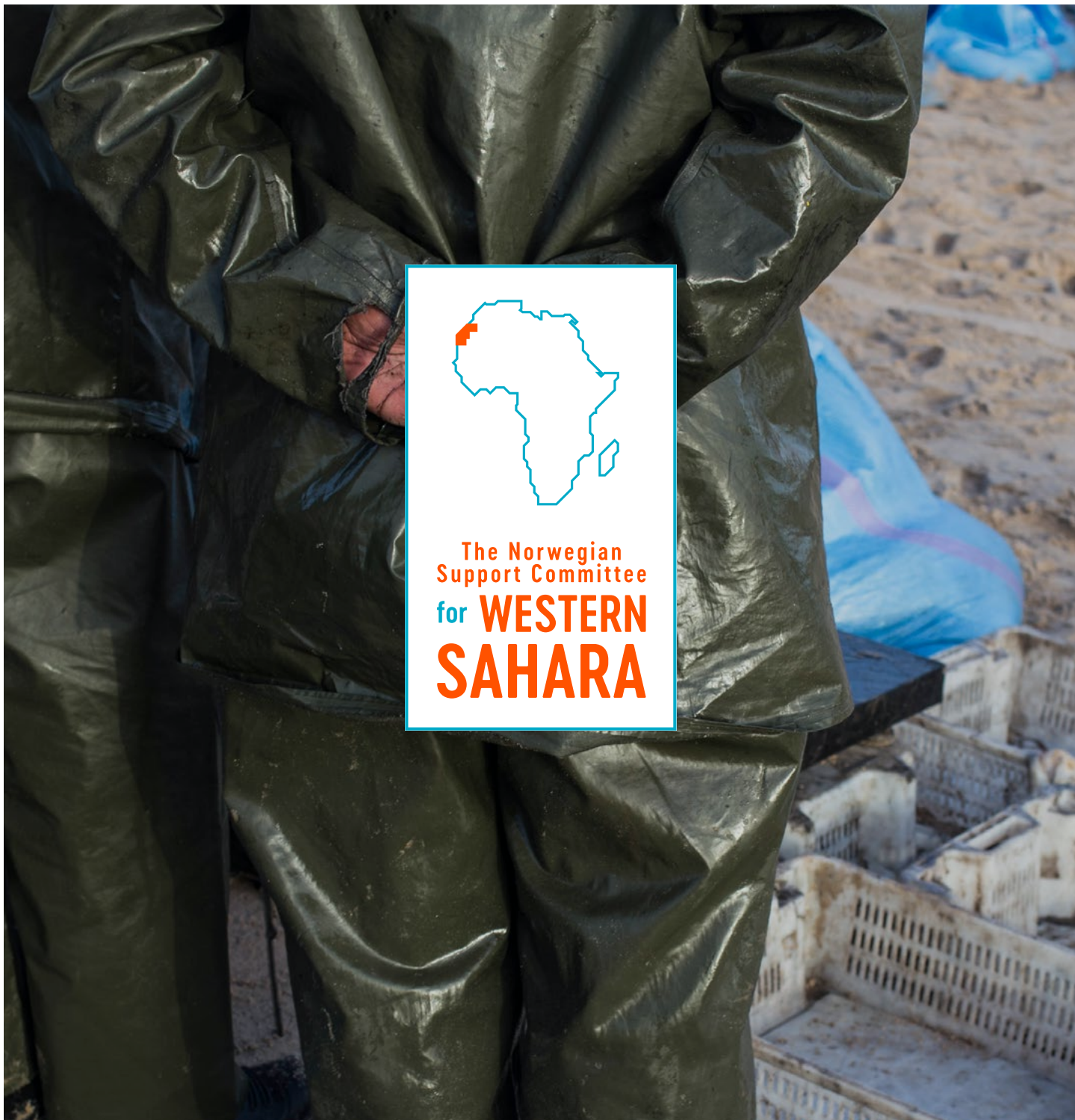




Feeding off West Africa

Norwegian fish farming companies' policies on traceability and sustainability of fish feed

A woman in Senegal processes small fish. Fish stocks along the West African coast are threatened by fish feed production and the aquaculture industry.



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Summary

It’s been called the ‘salmon adventure’ - the enormous growth of fish farms along the Norwegian coast that export salmon worldwide. When the question of the sustainability of the import of feed to the aquaculture industry was raised in the Norwegian Parliament in 2019, the then Minister of Fisheries Harald T. Nesvik stated that the industry “does not contribute to depletion of ecosystems or threaten food security in other countries.” There is reason to question such a conclusion and investigate whether Norwegian fish farming companies contribute to undermining food security in countries from which we import fish feed. This report addresses two main topics concerning Norwegian salmon farming companies that are rarely covered in the Norwegian media. The first is sustainability and food security in West Africa, which is one of the areas where fish feed producers buy raw materials from for the fish feed. The second is how the fish farming companies deal with the risk that Norwegian salmon’s feed may originate in the waters outside occupied Western Sahara. Such trade would conflict with international law and the Norwegian Ministry of Foreign Affairs’ advice to refrain from doing so.

Reports from FAO and international civil society organizations have thoroughly documented how the exploitation of fish stocks in West Africa for global feed production can have detrimental consequences for food security, jobs, and local markets.

This report challenges Norway’s 40 largest fish farming companies on issues related to sustainability and transparency in the supply chain. Twenty-three of the companies responded to our questionnaire. Several companies reported that they buy fishmeal originating in Mauritania and refer to various certification schemes for sustainable feed production. However, these certification schemes have not been able to prevent the depletion of fish stocks in West Africa, nor have they prevented the negative consequences this has for the local population.

This report shows that the fishmeal and fish oil production in Mauritania contributes to undermining

food security in West Africa, threatening women’s jobs in the processing industry, and negatively impacting the environment for those living near factories. When Norwegian salmon farmers use feed that contains fish oil from Mauritania, this ultimately means that we prioritize the production of salmon for relatively wealthy consumers over both local food security and local jobs in West Africa.

None of the companies that responded to the questionnaire have specific guidelines in place to ensure that fish feed does not originate from occupied Western Sahara. Regardless of such guidelines, fishmeal and fish oil production in Mauritania also affect fishery resources in occupied Western Sahara because many fish stocks migrate along the West African coast. A recent shift to using sardines in feed production in Mauritania could deplete the fish stocks in Western Sahara’s waters and deprive the Sahrawi people of their legitimate resources.

Considering that feed production in Mauritania also has severe consequences for food security throughout the West African region, we recommend that Norwegian fish farming companies should not buy feed originating in Mauritania.

The coalition agreement (Hurdalsplattformen) of the current Norwegian government led by Prime Minister Støre stated this government’s goal of facilitating further growth in the aquaculture industry in a «predictable, controlled and sustainable way» and that Norway will «lead the development of the world’s most productive and environmentally friendly aquaculture industry.»¹ If the government wants to take sustainability seriously, it must ensure that the Norwegian aquaculture industry and the fish feed industry do not undermine food security in the countries where the feed is produced.

The feed producers themselves are not challenged in this report. We will do this in later reports. Over the next three years, the Norwegian Support Committee for Western Sahara will produce similar reports on the industry.

Small pelagic fish are important for food security in West Africa.



What do farmed fish eat?

In the 1990s, the feed given to farmed salmon contained almost only fishmeal and fish oil, mainly from wild fish from the ocean. During the 2000s, the composition changed drastically, and today the feed consists of 70% plant ingredients and 30% marine ingredients.² The marine ingredients mainly consist of fishmeal and fish oil, where fishmeal usually accounts for just under 20%, and fish oil for about 10% of the total feed.³ According to the Norwegian food research institute Nofima, the average in 2020 was down to 12% fishmeal and 10% fish oil.⁴

The increase in the proportion of vegetable ingredients has led to criticism regarding, for example, the purchase of vegetable feed made from soy produced in Brazil. For a long time, soy produced in Brazil has contributed to exacerbating the deforestation of the Brazilian rainforest. It has been linked to human rights violations, slave-like working conditions, and illegal activity in indigenous territories.⁵ Following campaigns from, among others, the Norwegian NGOs Future in our Hands and Rainforest Foundation Norway, the aquaculture industry has taken action to guarantee that soy used in salmon feed is deforestation-free throughout the value chain.⁶

The aquaculture industry often refers to this significant decline in the proportion of marine ingredients in the feed and research to find more

sustainable feed alternatives as examples of the industry's work to become more sustainable. However, the proportion of more sustainable alternative feed ingredients such as microalgae and insect meal is very low and was only 0.4% in 2020.⁷ The problem is also that the enormous growth in aquaculture internationally means that despite a lower proportion of marine ingredients in the feed, the demand for fishmeal and fish oil is so significant - and growing - that it puts tremendous pressure on the fish stocks used in its production. In West Africa, this is especially true of small pelagic fish species used to produce fishmeal and fish oil.⁸

The coalition agreement of the current Norwegian government recognizes that further growth in the aquaculture industry must take place in a sustainable way. Among other policy goals, the government will «stimulate increased sustainability through a separate program for the production of sustainable feed based on Norwegian resources» and will «set a goal that all feed for the aquaculture industry will be from sustainable sources by 2030».⁹ However, it is essential to point out that sustainability is a broader concept than just whether the industry is sustainable in relation to the environment and the climate. As we will explain in this report, what farmed salmon eats has consequences for West African fishers' livelihoods and the food security of West African consumers.

Fish feed and the Sustainable Development Goals¹⁰
Sustainable farming must take into account compliance with the UN's Sustainable Development Goals also in the regions where the feed originates.

Goal 2: Zero Hunger: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

- **Target 2.1:** By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round
- **Target 2.4:** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

Goal 12: Responsible consumption and production: Ensure sustainable consumption and production patterns

- **Target 12.2:** By 2030, achieve the sustainable management and efficient use of natural resources

Goal 14: Life below water: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development

- **Target 14.4:** By 2020, effectively regulate harvesting and end overfishing, illegal, unreported, and unregulated fishing, and destructive fishing practices and implement science-based management plans to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics
- **Target 14. b:** Provide access for small-scale artisanal fishers to marine resources and markets

Food security, jobs, and local markets in West Africa

There is a growing cause for concern about food security in West Africa as a region, as wild fish are used for the production of fishmeal and fish oil for export. More than half a million tonnes of fresh fish from the West African coast are used for this purpose every year. According to Greenpeace Africa and Changing Markets, it would be enough to feed 33 million people in the region.¹¹ A recent report by the Food and Agriculture Organisation of the UN (FAO) makes it clear that across the whole of sub-Saharan Africa, the growing global demand for fish-based feed has most likely contributed to the overexploitation of marine fish stocks, to undermining local livelihoods, and to the reduction of the supply of fish for local consumers.¹² International organizations announced in May 2022 that Mauritania is one of several countries in West Africa with dire prospects for hunger and that the country has produced 40% less food than usual.¹³ In December of 2021, it was announced that 10% of the country’s population now suffers from acute malnutrition.¹⁴

Most fish stocks are either exploited at maximum capacity or overexploited in the waters stretching from Morocco to Guinea-Bissau.¹⁵ Two of the most important species fished for use in fishmeal and fish oil along the coast of West Africa are sardinella and bongo, and according to FAO, both of these species are overexploited.¹⁶ This is a significant problem for food security in West Africa because sardinella and bongo are both fish species that are an essential source of protein for the local population. In Senegal, for example, 70% of the population depends on fish as their primary source of animal protein.¹⁷ In West Africa, almost one million people depend on small-scale fishing, with fishing providing both work and food security.¹⁸ But in recent decades, overexploitation of fish stocks has made it more difficult and expensive to engage in artisanal fisheries. At the same time, overfishing has been exacerbated by trade agreements that have given European, Chinese and Russian industrial fleets access to African waters.¹⁹ In addition, African coastal communities are particularly vulnerable to climate change and

the negative consequences these have in terms of reduced fish stocks.²⁰

When local fish is used to produce fishmeal and fish oil for export to Europe and Asia, this also undermines the local fish markets, and local jobs are lost in the fisheries sector.²¹ This especially applies to women in the processing industry, who have traditionally salted, smoked, and dried fish which they have then resold in local markets. The fish processing industry also plays a vital role in food security in inland areas throughout West Africa because dried and salted fish last longer and can be sold over longer distances.²² In a recent BBC documentary, Diaba Diop, Secretary-General of Pencum Sénégal, talks about how the situation has worsened since fishmeal and fish oil factories were established in Senegal. Pencum Senegal is a coalition of various Senegalese associations for women to purchase, trade, and process fish products. Despite instructions from the authorities to use only fish trimmings, the factories use whole, fresh fish in the production of fishmeal and fish oil. While the women in the processing industry used to have good access to fresh fish, they are now outcompeted by factories that can pay higher prices for the fish. Instead of being able to buy fresh fish to process it, as they used to do before, many of the women in the processing industry can now only buy what the factories throw away.²³ In response to the many problems the industry has brought, the Senegalese government has since 2019 frozen all new licenses for fishmeal factories.

Neighboring country **Mauritania** is an essential producer of fishmeal and fish oil and has become one of the continent’s largest exporters in a short period of time. After France and Denmark, Norway is the third-largest importer for Mauritanian fish oil.²⁴ Many of the key concerns regarding fish stocks, food security, and jobs in Senegal also apply in Mauritania.

Mauritania has almost 40 fishmeal and fish oil factories, but this has resulted in relatively few jobs despite the industry attracting significant

investments.²⁵ According to officials from the Mauritanian Ministry of Fisheries, it is a general problem that the factories do not provide the number of jobs that they had committed to creating when they applied for permission to establish the factory. Many of the jobs are temporary, and instead of hiring locals, factories instead largely employ foreign workers.²⁶

The factories have also made it more difficult for local fishmongers who sell fish in local markets, as it pays better for fishers to sell the fish to the factories. This has made it more expensive to buy fish at the market. For the fish species sardinella, the price is now more than four times higher than at the beginning of the 2010s. Mauritania has a relatively low fish consumption of about half the global average compared to other countries. Still, fish such as sardinella has been a cheap source of protein and has, therefore, contributed to food security, which is now undermined when fish becomes much more expensive in local markets.²⁷ Although sardinella has not been crucial as a local food source in Mauritania as in other West African countries, Mauritanian fish also used to be resold to countries such as Ghana, Nigeria and Ivory Coast. This changed drastically when the fishmeal industry began to grow strongly in the 2010s.²⁸

When fishmeal and fish oil production was in its initial phase, the production was supported by some local fishermen who saw new opportunities to sell their fish, while others were worried about overfishing. As the industry grew, Mauritania allowed both Turkish and Chinese trawlers. Many of the factories prefer to buy fish from these large industrial trawlers. That made the situation worse for small-scale Mauritanian fishers.²⁹ Mauritania has a population of 4.6 million. The fishing industry provides 55,000 jobs to Mauritanians, of which 80% are in artisanal fisheries.³⁰

Another problematic aspect of the fishmeal and fish oil factories is environmental damage in the areas surrounding the factories.³¹ The vast majority of the factories are located in Nouadhibou, along a bay that is a reservoir for several fish species. According to local fishermen, liquid waste from the

factories has led to higher mortality of lobsters and other species in the bay.³² Activists have also noted that Nouadhibou’s population of about 120,000 inhabitants is plagued by air pollution, with harmful particles and rotten odors from the factories, which has led to major local protests.³³

The production of fishmeal and fish oil in Mauritania has increased enormously over the last decade and has only been regulated to a small extent. Due to concerns about the reduced stocks of especially round sardinella (*sardinella aurita*), Mauritanian authorities have introduced restrictions on the use of this type of fish for fishmeal production. They have set the goal that fishmeal and fish oil production must be reoriented towards using fish trimmings instead of whole fish. It is challenging to verify that the industry actually complies with the authorities’ restrictions, and Greenpeace assumes that incorrect reporting of fish types to avoid the restrictions may have increased.³⁴ Since 2020, it is no longer permitted to fish for round sardinella for use in fishmeal in Mauritania.³⁵ Mauritanian authorities have already set themselves the goal of phasing out fishmeal production altogether, and is instead promoting fish processing intended for human consumption (as opposed to feed production for fish farming and animal feed). The goal is to strengthen the country’s food security and increase value creation.³⁶ The original goal was to phase out fishmeal production entirely by 2020, but output to date has increased.³⁷

According to researcher Ad Corten, director of Corten Marine Research, who has been working with fisheries in Mauritania for over 20 years, the fishmeal industry has depleted the stock of round sardinella throughout the region. Now that fishmeal and the fish oil industry in Mauritania have moved away from using round sardines (after this was banned by the government), another fish species has become important: sardine. The sardine stock is found especially in Morocco, Western Sahara and Mauritania, and when the switch is now made to using sardines to make fishmeal and fish oil in Mauritania, this can have major consequences for the stocks in the waters off occupied Western Sahara.³⁸

Fatou Diouf sells fish at the market in Dakar, Senegal. The processing and sale of fish used to be controlled by women. Now this industry is threatened.



The occupation of Western Sahara and its rich waters

The coast of Western Sahara is long and rich in fishery resources, which, together with the territory’s rich deposits of phosphate have provided significant revenues to the occupying power Morocco.³⁹ Large parts of Western Sahara have been under Moroccan occupation since 1975 when the Spanish colonial power withdrew without carrying out a decolonization process as ordered by the UN.⁴⁰ More than half of the Sahrawi people had to flee across the border into Algeria, where they have lived in refugee camps for almost 50 years. The other half live in the Moroccan-occupied territories, where they are subjected to severe consequences and abuses if they engage in the struggle for self-determination.

According to the UN, Western Sahara is the last unresolved colonial issue in Africa and is officially considered a non-self-governing territory.⁴¹ The Sahrawi right to self-determination is recognized in over a hundred UN resolutions. Morocco’s claim to the territory was declared unfounded by the International Court of Justice in The Hague as early as 1975.⁴² In a series of judgments from 2015 to 2021, the EU Supreme Court ruled conclusively that trade and fishery agreements with Morocco do not apply to Western Sahara as Morocco does not have jurisdiction over the territory.⁴³ The latest ruling from 2021 states that explicit consent can only be given by Western Sahara’s liberation movement Polisario.⁴⁴ In November 2020, after 29 years, the ceasefire broke down. The backdrop was increased tensions between Morocco and Western Sahara’s liberation movement Polisario, linked to a land passage that Morocco uses to export goods - including fishery products - over to neighboring Mauritania.⁴⁵ Polisario has warned that the waters off Western Sahara are now also part of a war zone.⁴⁶

Western Sahara and Norwegian salmon farming companies

There are several reasons why all Norwegian companies should take an active stance against

becoming involved in the trade of goods from occupied territories. International law is clear that every people has the right to decide over their own country and resources, a right that is clearly formulated in the Declaration on the Granting of Independence to Colonial Countries and Peoples.⁴⁷ Any state that occupies and colonizes another country undermines international law as it deprives the people of their right to decide over their own resources.

Norwegian authorities are clear on the matter:

“Since 2007, the Norwegian authorities have advised against Norwegian business and industry engaging in trade, investment, natural resource exploitation and other forms of business activity in Western Sahara, which are not in accordance with the wishes of the Sahrawi, and may consequently be contrary to international law”, Stated Foreign Minister Ine M. Eriksen Søreide in the Norwegian Parliament, 7 June 2019.⁴⁸

In the questionnaire we sent to the 40 largest Norwegian fish farming companies in connection with this report, we asked whether the companies themselves have guidelines to ensure that fish feed used in production does not originate from fish caught outside the territory of Western Sahara. None of the companies that responded to our inquiry have specific guidelines regarding Western Sahara. However, several companies were interested in ensuring that the fish feed they used did not originate in Western Sahara, to avoid contributing to maintaining Morocco’s illegal occupation. Several of the companies replied that they are sure that the feed does not contain fish from Western Sahara through the traceability requirements that they set for their feed suppliers, and through answers that the feed suppliers have given the fish farming companies to questions about this.

Of the most prominent companies, Grieg Seafood answered that they require that the feed suppliers follow Norwegian laws and regulations and that compliance with the Foreign Ministry’s advice against trade with Western Sahara is included in this, but that they are now considering specifying this in a new feed policy. Grieg Seafood also specified that among their feed suppliers, only BioMar receives marine ingredients from West Africa, specifically from Morocco and Mauritania, and further replies that:

“As far as Morocco is concerned, BioMar has internal routines to ensure that these ingredients are not fished in Western Saharan waters. Among other things, they do not buy from factories in the geographical vicinity of Western Sahara or where there is a risk that the fisheries are from Western Sahara.” (our translation)

Lerøy, one of the most prominent players in the industry, replied that their feed supplier Cargill had informed them that in Cargill’s contracts with Mauritanian suppliers, it is “defined that fishing will not take place in the waters of Western Sahara.”



These are the companies’ replies

In total, we received 23 answers to the questions we sent to the 40 companies.⁴⁹

Two of the largest aquaculture companies, MOWI and Salmar, failed to respond to the inquiry. The other companies that did not respond were SinkabergHansen, Alsaker Fjordbruk, Erko Seafood, Tombre Gruppen, Ellingsen Seafood, Gratanglaks, Salaks, Steinvik Fiskefarm, Arnøy Laks and Firda Seafood.⁵⁰

Companies that declined to participate, or that replied that they did not have the capacity to respond: Masøvål Fiskeoppdrett, Gigante Havbruk, Flakstadvåg Laks, Blom Fiskeoppdrett, Kobbervik and Furuholmen Oppdrett / Br. Birkeland Farming AS.

We contacted the 40 largest fish farming companies in Norway based on turnover⁵¹ and asked them five questions:⁵²

1. *Does the company require its feed suppliers to publicly report on the geographical origin and composition of the fish feed they produce, including which specific catch areas the feed originates from?*

The vast majority of fish farming companies replied that they either require the feed suppliers they use to report on the origin and composition of raw materials in the feed, or that the feed companies themselves already do this. Lerøy requires, for example, that all raw materials be covered by a tracking system that provides a complete overview of all the raw materials used, with details of fish species and catch or production area. Grieg Seafood “requests geographical origin for ingredients that have a risk element attached to it, such as fisheries (fishmeal and fish oil) and soy” and has this information publicly available on its website.⁵³

Many of the companies replied that the feed companies themselves provide information about the fish species used, their origin, and whether trimmings or whole fish were used in their annual and sustainability reports, that are publicly available. The main feed companies, such as BioMar, Cargill and Skretting, also report on fish species, production methods, certification and sustainability rankings through the Ocean Disclosure Project, where this information is made public.⁵⁴

The fish farming company Kvarøy uses so-called blockchain tracking on all ingredients in the feed

to be able to track the data along the entire production chain.

2. *Does the company have a policy that requires the feed supplier to reduce the use of wild fish in feed production?*

When it comes to demands to reduce the use of wild fish in feed production, there is a wide variation in the responses from the various companies.

Kvarøy replies that they have worked to reduce the use of wild fish over many years and that in the custom-made feed they use, there is “only fish that can not be used for human consumption, i.e., trimmings” (our translation). Instead of fishmeal, Kvarøy uses a substitute with algae produced on residual raw material from sugar production in Brazil.

Of the most prominent companies that responded to the inquiry, Lerøy and Cermaq answered that they do not demand a reduction in the use of wild fish in feed production but are concerned about sustainability in ingredients and feed composition. Lerøy “increasingly uses cuttings from wild fish production and at the same time sets strict requirements for which marine raw material can be used” (our translation).

Several of the companies answer that they want to use as much fish trimmings as possible in the feed, such as Nova Sea, which has requirements for reduced use of wild fish in their feed. Bremnes Fryseri aims to have 25-30% fish trimmings in the marine ingredients, and to reduce the use of fish oil, Bremnes Fryseri has also replaced parts of

the fish oil with algae oil and algae flour. Salmon Group, which negotiates feed agreements for several small and medium-sized fish farming companies, replied that they require from feed suppliers that “the largest possible share and a minimum of 30% of the fishmeal must be produced from trimmings” (our translation). For 2021, Salmon Group writes that their leading supplier states that 41% of the fishmeal and 23% of the fish oil came from trimmings.

Several of the companies also answer that they are interested in using alternatives and new raw materials; for example, Eide Fjordbruk works to develop fermented plant raw materials, insect flour, and kelp flour through the subsidiary Norforsk AS. Grieg Seafood points out that they are looking for alternative marine ingredients, but that in the development of alternatives one must ensure that there are no other unintended impacts on environmental and social conditions.

3. *Do you have guidelines related to the sustainability of the feed you buy? If so, can you share these with us?*

The most significant players state that they have their own guidelines for sustainability which are available via their websites and annual and sustainability reports. On the other hand, several of the medium-sized aquaculture companies state that they only require feed manufacturers to sell feed that is sustainability certified, either through ASC, MarinTrust, or Global G.A.P.

From the responses we received, it was clear that several companies are only going by external certification schemes, and many refer to the sustainability reports and requirements for the

feed companies instead of guidelines of their own. Eidsfjord Sjøfarm, for example, only replied that they have agreements with Norwegian fish feed producers and referred to «their work and requirements in relation to sustainability.» Bolaks is another example, which to the five questions we sent, only answered that the company itself is GlobalGap certified and that they have a policy of using only certified feed suppliers (stating which these were). Emilsen Fisk also refers only to the feed companies’ reports and sustainability goals, and to ASC certification, even on the question of whether the company has guidelines to ensure that fish feed used in production does not originate from fish fields outside occupied Western Sahara.

4. *Which fish feed suppliers do you use?*

Of the fish farming companies that responded, BioMar, EWOS / Cargill and Skretting are most often stated as the feed suppliers, and it is not uncommon to use several of them simultaneously.

5. *Does the company have guidelines to ensure that fish feed used in production does not originate in fishing grounds outside the territory of Western Sahara?*

None of the farming companies that responded stated having their own guidelines to ensure that ingredients in the fish feed do not originate in Western Sahara. However, all the companies that answered this question said that they either do not have feed originating from the West African region at all or that they have received confirmation from the feed supplier that the feed does not originate in Western Sahara in those cases where the feed comes from the region.

Fishing boats along the beach in Senegal.



A sustainable example

Kvarøy Fiskeoppdrett AS is a family business that has invested fully in sustainable salmon production. With the American food chain Whole Foods as a significant customer, Kvarøy specializes in producing farmed salmon for consumers who want salmon that is as healthy and sustainable as possible. This is reflected in the company’s choice of feed, which they get custom-made, and where only trimmings, not whole fish, are used in the production. In addition, Kvarøy has started using alternative feed sources, such as algae produced from residual raw materials from sugar production in Brazil, and is also working on new feed sources made with sugars from trees and insects in collaboration with Foods of Norway. When it comes to traceability, Kvarøy is also a pioneering company that ensures full traceability and uses blockchain tracking on all ingredients. Kvarøy has no ingredients in their feed originating from the West African coast and, therefore, not from Western Sahara.

Mauritania’s fish feed problem

The port of Nouadhibou, where the majority of Mauritanian fishmeal and fish oil production takes place.



When it comes to marine feed ingredients from West Africa, several fish farming companies state Mauritania as a source of marine feed ingredients and the feed producers Cargill and Biomar as the parties they purchased from.⁵⁵ In both cases, the imports come from suppliers in Mauritania who are certified under a so-called Fisheries Improvement Project (FIP).

A Fisheries Improvement Project aims to improve the management of fishery resources and to prepare and support producers to be able to meet the requirements of certification standards such as MarinTrust and MSC (Marine Stewardship Council) in the future. In Mauritania, such a project has been established as a collaboration between Mauritanian fisheries authorities, the Mauritanian Institute of Marine Research, local business interests and international fishmeal and fish oil importers.⁵⁶ Among the participating international companies is OLVEA, a French company that has been involved in importing fish oil from occupied Western Sahara.⁵⁷ The Norwegian company Pelagia is also one of the partners, in addition to major players such as BioMar and Cargill, that have recently joined.⁵⁸

Several of the responses from various fish farming companies included information from Cargill and BioMar about the Mauritanian fisheries improvement project. Cargill joined in 2021, and Lerøy replies that according to Cargill, the purpose of the project is:

*«to develop sustainable regulation of the stock, and to work with the authorities to protect and secure important fish species for direct human consumption in Mauritania, so that these do not go to the export or production of fish oil or fish meal. This addresses the concerns about food security in Mauritania. At the same time, developing sustainable regulation of the stocks that have not been used or desired as food for the local population could develop a sustainable industry for the production of fishmeal and oil. By working with the authorities, fishermen, and local stakeholders in Mauritania, we work to develop a more sustainable outcome for the country»(our translation).*⁵⁹

Lerøy also states in their correspondence with us that Biomar participates in the Mauritanian fisheries improvement project *”due to its focus on artisanal fishermen, stock management and ensuring*

that a percentage of the catch goes to building resilient Mauritanian communities” (our translation).⁶⁰

The Mauritanian Fisheries Improvement Project was initially established to qualify for MarinTrust certification over time. Along the way, MSC certification was also included in the project, so the goal now is to work to be eligible for both MarinTrust and MSC certification.⁶¹ FIPs are, in principle, a step toward being able to qualify for certification in the future, and MarinTrust operates a labeling scheme for such programs as The MarinTrust Improver Program. Nevertheless, it is currently not permitted for any production facility in Mauritania to use this label. According to MarinTrust, this is because an external audit has not yet been carried out due to the covid pandemic.⁶²

Greenwashing?

Despite the positive accounts of the Mauritanian Fisheries Improvement Project in the responses we received from Norwegian fish farming companies, this type of project has also received a lot of criticism. First, in addition to Mauritanian official institutions, only private business interests are represented. Feedback Global, which has worked for many years with sustainable food and feed production, states that they are concerned that FIPs such as in Mauritania might act as a ‘smokescreen’ – creating an impression that a fishery is sustainable or at least improving – ‘sustainability in progress’ - when in reality nothing has changed.

Furthermore, Feedback Global points out that FAO assessments have shown that small pelagic stocks off the coast of West Africa are in a poor state with a lack of fisheries management and management capacity. It is not clear how FIPs, whose key partners have a vested commercial interest in maintaining access to those fisheries, will be able to solve those very serious structural problems.⁶³ None of the parties in the project represent local civil society or representatives of fish processors and fishmongers.

By reading the documents available from the Mauritanian Fisheries Improvement Project, it is clear that despite a strong focus on ensuring the management of fish stocks to meet the certification requirements, there is a conflict of interest between commercial interests and considerations

of local food security and social impacts. A FIP report from 2021 recognizes that it is necessary to encourage small-scale fishing to supply local markets with fish and increase fish consumption per capita. Nevertheless, it is followed up by the wish for a quota of pelagic fish set aside only for fishmeal.⁶⁴ This is despite the fact that it has been the Mauritanian authorities’ stated political goal to phase out fishmeal production completely.

In the information that several fish farming companies sent about the Fisheries Improvement Project in Mauritania, it was emphasized that they work together to ensure that essential fish species go to human consumption in Mauritania and that “a percentage of the catch goes towards building resilient Mauritanian communities.” The Mauritanian authorities have introduced a law that at least 20% of all catch should go directly to human consumption, and it is to be expected that this law is followed. It is also not permitted to use important food fish such as round sardinella for fishmeal and fish oil production as part of the Mauritanian Ministry of Fisheries’ national fisheries plan.⁶⁵ In the FIP documents, as far as we can see, there are no other references that can be linked to a percentage of the catch going to building resilient Mauritanian communities other than just following Mauritanian law. The publicly available information from the Mauritanian FIP is also apparent in that no assessments of social aspects, including human rights and labor rights, have been done so far. However, this is required to obtain certification.⁶⁶

The organizations Greenpeace Africa and Changing Markets have been working on these issues for a long time and have stated that the Fisheries Improvement Project in Mauritania is problematic due to the structural overcapacity in fishmeal and fish oil production and overfishing of small pelagic fish in Mauritania and the region. Greenpeace Africa and Changing Markets describe it as a type of greenwashing or eco-labeling, which overlooks the fundamental fact that the rights of local small-scale fishers, fish processors and fishmongers and the right to food throughout the region must come first before the interests of feed producers in rich countries. The organization CAOPA, which represents African small-scale fishing communities, has also stated that “[i]t would be unjustifiable for

us if aquaculture dependent on fishmeal, produced in competition with fishermen fishing for human consumption, were to be declared sustainable.”⁶⁷

The network organization Coalition for Fair Fisheries Arrangements (CFFA) is critical of the Mauritanian FIP. For several years, CFFA has questioned the effect that international trade agreements with African countries have on small-scale fisheries and communities on the continent. According to Andre Standing from CFFA, it is doubtful that Mauritanian fisheries can be sustainable in the short or medium-term unless most fishmeal factories are closed. He also points out the conflict of interest in the Mauritanian FIP, as it is financed by companies with an obvious self-interest in the fishmeal industry, while small-scale fishers are not represented. Instead of participating in such projects, CFFA encourages European companies and investors to withdraw entirely from Mauritania’s fishmeal and fish oil industry.⁶⁸

The fishing expert Ad Corten states that due to the lack of regional management of West African fish stocks, it is very likely that the same depletion that has been seen of round sardinella will happen to the stocks of sardines.⁶⁹ This means that the fishmeal and fish oil industry in Mauritania can lead to a depletion of the sardine stock in Western Sahara in a few years’ time. When Norwegian farmed salmon is fed in part on fish oil from Mauritania, it means that the industry today may risk destroying the future fish stocks in Western Sahara, regardless of how the conflict is resolved.

Another problematic aspect is that the Mauritanian FIP has an explicit goal of supporting cooperation with Moroccan authorities and researchers in the management of common fish stocks.⁷⁰ If such cooperation also involves the management of the waters outside occupied Western Sahara - which is likely - it is not the Moroccan authorities but Polisario that would be the legitimate representative. The European Court of Justice has made it clear that Polisario is the internationally recognized representative of the Sahrawi people,⁷¹ and Polisario is the partner that needs to be involved in discussions on cooperation in managing regional fisheries resources that include Western Saharan waters.

Certification: Wrong answer to the right question?

There are differing opinions about certification. Organizations such as Feedback Global support the use of by-products such as fish trimmings in fish feed but are very critical of the certification of fish or fish stocks (and products made from these as fishmeal and fish oil) where it is specifically intended for use in feed for either aquaculture or animal feed. To be credible, certification schemes should not certify what is called reduction fisheries, where fish are caught specifically to make fishmeal and fish oil, the organization points out.⁷²

The researcher Ad Corten, explains that he is not opposed to using fish to produce fishmeal, but that he is opposed to doing so in those cases where the fish could have been used for human consumption. In Mauritania, the structural problems of overfishing and lack of control, quotas and management are so great that fishmeal and fish oil production are not sustainable at all. Initiatives such as the fisheries improvement project in Mauritania are driven by the economic interests of the fishmeal industry. Hence they will not argue for a reduction of catches of the fishmeal fleet, and thus not solve these major structural problems that cause the industry by depleting stocks that are vital for food security throughout the region.⁷³ According to marine biologist Daniel Pauly, certification schemes are generally of little value in West Africa, because certification cannot prevent fishing activities from threatening food security in the region.⁷⁴

MarinTrust certification of marine raw materials is also problematic because the industry runs the

certification. There are several examples of the production of marine ingredients that have been certified by MarinTrust, but which have been shown to be linked to very unsustainable fisheries.⁷⁵ Regarding MarinTrust's certification, it is also worth mentioning that MarinTrust certifies several fishmeal and fish oil factories located in occupied Western Sahara.⁷⁶ By certifying production there, Morocco's fishing activities, that violate international law and international trade agreements in the territory they occupy, are legitimized and greenwashed. The rightful owners of the fish are the Sahrawi people. The production of fish oil and fishmeal in the occupied territories contributes to undermining the food security of the Sahrawi people, who do not have access to the fish. By certifying production facilities in the Moroccan-occupied territory, MarinTrust also contributes to this.

Andre Standing from The Coalition for Fair Fisheries Arrangements (CFFA) also points out that it is worrying that IFFO, which is behind MarinTrust and which represents business interests in the production of marine ingredients, is trying to portray the industry as necessary for achieving the UN's Sustainable Development Goals and to reduce poverty and secure food security in developing countries.⁷⁷ As we have seen in this report about fishmeal and fish oil production in Mauritania and the industry's negative consequences for food security throughout the West African region, it is problematic to portray the industry as a positive contributor to achieving the UN's Sustainable Development Goals.

Fishermen at the port of El Aaiún in occupied Western Sahara. MarinTrust has listed Western Sahara as part of Morocco, contrary to the position of the UN and the European Court of Justice.



MarinTrust: This standard was formerly called IFFO RS Standard because it was the IFFO, the International Fishmeal and Fish Oil Organization that represents business interests, that developed it. The MarinTrust standard is designed to certify **marine ingredients**.

MSC (Marine Stewardship Council): MSC is an independent non-profit organization that has developed a standard for sustainable fishing. The standard is made to certify wild-caught fish.

ASC (Aquaculture Stewardship Council): ASC is an independent non-profit organization, which like MSC, was initially started by WWF (World Wide Fund for Nature). The ASC standard has been developed to certify aquaculture, i.e., farmed fish. Particularly relevant for the feed industry are the requirements set by the ASC standard for the maximum level of how much wild-caught fish can be used as a feed ingredient. In addition, the standard requires that the fish farms must be able to guarantee the complete traceability of the feed.

Global G.A.P.: A standard for certifying good agricultural standards, also used to certify fish farms.

Debio: Certification of organic salmon where it is a requirement that the fish feed does not contain any fish as raw material that could have been used for human consumption.

Thousands of Moroccans work in the fishing industry in occupied Western Sahara.

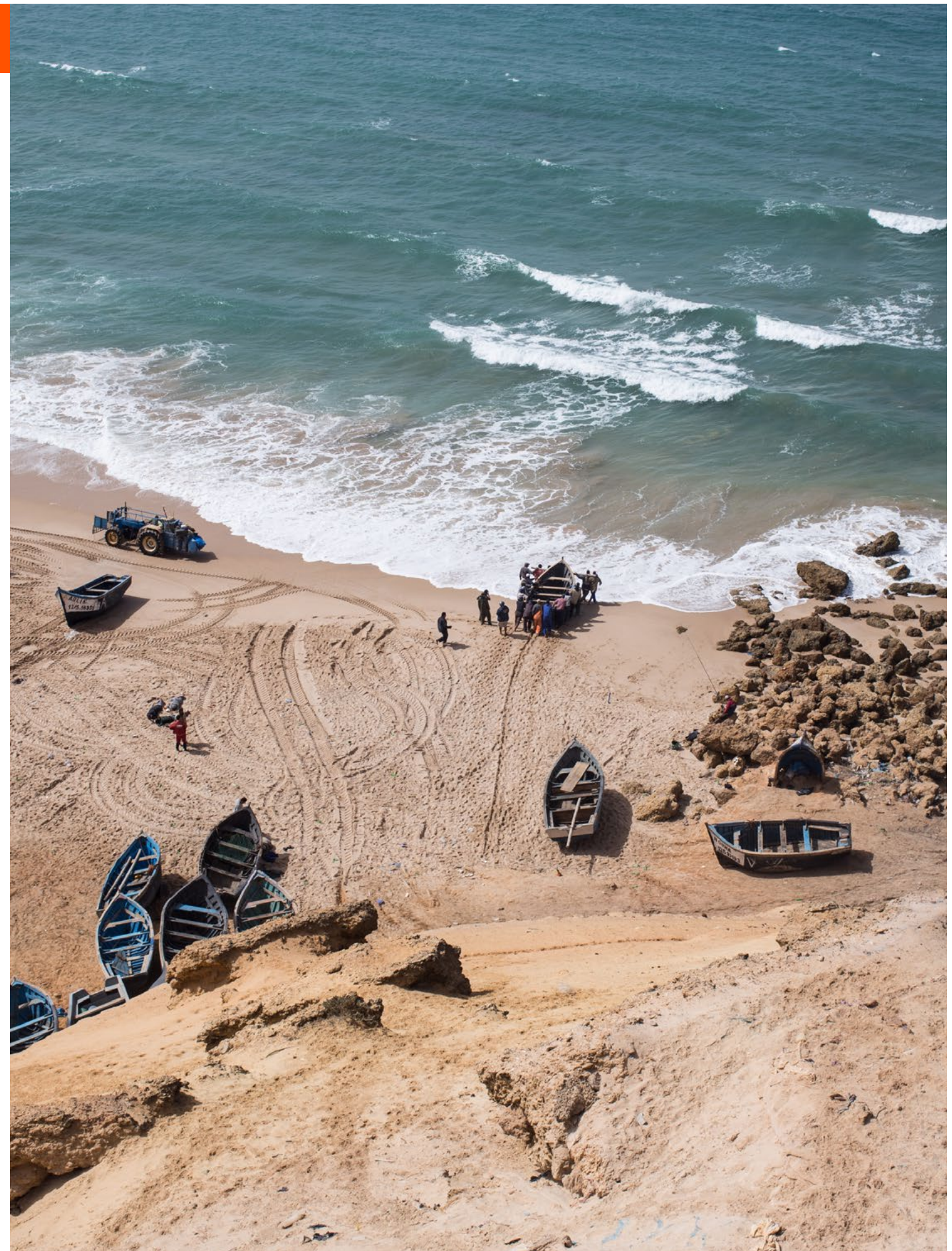
Recommendations

Recommendations to fish farming companies

- Ensure full and public traceability of marine ingredients;
- Follow best practice and only use trimmings or fish that are not fit for human consumption for the marine part of the feed.
- Use alternative feed sources in those cases where these sources are sustainable;
- Stop using feed with marine ingredients originating in Mauritania;
- Include in feed policy that no marine ingredients must come from the waters outside Western Sahara;
- Include in contracts with feed producers that they must be able to guarantee and document that the fish used as raw material does not come from Western Sahara;
- Stop the use of certification schemes that do not take into account human rights and international law in Western Sahara, which thus have little credibility in assessments related to sustainability;

Recommendations to the government

- Demand full and public traceability in the aquaculture industry that goes back to the original fishing grounds for the fish used to produce marine feed, in line with the purpose of the Norwegian 'Transparency Act' to ensure the public access to information on how companies handle negative consequences for fundamental human rights;
- Set specific requirements for the aquaculture industry, in line with the coalition agreement (Hurdalsplattformen), to ensure that all fish feed comes from sustainable sources by 2030. To ensure sustainability, companies should be required to use only fish trimmings and by-products in fish feed production. Fish fit for human consumption must not be used to produce fish feed, especially in cases where catching the fish for use in fish feed contributes to undermining food security in the country of origin;
- Include food security in the Global South in assessments of whether the goal of providing sustainable feed sources by 2030 has been achieved, and in long-term plans for the aquaculture industry;
- Make it clear to Norwegian fish farming companies that trade with Western Sahara supports violations of international law and that companies must ensure that raw materials for fish feed do not originate in Western Saharan waters.



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