grieg Seafood Green Bond Framework" per June 2020, available on the Company website.

Our assurance does not extend to any other information in the Green Bond Report. We have not reviewed and do not provide any assurance over any individual project information reported, including estimates of sustainability impacts.

The Board of Directors and the Managing Director's Responsibility for the Report

The Board of Directors and the Managing Director are responsible for ensuring that the Company has implemented appropriate guidelines for Green bond management and Internal Control.

Responsibilities of the Company's management

The management of the Company is responsible for evaluating and selecting eligible green projects, for the use and management of bond proceeds, and for preparing a Green Bond Report that is free of material misstatements, whether due to fraud or error, in accordance with the Company's Green Bond Framework.

Auditor's Responsibilities

Our responsibility is to express a limited assurance conclusion on the selected information specified above in the assurance scope based on the procedures we have performed and the evidence we have obtained.

We conducted our work in accordance with the International Standard on Assurance Engagements ISAE 3000 – "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information". This standard requires us to plan and perform our procedures to obtain limited assurance that the Company has performed the procedures and processes according to the documents defined in the "Assurance scope". A limited assurance engagement consists of making inquiries, primarily of persons responsible for the management of bond proceeds and the process for selection of eligible green projects, and applying analytical and other limited assurance procedures, such as substantive testing of selected information through inspection of supporting documents.



The procedures performed consequently do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in a reasonable assurance engagement. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our Independence and Quality Control

We are independent of the Company as required by laws and regulations, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We apply the International Standard on Quality Control (ISQC 1) and maintain a comprehensive system for quality control including documented policies and procedures that complies with ethical requirements, professional standards and applicable legal and regulatory requirements.

Conclusion

Based on the limited assurance procedures we have performed in accordance with our scope and the evidence we have obtained, nothing has come to our attention that causes us to believe that the selected information disclosed in the Company's Green Bond Report 2021 has not been prepared, in all material respects, in accordance with the relevant criteria.

Bergen, June 22 2022

PricewaterhouseCoopers AS

A handwritten signature in blue ink that reads 'Hanne S. Johansen'.

Hanne Sælemyr Johansen
State Authorised Public Accountant



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