



Global
Roundtable
on marine
ingredients



Partner
Africa

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2023

Track the fish

A human rights impact assessment of the
small pelagic fish value chain in Senegal
and Mauritania



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1 Executive Summary

Partner Africa has been commissioned by the Global Roundtable on Marine Ingredients to undertake a Human Rights Impact Assessment (HRIA) of the small pelagic fish value chain in Mauritania and Senegal in 2022. This report outlines the findings of this study.



1.1. BACKGROUND AND METHODOLOGY

Small pelagic fish consist of different types of migrating fish usually moving in schools. Common species include herring, sardines, anchovies and mackerel. When fresh, dried, salted or smoked they are used for human consumption, but they are also (in addition to fish trimmings) a key source for fishmeal and fish oil (FMFO) production.

The rapid development of the FMFO industry in West-Africa has been increasingly criticised for exploiting small pelagic fish stocks, adversely impacting food security, and polluting the local environment¹. The Global Roundtable on Marine Ingredients wants to better understand these issues raised within the small pelagic fish value chain at all levels - fisheries, artisanal processing and FMFO factory level - and opportunities for making improvements in the sector.

As such, Partner Africa undertook a human rights impact assessment (HRIA) of the small pelagic fish value chain in Mauritania and Senegal to identify positive and adverse impacts of the value chain on all actors involved (including FMFO factories and artisanal processing) and recommendations needed to drive positive change within this sector. In Senegal, the scope of the study was limited to only identifying impacts for artisanal fishers and processors. In Mauritania, the scope of the study also included identifying impacts at the commercial vessel level as well as the FMFO factory level.

A HRIA is part of a business' due diligence efforts as explained in the UN Guiding Principles on Business and Human Rights² and helps businesses identify salient issues in their supply chains and appropriate mitigation and remediation plans. In short, a HRIA uses human rights principles, and looks at impacts using a human rights lens and differentiates between rights-holders (i.e. stakeholders that have a particular entitlement such as workers and community members) and duty-bearers (i.e. stakeholders that have a particular duty to protect or respect human rights such as the government and (inter) national businesses).

The methodology of this study is inspired by the internationally recognised HRIA methodology³ as well

as the sector-wide human rights impact assessment (SWIA)⁴ methodology - both developed by the Danish Institute on Human Rights. The study included desk-top-based research, virtual interviews with key stakeholders and experts from public and private sectors, and field research to engage - through interviews and focus group discussions - with all rights-holders groups identified and collect (mainly) qualitative data. The field visit consisted of a visit to Saint-Louis and Joal-Fadiouth in Senegal at the end of July 2022 and two visits to Nouadhibou in Mauritania at the end of September 2022 and early January 2023. In total, this study engaged 216 stakeholders.

1.2. MAIN FINDINGS

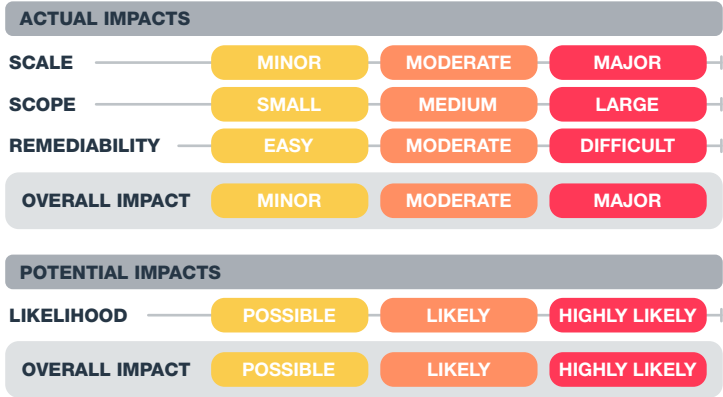
One of the objectives of the study was to provide the members of the Global Roundtable on Marine Ingredients with an overview of actual and potential positive and adverse impacts for all the different types of rights-holders in the small pelagic fish value chain.

This study found that there is much potential for the small pelagic fish industry to positively impact human rights of the local population, such as:

1 The **right to an adequate standard of living** and the **right to work** for the large number of direct and indirect (formal and informal) jobs created throughout the value chain, stimulating many related and peripheral activities for coastal peoples and communities.

2 The **right to food** as small pelagic fish - when processed through artisanal processors and sold on the local market - is a source of high protein food for the local population.

The adverse impacts identified in this study have been assessed based on the severity of the impact (scale, scope and remediability) using the framework to the right – aligned with the UNGPs.



Annex I explains the definitions of the impact ratings.

MAURITANIA

SENEGAL

The tables list various adverse impacts such as Pollution, Availability, Accessability, Acceptability and Quality of Food, Regular Employment, Child Labour, Occupational Health & Safety, Management, Information, and Advice, Worker Representation, Trade Unions and Organisations, Contracts, Working Hours, and Debt Burden. For each impact, the severity (Scale, Scope, Remediability) and likelihood (Possible, Likely, Highly Likely) are indicated, along with the overall impact rating. The affected rights-holders are also listed, including Artisanal Fishers, Pirogue Owners, Community Members, Children (Orphans), and Other (Debtors).

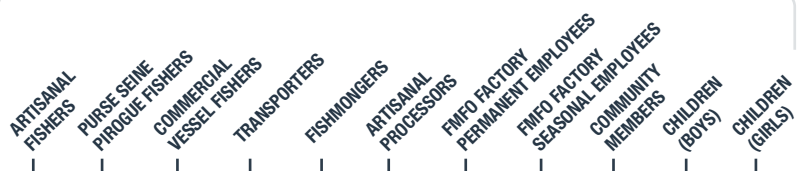
The two tables that follow provide a summary overview of all adverse impacts identified in Mauritania and Senegal, their overall impact rating, and a list of the rights-holders affected by the impact. Two separate tables have been created, one for Mauritania and one for Senegal though it must be noted that many of the findings are the same in both countries. It must also be noted that the situations vary from factory to factory, vessel to vessel, pirogue to pirogue and as such this table summarises the general trends as highlighted in our research. A further research phase investigating factory per factory would be needed in order to differentiate best practices from malpractices.



MAURITANIA

- = RIGHT TO A HEALTHY ENVIRONMENT
- = RIGHT TO AN ADEQUATE STANDARD OF LIVING
- = LABOUR RIGHTS

AFFECTED RIGHTS-HOLDERS



	ARTISANAL FISHERS	PURSE SEINE PIROGUE FISHERS	COMMERCIAL VESSEL FISHERS	TRANSPORTERS	FISHMONGERS	ARTISANAL PROCESSORS	FMFO FACTORY PERMANENT EMPLOYEES	FMFO FACTORY SEASONAL EMPLOYEES	COMMUNITY MEMBERS	CHILDREN (BOYS)	CHILDREN (GIRLS)
POLLUTION											
Despite the fact that some factories do have smoke filters on their chimneys, according to all stakeholders interviewed, smoke and odours from the factories have impacted their right to health. It may lead to respiratory and skin problems, which community members and children have reported and/or showed during the field research. This issue was also reported by the FAO.	ACTUAL	ACTUAL	—	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
Despite the fact that some factories do have stick-waters treatment plants, stakeholders interviewed complained about some factories still releasing untreated water into the ocean. This is likely to affect marine ecosystems, as reported by all community members and fishers who see fewer coastal lobsters and shrimps. In addition, this is likely to affect people's right to health as wastewaters have been linked to cases of diarrhoea, vomiting and nausea. This issue was also reported by the FAO.	ACTUAL	ACTUAL	—	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
General waste (plastics, bins etc) and production waste have been reported and observed (during the field research) to be dumped on the beach, landing site and artisanal processing site by stakeholders themselves. This is likely to affect marine ecosystems, as reported by all community members and fishers. In addition, this is likely to affect people's right to health as waste can lead to ill-health and affect fish quality.	ACTUAL	ACTUAL	—	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
AVAILABILITY, ACCESSIBILITY, ACCEPTABILITY AND QUALITY OF FOOD											
Limited availability (e.g. fish becoming a scarcer resource), accessibility (e.g. all stakeholders and desk-top research documented a price increase of especially sardinella), and quality of fish (e.g. due to a lack of freezing capacities and dirty landing/processing sites) for human consumption.	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
REGULAR EMPLOYMENT											
Loss of income and opportunities to work due to the competition with fishing vessels (for fishers) and FMFO factories (for artisanal processors), depleting fish stocks and increasing prices of fish operations, limited operations in FMFO factories (affecting factory employees)	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	—	—	—
CHILD LABOUR											
Children working on artisanal boats (both pirogues and purse seine pirogues) and landing sites engaged in child labour	—	—	—	—	—	—	—	—	—	ACTUAL	—
Possibility of underaged workers hired as daily labourers in FMFO factories due to a lack of age verification systems	—	—	—	—	—	—	—	—	—	POTENTIAL	—
OCCUPATIONAL HEALTH & SAFETY											
Fishers on pirogues and purse seine pirogues reported hazardous working conditions at sea, with a risk of sinking boats and collisions with commercial vessels. Fishers wear lifejackets, but there is no other life saving equipment on board	ACTUAL	ACTUAL	—	—	—	—	—	—	—	POTENTIAL	—
Fishers on pirogues and purse seine pirogues reported a risk of fire caused by the use of gas for cooking onboard the boats	ACTUAL	ACTUAL	—	—	—	—	—	—	—	POTENTIAL	—
Fishers on purse seine pirogues reported poor sleeping conditions, such as sleeping while sitting during long overnight fishing operations	ACTUAL	ACTUAL	—	—	—	—	—	—	—	POTENTIAL	—
Accidents such as cuts have been reported as a result of using knives for fishing operations and processing, and burns from processing stoves	ACTUAL	ACTUAL	—	—	ACTUAL	ACTUAL	—	—	—	POTENTIAL	—
Catching diseases due to unhygienic working spaces	—	—	—	ACTUAL	ACTUAL	ACTUAL	—	—	—	—	—
There is a risk of accidents for transporters due to the use of very old vehicles for transporting fish in the artisanal sector	—	—	—	POTENTIAL	—	—	—	—	—	—	—
Artisanal processors risk respiratory diseases caused by fish smoking	—	—	—	—	—	POTENTIAL	—	—	—	—	—
HARASSMENT, DISCRIMINATION, AND ABUSE											
Risks of discrimination, harassment, and/or abuse within some factories or onboard vessels due to the limited enforcement of policies, trainings and reporting mechanisms	—	—	POTENTIAL	—	—	—	POTENTIAL	POTENTIAL	—	—	—
WORKER REPRESENTATION, TRADE UNIONS AND GRIEVANCES											
Difficulties raising complaints, issues and/or grievances (anonymously) experienced at the workplace (either on boats, vessels, processing sites, factories or in the community)	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	—	—
CONTRACTS, WORKING HOURS											
Lack of formal work contracts impacting decent working conditions	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	—	ACTUAL	—	—	—
Risk of excessive working hours depending on the availability of fish	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	—	POTENTIAL	—	—	—
DEBT BONDAGE											
Risk of debt bondage as a result of financiers financing a fishing operation	POTENTIAL	POTENTIAL	—	—	—	—	—	—	—	—	—

SENEGAL

- = RIGHT TO A HEALTHY ENVIRONMENT
- = RIGHT TO AN ADEQUATE STANDARD OF LIVING
- = LABOUR RIGHTS

AFFECTED RIGHTS-HOLDERS



	ARTISANAL FISHERS	PURSE SEINE PIROGUE FISHERS	TRANSPORTERS	FISHMONGERS	ARTISANAL PROCESSORS	COMMUNITY MEMBERS	CHILDREN (BOYS)	CHILDREN (GIRLS)
POLLUTION								
All 48 community members that participated in the FGD reported that factories release untreated water into the sea. It was not the objective of this research to investigate factory by factory, however, the fact that this practice still happens does affect marine ecosystems, as reported by all community members and fishers. In addition, this is likely to affect people's right to health as wastewater from factories have been linked to cases of diarrhoea, vomiting and nausea.	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
General waste (plastics, bins etc) and production waste have been reported and observed (during the field research) to be dumped on the beach, landing site and artisanal processing site by stakeholders themselves. This is likely to affect marine ecosystems, as reported by all community members and fishers. In addition, this is likely to affect people's right to health as waste can lead to ill-health and affect fish quality.	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
Rising sea levels impacting the space available for artisanal fish processing in Senegal, as reported by all processors in Saint-Louis.	—	—	—	—	ACTUAL	—	—	—
AVAILABILITY, ACCESSIBILITY, ACCEPTABILITY AND QUALITY OF FOOD								
Limited availability (e.g. fish becoming a scarcer resource), accessibility (e.g. all stakeholders and desk-top research documented a price increase of especially sardinella), and quality of fish (e.g. due to a lack of freezing capacities and dirty landing/processing sites) for human consumption.	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
REGULAR EMPLOYMENT								
Loss of income and opportunities to work due to the competition with fishing vessels (for fishers) and FMFO factories (for artisanal processors), depleting fish stocks, oil exploration and increasing prices of fishing operations.	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	—	—	—
CHILD LABOUR								
Children working on artisanal boats (both pirogues and purse seine pirogues) and landing sites engaged in child labour	—	—	—	—	—	—	ACTUAL	—
Children working as female artisanal processor assistants	—	—	—	—	—	—	—	ACTUAL
OCCUPATIONAL HEALTH & SAFETY								
Fishers on pirogues and purse seine pirogues reported hazardous working conditions at sea, with a risk of sinking boats and collisions with commercial vessels. This is exacerbated due to fishers having to travel further away from the shore (e.g. oil exploration areas restricted for fishing). Wearing life-jackets is not common for fishers in Senegal as it is seen as not being 'brave enough'.	ACTUAL	ACTUAL	—	—	—	—	POTENTIAL	—
Fishers on pirogues and purse seine pirogues reported occasional fires caused by gas onboard the boats	ACTUAL	ACTUAL	—	—	—	—	POTENTIAL	—
Fishers on purse seine pirogues reported poor sleeping conditions, such as sleeping while sitting during long overnight fishing operations	—	ACTUAL	—	—	—	—	POTENTIAL	—
Accidents such as cuts have been reported as a result of using knives for fishing operations and processing, and burns from stoves	ACTUAL	ACTUAL	—	ACTUAL	ACTUAL	—	POTENTIAL	POTENTIAL
Catching diseases due to unhygienic working places	—	—	ACTUAL	ACTUAL	ACTUAL	—	—	POTENTIAL
Artisanal processors risk respiratory diseases caused by fish smoking	—	—	—	—	POTENTIAL	—	—	POTENTIAL
HARASSMENT, DISCRIMINATION, AND ABUSE								
All artisanal processors and 25% of the community members reported that long working hours, into the night, and the absence of electricity on-site can lead to dangerous situations for women and they fear attacks.	—	—	—	—	ACTUAL	—	—	POTENTIAL
WORKER REPRESENTATION, TRADE UNIONS AND GRIEVANCES								
Difficulties raising complaints, issues, and/or grievances (anonymously) experienced at the workplace (either on boats, processing sites or in the community)	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	—	—
CONTRACTS, WORKING HOURS								
Lack of formal work contracts impacting decent working conditions	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	—	—	—
Risk of excessive working hours depending on the availability of fish	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	—	—	—
DEBT BONDAGE								
Risk of debt bondage as a result of financiers financing a fishing operation	POTENTIAL	POTENTIAL	—	—	—	—	—	—

As these tables illustrate, adverse impacts have been identified at both artisanal and industrial fishing and processing levels. The results of this study are not meant to argue in favour of one industry over the other as both sectors are important and complementary. Instead, this study creates a better understanding of the impacts found in both sectors in Mauritania (only in the artisanal sector in Senegal) with one objective: for each sector to adapt its way of working to address the adverse impacts and maximise the positive impacts (such as its significance for people’s livelihoods). Such an adaptation could entail for example limiting the number of fishing vessels and operations.

In addition, it must be noted that with approximately 40 factories in Mauritania and 50+ commercial vessels fishing in its waters, practices vary greatly. The objective of this HRIA was not to conduct a detailed factory-per-factory nor vessel-per vessel investigation, but rather to convey the trends as reported by the representative sample of stakeholders interviewed. We recommend a second phase of investigation be conducted, looking into more details at each actor’s practices in order to differentiate those that adopt best practices from the others, and to help identify the specific mitigation measures needed to be implemented by each of them.

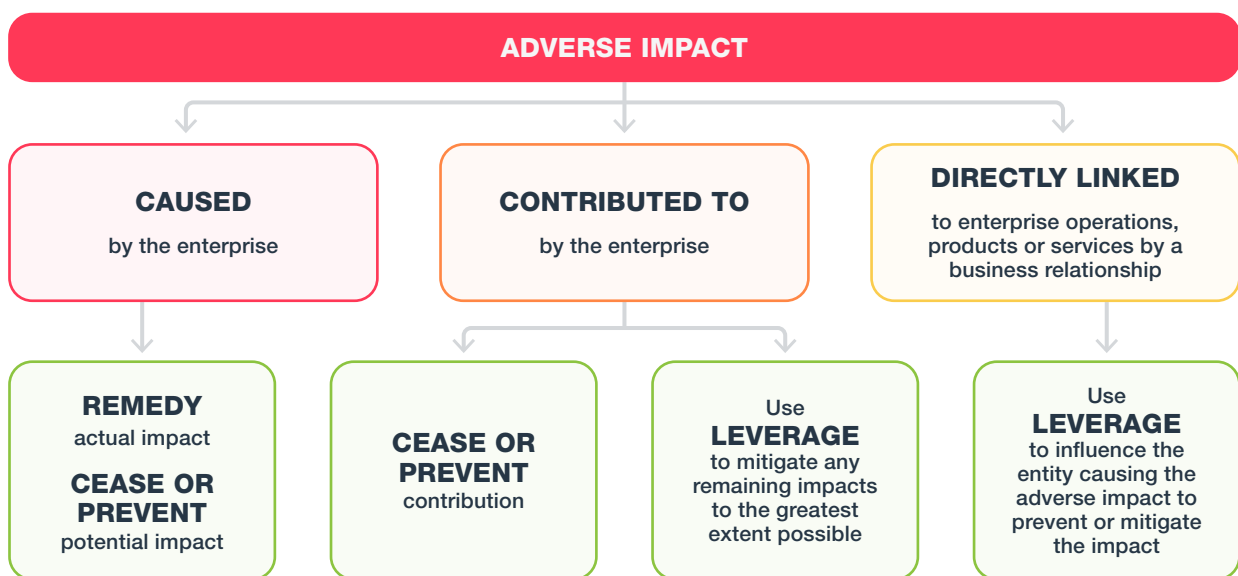
Also, in the course of 2022, the Mauritanian authorities have started enforcing important regulations aimed at limiting the impact of FMFO activity on fish stocks, on food security and on the environment. Despite the fact that some actors are temporarily negatively affected by these new measures (e.g. fishers having to travel further out at sea to fish), the measures are generally in line with what had been recommended by civil society and specialised working groups and are likely to have a positive effect on the sustainability of the small pelagics value chain in the country. However, the continuity of such enforcement measures remains to be seen and the long term negative impact on stakeholders must also be taken into account by the duty-bearers.

Both sectors - artisanal and industrial - are present in international supply chains meaning international businesses, buyers and investors have a duty of care towards all stakeholders. This duty of care extends towards the artisanal sector, even though it may seem further removed from their supply chain. The next section provides an overview of the recommendations that different duty-bearers in both sectors can implement to mitigate, remediate and prevent the impacts found.

1.3. RECOMMENDATIONS

As a result of the impacts identified in this study and the complex and overlapping root causes giving rise to these impacts, this study identified recommendations for each duty-bearer – for the government and policymakers, FMFO factory management and owners, international buyers and investors, civil society organisations, certification standards and for the Fishery Improvement Project (FIP) - to increase the potential positive impacts, whilst preventing, mitigating and/or remediation negative impact. The recommendations also take into consideration the business linkages to an impact (e.g. whether it causes, is linked to, or contributes to an adverse impact) as that determines what action duty-bearers should undertake. For example, if a FMFO factory 1) *causes* an adverse impact on people’s right to health as a result of smoke emissions and not installing smoke filters, and/or 2) *is directly contributing* to child labour for knowing that it is an issue on purse seine pirogues part of its supply chain but not taking any steps to prevent it, the actions the FMFO factory ought to undertake differ. In the first instance, they need to provide a remedy to those affected and cease and prevent the impact from occurring again. In the latter, they need to use their leverage to cease and prevent the impact but do not need to provide a remedy.

The following framework is used when identifying next action steps⁵:



Collaboration and buy-in from all duty-bearers are needed in order to drive changes in the industry. To illustrate, in order to get the FMFO factories on board and start implementing some of the recommendations outlined, the international buyers as well as the FIP can play an important role here for their leverage over the factories. In order to ensure the government cooperates, civil society can use their 'leverage' of campaigning and awareness raising (as they have already quite successfully done so), and also international buyers and investors can use their leverage as the national economy benefits from the export to international markets.

All the recommendations are explained in detail in the body of this report. As a start, it is recommended to set up a public-private partnership including roundtable meetings within the FMFO industry in West Africa consisting of all these above-mentioned duty-bearers. In order to catalyse positive change, it is crucial to improve social dialogue in the industry and to determine collaboratively which of the recommendations outlined in this report to prioritise. When determining that, **it is recommended to start with the recommendations mitigating the most salient impacts identified in this study which include:**

- 1 Environmental pollution impacting the right to a healthy environment and the right to health;
- 2 Food availability, accessibility and quality;
- 3 Loss of income and jobs;
- 4 Child labour; and
- 5 Occupational health & safety issues.

In addition, especially with regards to the recommendations that speak to behavioural, socio-cultural or economic change, it is recommended to start with piloting a sample of the interventions in a selection of fishing communities and then expanding the scope depending on what worked well or what didn't work well.

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2

Introduction and Industry Context



2.1. OBJECTIVES OF THIS HRIA

Partner Africa has been commissioned by the Global Roundtable on Marine Ingredients to undertake a Human Rights Impact Assessment (HRIA) of the small pelagic fish value chain in Mauritania and Senegal in 2022. The HRIA seeks to provide the Global Roundtable on Marine Ingredients with a better understanding of the key salient issues within the small pelagic fish value chain in Mauritania and Senegal on the different types of stakeholders involved within this industry. In addition, it also seeks to provide them with a better understanding of the root causes of these issues and develops recommendations for all duty-bearers involved in the value chain to inform and catalyse change.

A HRIA aims to identify positive and adverse human rights impacts for all stakeholders in the supply chain and those potentially adversely impacted by the industry or business, such as community members. It differs from social and economic impact assessments as it looks at the impacts using a human rights lens - using human rights sources⁶ as the benchmark of the study and differentiating between rights-holders (i.e. stakeholders that have a particular entitlement such as workers and community members) and duty-bearers (i.e. stakeholders that have a particular duty to protect or respect human rights such as the government and (inter) national businesses). When the human rights impacts of a wider industry in a specific country context are being assessed rather than the human rights impacts of one particular business, this is also being referred to as a sector-wide human rights impact assessment, as is true for this study. As an important element of undertaking a HRIA is stakeholder consultation and engagement, it is also a form of social dialogue.

A HRIA is part of a business' due diligence⁷ efforts as explained in the UN Guiding Principles on Business and Human Rights, which firmly establishes the corporate responsibility to respect human rights as a standard of expected conduct. Over the past few years, the number of HRIAs undertaken has rapidly increased as a response to the increasing number of legal cases brought against businesses for human rights and environmental impacts - either in their own operations or through subsidiaries.⁸

As a result, this HRIA is a timely study and it is the first attempt to link the impacts in the small pelagic fish value chain in Senegal and Mauritania - including at fisheries, artisanal processing and FMFO factory level - with the business and human rights framework. A linkage is most welcome, as highlighted in one of the interviews with

the Business and Human Rights Resource Centre, as it acknowledges and emphasises the role of duty-bearers, including businesses, to respect human rights in their value chains. This study will hopefully catalyse action in this sector by businesses (both national and international) as it will help them understand the key issues in their supply chains and key actions and improvements that are needed to address these issues and create change for people on the ground.

In Senegal, the scope of the study was limited to only engaging with artisanal fishers and processors (not FMFO factory actors and commercial vessels). In Mauritania, this HRIA engaged with all types of rights-holders involved in the small pelagic value chain - including artisanal fishers, purse seine pirogue fishers, commercial vessel fishers, transporters, fishmongers, artisanal processors, financiers, FMFO factory permanent employees and FMFO factory seasonal employees. Some of these rights-holders engaged with (i.e. FMFO factories and commercial fleets) form part of the Mauritanian Fishery Improvement Project (FIP) for small pelagics (further explained in section 2.3 of this report). Therefore, the results of this study can be used by the FIP to better understand key risks within the FIP and the action needed to drive positive change.

As explained earlier, this HRIA was not meant to conduct a detailed investigation into each actor's practices but rather present Human Rights impacts trends as lived and explained by the stakeholders interviewed. As such, even if some duty-bearers such as FMFO factories management, international buyers, vessels owners may adopt responsible practices, these are not necessarily visible for duty-bearers who, most of the time, talk about the industry as a whole. Progressive actors, for example those who are actively supporting the FIP, would gain a lot by engaging more proactively with duty-bearers, to showcase the actions they undertake but also to hear directly from them how they are affected by the industry. This would allow them to reduce risks and increase trust with their stakeholders.

2.2 SMALL PELAGIC FISH VALUE CHAIN BACKGROUND

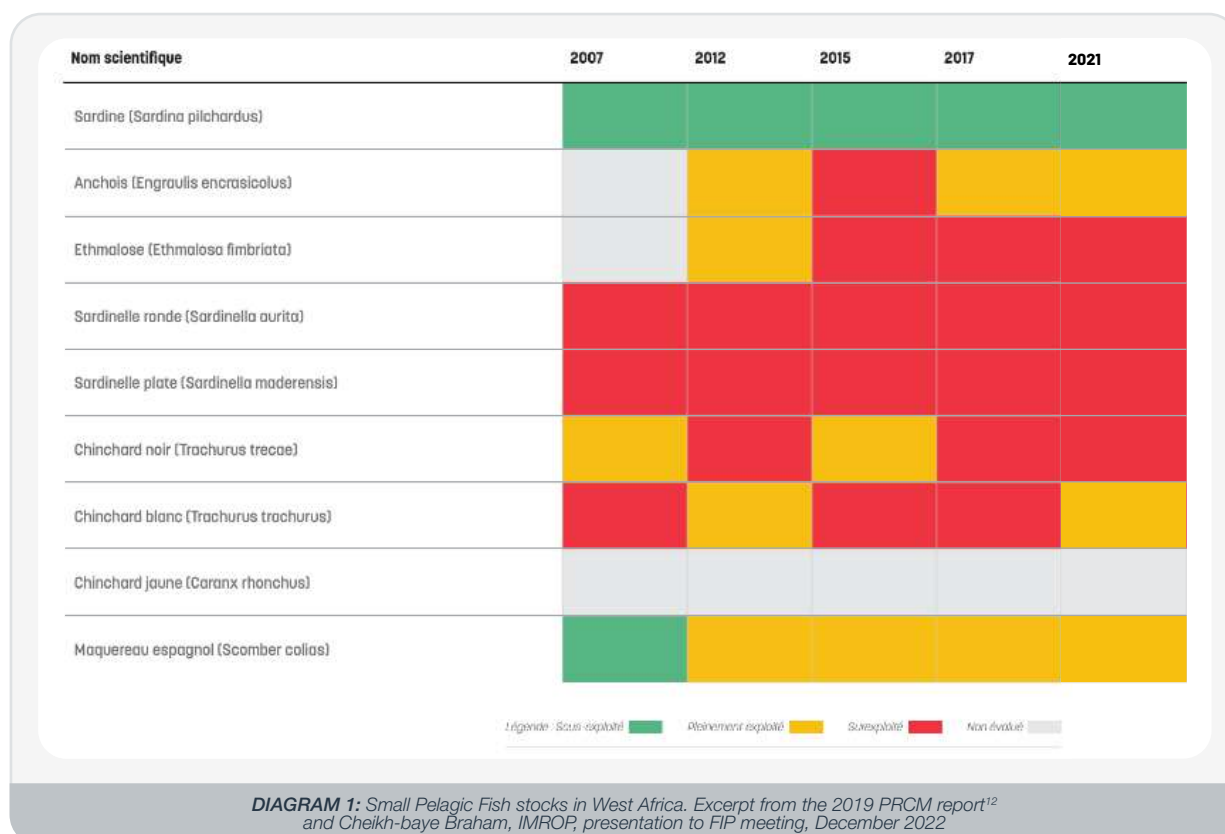
Small pelagic fish are a group of species that live in the column of water, not near the bottom or the shore. They consist of different types of migrating fish usually moving in schools. Common species include herring, sardines, anchovies and mackerel. These fish are known as low-trophic level species (or forage fish) in that they play an important role in the ocean food web. Many bigger animals such as larger fish, seabirds and sea mammals rely on them for food. However, small pelagic fish are

also some of the world's most caught and traded fish, making up 28%⁹ of global wild capture. In 2017, total catches of small pelagics in Mauritania, The Gambia, Senegal and Guinea-Bissau was around 1,300,000 tonnes, with Mauritania accounting for 65% of these followed by Senegal (28%)¹⁰.

As described in many reports¹¹ and as confirmed by our field research in Mauritania and Senegal, they represent a strategic commodity in West Africa because:

- ★ They play an important role in the food security of rural and urban populations with low purchasing power by providing protein at a more affordable price than other typical sources such as meat
- ★ They support for a large number of direct and indirect jobs throughout the traditional value chain for human consumption, while stimulating many related and peripheral activities
- ★ They are easy to transport once transformed (dried, salted, smoked), thus facilitating its availability in the most remote and isolated areas

As a result of a conjunction of factors in which overfishing plays a significant role, figures tend to show that many species of small pelagics (except for sardines) are already “fully exploited” or even overexploited.



Many countries have put in place limitations to fishing small pelagics (quotas, fishing zones, biological rest periods, prohibition to catch/sell juvenile fish, etc) and some industry actors have long taken steps to control their supply chain by certifying sustainable practices of fisheries. However, these commendable initiatives are not implemented widely enough on a regional scale to protect stocks from declining and avoid adverse impacts on the population's right to food from occurring.

2.3 THE FISHMEAL AND FISH OIL (FMFO) INDUSTRY

Small pelagic fish are also (in addition to fish trimmings) a key source for fishmeal and fish oil production by cooking, squeezing, drying and grinding them. Small pelagics' main source of food being plankton, and most small pelagics are fatter than other fish species.

Fishmeal and fish oil are therefore rich in minerals, fatty acids (especially long chain omega-3) and vitamins. Fishmeal is easily digestible by a wide range of farm animals, pigs, poultry, pets and farmed fish (aquaculture taking up 65-70% of the fishmeal production¹³). Fish oil is promoted as having many positive features for direct human consumption, such as lowering cardiovascular and neurological risks and strengthening the immune system.

According to IFFO (The Marine Ingredients Organization), most fishmeal comes from by-products (currently 1/3 of the world's fishmeal production) and in light of the finite supply of small pelagics, other raw materials are being introduced in the aquaculture diet (ex. soya, wheat, land animal proteins, algal products, microbial proteins, insect meal). According to the fishmeal industry, 1kg of wild fish, when incorporated with other ingredients to make compound diets, gives 5kg of farmed fish across

global production systems, thereby contributing to food security. On the other hand, using a local lens and considering the transformation of wild fish to fishmeal, the Mauritanian Institute for Oceanographic Research and Fisheries (IMROP) estimates the ratio between fresh fish and fishmeal to be 5,4 to 1¹⁴ (5,4 tons of small pelagics needed to produce 1 ton of fishmeal). In addition to these ratios, small pelagics are low trophic level species; therefore, the cornerstone of a whole marine ecosystem. Their disappearance can have a trickling effect on many other, larger species and on the whole sustainability of the aquafeed sector.

In light of these contradicting objectives (facing growing demand for fishmeal vs maintaining the ecosystems), the FMFO industry has been under the spotlight in the last few years, especially in West Africa. Several reports¹⁵ and articles have shed light on the situation at the fishing and production sites, with factories in Mauritania, Senegal and The Gambia being accused of polluting water & air, depleting fish stocks and pushing fish prices up for human consumption, thus impacting the income of thousands of fish-dependent businesses, while ultimately affecting food security in the region.

Several actors of the international FMFO industry recognize that these allegations go against their own sustainability commitments and have decided to take action within their own supply chain and more generally at the fishery level. At the international level, a series of multi-stakeholders initiatives aiming at improving the transparency, practices and positive impacts of the sector have emerged, such as for example Fishery Progress, Fish Choice, Sustainable Fish, The Global Roundtable for Marine Ingredients and Solutions for Seafood.¹⁶ In Mauritania, different stakeholders engaged in fishing, processing and sourcing from this country have launched a Fishery Improvement Project (FIP) for small pelagics¹⁷ in 2017. A FIP is a multistakeholder effort to address environmental and social responsibility challenges in a fishery. It brings together the most important actors of the sector, and it requires a fishery management/improvement plan with regular progress reports, clear targets and a regular independent assessment. A FIP's long term objective is also for the fishery to achieve MSC certification or MarinTrust approval (and for the factories to achieve MarinTrust certification), two standards that aim at improving overall fishery practices and fish stock management. **Even if the Mauritania Small Pelagics FIP has been focusing mostly on biodiversity aspects so far, the actors involved in the initiative have mentioned that the objective is to incorporate more social impact indicators in the future, in order to drive positive change at this level too.**

2.4. SMALL PELAGIC FISH AND THE FMFO INDUSTRY IN SENEGAL

Senegal has more than 500 km of coastlines and represents, together with neighbouring countries Morocco, Mauritania and the Gambia, one of the hotspots for small pelagics globally. Direct consumption by Senegalese households has been a traditionally important destination for small pelagics, as they represent an important yet cheap source of protein. Small pelagics amount to 82% of all fish consumption

in the country¹⁸. Over the period 2009–2018, an average of 315,000 tons of small pelagic fish were landed each year (representing 72% of the catches). Most of this¹⁹ is consumed nationally, either fresh, frozen or transformed by hand.

Artisanal processing (smoking, drying and salting) is another important output for small pelagics, generating income for many households while contributing to food security.

According to a recent article by the Regional Partnership for the Conservation of the Coastal and Marine Zone (PRCM 2019)²⁰, small-scale coastal pelagic fisheries employ in total more than 84.000 people: 12,000 fishers, 34,000 related jobs in the fish trade and 38,000 in the artisanal fish processing segment.

In Senegal, the volumes of fishery products exported over the period 2008-2018 are of the order of 170,000 tonnes on average per year and represent almost 38% of the total annual average national production estimated at 451,000 tonnes. Out of the fish quantities exported from Senegal, frozen fish represent 93% and the other products (fresh fish, fillets, smoked or salted fish, fishmeal, etc) represent the remaining 7%. Regarding fishmeal specifically, there was a steep increase in quantities exported between 2012 (485t) and 2015 (8300t) but it remains marginal in regard to the overall quantities of fish exported²¹.

There are about 4 FMFO factories in Senegal, although the exact number of operating factories fluctuates regularly. Since 2012, the Senegalese government has adopted a policy aiming at supporting the national fishing fleet, and FMFO factories in Senegal usually work with individual suppliers who provide processing waste and fresh fish²².

In September 2022, a fisherman's collective (40 individuals) launched a landmark court case against an FMFO factory in Senegal for a violation of their right to a clean environment. Even if the case was recently dismissed, it marks the importance of grievances that neighbouring communities have against the industry.

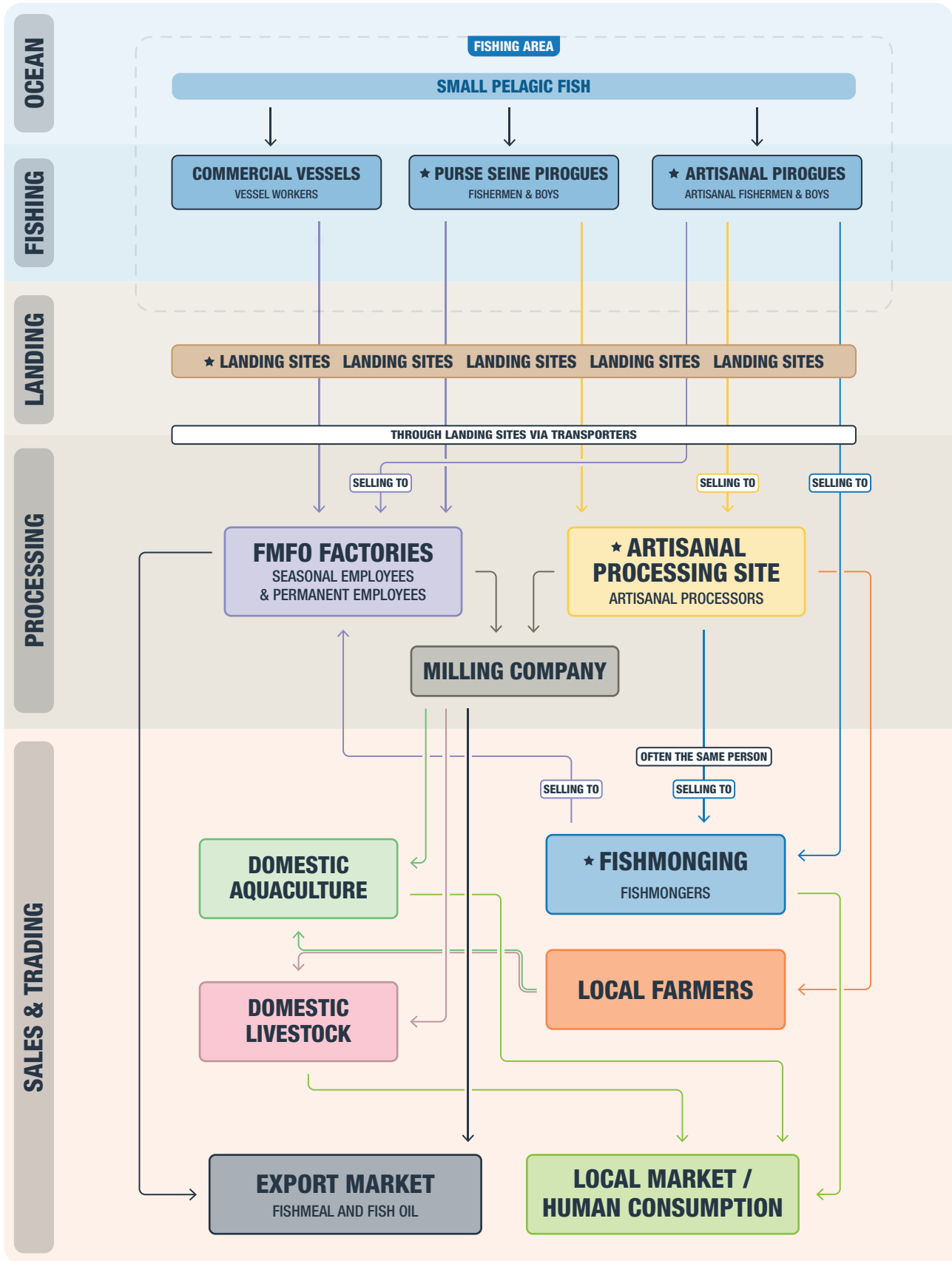


FIGURE 1: Dried salted fish for sale in Senegal

© All pictures in this report are taken by Partner Africa during the field research in 2022-2023



The below diagram explains the small pelagic value chain in Senegal. All locations marked with a ★ represent the locations visited as part of the scope of this study. The stakeholders engaged as part of this study are listed within corresponding blocks.



2.5. SMALL PELAGIC FISH AND THE FMFO INDUSTRY IN MAURITANIA

Mauritania has a coast on the Atlantic ocean of about 800km, and is another hotspot for small pelagics in the region. They represent between 80% and 85% of the country's catches. In 2020, there was a total number of 53,890 fishers on board vessels in the various artisanal, coastal and deep-sea segments²⁴. Contrary to Senegal, the government has favoured the delivery of fishing licences to foreign fleets through two fishing schemes, one national and one international.

The national scheme implies that catches have to be landed and transformed in Mauritania in order to "maximise the economic revenues of fishing and transformation for the national economy"²⁵. It is to be noted that foreign boats can operate under the national scheme if they are chartered by Mauritanian fishing concession owners. For example, in 2020, 839 boats²⁶ were operating under the national scheme, most of which were Mauritanian flagged (676) but also 118 Turkish flagged and 20 Chinese flagged. There are exceptions to this scheme, such as for example an agreement with the Chinese company Fuzhou HongDong Pelagic Fishery Co. Ltd which has a fleet of 83 vessels and is allowed to fish and transform directly in its own facilities. This exception was granted in 2010 for 25 years in exchange for an investment of 100 million USD by the company and a promise to employ 2000 Mauritanian nationals²⁷. The deal has since been under investigation for suspicion of corruption by the Mauritanian parliament²⁸ and the Chinese company's trawlers were implicated in the deaths of Mauritanian artisanal fishers in 2020²⁹.

The international scheme implies that fishing vessels have to disembark or transboard their catches under the control of Mauritanian authorities before being allowed to take them abroad. In 2021 for example, Mauritania struck a deal with the EU for six years, enabling tuna, small pelagic fish, crustaceans and demersal fish to be fished for France, Germany, Ireland, Italy, Latvia, Lithuania, the Netherlands, Poland, Portugal and Spain

in Mauritanian waters³⁰. Mauritania will receive €57.5 million a year, in return for a maximum of 290.000 tonnes of fish, and an additional €3.3 million per year will be given to support the local fishing community.

Industrial transformation is limited to whole fish freezing, simple transformation and freezing (ex. head-chopping, guts cleaning, fillets), and fishmeal and fish oil transformation³¹. According to the 2020 Fisheries Social and Economic Observatory Report, Mauritania has 155 fish processing plants, of which 43 (30%) are FMFO plants (although not all of them are in operation) and 112 are freezing units (70%)³². There was an exponential increase in the number of FMFO factories in Mauritania (from 3 in 2007 to more than 30 active today), which is reflected in the exponential increase of FMFO exports, from 10.000t in 2009 to 119.000t in 2019; This represents more than 425.000t of small pelagics transformed annually³³.

There are 9 FMFO factories in Mauritania who publicly support the Fishery Improvement Project (Alfa Services, Omaurci, ATYFEN, Mah el Turk, RIM Fishmeal, SICOP, Société Alwataniya pour la Pêche, SGIP Complex SA, Atlantique Protéine), although this support is only public and does not imply any binding action nor any control over the factories. Winterisation Mauritania is also a FIP supporter although it does not produce FMFO but rather buys, stores and exports fish oil from other factories.

In addition to the FIP, some of the FMFO production sites (ATYFEN, Mah El Turk and Omaurci) are accepted in the MarinTrust Improver Programme. Production sites that are accepted on the MarinTrust Improver Programme have demonstrated that as well as being engaged in the FIP, they have complied with a third party audit against the MarinTrust standard³⁴ at the production level.

In addition, Alfa Services, ATYFEN, Omaurci and Winterisation Mauritania are all GMP+ (Good manufactured practice) certified. Mah El Turk, Alfa Services, ATYFEN and Winterisation Mauritania are FOS (Friend of the Sea) certified.

* THESE SITES HAVE COMPLIED WITH A THIRD PARTY AUDIT AGAINST THE MARINTRUST STANDARD

** AS A MEMBER OF OLVEA'S SUPPLY CHAIN

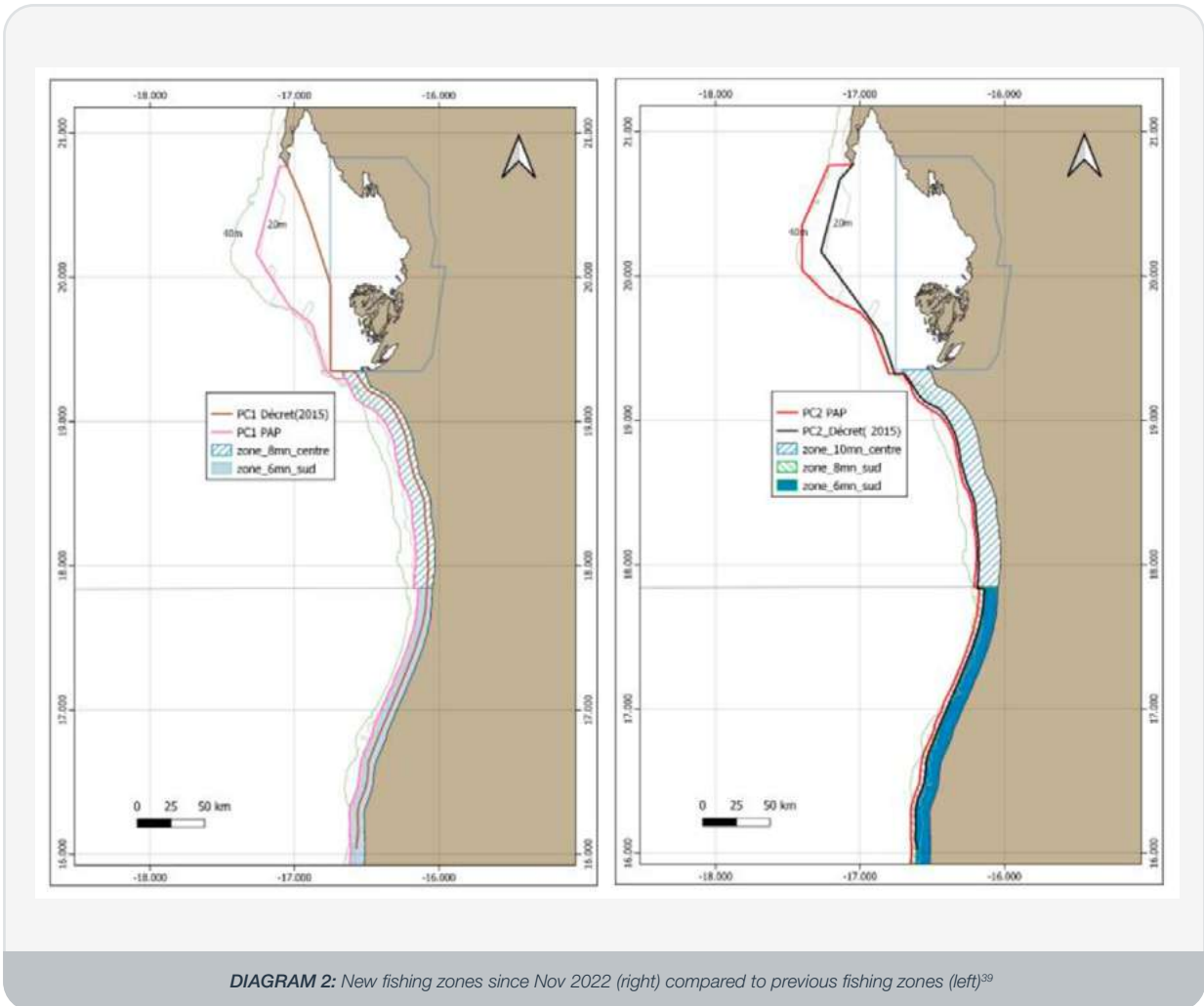
	FISHERY IMPROVEMENT PROJECT SUPPORTER	MANAGEMENT INTERVIEW CONDUCTED	PERMANENT WORKERS INTERVIEWS CONDUCTED	OBSERVATIONAL WALK CONDUCTED	OPERATIONAL DURING TIME OF THE VISIT	MARINTRUST CERTIFICATION STATUS	GMP+ CERTIFICATION	FOS CERTIFICATION
ALFA SERVICES	YES	YES	YES	YES	YES	NO	YES	YES
OMAUHCI	YES	YES	YES	YES	NO	IMPROVER PROGRAMME*	YES	NO
ATYFEN	YES	YES	YES	YES	NO	IMPROVER PROGRAMME*	YES	YES
MAH EL TURK	YES	YES	NO	NO	NO	IMPROVER PROGRAMME*	NO	YES
RIM FISHMEAL	YES	NO	NO	NO	NO	NO	NO	NO
SICOP	YES	YES	NO	NO	NO	NO	NO	NO
SOCIÉTÉ ALWATANIYA POUR LA PÊCHE	YES	NO	NO	NO	NO	NO	NO	NO
SGIP COMPLEX SA	YES	NO	NO	NO	NO	NO	NO	NO
ATLANTIQUE PROTÉINE	YES	NO	NO	NO	NO	NO	NO	NO
WINTERISATION MAURITANIA (OIL)	YES	YES	NO	NO	YES	CHAIN OF CUSTODY CERTIFIED**	YES	YES
SFHP	NO	NO	YES	YES (PARTIAL)	YES	NO	NO	NO

The impressive increase in fish production, transformation and added value in the last 15 years nevertheless came at the expense of the sustainability of fish stocks. Some of the small pelagics such as round sardinella, black horse mackerel and ethmalose have shown signs of overexploitation in the national statistics³⁵ and other reports³⁶, a fact that has had effects on food security.

As a response, to promote the availability and accessibility to fish for the local population, the Mauritanian government oversees that a certain percentage of catches (2% of catches under the international scheme) is diverted to the “Société Nationale de Distribution de Poissons” (National Fish Distribution Company. In addition, since mid 2022, the Mauritanian government has started to enforce several regulations to respond to mounting public discontent against the FMFO industry³⁷. The overall objective of these new regulations seems to be a better regulation of the industry and prioritisation of small pelagics for human consumption.

As a result, as verified in the field research of this study, the following are being implemented:

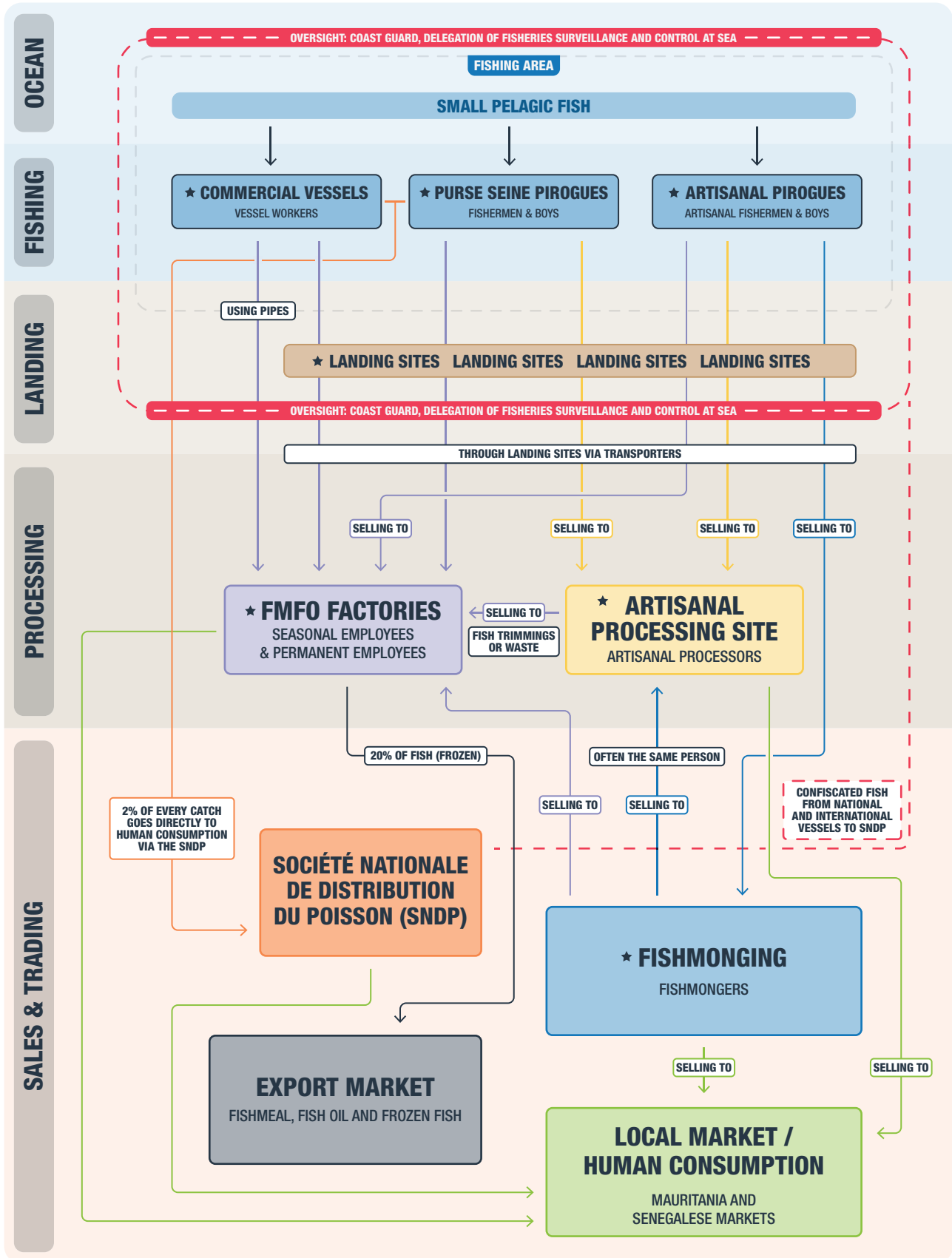
- ★ There are more controls by the fisheries authority aboard commercial vessels and at landing sites.
- ★ Fines for fishing in restricted areas have increased greatly.
- ★ Restrictions per species and per destination (human consumption, freezing, FMFO factories) are being implemented; Of all fish bought by the factories, a maximum of 80% can be processed in FMFO and the rest has to be frozen for human consumption³⁸.
- ★ Fishing zones have been reviewed in order to limit the coastal segment which had considerably increased in the last years. As a general rule all fishing zones have been moved away from the coastal, nursing and spawning areas;
- ★ Fishing and operating licences as well as export permits are much more complicated to obtain.



Small pelagic value chain in Mauritania on following page:



The below diagram explains the small pelagic value chain in Mauritania. All locations marked with a ★ represent the locations visited as part of the scope of this study. The stakeholders engaged as part of this study are listed within corresponding blocks.



2.6. SMALL PELAGIC VALUE CHAIN AND FMFO INDUSTRY ACTORS EXPLAINED

2.6.1. Rights-holders

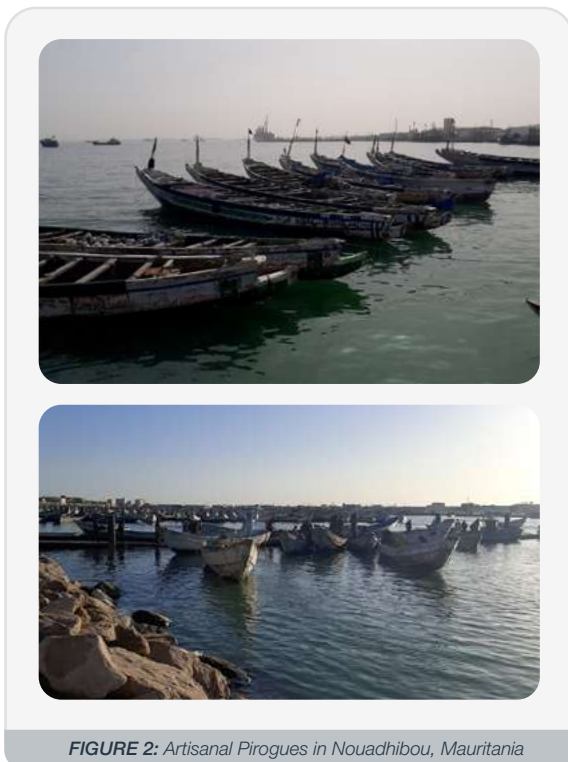


FIGURE 2: Artisanal Pirogues in Nouadhibou, Mauritania

Artisanal Fishers: Artisanal fishers, also referred to as small-scale fishers (SSF), are involved in small-scale, low-technology, low capital fishing practices, using traditional fishing techniques usually in pirogues. It is estimated that there are about 12,000 SSF'ers in Senegal⁴⁰. Artisanal fishers are split between boat owners and crew members. The crew members consist of adult males and boys (approx. 13 years and older but also reported to be younger). The number of fishers on a boat is dependent on the size of the boat. Small boats carry 8-10 people whilst bigger pirogues can carry around 30 people. A fishing operation can last up to 8 hours - either during the day or night. Revenues from fishing are distributed between the boat owner (receives 1/3rd), the engine owner (receives 1/3rd - usually owned by the boat owner), and the remaining 1/3rd is to be distributed equally amongst the rest of the fishing crew (approx. 10 people in pirogue and up to 30 people in purse seine pirogues). Before distributing the revenue, the expenses for each fishing operation (incl. food, drinks, baits, and gas) are deducted from the revenue. Our study found that many fishing operations are financed by a private individual, a factory or a fishmonger, in which case the fishers have to sell the catch to them at a fixed price, usually lower than the market price. The fishing contracts with funders can be either oral or in writing (with the factories). In case the fishing operation is not externally financed, the fishers can sell the catch to the highest bidder at landing sites, either factory agents, fishmongers or artisanal processors.

Purse Seine Pirogue Fishers: The type of fishers on purse seine pirogues are oftentimes the same kind of fishermen as on 'regular' pirogues (group above). Purse seine pirogues are composed of two pirogues who work together to encircle the fish with the purse seine net (400 to 800 metres long with a drop of 40 metres). See the picture below. A purse seine net is quite expensive for the standard of living in Senegal and Mauritania (between 1700USD and 2200USD). In Mauritania, Senegalese purse seine pirogues either operate under the Islamic Rep. of Mauritania/Senegal fishing agreement⁴¹ or are chartered directly by Mauritanian individuals (such as fishmongers or business people) or companies (FMFO factories) to fish in the coastal areas. Sometimes their operations are prefinanced by large fishmongers or factory agents, in which case the price is fixed beforehand and is usually lower than what is paid at landing sites. Revenues from fishing are shared between the boat owner and the fishers after the deduction of the costs. Just like for artisanal fishers - the fishers' part is 1/3 of the revenue of the catch after the deduction of expenses (fuel, food, bait). Fishing operations last about 1 day but can be up to 2 days if needed.

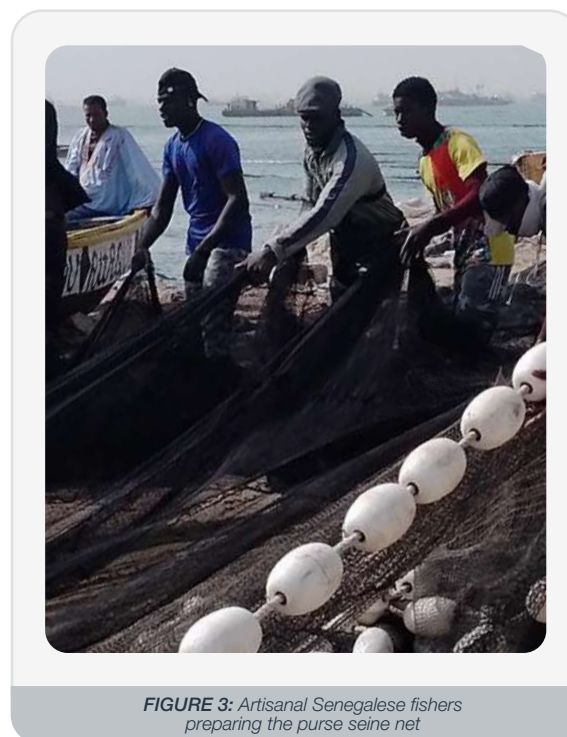


FIGURE 3: Artisanal Senegalese fishers preparing the purse seine net

Commercial Vessel Fishers in Mauritania: These vessels are larger commercial boats also using the purse seine fishing technique. These boats fish in the coastal areas and have a much larger fishing capacity than the purse seine pirogues. It is estimated that in Mauritania, 73% of the small pelagic catch is ensured by the commercial vessels (Bateaux côtiers) whilst 27% is covered by the purse seine pirogues (pirogues de senne tournante sénégalaises)⁴². Most of these vessels are registered⁴³ in Mauritania (676 in 2020), Turkey (118 in 2020) and China (20⁴⁴ in 2020) but all operate under the national scheme. From our research, their crew (in general about a dozen) can be Mauritanian or of mixed nationality, often with foreign supervisors and Mauritanian fishers, despite the fact that the government has issued in 2020

a ministerial order requesting the “mauritanization” of crews⁴⁵. The Mauritanian vessel fishers need a pass and a fisher ID card issued by the Direction Marine. They do not hold a formal contract with the boat owner but they are paid an average of US Dollars 500 per month. On the boats inspected during our research, supervisors were from Chile. The expatriates are paid around USD 3 000 per month and they hold a contract with the company. Bonuses can be given in case of good catches. Unlike in Mauritania, the factories in Senegal do not specifically charter industrial vessels for their supply.



FIGURE 4: A commercial purse seine vessel

Transporters: Small pelagics are transported from the boats to the landing sites by men (and supported by boys) on foot, in large buckets of 20kg. Boys who are helping in the fishing operations also offload the fishing gear from the boats. From the landing sites to the markets and factories, fish is transported by various means which vary depending on its final destination. It includes by foot and old pick-ups for the artisanal sector, sometimes by refrigerated trucks for the factories, bicycles and even public transport when processed fish needs to be sold in other parts of the country. See a picture below of the trucks used for transport in the artisanal sector.



FIGURE 5: Old pick up trucks used to transport fish in the artisanal sector



FIGURE 6: “fishmonger collector”’s card from Mauritania

Fishmongers: A fishmonger is typically a middle-man or woman who buys the fish from the fishers in order to resell it either to factories, to markets, to artisanal processors, or any other actor. Important fishmongers with high purchasing capacity can also pre-finance fishing operations (e.g. costs for gas, baits, food, etc) and as result secure a fixed price (often below the market price) for the fish when landing. The fishmongers ensure wholesale sales and supply the country’s markets. Small-scale fishmongers also supply fish at local markets. Many processors also act as fishmongers supplying fresh fish to the local community. In Mauritania, only Mauritanian nationals are allowed to be fishmongers, a status they get through a professional fishmonger card issued by the ministry of fisheries and maritime economy (see above). Fishmongers must comply with a series of requirements depending on their category⁴⁶: Collector, Distributor, Exporter. Senegalese women who play an important role in the post-harvest sector are not allowed to work as fishmongers in Mauritania, despite having lived in Mauritania sometimes for 20 years. Our research shows that non-Mauritanian fishmongers get fines from the Marine Services for this reason. Fishmongers must obtain a licence/card from the Mauritanian government authorising them to collect and transport fish. See an example of the card above.

Artisanal Processors: The artisanal processing sector is largely dominated by women. Artisanal processors buy fish from fishing boats or fishmongers at the landing sites before processing them. While artisanal processing can be with any palatable species of fish, artisanal processing of small pelagic generally consists of drying, smoking and/or salting which make it easier to preserve and transport the fish to other areas of the country. Artisanal processors can also sell the fish trimmings to the factories. In Mauritania, artisanal processors are often Senegalese women who sell their products back



FIGURE 7: Fish sold at the local market in Nouadhibou

to Senegal where demand and prices are higher than in Mauritania. Many of them also act as fishmongers selling unprocessed fresh fish. Artisanal processors can also sell trimmings or fish waste to factories, in which case they need the fishmonger's card. So for the non Mauritanian processors who are not eligible for the fishmonger's card, they have to go through an intermediary.



FIGURE 8: An artisanal processor in Nouadhibou, Mauritania

Mauritanian FMFO Factory Permanent Employees: Factory employees are usually hired to carry out several tasks, including driving, maintenance, machine operation, and tallying operations, health and safety, logistics and management tasks. Permanent employees on the factory floor are all men. They have formal open ended contracts with the factories and they pay mandatory social contributions (social security, etc). Permanent employees in Mauritania get annual leave and work 6 days a week in high season, in shifts of 12h⁴⁷. However, there are also times when they don't have to work, during low season or when there is not enough fish to process.

Mauritanian FMFO Factory Seasonal Employees: Seasonal factory employees are employed by the day. Due to the recent restrictions and uncertainty in operations, factories are increasingly using seasonal workers who are hired on a daily basis and do not always have formal contracts. In Mauritania, in 2019, there were 1,972 FMFO factory employees (including permanent and temporary). In Senegal, in 2018, there were 129 permanent factory employees and 264 temporary factory employees (however, they did not fall within the scope of this study)⁴⁸. As these figures show, many of the jobs created directly by the FMFO industry in Senegal and Mauritania are temporary and do not necessarily benefit local populations. For instance, in Senegal, most nationals work in the FMFO industry but in Mauritania, 74%⁴⁹ of the jobs are reportedly held by foreigners from China and Senegal. In our research in Mauritania, we have recorded Mauritians, Senegalese, Moroccan and Malians.



FIGURE 9: Bags of fishmeal being filled at a factory in Nouadhibou, Mauritania

2.6.2. Duty-Bearers

2.6.2.1. National Duty-Bearers



FIGURE 10: Mauritanian coast guards boats

Mauritanian Government: The Mauritanian government's institutions in charge of fisheries are under the Ministry of Fisheries and Maritime Economy and include: The Mauritanian Institute for Oceanographic Research and Fisheries (IMROP)⁵⁰, the National Fisheries and Aquaculture Sanitary Inspection Bureau (ONISPA)⁵¹, The National Company for Fish Commercialization (SMCP)⁵², The Nouakchott Fish Market⁵³; The National Fish Distribution Company (SNDF)⁵⁴, and the Mauritanian Shipyard (CNM)⁵⁵. It is the ONISPA, in coordination with the Coast Guards, that conducts inspections aboard the vessels and at the landing and collecting sites, assess the quality of the fish, and issues operating permits. Since 2015 and the launch of the National Strategy for a Responsible Management and Development of Fisheries and Maritime Economy (2015-2019)⁵⁶, the Mauritanian government has taken increasing measures to better regulate the industry (as explained in the background section above). Some international buyers are also supporting the authorities with enforcing the regulations. Olvea for example will provide ONISPA and fish oil producers with training modules on regulations, control of sanitary risks, treatment of stick-waters, and sustainability certification standards.

Senegalese Government: In Senegal, the institutions and departments in charge of regulating fishing activities are: the Ministry of Fisheries, the Direction of Fisheries and the *Direction de la protection et de la surveillance des pêches* (DPSP).

Mauritanian FMFO Factory Owners and Management:

In 2015 there were 32 fishmeal and fish oil processing plants accredited by the Ministry in Mauritania⁵⁷ and in 2020, 43 plants were identified as FMFO factories⁵⁸ by the Ministry; however their level of operation, as well as the information on shareholders and ownership, is not publicly available. Not all of these factories are necessarily operating at the moment. Factory managers are responsible for the different departments of the factories (QHSE, Administration & Finance, Operations, General Management etc). Only 1 to 5% of the employees in administration/management are women, whereas there are no women on the factory floor. Nationalities of factory owners and management staff vary. In this study, we identified Mauritanian, Senegalese, Moroccan and Chinese nationals during interviews, although there are also others such as Turkish, Ghanians and Indians. The level of compliance with the law and responsible practices vary greatly among factories. There are 9 factories who currently support the FIP, which means that they are in some way or another involved in the FIP discussions, roundtables, and it can be inferred that they have at least some level of interest in monitoring the situation. However, being a FIP supporter in no way involves any formal commitment nor any recognition of better practices..

Financier: In Senegal and Mauritania, due to the fact that fishing operations costs have increased in the past years and even months (due to longer distances fishing and increased gas and food costs), a ‘financier’ funds the expenses of the fishing operation and can sometimes provide prohibited fishing gear (usually monofilament nets). In turn, fishers have to sell their catch to the ‘financier’ at a fixed rate. The ‘financier’ can be a fishmonger, a private individual or be mandated by the FMFO factories.

Boat owners / captains: Boat owners of pirogues or purse seine pirogues can have contracts with the

factories and/or fishmongers, but not with the rest of the crew. Agreements between boat owners and fishers are usually oral only. It is the responsibility of the boat owner or captain to ensure their crew is safe and can enjoy decent working conditions.

Commercial vessel owners / captains / supervisors:

The owners could be national but also international (e.g. Turkey or Chinese flagged). The vessels have a captain and supervisors on board and the vessel has a ‘supply contract’ with the factory, but no contracts with its workers. It is the responsibility of those owners, captains and supervisors to ensure compliance to labour standards aboard the vessel.

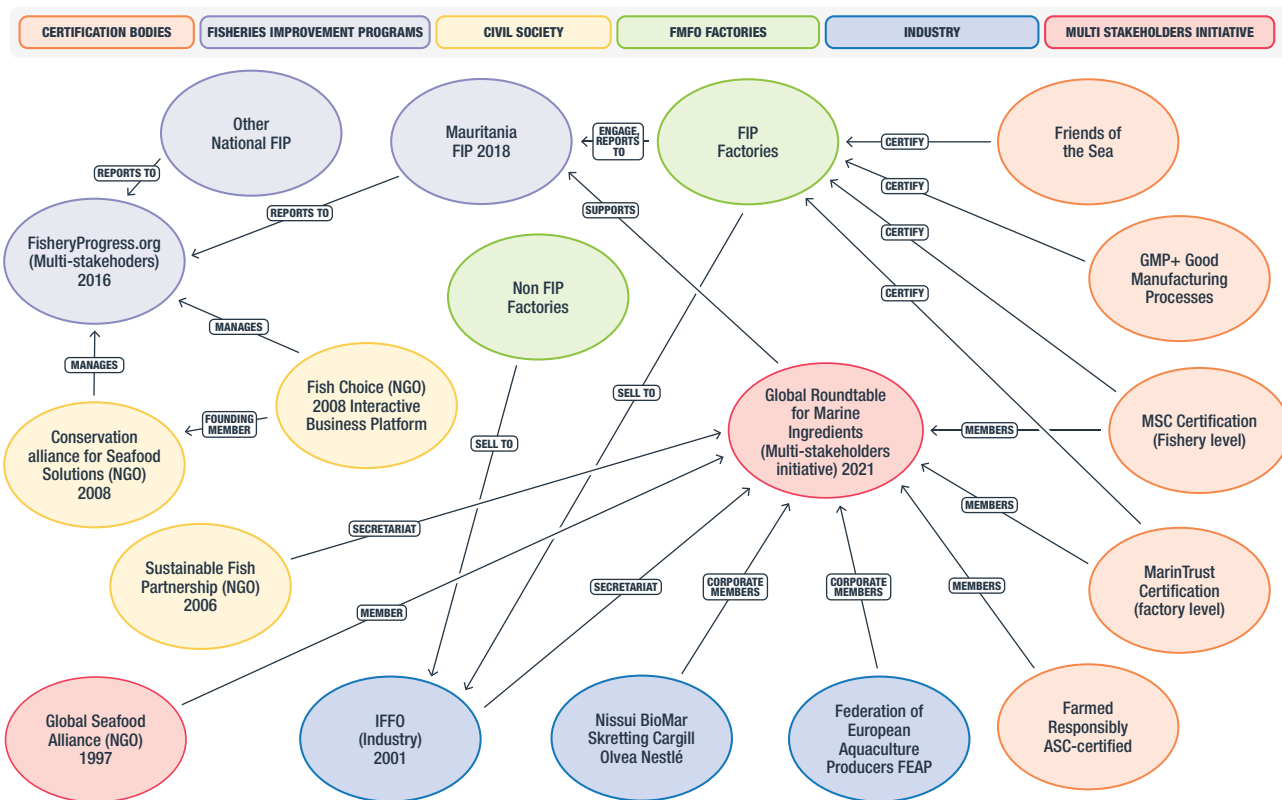
2.6.2.2. International Duty-Bearers

International Businesses / Buyers / Investors / Retailers:

FMFO factories in Mauritania and Senegal sell their production of fishmeal and fish oil to traders and companies who supply the aquaculture and farming industry worldwide. As fishmeal is widely used for farmed fish, livestock feed and pet food, and as fish oil is widely used in the cosmetics and pharmaceutical sectors, the product is diverted into many supply chains once exported. Retailers might not know their connection with fishing and factories in West Africa. However, due to the responsibilities of businesses and investors as duty-bearers under the UNGP framework, businesses should undertake due diligence efforts to ensure a respect for human rights reaching all the way to the fisheries in West Africa.

International civil society and certification standards:

In light of this complex international supply chain, and actors facing the need for more transparency and better practices, a wide range of initiatives started to emerge in the early 2000s. Civil society, certification standards, and industry actors have joined forces, launching in a series of multi-stakeholders initiatives represented below.



3 Methodology



The methodology used for this research is based on the internationally recognised HRIA methodology⁵⁹ and the sector-wide human rights impact assessment (SWIA) methodology⁶⁰ - both developed by the Danish Institute on Human Rights⁶¹.

A HRIA is predominantly a qualitative research assessment and this study, therefore, uses a wide range of participatory research approaches when collecting data. This means that the right-holders (e.g. worker, fisher, community member) voices and experiences are central to our research process as this method of researching encompasses research designs, methods, and frameworks that use systematic inquiry in direct collaboration with those affected by an issue being studied for the purpose of action or change.

The methodology used for this HRIA consisted of the following steps:

3.1. SCOPING / CONTEXTUAL ANALYSIS

During the first phase, a thorough understanding was gained of the context in which the HRIA is taking place through desk-top research. This included understanding the small pelagic fish value chain in Senegal and Mauritania (how it operates, who the main duty-bearers and rights-holders are) and wider cultural, social, legal and political dynamics within the industry.

3.2. PLANNING AND PREPARATION



FIGURE 11: A focus group discussion with Mauritanian factory employees

A field plan and schedule were developed and logistical preparations were made during this phase. Simultaneously, based on the information in the scoping phase, a list of human rights indicators was developed. This was based on internationally recognised human rights standards and the UN Guiding Principles on Business and Human Rights. Thereafter, the desktop and field research tools (interview questionnaires, focus

group discussion tools) were created reflecting the human rights indicators.

3.3. DATA COLLECTION: DESK-TOP RESEARCH

16 virtual interviews took place with key stakeholders to provide contextual analysis of the supply chain, including how it works and operates, who the rights-holders are, current human rights risks and wider cultural, social, legal, and political risks. **Interviews were undertaken with the following actors (in brackets the country/ies they refer to):**

BUSINESSES

- Winterisation Mauritania (Mauritania)
- OLVEA (Mauritania)
- Ex-Barna management (Senegal)
- SCASA (Senegal)

NGOs/CSOs

- Greenpeace Africa (Senegal/Mauritania)
- Business and Human Rights Resource Centre (Senegal)

FISHING ORGANISATIONS

- African Confederation of Artisanal Fishing Organisations (Senegal/Mauritania)
- Directorate of Maritime Fisheries Senegal (Senegal)
- Synergy Light for Development (Senegal)
- Senegal National Fishers' Association (Senegal)
- Activists in Mauritania & Senegal
- The Mauritanian Institute for Oceanographic and Fisheries Research (IMROP) (Mauritania)
- Institute for Oceans and Fisheries, Stanford University (Senegal/Mauritania)

LOCAL GOVERNMENT / INTERNATIONAL GOVERNMENT

- Senegal's Minister for the Environment and Sustainable Development
- Mauritania Ministry for Fisheries and Maritime Economy
- Food and Agriculture Organization (Senegal)

3.4. DATA COLLECTION: FIELD RESEARCH

The field research was conducted by a mixed-gender research team of Mauritanian and Senegalese nationals and consisted of different phases:

- A very brief scoping visit in Joal-Fadiouth, Senegal (17th-21st of June 2022)
- A thorough field visit in Senegal (26th-29th of July 2022), this included Joal-Fadiouth (South of Senegal) and St-Louis (North of Senegal)
- A first field visit in Nouadhibou, Mauritania - to understand whether factories were active (25-28th of September)
- A second thorough field visit in Nouadhibou, Mauritania (2nd-5th of January 2023)

3.4.1. Sample size and sampling technique

As the HRIA is a qualitative led research approach (combining quantitative data elements), the sample size does not need to be 'statistically significant'. However, the sample size should ensure to collect a substantial amount of information on all rights-holders and ensure the sample size is large enough to include different groups of rights-holders. rights-holders themselves are the most valuable experts on their own human rights. Even in communities where human rights terminology does not exist, rights-holders' experience changes in their sense of self within society. People are keenly aware of what affects their lives. The HRIA used both purposive and snowball sampling techniques to select the stakeholders to interview.

- ★ Purposive sampling (or judgmental sampling) is a type of nonprobability sampling that is often used for HRIAs. It is especially being used when it is difficult to reach every area or member of the target population (i.e., all smallholder farmers and community members) or if there is insufficient time to visit the number of individuals needed for statistical analyses using a random sample. With purposive sampling, the researcher decides which particular groups to interview based on what the researcher logically assumes to be representative of the target population. Judgments are made on the expected heterogeneity of areas, population groups, locations, households, and individuals.
- ★ In cases when there was very little information available about the location of certain stakeholder groups/individuals, a snowball technique was used to select the key stakeholders to interview. A snowball technique is another form of nonprobability sampling often being used for HRIAs during which research participants are asked to identify additional research participants during an interview.

In total, this study engaged - through field interviews and focus group discussions - with 200 rights-holders across all different rights-holders categories during the field visit to both Mauritania and Senegal, as illustrated in the graphics to the right:

TOTAL INTERVIEWED: 200		
FOCUS GROUP DISCUSSIONS		
MAURITANIA	COMMUNITY MEMBERS	FEMALE: 7 MALE: 9 TOTAL: 16
	COMMUNITY LEADERS	FEMALE: 0 MALE: 4 TOTAL: 4
	NATIONAL FEDERATION OF ARTISANAL FISHERMEN	FEMALE: 0 MALE: 3 TOTAL: 3
SENEGAL JOAL-FADIOUTH	ARTISANAL FISHER	FEMALE: 0 MALE: 5 TOTAL: 5
	ARTISANAL PROCESSOR	FEMALE: 15 MALE: 0 TOTAL: 15
	COMMUNITY MEMBERS	FEMALE: 0 MALE: 5 TOTAL: 5
SENEGAL ST. LOUIS	ARTISANAL FISHER	FEMALE: 0 MALE: 11 TOTAL: 11
	ARTISANAL PROCESSOR	FEMALE: 7 MALE: 0 TOTAL: 7
	COMMUNITY MEMBERS	FEMALE: 0 MALE: 5 TOTAL: 5
INTERVIEWS		
MAURITANIA	ARTISANAL FISHER	FEMALE: 0 MALE: 6 TOTAL: 6
	ARTISANAL PROCESSOR/FISHMONGER	FEMALE: 6 MALE: 0 TOTAL: 6
	COMMUNITY MEMBERS	FEMALE: 10 MALE: 5 TOTAL: 15
	COMMERCIAL VESSEL FISHERS	FEMALE: 0 MALE: 19 TOTAL: 19
	FISHMONGER	FEMALE: 6 MALE: 7 TOTAL: 13
	TRANSPORTER	FEMALE: 0 MALE: 5 TOTAL: 5
SENEGAL JOAL-FADIOUTH & ST. LOUIS	ARTISANAL FISHER	FEMALE: 0 MALE: 14 TOTAL: 14
	ARTISANAL PROCESSOR/FISHMONGER	FEMALE: 14 MALE: 0 TOTAL: 14
	COMMUNITY MEMBERS	FEMALE: 4 MALE: 14 TOTAL: 18
FACTORY INTERVIEWS		
MAURITANIA OVERVIEW	FACTORY WORKER	FEMALE: 1 (OMAUROCI) MALE: 19 TOTAL: 20
	FACTORY MANAGEMENT	FEMALE: 1 (OMAUROCI) MALE: 8 TOTAL: 9
MAURITANIA PER SITE	FACTORY WORKER	ATYFEN 12 OMAURCI 2 ALPHA SERVICES 3 SFHP (NON FIP) 3
	FACTORY MANAGER	ATYFEN 3 OMAURCI 3 ALPHA SERVICES 3 SFHP (NON FIP) 0

As the table above shows, a few factories in Mauritania were visited. This includes 3 factories (Alfa Services, Omaurci and ATYFEN) out of the 9 who support the FIP (Alfa Services, Omaurci, ATYFEN, Mah el Turk, RIM Fishmeal, SICOP, Société Alwataniya pour la Pêche, SGIP Complex SA, Atlantique Protéine); Only one (Alfa Service) was operational at the time of the visit.

During our visit, a Chinese non-FIP factory (SFHP) was also operational; Our team managed to speak to the permanent employees working at the factory, however, it was not possible to conduct a thorough visit of the premises due to the factory management's unwillingness to let us do so.

3.4.2. Data collection methods

- ★ **Observational Walks:** Non-participant observation was used as researchers walked through the landing, processing sites, 1 factory and the community to collect data. They were able to observe how the landing site, processing site and the community organise themselves, how people carry out their activities, including if any children are working, and make observations about the cleanliness and hygienic conditions.



FIGURE 12: A focus group with women from the community in Nouadhibou

- ★ **Focus group discussions:** two different participatory group exercises were used in this study. The first one included a photo focus group discussion which uses pictures of issues and risks identified during desktop research to bring out a discussion amongst the group and find solutions to these risks. The second one included a problem/solution tree analysis which is a visual tool that can specify and investigate a problem's causes and effects, and find their solutions. A total of 12 FGDs were organised with 71 rights-holders and community members.
- ★ **Individual interviews:** 106 individual interviews were conducted with different type of rights-holders groups such as artisanal fishers, artisanal processors, community members, fishmongers, transporters, loaders, agents, subcontractors, purse seine vessel workers, purse seine vessel captains, Mauritanian FMFO factory employees, Mauritanian FMFO factory managers, commercial vessel fishers in Mauritania and their captains. To dig deeper into the human rights risks faced by rights-holders, 23 community members/key informants were also interviewed including imams, doctors, association presidents, local activists and other community members not associated with the fishing industry.

3.5. ANALYSING IMPACTS AND FINDINGS

3.5.1. Severity analysis

After the desk-top and field research, all the collected data was analysed - thematically - to identify positive and adverse impacts. For each identified impact, it was documented whether the impact was actual (i.e. impacts that have already occurred) or potential (i.e. impacts that might occur in the future). To determine the impact severity of actual adverse impacts, the scale, scope and remediability of each impact were identified. The scale means the seriousness of the impact and was rated as major, moderate, medium or minor. The scope means the number of people affected and was rated as large, medium or small. The remediability means the ability to restore the individual impacted to at least the same as, or equivalent to, their situation before the impact occurred and was rated as difficult, moderate or easy. For those impacts that are potential, the likelihood of an impact occurring over the next 5 years if no necessary prevention measures were implemented was identified and rated possible, likely or highly likely. See annex 1 for specific risk rating determinations.

3.5.2. Root cause analysis

The root causes and key drivers that give rise to the adverse impact were analysed and identified for each adverse impact. Root causes were categorised between economic root causes (those related to the economy, such as poverty and unemployment levels), governance and institutional root causes (those related to policies, infrastructure, and management systems), socio-cultural root causes (those related to specific societal and traditional aspects of the communities), and environmental root causes (those related to changes in the environment as a result of climate change).

3.5.3. Business linkage analysis

Most HRIA's include a separate business linkage analysis to understand how a particular business is linked to the impacts identified (i.e. is a business *causing, contributing to or directly linked to* an adverse impact identified)⁶². As this HRIA did not look into the supply chain of one particular business/international buyer or investor but instead formed part of a sector-wide impact analysis, a business linkage analysis for each impact is not included in this study but it does provide a few insights (sector-wide) on this.

3.6. DEVELOPING RECOMMENDATIONS

For each adverse impact, recommendations for future actions were provided to mitigate, remediate, and prevent the adverse impacts. These recommendations are categorised per duty-bearer. They are based on best practices in the industry and/or similar industries and informed by stakeholder interviews on the ground.

3.7. LIMITATIONS

There were several limitations within the research which are listed below:

- ★ **Delayed field work:** There were several government-mandated closures of FMFO factories in Mauritania, initially in August when the initial field research was due to be carried out but also in September and December. The situation was ongoing, and there was little coverage on expected reopening dates, so it was hard to establish when the field work could be carried out. To overcome this challenge, Partner Africa carried out a small scoping mission in September 2022 to assess the landscape in which the HRIA would be taking place. However, the closures challenged the field visit as we had to postpone the research by a few months. This impacted the start and completion date of the research.
- ★ **Limited data collection methods that could be used:** The non-operational status of the 2 FIP FMFO factories (Omaurci and Atyfen) and not receiving approval to visit the Chinese non-FIP factory (SFHP) meant that we could not carry out observations whilst employees carried out their jobs in these factories (e.g. we could not observe the situation in the factories, what the working conditions looked like, whether employees were using any PPE, whether there were any children at work etc). In addition, we also could not undertake a documentation review of factories' policies and worker agreements, timesheets, wages etc. This type of observational/transect walks and the documentation review is always part of our HRIA studies. Notwithstanding, Mauritanian FMFO factory employees and managers from the 3 FIP factories (Alfa Services, Omaurci and Atyfen) and the Chinese non-FIP factory (SFHP) were still able to be interviewed.
- ★ **Limited availability of stakeholder groups:** We did not interview any Mauritanian FMFO seasonal factory employees as only 1 factory was operating at the time of the visit, and the factory did not have a good catch and therefore did not need to hire daily workers. In addition, we interviewed only a small sample of employees (three) from the non-FIP factory (SFHP) and no management.
- ★ **Research results impartiality:** As this was not an unannounced visit to Mauritania (we needed commitment from the FMFO factories to undertake the research), the factory's management could have informed the communities and employees about the field visit and could have instructed answers. To overcome this challenge, Partner Africa's researchers are trained to ensure the interviewees feel comfortable during interviews and remind them of our independent status and their anonymity. In addition, the interviewees were selected randomly, and the researchers conducted interviews solely with the interviewee without a factory representative. The researchers also did not observe any 'coached' answers.
- ★ **Qualitative scope:** As mentioned above a HRIA is a qualitative-led approach. Our research does not measure air quality or pollution levels in the water. In addition, we did not undertake any medical assessments. Data gathering relied on participatory and rights-based approaches grounded in the internationally recognised methodology developed by the Danish Institute on Human Rights.
- ★ **Ability to draw conclusions on performance between FIP and Non-FIP factories:** We did not undertake a comparative study between factories that are supporting the FIP, factories that are accepted under the MarinTrust Improver Programme (or other types of third-party recognition) versus "other" factories as this would need a detailed research on its own. In addition, there were not enough factories in operation to allow a representative sample to undertake a comparative study. It is therefore not possible to draw any grounded conclusions on the performance of FMFO factories based in the FIP versus factories that are not based in the FIP. The only finding we could identify is that FIP factory employees interviewed told us they are aware of their responsibilities and they receive training on hygiene and good manufacturing practices. Non-FIP factory employees told us they didn't get any training on these aspects. We recommend that a second phase of the research be conducted more specifically to compare the factories that are supporting the FIP and those who are not, in order to differentiate "good actors" of the industry from the others. This would also allow the government to foresee a differentiated approach and it would improve the FIP supporters' image with the community.
- ★ **Ability to draw conclusions on impacts in Mauritania and Senegal:** As the scope of this study was limited to identifying impacts for SSF only in Senegal, the impacts identified in Mauritania at FMFO industry level cannot be applied to Senegal. The scope in Senegal was much smaller and did not include interviewing rights-holders in the FMFO industry - only at artisanal level.

4

Main Findings

This chapter highlights the main impacts identified in both Senegal and Mauritania and determines the severity of each adverse impact. Many of the findings are the same in both countries. To avoid repetition and ensure small pelagic fish are considered a shared resource, this chapter is not separated between Senegal and Mauritania. Instead, within each section, the situation in both Mauritania and Senegal is explained and differences between the two are highlighted where needed. This chapter also provides information about the root causes giving rise to the issues identified and provides insights into the linkages of businesses with the impacts.



4.1. POSITIVE HUMAN RIGHTS IMPACTS IDENTIFIED

This study found that there is much potential for the small pelagic fish industry to positively impact the human rights of the local population. This was identified in desk-top research and confirmed by stakeholder interviews on the ground. It includes:

- A potential positive impact on the right to an adequate standard of living and the right to work for the large number of direct and indirect (formal and informal) jobs created throughout the value chain, stimulating many related and peripheral activities for coastal peoples and communities. Especially in Senegal, the artisanal fishers and their communities do not engage much in other income-generating activities. In Mauritania, this is slightly different as a large group in the community is also active in the mining industry or works as traders.
- A potential positive impact on the right to food as small pelagic fish - when processed through artisanal processors and sold on the local market - is a source of high protein food⁶³ for the local population and could be easily accessible especially for those with low purchasing powers and the most vulnerable.

However, due to several factors (as explained in the root cause section below), adverse impacts take the upper hand and must be mitigated and prevented first before the potential positive impacts can come to fruition. The following sections explain the adverse impacts identified in this study - categorised per rights area.

4.1. ADVERSE HUMAN RIGHTS IMPACTS IDENTIFIED

4.2.1. Right to a Healthy Environment

Various poor environmental practices in the fishing and FMFO industry in general were highlighted by stakeholders in Senegal and Mauritania. Consequently, this has impacted the human rights of community

members, fishermen and factory employees- such as their right to a healthy environment and right to health in both countries. Since at least 2015, the Mauritanian government has recognised that the relatively uncontrolled and exponential development of the FMFO industry in the country has led to more conflicts around environmental issues and around fishing zones usage.⁶⁴ This issue has also been reported in several official reports relating to the effects on the local population, the most recent being by the FAO: *"In Senegal, the potential and/or observed negative impacts of the [FMFO] industry on public health and human well-being are related to its air, water and soil pollution. People living near the fishmeal and fish oil factories frequently complain about the smoke and very bad odours they generate. According to local communities living near factories, the air breathed is sometimes pungent and entails sensations of suffocation. The increase in respiratory illnesses, such as rhinitis and cough that more particularly affect children and the elderly as well as adults with chronic diseases, is deemed to be caused by these nuisances. On the other hand, cases of diarrhoea, vomiting and nausea that may be linked to the wastewaters are sometimes reported not only by factory workers, who are generally not equipped with suitable protective means, but also by people living near FDI production areas."*⁶⁵

It is to be noted that in Sept 2021, the Mauritanian Ministry for Environment and Sustainable Development launched a call for proposal for an environmental audit of FMFO factories⁶⁶, funded by the West Africa Coastal Areas Management Programme (World Bank). However our information shows that the audit was eventually deemed not urgent and postponed by the Ministry.

The following illustrates how people's right to a healthy environment is impacted:

First, it has been reported by 100% of the stakeholders in Mauritania interviewed (and it was also acknowledged by factory management) that the smoke from the factories' operations is causing adverse health impacts for the population. This widely recognised issue has led to social unrest in Nouadhibou, Mauritania in the past. The population that resides on the eastern side of Nouadhibou, where the smoke travels due to the direction of the wind, reported having health issues

due to this. Health impacts that were reported included respiratory problems and skin problems. It is not clear how many factories in Nouadhibou do have smoke filters and whether these filters are effective. Those filters are seen as a big investment, and some of the factories interviewed reported that it is in the pipeline to purchase them. We have received information from some FIP factories about their smoke filtering equipment but we haven't been able to verify the effectiveness of the installation. Nevertheless, with about 40 factories in Nouadhibou, it is difficult to differentiate those who do pollute the air and those who don't, and as such the neighbouring communities do not make the distinction. During the interviews with our researchers, Mauritanian factory management reported that in periods of heavy winds the government requires them to stop their operations as a way to prevent smoke, however no legal or policy evidence of such a regulation was found during desk-top research. Smoke may lead to respiratory and skin problems, which community members and children have reported and/or showed during the focus group discussion (people showed their skin with visible rash alleging that it was the result of pollution from FMFO factories). They mentioned that the smoke also impacted children, with one community member, who said that her child left the city to live with family members as the smoke exacerbated her asthma. Additionally, a health worker/doctor interviewed in the Cansado community in Mauritania mentioned that according to him many of the health issues like respiratory and skin issues that the community was facing was due to the smoke of the FMFO factories. It is worth noting that the smoke and odours issues have been highlighted in various reports, the most recent being by the FAO:⁶⁷ *"A variety of negative impacts generated by the FBF industry were identified in all nine countries. In addition to smoke and bad odours, communities observed that wastewater discharged from factories was negatively impacting the environment. Based on the opinions of some technical stakeholders and local communities interviewed, this may lead to increased respiratory and skin diseases, particularly for vulnerable children and the elderly. Incidents of various diseases, such as rhinitis, cough, asthma, diarrhoea and nausea, have increased, as reported by local populations and technical staff. Additionally, poorly equipped factory workers and most artisanal processors who provide processing wastes for raw materials experience high exposure to such diseases and also suffer from frequent injuries. This is the perceived situation in Nouadhibou, the second-largest city in Mauritania [...]"*.

Second, issues have been reported regarding the release of wastewater from FMFO factories directly into the ocean. Our researchers could see it directly and it was also reported by several interviewees in Nouadhibou. Despite the fact that some factories do centralise the treatment of their stick-waters to dedicated plants (ex. Alfa Soluble), it is not clear which ones do treat their waters and which don't; This lack of information increases the general lack of trust towards the industry and undermines the efforts made by some FMFO actors to comply with the law. This is the same in Senegal, where FGD participants (48 rights-holders) reported a lack of treatment of the processed waters that factories release into the sea.

In addition, both general waste (plastics, bins etc) and production waste have been reported to be dumped on the beach and landing site in Mauritania and Senegal.

Though two of the factories visited (Omaurci and Alfa) in Mauritania have a waste collection on site with the municipality collecting their waste, not all factories have that - especially not the smaller factories. As a result, waste that is not collected by the municipality ends up being dumped on the beach, as reported by all stakeholders interviewed. This practice has improved over the past years, but a lot of fish waste and other garbage is still dumped directly on the beach by the stakeholders themselves. Waste has also been reported as an issue in Senegal, with rampant pollution of the landing site. FGD participants (48 rights-holders) in Senegal reported that the absence of garbage collection by the municipality and the lack of sensitisation on beach cleanliness led to the pollution of the landing site. Partner Africa associates observed in both Senegal and Mauritania a dirty landing site full of waste and plastic containers and the community throwing rubbish onto the beach (see figure 15).



FIGURE 13: Untreated water being released from allegedly a Chinese factory in Nouadhibou



FIGURE 14: Water discharge allegedly coming from the nearby Omega Fishing SA FMFO factory in Joal Fadiouth, Senegal



FIGURE 15: Waste on the beach in Nouadhibou



FIGURE 16: Rubbish nearby a processing site in Joal-Fadiouth, Senegal (left) & young girls throwing garbage directly on the shore in Saint-Louis, Senegal (right)

Because of this alleged untreated water release in combination with polluted landing sites, all community members and fishers reported fewer coastal lobsters and shrimps in Mauritania. This is also reported by the FAO in its latest report⁶⁸: “Nowadays, liquid wastes from the factories are considered by the local communities to be harmful to aquatic fauna. These communities have observed more frequent unexpected mortality of small specimens of several species in the bay. In the particular case of lobster, local fishers argued that the installation of the factories resulted in high mortality, which led to the scarcity of this species in the area.” In 2021, The New Yorker’s journalist Ian Urbina released a documentary showing the impact on the fauna of untreated waters from FMFO factories in The Gambia⁶⁹.

Thirdly, polluted artisanal processing sites have also been reported in both Mauritania and Senegal. FGD participants (48 rights-holders) reported that in Saint-Louis, Senegal, the lack of a garbage collection points near the artisanal fish processing site and the lack of

proper cleaning and rubbish collection system has led to the pollution of the artisanal processing sites. A polluted processing site can contaminate food and create health risks for women processors and their on-site workers, as well as for final customers.

An additional problem specific to Senegal is that in Saint-Louis rising sea levels have started to impact the space available in the fish processing site. All processors in Saint-Louis reported that rising sea levels impact the space available for processing fish. This may affect the community’s income levels if artisanal processors cannot access the processing site.

It must be noted that some international buyers are already taking action to get a better understanding of the impact of the FMFO value chain in Mauritania and Senegal. Olvea for example is conducting a life-cycle analysis of fish oils it buys in Mauritania, in order to have a more precise understanding of impacts on the resource, on the environment and on CO2 emissions.

Summarised findings:

MAURITANIA & SENEGAL

LOCATION		
IMPACT	SMOKE FROM THE FACTORIES LEADING TO RESPIRATORY AND SKIN PROBLEMS OF THE LOCAL POPULATION	ACTUAL
IMPACT	RELEASING UNTREATED WATER INTO THE OCEAN IMPACTING THE MARINE ECOSYSTEM AND AFFECTING PEOPLE’S HEALTH	ACTUAL
IMPACT	DUMPING WASTE ON THE BEACH, PROCESSING AND LANDING SITE AFFECTING THE MARINE ECOSYSTEM AND IMPACTING PEOPLE’S HEALTH	ACTUAL

SCALE

MAJOR

SCOPE

LARGE

REMIEDIABILITY

DIFFICULT

LIKELIHOOD

N/A

RIGHT-HOLDERS IMPACTED
All rights-holders (including community members)

RIGHTS IMPACTED
Right to a healthy environment (Resolution A/76/L.75; Resolution A/HRC/RES/48/13, Senegal’s Constitution 8, Mauritania’s Constitution 19) • Right to health (ICESCR G.C. 14, Senegal’s constitution 8 and 17, Mauritania’s Constitution 19) • Right to land and resources (C169)

ROOT CAUSES
Lack of smoke filters across multiple factories • Lack of enforced regulations • Lack of environmental audits per factory • Lack of waste water treatment facilities across multiple factories • The lack of infrastructure to keep landing sites and fish processing sites clean such as a garbage collection system • The lack of an adequate sewage system • The lack of education on the consequences of pollution of beaches and water • The lack of a landfill in Saint-Louis, Senegal • The close proximity of a landfill site to the community in Joal-Fadiouth, Senegal

LOCATION

SENEGAL

IMPACT

RISING SEA LEVELS IMPACTING THE SPACE AVAILABLE FOR PROCESSING ARTISANAL FISH PROCESSING IN SENEGAL

ACTUAL

POTENTIAL

SCALE

MODERATE

SCOPE

MEDIUM

REMEDIABILITY

DIFFICULT

LIKELIHOOD

N/A

RIGHT-HOLDERS IMPACTED

Artisanal processors

RIGHTS IMPACTED

Right to an adequate standard of living (ICESCR 11) • Right to food (ICESCR G.C. 12, UDHR 25)

ROOT CAUSES

Rising global temperatures and climate change

4.2.2. Right to an Adequate Standard of Living

According to international human rights law, people have the right to an adequate standard of living, defined as providing food, water and housing. This falls under the heading of economic, cultural and social rights, and its justiciability is based on an AAAQ framework which means that it should be accessible, available, acceptable and of quality. This study found adverse impacts on people's standard of living in terms of the provision of food.

4.2.2.1. Availability, accessibility, acceptability and quality of food

Fish is a staple in the Senegalese diet. During interviews, all fishers on pirogues and purse seine pirogues, all artisanal processors, and community members in Senegal reported being able to access fish to consume at home, though they all mentioned fish being a scarce resource within both communities (it is less available) and needing to pay much more to get the same quantity of fish (it is less accessible). In addition, they also reported the quality of fish is lower. In Mauritania, all community members also reported a decrease in the accessibility and availability of fish for human consumption. To illustrate, it has been reported by community members that the prices of sardinella have risen in recent years from 100 to 600 MROs (from 0,25 EUR to 1,5 EUR/kg), which represents a steep increase for the poorer population in Mauritania who are the consumers of this species. This confirms findings from the desk-top research which highlighted that there is a direct link between the price of small pelagics for human consumption at the local market and the level of catches⁷⁰. Fish price paid by Mauritanian households today is higher than it was in the past years, as confirmed by the Economic and Social Observatory for Fisheries of the Mauritanian Ministry of Fisheries and Maritime Economy: *"In the first half of 2021, the overall price trend in Nouakchott showed a strong upward trend. They ranged from 160% for the grouper, through 105% for sea bream and 21% for lean"*⁷¹. The FAO, citing statistics from the Mauritanian Institute for Oceanic and Fisheries Research in a recent report has also reported a similar trend: *"Poorer households that do consume fish may be negatively affected because of increasing fish prices (from less than USD 95 per tonne in the early 2010s to over USD 400 currently)"*⁷².

Although there is a cultural preference for meat over small pelagic fish in Mauritania (as mentioned in one of the latest FAO report⁷³ on the topic and as argued in one of our virtual stakeholder interviews) all stakeholders in Mauritania interviewed mentioned that it is nevertheless a salient issue for poorer people. This is because 1) more Mauritians eat fish due to the increasing prices of meat; 2) amongst vulnerable groups, fish has always been popular - especially sardinella. Since 2013, the Mauritanian government created the National Society for Fish Distribution (SNDP) whose mission is to increase fish consumption in the country.⁷⁴

Key reasons for the increase of fish price and lack of quality fish in Senegal and Mauritania, as reported by the interviews, include 1) the scarcity of fish and that catches are intended for the FMFO industry and export, as they pay higher prices, leaving the local market being poorly supplied; 2) lack of appropriate containers, such as basins and buckets, and space on the landing sites means that fish is temporarily dumped (or unloaded, or thrown) on the beach when being brought from the artisanal boats and before the transporters or fishmongers take it for processing, storing or transporting affecting the quality of the fish due to the beach's polluted environment and it also gets squashed (or crushed, or mashed) if there are large quantities of it and 3) all fishers of pirogues and purse seine pirogues and artisanal processors reported that they do not use freezers to prolong the quality of fish as this is something they cannot afford. Instead, they use alimentary ice bought for fishing operations.

Senegal lacks policies that control the availability of fish for local consumption, whilst the Mauritanian government has implemented policies to improve this, such as 1) ensuring 2% of all catches to go directly to the local market, 2) 20% of factories' fish to be frozen and then used for local consumption, and 3) prohibiting sardinella to be used for processing into FMFO. All Mauritanian stakeholders interviewed mentioned that despite these new regulations they still experienced issues with the accessibility of fish - especially in terms of prices and quality. This could indicate that the current quotas are insufficient and/or that the impacts of the new policies are not yet visible. In addition, this research revealed emerging practices - from commercial vessels and factories in Mauritania - circumventing the regulations. First, there have been cases where commercial vessels in Mauritania remain at sea for a few days after fishing

so that the quality of the fish is degraded, improper for human consumption, and the whole stock is therefore allowed to be channelled to FMFO (rather than used for human consumption and freezing), as documented in our interviews aboard a vessel and FGDs with factory employees in Mauritania. Second, it has been confirmed

by one of our management interviews that factories continue processing sardinella. Our research shows that some factories and vessel operators in Mauritania prefer to take the risk of being fined or having their boats detained for 30 days in order to channel their catch to the factories and for factories to keep processing.

Summarised findings:

LOCATION



MAURITANIA & SENEGAL

IMPACT

LIMITED AVAILABILITY, ACCESSIBILITY AND QUALITY OF FISH FOR HUMAN CONSUMPTION

ACTUAL

POTENTIAL

SCALE

MODERATE

SCOPE

LARGE

REMEDIABILITY

DIFFICULT

LIKELIHOOD

N/A

RIGHT-HOLDERS IMPACTED

All rights-holders (including community members)

RIGHTS IMPACTED

Right to an adequate standard of living (ICESCR 11) • Right to food (ICESCR G.C. 12, UDHR 25)

ROOT CAUSES

Overexploitation of fish • Fish intended for export and not human consumption • Increasing prices of fish • Loopholes within the current regulations • The lack of infrastructure to prolong the fish quality and store landed fish • The use of fresh fish fit for human consumption in FMFO production • The use of monofilament nets

4.2.3. Labour Rights

4.2.3.1. Regular employment and income

Many stakeholders across the supply chain in both Senegal and Mauritania reported a recent loss of income and jobs in the fishing industry. Several factors were identified as a catalyst for this loss of income. This includes the overdevelopment of the FMFO industry as it requires an extensive amount of small pelagic fish, which appears to, through interviews and FGDs with affected stakeholders and also through official reports⁷⁵ and NGO reports⁷⁶, have contributed to the depletion of fish stocks - paramount for the income of coastal peoples and their communities. Overexploitation of certain species has been attributed by the government itself to inadequate management practices, a too wide coastal fishing fleet and intense exploitation of critical areas such as spawning and nursing areas⁷⁷. The stakeholders interviewed reported the following issues regarding their loss of income:

First, fishers on pirogues and purse seine pirogues in both Senegal and Mauritania mentioned there were two main reasons for their loss of income and jobs over the past few months:

1. Less availability of fish to catch: as fishers' income is wholly dependent on the quality and size of the catch, a limited availability of fish at sea directly impacts their income. Fishers on pirogues and purse seine pirogues reported their struggle to catch fish is associated with the FMFO industry, which has also been confirmed by desktop research⁷⁸. To illustrate, FGD participants in Senegal (48 rights-holders) reported that the competition with fishing vessels and the vessel's fishing capacities have led to depleted fish stocks. 75% of community members interviewed in Senegal reported that fishers

struggle to catch fish to make a stable income. The lack of fish availability to catch is exacerbated by the oil exploration and the related restriction of the fishing zone available for fishers to fish. This means there is an even smaller available fishing area available for fishers on pirogues and purse seine pirogues to make their catch. As a result, Senegalese fishers sometimes travel to Mauritanian waters. This is not without risk - FGD participants (48 rights-holders) reported that Senegalese fishers fishing in Mauritanian waters face the risk of being arrested and losing fishing equipment if they do not have a licence to fish in Mauritanian waters. 71% (5/7) of fishers on pirogues and purse seine pirogues in St. Louis said Mauritanian coast guards confiscate their fishing materials once they enter Mauritanian areas without a licence. This shows their desperate need to find an income from fishing.

"The FMFO factories in Mauritania and Senegal have a real impact on our activity. They need a lot of small pelagic, and now, with the scarcity of fish, the fishermen catch the juveniles. If the situation does not change, there will be no more fish in these areas within a few years." **Artisanal Fisher, 50, Saint-Louis, Senegal**

2. Increasing prices of fish operations: another reason for the fishers' loss of income is the increasing prices. This includes higher costs of food and gas due to inflation but also due to the longer distances travelled at sea to reach the designated fishing areas for each segment in both Senegal and Mauritania. The recent policy change by the government in Mauritania⁷⁹ has modified the fishing zones and excluded areas known as small pelagics' spawning and nursing areas. As a result, the fishing zones are now further away from the coast. Many fishers reported the 'remoteness' of fishing areas as a significant financial and physical (open seas) challenge for them. Consequently, externally-financed operations

(e.g. by a factory, private individual or a fishmonger) in Senegal and Mauritania have increased. As a result, fishers have to sell the catch to them at a fixed price, usually lower than the market price. This contradicts a claim made in the recent FAO report⁸⁰ indicating that artisanal fishers can generally sell an increased volume of catch at higher prices to the industry than their more traditional buyers (local fishmongers and consumers) and thus increasing their income.

As a way to try to increase their income from catches and to compete with commercial vessels, fishers on pirogues and purse seine pirogues in Mauritania and Senegal use nets of a small diameter (monofilament net), despite the fact these fishing gear are forbidden in both countries. Monofilament nets are reportedly damaging in that they catch species indistinctly of sizes (also juvenile fish), among other issues⁸¹, and have been forbidden in Senegal since 1998 and in Mauritania since 2002. During the field visit, it was reported that some factories do use juvenile fish to produce FMFO during adult fish scarcity. To illustrate, Mauritanian factory employees interviewed mentioned that *“they don't like to process juvenile fish because they block the machines”* clearly indicating that they do process juvenile fish, but would rather not due to the harm it causes the processing machines. All fishers in Senegal reported that some factories encourage the fishing of juvenile fish for their operations, incentivising them to catch juvenile fish, further contributing to the depletion of fish stocks. It was also reported by fishers in Mauritania that factory agents sometimes provide monofilament nets to contracted fishers.



FIGURE 17: Monofilament net on the beach in Saint-Louis, Senegal, despite the national ban on this fishing gear

Second, artisanal processors and fishmongers in Senegal and Mauritania, mostly females, also reported an income reduction and the loss of opportunities to work due to the lack of available fish to process and sell – even in peak season. Artisanal processors' income depends on the amount of fish being caught, how much they purchase fish for and how well the sales of processed and unprocessed fish go. According to all female artisanal processors interviewed in Senegal and Mauritania, they process considerably less fish than before, negatively impacting their livelihood. To illustrate, one artisanal processor/fishmonger mentioned she sold 4 tons in a single day in 2015. Now, there is not much

fish to process, so the quantities are limited, up to tens of kgs. They see this as a result of having to compete with FMFO factories, which they see as a 'threat to women' and a direct competitor, according to all artisanal processors interviewed in Mauritania. Similarly, in Joal-Fadiouth, FGD participants (48 rights-holders) also reported competition to buy fish with FMFO factories. This is because factories have more financial means to invest in procuring fish for their operations, such as paying higher prices than they can afford or financing a fishing operation, essentially pushing women out of accessing fish. This has led to a loss of work for the women processors, consequently impacting revenues to feed families and causing an overall loss of income for the community. The presence of many FMFO factories needing high volumes of fish creates a market distortion with regard to the pre-FMFO situation.

Third, FMFO seasonal factory employees in Mauritania are daily workers and are only 'employed' (daily and verbal contracts) when there is fish to process. On peak days, factories could employ up to 100 seasonal employees. However, the 2022 season saw a more limited production, and many factories were not in operation. This resulted in a loss of income for many of these seasonal employees. Of the 3 factories visited, only 1 factory was in operation – Alfa Service. In addition, employees from the Chinese factory mentioned it was in operation, but this could not be verified as this factory was not visited (just worker interviews outside the factory). Factories that are in operation are factories with freezing capacities, according to the new Mauritanian government policies. These factories in operation do use seasonal/daily labourers, but considerably less than before. In addition, both management and employees reported that the number of permanent staff employed in FMFO factories is now less as a result of the recent developments in the industry.

Fourth, in Mauritania, transporters used to be the main actors transporting fish from the landing site to either the factories or artisanal processing sites and used to get work from the FMFO industry. But even this profession has been affected as some factories now have implemented pipes to suck the fish directly from the vessels to transport trucks or to the factories. Transporters have reported that one such pipe substitutes the work of 40 transporters. The transporters still transport fish to the processing site and to other factories that do not use pipes. See the below pictures illustrating these pipes.



FIGURE 18: Pipes sucking fish from the boats into the factories and/or trucks in Mauritania

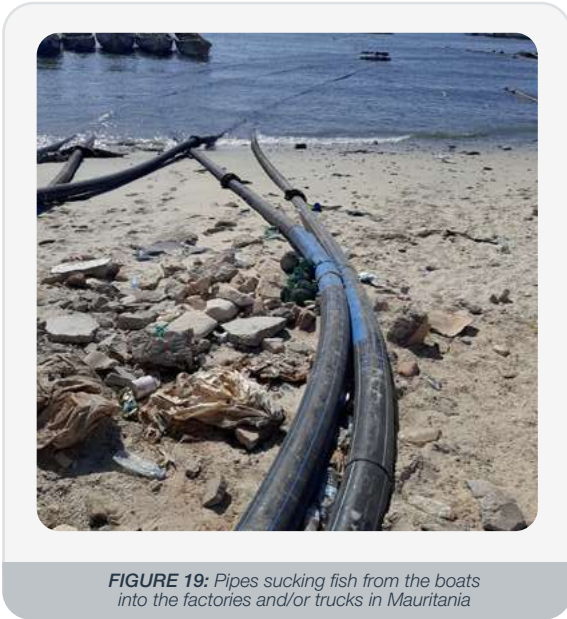


FIGURE 19: Pipes sucking fish from the boats into the factories and/or trucks in Mauritania

Lastly, commercial vessel fishers in Mauritania also experienced less regular work due to the recent changes in the fishing sector. Though some commercial vessels still went ahead with their fishing operations, the number of operations was considerably less and many vessels were docked at the time of our research. The vessel owner pays commercial vessel fishers per fishing operation. This meant that many of the vessel fishers were losing out on income as a result of fewer fishing operations at sea.

It is essential to highlight that attempts have been made by the Mauritanian government through new regulations to monitor the industry, protect fish stocks, and prioritise small pelagics for human consumption since mid-2022. These new initiatives are commendable and, when implemented and enforced widely enough, could potentially have positive impacts on fish stocks. However, the government must ensure that an improvement in one area (e.g. fish stocks / food for human consumption) does not impede progress in another area (e.g. on livelihoods and access to income and jobs). This is further explained in the recommendation section of the report.

Summarised findings:

LOCATION



MAURITANIA & SENEGAL

IMPACT

LOSS OF INCOME AND OPPORTUNITIES TO WORK DUE TO THE COMPETITION, DEPLETING FISH STOCKS, OIL EXPLORATION (SENEGAL) AND INCREASING PRICES OF FISHING OPERATIONS

ACTUAL

POTENTIAL

SCALE

MINOR

SCOPE

LARGE

REMIEDIABILITY

MODERATE

LIKELIHOOD

N/A

RIGHT-HOLDERS IMPACTED

Artisanal fishers • Purse seine pirogue fishers • Commercial vessel fishers in Mauritania • Mauritanian FMFO factory seasonal employees • Mauritanian FMFO factory permanent employees • Transporters • Artisanal processors • Fishmongers

RIGHTS IMPACTED

Right to work (UDHR, 23, Senegal’s Constitution Article 8) • Right to just and favourable working conditions (UDHR 23, ICESCR 7, Senegal’s Constitution Article 25, Senegal’s 1997 Labour Code, Mauritania’s Law No. 2004-017 on the labor code)

ROOT CAUSES

Increasing number of FMFO factories • An abundance of fishing vessel licences in the coastal segment and rapid development of the FMFO industry • Scarcity of fish • Overexploitation of fish - Lack of education on breeding areas of fish and the biological rest period • Inflation (higher cost of food and gas) • Shutdown of operations in FMFO factories • Competition between artisanal processors and FMFO factories for raw materials • New zoning / fishing areas are designed by the authorities • Pipes transporting fish from the vessels to the factories • Increasing number of fishing operations externally ‘financed’

4.2.3.2. Child labour

According to international and national legal frameworks, children are allowed to perform light work from the age of 13. On the contrary, child labour is prohibited and occurs when 1) children perform hazardous tasks; 2) children work at night; 3) children perform work that is mentally, physically, socially, or morally dangerous and harmful to children; or 4) when work interferes with their schooling depriving them of the opportunity to attend school, by obliging them to leave school prematurely or by requiring them to attempt to combine school attendance with excessively long and heavy work.⁸²

According to key informant interviews with community members in Mauritania, about 50% of the children in the

visited communities go to school. Even though schools are available in many communities, stakeholders reported that schools lack teachers. It is prevalent for children to drop out of school after primary school (ages 6 until 12 years), as reported by all stakeholders in Senegal and Mauritania. In Senegal, there are no high schools in the visited communities.

According to all stakeholders interviewed in both Mauritania and Senegal, it is very common for boys to work on the landing site and artisanal fishing boats (artisanal pirogues and purse seine pirogues) – either accompanying their father or other family members on pirogues and purse seine boats during school hours - as was also confirmed by the research team through observations in both countries. At the landing sites,

it was reported that children support carrying fishing equipment to the boats. In Senegal, this includes transporting crates, usually around 25kgs, to the shore and to refrigerated trucks. It also includes helping count the number of crates taken from the boat. On the artisanal fishing pirogues, our research team observed that in Senegal, almost a third of the crew were children (boys). The type of tasks that boys perform on boats consist of helping with repairing nets, and helping to prepare tea and food and perform tasks like fishing and assisting where needed. Boys that were found to be working on the pirogues are not going to school simultaneously as it is incompatible with regular school attendance. The period spent on pirogues can be extremely long, with work beginning very early in the morning and/or lasting until night. We didn't see nor receive any evidence of children working on commercial vessels in Mauritania. Our team was told that the process leading to work on commercial vessels is more controlled by the authorities and requires the obtention of a card from the ministry.

During interviews, all fishers on pirogues and purse seine pirogues in Senegal reported that they started working on a boat from the ages of 8 years old and confirmed that activities carried out by children include fishing and carrying crates, water and other materials to the boat. FGD participants (48 rights-holders) in Senegal reported that children start fishing at 12-13 years old, as it is seen as a learning process for the job to assist adult fishers in all aspects of fishing operations and help their parents earn money. When asked what could be done to enable children to go to school, a fishermen responded:

“More sensitisation is needed for parents. It is more important for a child to go and stay at school now because the situation has changed, and now resources are scarce”. **Artisanal Fisher, 60, Joal-Fadiouth, Senegal**

In Senegal, all processors reported that they started working as processors around the ages of 15-25. Usually, adults do processing, but all processors reported that it is not unusual to have teenagers cutting and cleaning fish and generally assisting in the processing site. It is interesting to note that 5/14 processors mentioned



FIGURE 20: Children on a pirogue in Senegal

that some children would rather earn money than go to school and therefore drop out. However, in Mauritania, at the processing site, no children were observed working in the processing site (nor was this reported by any stakeholder).

Clearly, the amount of time children work interferes with their rights and ability to attend school. Additionally, the working conditions, time at work and the tasks performed by children working on and off pirogues and carrying/processing fish at artisanal sites indicate that some children who perform fishing and processing-related tasks engage in child labour. Annex II shows a table, developed by the FAO and the ILO, looking at the tasks that children perform in the fishing industry and the hazards and health risks associated with that task⁸³. No children were interviewed during this research.

In the FMFO factories in Mauritania, no children were observed working - nor was this reported by any factory employees, managers or community members. However, during management interviews of the factories visited, it was reported that FMFO factories do not verify the ages of seasonal employees. There is therefore a risk of employing underaged workers as daily labourers in peak season. As seasonal employees were not on site at the time of the field visit, we could not fully assess this risk.

Summarised findings:

LOCATION



MAURITANIA & SENEGAL

IMPACT

CHILDREN WORKING ON ARTISANAL BOATS (BOTH PIROGUES AND PURSE SEINE BOATS) AND LANDING SITES ENGAGED IN CHILD LABOUR

ACTUAL

POTENTIAL

SCALE

MAJOR

SCOPE

LARGE

REMIANIABILITY

DIFFICULT

LIKELIHOOD

N/A

RIGHT-HOLDERS IMPACTED

Children (Boys - 8-18 years old in Senegal and 13-18 years old in Mauritania)

RIGHTS IMPACTED

Right to be free from hazardous work (ILO C- 138 and No.182, Senegal's Ministerial Decrees No. 3748, 3749, 3750 & 3751) • Right not to be engaged in child labour (ICESCR 10, ILO C138, ILO 182, ILO C188, Senegal's Labour Code 1997 , Mauritania's Law No. 2004-017 on the labor code) • Right to education (Convention on the Rights of the Child, Senegal's Constitution 21 and 22)

ROOT CAUSES

Culturally important that children learn fishing on a young age as footsteps to their parents' jobs • Unawareness of the difference between child work and child labour • The lack of higher education available to children in the community • Low income creates the need for increased unpaid child family labour • The lack of alternative (skilled) job opportunities within the area decreases the incentive to stay in education

LOCATION

SENEGAL

IMPACT

CHILDREN WORKING AS FEMALE ARTISANAL PROCESSOR ASSISTANTS

ACTUAL

POTENTIAL

SCALE

MAJOR

SCOPE

LARGE

REMEDIABILITY

DIFFICULT

LIKELIHOOD

N/A

RIGHT-HOLDERS IMPACTED
Children (girls 15-18 years old)

RIGHTS IMPACTED
Right to be free from hazardous work (ILO C- 138 and No.182, Senegal's Ministerial Decrees No. 3748, 3749, 3750 & 3751) • Right not to be engaged in child labour (ICESCR 10, ILO C138, ILO 182, ILO C188, Senegal's Labour Code 1997 , Mauritania's Law No. 2004-017 on the labor code) • Right to education (Convention on the Rights of the Child, Senegal's Constitution 21 and 22)

ROOT CAUSES
Culturally important that children learn fishing on a young age as footsteps to their parents' jobs • Unawareness of the difference between child work and child labour • The lack of higher education available to children in the community • Low income creates the need for increased unpaid child family labour • The lack of alternative (skilled) job opportunities within the area decreases the incentive to stay in education

LOCATION

MAURITANIA

IMPACT

POSSIBILITY OF UNDERAGED WORKERS HIRED AS DAILY LABOURERS IN FMFO FACTORIES DUE TO A LACK OF AGE VERIFICATION SYSTEMS

ACTUAL

POTENTIAL

SCALE

MODERATE

SCOPE

MEDIUM

REMEDIABILITY

MODERATE

LIKELIHOOD

POSSIBLE

RIGHT-HOLDERS IMPACTED
Children (boys)

RIGHTS IMPACTED
Right to be free from hazardous work (ILO C- 138 and No.182, Senegal's Ministerial Decrees No. 3748, 3749, 3750 & 3751) • Right not to be engaged in child labour (ICESCR 10, ILO C138, ILO 182, ILO C188, Senegal's Labour Code 1997 , Mauritania's Law No. 2004-017 on the labor code) • Right to education (Convention on the Rights of the Child, Senegal's Constitution 21 and 22)

ROOT CAUSES
Lack of age verification

4.2.3.3. Occupational health and safety

Various occupational health and safety issues have been identified in interviews with different stakeholders, adversely impacting their right to health and right to just and favourable working conditions.

First, all fishers on pirogues and purse seine pirogues in both Senegal and Mauritania reported that working conditions at sea can be hazardous especially due to travelling further out into the sea to make their catch while using pirogues. To illustrate, in Saint-Louis, Senegal, this issue is exacerbated because of oil exploration areas which are restricted for fishing, so fishers have to travel further away, up to 200 kilometres from the shore. Accidents at sea that have been reported are knife wounds (for working with nets and ropes), sinking boats and falls and collisions between artisanal boats and commercial vessels. Purse seine pirogues can be at sea - if needed - for 2 days (sleeping is done while sitting), and fishers bring cooking gas and utensils to cook onboard. FGD participants (48 rights-holders) in Senegal also reported the risk of fire and explosion on

board as fishers cook and make tea using gas bottles. This risk is the same in Mauritania. In addition, artisanal fishers reported insufficient PPE in both Senegal and Mauritania. In Mauritania, all fishers on pirogues and purse seine pirogues reported wearing lifejackets (and this was observed during our field research) owned by the fishermen themselves. However, they do not have any other type of safety equipment on board such as first aid kits. In Senegal, FGD participants (48 rights-holders) identified that wearing life-jackets is not common for fishers as it is seen as not being 'brave enough', unless they go fishing in a country where it is enforced (Guinea, Mauritania, Guinea Bissau). Not wearing life jackets and/or having other life saving equipment on board could lead to some fishers potentially losing their life.

Second, at the FMFO factories visited in Mauritania, it was observed that employees wear gum boats, but many did not wear masks. When asked what kind of training they receive from factory management on health and safety, employees reported receiving training on hygiene but not on safety or security. This is important as workers use heavy equipment to collect the fish from the stack, upload it into the machines and process it. In

one of the factories, employees from Atyfen mentioned during a FGD that they had gotten sick due to the smell coming from the machines during operations.

Lastly, Mauritanian processing sites have no electricity, water, or toilets. In Senegal, there are toilets, but they are filthy and are not regularly cleaned by the municipality nor by the professional associations. The working place is unclean, and female artisanal processors reported running the risk of catching diseases associated with unmanaged solid waste in both Senegal and Mauritania. Because solid waste clogs drains creating stagnant water for insect breeding and transmission of diseases such as cholera, improper solid waste disposal and management can lead to air, soil, and water pollution. Major health problems associated with improper municipal solid waste management include diseases such as cholera, malaria, dengue fever, respiratory infection, and asthma⁸⁴. In addition, artisanal processors in Senegal and Mauritania reported cuts resulting from using knives for processing and burns from stoves. During the field visit, it was observed that processors in both countries do not have any PPE, including gloves or masks. Although this was not reported during field research, desktop research found that fish smoking could have negative respiratory health impacts on those that practice fish smoking.⁸⁵

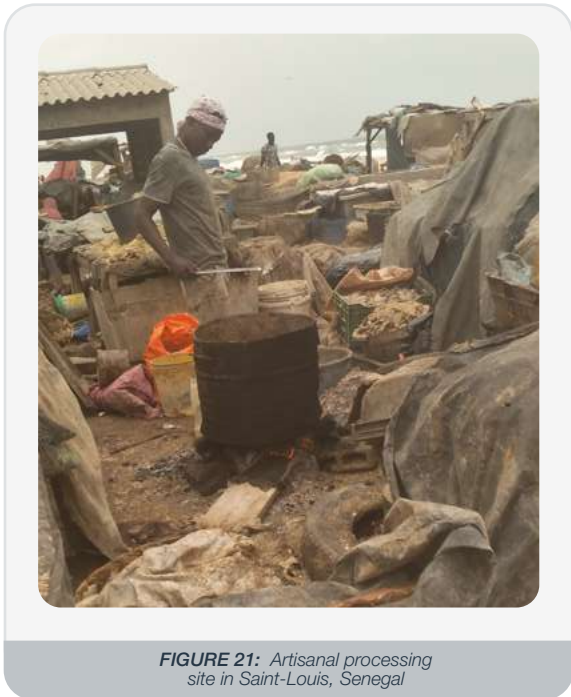


FIGURE 21: Artisanal processing site in Saint-Louis, Senegal

Summarised findings:

LOCATION



MAURITANIA & SENEGAL

IMPACT

COLLISIONS AND SINKING BOATS

ACTUAL

POTENTIAL

SCALE

MAJOR

SCOPE

LARGE

REMIANIABILITY

DIFFICULT

LIKELIHOOD

N/A

RIGHT-HOLDERS IMPACTED

Artisanal fishers • Purse seine pirogue fishers • Commercial Vessel Fishers in Mauritania

RIGHTS IMPACTED

Right to just and favourable working conditions (UDHR 23, UDHR 24 ICESCR 7, Senegal's Constitution Article 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code) • Right to health (ICESCR G.C. 12, 14) • Right to life (UDHR 4) • Occupational Health and Safety (ILO C155, ILO C188, Mauritania's Law No. 2004-017 on the labor code)

ROOT CAUSES

Lack of PPE and high cost of PPE • Lack of life-saving equipment • Lack of first aid kits • Lack of adequate H&S training • Cultural practices of not wanting to wear life jackets in fear of appearing 'not brave' (in Senegal only) • The scarcity of fish available in the coastal zone

LOCATION



MAURITANIA & SENEGAL

IMPACT

GAS ONBOARD THE FISHING BOATS CAUSES OCCASIONAL FIRES

ACTUAL

POTENTIAL

SCALE

MAJOR

SCOPE

MEDIUM

REMIANIABILITY

MODERATE

LIKELIHOOD

N/A

RIGHT-HOLDERS IMPACTED



Artisanal fishers • Purse seine pirogue fishers

RIGHTS IMPACTED

Right to just and favourable working conditions (UDHR 23, UDHR 24 ICESCR 7, Senegal's Constitution Article 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code) • Right to health (ICESCR G.C. 12, 14) • Right to life (UDHR 4) • Occupational Health and Safety (ILO C155, ILO C188, Mauritania's Law No. 2004-017 on the labor code)

ROOT CAUSES

Lack of PPE and high cost of PPE • Lack of life-saving equipment • Lack of first aid kits • Lack of adequate H&S training • Cultural practices of not wanting to wear life jackets in fear of appearing 'not brave' (in Senegal only) • The scarcity of fish available in the coastal zone

LOCATION   **MAURITANIA & SENEGAL**



IMPACT **SLEEPING WHILE SITTING DURING LONG OVERNIGHT FISHING OPERATIONS** **ACTUAL** **POTENTIAL**

SCALE **MODERATE** **SCOPE** **MEDIUM** **REMEDIABILITY** **MODERATE** **LIKELIHOOD** **N/A**

RIGHT-HOLDERS IMPACTED
Purse seine pirogue fishers

RIGHTS IMPACTED
Right to just and favourable working conditions (UDHR 23, UDHR 24 ICESCR 7, Senegal's Constitution Article 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code) • Right to health (ICESCR G.C. 12, 14) • Right to life (UDHR 4) • Occupational Health and Safety (ILO C155, ILO C188, Mauritania's Law No. 2004-017 on the labor code)

ROOT CAUSES
Lack of PPE and high cost of PPE • Lack of life-saving equipment • Lack of first aid kits • Lack of adequate H&S training • Cultural practices of not wanting to wear life jackets in fear of appearing 'not brave' (in Senegal only) • The scarcity of fish available in the coastal zone

LOCATION   **MAURITANIA & SENEGAL**



IMPACT **CUTS AS A RESULT OF USING KNIVES FOR FISHING OPERATIONS AND PROCESSING AND BURNS FROM PROCESSING STOVES** **ACTUAL** **POTENTIAL**

SCALE **MINOR** **SCOPE** **SMALL** **REMEDIABILITY** **EASY** **LIKELIHOOD** **N/A**

RIGHT-HOLDERS IMPACTED
Fishmongers • Artisanal processors • Artisanal fishers

RIGHTS IMPACTED
Right to just and favourable working conditions (UDHR 23, UDHR 24 ICESCR 7, Senegal's Constitution Article 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code) Right to health (ICESCR G.C. 12, 14) Right to life (UDHR 4) Occupational Health and Safety (ILO C155, ILO C188, Mauritania's Law No. 2004-017 on the labor code)

ROOT CAUSES
Lack of PPE and high cost of PPE • Lack of life-saving equipment • Lack of first aid kits • Lack of adequate H&S training • Cultural practices of not wanting to wear life jackets in fear of appearing 'not brave' (in Senegal only) • The scarcity of fish available in the coastal zone

LOCATION   **MAURITANIA & SENEGAL**

IMPACT **CATCHING DISEASES DUE TO UNHYGIENIC WORKING SPACES** **ACTUAL** **POTENTIAL**

SCALE **MODERATE** **SCOPE** **MEDIUM** **REMEDIABILITY** **MODERATE** **LIKELIHOOD** **N/A**

RIGHT-HOLDERS IMPACTED
Artisanal processors

RIGHTS IMPACTED
Right to just and favourable working conditions (UDHR 23, UDHR 24 ICESCR 7, Senegal's Constitution Article 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code) • Right to health (ICESCR G.C. 12, 14) • Right to life (UDHR 4) • Occupational Health and Safety (ILO C155, ILO C188, Mauritania's Law No. 2004-017 on the labor code)

ROOT CAUSES
Lack of PPE and high cost of PPE • Lack of life-saving equipment • Lack of first aid kits • Lack of adequate H&S training • Cultural practices of not wanting to wear life jackets in fear of appearing 'not brave' (in Senegal only) • The scarcity of fish available in the coastal zone

LOCATION
 MAURITANIA

IMPACT

RISK OF ACCIDENTS DUE TO THE USE OF VERY OLD VEHICLES FOR TRANSPORTERS

ACTUAL

POTENTIAL

SCALE

MODERATE

SCOPE

MEDIUM

REMIEDIABILITY

MODERATE

LIKELIHOOD

POSSIBLE

RIGHT-HOLDERS IMPACTED
Transporters

RIGHTS IMPACTED
Right to just and favourable working conditions (UDHR 23, UDHR 24 ICESCR 7, Senegal's Constitution Article 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code) • Right to health (ICESCR G.C. 12, 14) • Right to life (UDHR 4) • Occupational Health and Safety (ILO C155, ILO C188, Mauritania's Law No. 2004-017 on the labor code)

ROOT CAUSES
Lack of PPE and high cost of PPE • Lack of life-saving equipment • Lack of first aid kits • Lack of adequate H&S training • Cultural practices of not wanting to wear life jackets in fear of appearing 'not brave' (in Senegal only) • The scarcity of fish available in the coastal zone

LOCATION**MAURITANIA & SENEGAL**

IMPACT

RISK OF RESPIRATORY DISEASES CAUSED BY FISH SMOKING

ACTUAL

POTENTIAL

SCALE

MODERATE

SCOPE

MEDIUM

REMIEDIABILITY

MODERATE

LIKELIHOOD

POSSIBLE

RIGHT-HOLDERS IMPACTED
Artisanal processors

RIGHTS IMPACTED
Right to just and favourable working conditions (UDHR 23, UDHR 24 ICESCR 7, Senegal's Constitution Article 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code) • Right to health (ICESCR G.C. 12, 14) • Right to life (UDHR 4) • Occupational Health and Safety (ILO C155, ILO C188, Mauritania's Law No. 2004-017 on the labor code)

ROOT CAUSES
Lack of PPE and high cost of PPE • Lack of life-saving equipment • Lack of first aid kits • Lack of adequate H&S training • Cultural practices of not wanting to wear life jackets in fear of appearing 'not brave' (in Senegal only) • The scarcity of fish available in the coastal zone

4.2.3.4. Harassment, discrimination, and abuse

There is a risk of attacks on women when going home late from the processing sites in Senegal. During interviews in Joal-Fadiouth, all artisanal processors and 25% of the community members reported that long working hours, into the night, and the absence of electricity on-site can lead to dangerous situations for women.

The FMFO factories in Mauritania visited as part of this study did not have policies in place against discrimination, physical abuse and/or harassment – neither did the commercial vessels visited. One of the factory managers interviewed (from SPHE), mentioned that if a person is discriminated against, they can report this in writing to the company's management. There does not appear to

be a formal system at the factory and vessel levels that enables workers to report discrimination, harassment or abuse (as explained above). The manager mentioned that physical abuse would be sanctioned with layoffs and wage cuts. In Mauritania, all FMFO factory employees interviewed (all permanent workers) as well as commercial vessel fishers did not report any cases of harassment, discrimination, and abuse. Nonetheless, it should be highlighted as a potential risk due to the lack of policies, sensitisation and training on this topic and the findings of desk-top research that point to the potential risk of harassment and abuse onboard fishing vessels. According to research, exploitation and abuse are frequently faced by West African fishermen, including abuse and discrimination and calls for greater protection and accountability for fishers in the region⁸⁶.

Summarised findings on following page

Summarised findings:

LOCATION **SENEGAL**

IMPACT **LONG WORKING HOURS, INTO THE NIGHT, AND THE ABSENCE OF ELECTRICITY ON-SITE CAN LEAD TO DANGEROUS SITUATIONS FOR WOMEN AND THEY FEAR ATTACKS** **ACTUAL** **POTENTIAL**

SCALE **MAJOR** **SCOPE** **MEDIUM** **REMEDIABILITY** **DIFFICULT** **LIKELIHOOD** **N/A**

RIGHT-HOLDERS IMPACTED
Artisanal processors

RIGHTS IMPACTED
Right to non-discrimination and equality (UDHR 7, Senegal’s Constitution 25) • Right not to be subjected to torture or to cruel, inhuman or degrading treatment or punishment (UDHR 5, Senegal’s Constitution 7)

ROOT CAUSES
The lack of infrastructure, such as electricity, in the processing site

LOCATION **MAURITANIA**

IMPACT **RISKS OF DISCRIMINATION, HARASSMENT, AND/OR ABUSE WITHIN A FACTORY OR ONBOARD A VESSEL DUE TO A LACK OF POLICIES, TRAININGS AND REPORTING MECHANISMS** **ACTUAL** **POTENTIAL**

SCALE **MODERATE** **SCOPE** **MEDIUM** **REMEDIABILITY** **MODERATE** **LIKELIHOOD** **POSSIBLE**

RIGHT-HOLDERS IMPACTED
Artisanal fishers • Purse seine pirogue fishers • Commercial vessel fishers in Mauritania • Mauritanian FMFO factory permanent employees • Mauritanian FMFO factory seasonal employees

RIGHTS IMPACTED
Right to non-discrimination and equality (UDHR 7, Senegal’s Constituion 25) • Right not to be subjected to torture or to cruel, inhuman or degrading treatment or punishment (UDHR 5, Senegal’s Constitution 7)

ROOT CAUSES
Lack of policies at FMFO factory level and at vessels • Lack of training on harassment, discrimination and abuse • Lack of formal reporting mechanisms

4.2.3.5. Worker representation, trade unions and grievances

This study also found a few impacts on people’s freedom of association as none of the stakeholders interviewed were part of a trade union. In Mauritania, fishers are represented through multiple federations of fishers. The federations negotiate with the ministry and coast guards on behalf of the fishermen. Federations also represent fishers in Senegal. In both countries, the federations represent fishers on pirogues, purse seine pirogues, commercial vessel fishers in Mauritania, and artisanal processors. If any of these categories of workers have any issues, problems or complaints, they will go to the federations. However, the federation does not deal with any accidents or injuries that might occur at work or complaints around harassment, discrimination, or issues

related to labour standards and social standards. The fishing federation does not represent transporters, as they have their own federation.

FMFO permanent factory employees in Mauritania can report any issues they face at work to HR. However, they are not able to report an issue anonymously, and it remains unclear (from the management interviews) how issues are documented, monitored and followed up on. There does not seem to be any formal system in place. It is also unclear whether the daily seasonal employees could access these systems. One factory employee mentioned, “personally, I am not part of a union because of the lack of confidence in this kind of grouping”.

There also is no grievance system available and accessible for community members to report issues they experience with FMFO factories in Mauritania.

Summarised findings on following page

Summarised findings:

LOCATION



MAURITANIA & SENEGAL

IMPACT

DIFFICULTIES RAISING COMPLAINTS, ISSUES, AND/OR GRIEVANCES (ANONYMOUSLY) EXPERIENCED AT THE WORKPLACE

ACTUAL

POTENTIAL

SCALE

MODERATE

SCOPE

LARGE

REMEDIABILITY

EASY

LIKELIHOOD

N/A

RIGHT-HOLDERS IMPACTED

Artisanal fishers • Purse seine pirogue fishers • Commercial vessel fishers in Mauritania • Mauritanian FMFO factory permanent employees • Mauritanian FMFO factory seasonal employees • Transporters • Artisanal processors • Fishmongers • Community members

RIGHTS IMPACTED

Freedom of Association (Human Rights Act 11, Senegal's Constitution 8 and 10, Mauritania's Constitution) • Right to join and form a trade union (ICCPR 22, UDHR 20 Senegal's Constitution 25, Mauritania's Constitution)

ROOT CAUSES

Absence of formal grievance procedures at factory or industrial vessel level • Lack of unionisation

4.2.3.6. Contracts and working hours

The artisanal fishing industry in Mauritania and Senegal is a rather informal sector, meaning that many actors do not have formal work contracts. This impacts their understanding and awareness of their responsibilities and rights at work, and the terms and conditions of work. In addition, no clear agreements are made regarding working hours, rest, or what happens in terms of accidents at work.

- FMFO factory seasonal employees in Mauritania are daily workers and only have verbal contracts. Excessive working hours for this category of workers were not reported during our field visit, but is a risk when production is high as factory employees' shifts are 12-hours.
- Factories in Mauritania, when financing fishing operations, appear to have written contracts with the commercial vessel owners and boat owners of pirogues and purse seine boats but not with all the crew members on board. Crew members only have verbal agreements with the boat owner in Mauritania and Senegal. It is difficult to assess the number of hours fishers work because working hours depend on the quality and quantity of the catch. According to interviews with fishers on pirogues and purse seine pirogues in both countries, those on pirogues could spend up to 8 hours at sea – either during the day or night. Purse seine pirogue fishers - when needed - could stay at sea for 2 days, and commercial vessels fishers stay there for up to a week.

- Artisanal processors and fishmongers do not have any contracts with their buyers or sellers, only verbal agreements neither Mauritania or Senegal. They work from 7AM until 11PM for six-seven days a week (though depending on the availability of fish).
- Transporters in Mauritania do not have working or supply contracts – all is done verbally. Their work hours depend on the time of arrival of boats from fishing. They can work from early morning to 11 or 12PM at night. They work as long as boats reach the landing sites. There is a risk of excessive working hours for them when there is a high availability of fish.



FIGURE 22: Artisanal fishers on the pirogue and transporters in the water in Mauritania

Summarised findings on following page

Summarised findings:

LOCATION **MAURITANIA & SENEGAL**

IMPACT **LACK OF FORMAL WORK CONTRACTS IMPACTING DECENT WORKING CONDITIONS** **ACTUAL** **POTENTIAL**

SCALE **MINOR** **SCOPE** **LARGE** **REMEDIABILITY** **MODERATE** **LIKELIHOOD** **N/A**

RIGHT-HOLDERS IMPACTED
 Artisanal fishers • Purse seine pirogue fishers • Mauritanian FMFO factory seasonal employees • Artisanal processors • Fishmongers

RIGHTS IMPACTED
 Right to just and favourable working conditions (UDHR 23, ICESCR 7, Senegal's Constitution Article 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code) • Right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay (UDHR 24, Senegal Constitution 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code)

ROOT CAUSES
 Increasing number of FMFO factories Informal sector with many seasonal and daily labourers

LOCATION **MAURITANIA & SENEGAL**

IMPACT **RISK OF EXCESSIVE WORKING HOURS DEPENDING ON THE AVAILABILITY OF FISH** **ACTUAL** **POTENTIAL**

SCALE **N/A** **SCOPE** **N/A** **REMEDIABILITY** **N/A** **LIKELIHOOD** **POSSIBLE**

RIGHT-HOLDERS IMPACTED
 Artisanal fishers • Purse seine pirogue fishers • Mauritanian FMFO factory seasonal employees • Artisanal processors • Fishmongers • Transporters

RIGHTS IMPACTED
 Right to just and favourable working conditions (UDHR 23, ICESCR 7, Senegal's Constitution Article 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code) • Right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay (UDHR 24, Senegal Constitution 25, Senegal's 1997 Labour Code, Mauritania's Law No. 2004-017 on the labor code)

ROOT CAUSES
 Lack of monitoring working hours • Lack of terms and agreements of work

4.2.3.7. Debt bondage

As mentioned before, many fishing operations – either using pirogues or purse seine boats – are financed by a factory, a fishmonger, or occasionally a private individual in both Mauritania and Senegal. This means that the factory or fishmonger pays for all the expenses (food, drinks, baits, gas) in return for the catch. 36% of fishers on pirogues and purse seine pirogues in Senegal reported that if a buyer has financed the fishing activity in advance, the fisherman must sell him the catch at a set price. FGD participants (48 rights-holders) in Senegal reported that because of the lack of money to buy supplies and necessary fishing material, fishers frequently end up in agreements where they must sell at a discounted rate to buyers who have financed the

fishing operation. This same scenario also applies to Mauritania.

This brings a risk of debt bondage, working for little or no money to repay a debt. This is because it can create a situation where fishermen have to attend fishing operations to pay back their 'debts' to the financier, and end up not earning any money, especially when a fishing operation could not obtain the desired catch or no catch at all. The field research did not indicate that boat owners are forced by the 'financier' to work to pay off the debt or if the debt is growing as more and more loans are taken. However, a cycle of debt bondage between fishers on pirogues and purse seine pirogues and whoever financed the operation is a potential risk identified.

Summarised findings on following page

Summarised findings:

LOCATION
MAURITANIA & SENEGAL

IMPACT
RISK OF DEBT BONDAGE AS A RESULT OF FINANCIERS FINANCING A FISHING OPERATION
ACTUAL
POTENTIAL

SCALE
MODERATE

SCOPE
MEDIUM

REMIEDIABILITY
MODERATE

LIKELIHOOD
POSSIBLE

RIGHT-HOLDERS IMPACTED

Artisanal fishers • Purse seine pirogue fishers

RIGHTS IMPACTED

Right to not be subjected to slavery, servitude or forced labour (UDHR 4, ICCPR 8, ILO C29, ILO C105, Senegal's Constitution Article 25, Mauritania's Constitution Article 13)

ROOT CAUSES

High initial costs of carrying out a fishing operation, including purchasing gas oil, engine oil and food for the duration of the trips • High inflation within the region has also meant that prices of goods add additional financial pressure on fishers • Difficulty in securing loans from financial institutions to fund fishing operations • Financiers (fishmongers or factories) financing a fishing operation

As these sections above illustrate, adverse impacts have been identified at both artisanal and industrial fishing and processing levels. The results of this study are not meant to argue in favour of one industry over the other as both sectors are important and complementary. Instead, this study creates a better understanding of the impacts found in both sectors in Mauritania (only in the artisanal sector in Senegal) with one objective: for each sector to adapt its way of working to address the adverse impacts and maximise the positive impacts (such as its significance for people's livelihoods). Such an adaptation could entail for example limiting the number of fishing vessels and operations.

Both sectors - artisanal and industrial - are present in international supply chains meaning international businesses, buyers and investors have a duty of care towards all stakeholders. This duty of care extends towards the artisanal sector, even though it may seem further removed from their supply chain. The next sections - after explaining the root causes of the impacts found - further explain this duty of care and provide an overview of the recommendations that can be implemented by different duty-bearers in both sectors (artisanal and commercial) to mitigate, remediate and prevent the impacts found.

Root causes begin on following page

4.3. ROOT CAUSES

The root causes of each impact have been highlighted in the previous section when the impacts were described, explained and unpacked. This section provides a structured overview of the root causes identified. Very often, it is a combination of multiple root causes that creates an environment for an impact to occur. When determining the next action steps, it is important to take into consideration the importance of tackling the root causes of impacts.

ECONOMIC

Rapid development of the FMFO industry for export resulting in an increased number of FMFO factories in Mauritania and an abundance of fishing vessel licences

Inflation: Higher cost of food and gas increasing the price of fishing operations

Implementation of pipes from the vessels to the factories substituting manual labour

Artisanal fishing is an informal sector with many seasonal and daily labourers without much regulation

Poverty levels unabling people to afford effective PPE and to pay for own fishing operation, and increasing the need for unpaid child family labour

Unemployment rates disincentivises children to stay in education

Dependence on the income received by selling fishing rights to foreign countries and corporations

CLIMATE / ENVIRONMENT

Scarcity of fish due to overexploitation of fish and lack of education on fishing gears dangers, breeding areas of fish and biological rest period

Rising global temperatures and sea levels impacting the space available for processing fish

GOVERNANCE

'Unintended consequences' of recently implemented policies by the Mauritanian government resulting in a shutdown of operations in FMFO factories, longer duration of fishing trips, and loss of income/jobs

Lack of effective enforcement and loopholes within the current regulations impeding its effectiveness

Lack of effective monitoring and enforcement of labour laws in factories and fisheries (e.g. on working hours, health & safety, terms and agreements of work, age verification, grievance mechanisms, unionisation)

Lack of available (higher) education and teachers resulting in school drop-outs and child labour

Lack of infrastructure and facilities, such as: 1) electricity at processing sites; 2) containers, basins, buckets and space on landing sites to store fish; 3) smoke filters; 4) water treatment facilities; 5) garbage collection system; 6) adequate sewage system; 7) landfill

SOCIOCULTURAL

Not wanting to wear life-jackets in fear of appearing not-brave

Culturally important that children learn fishing at a young age

Unawareness of the difference between child work and child labour

Unawareness of the consequences of pollution of beaches and water

4.4. BUSINESS LINKAGES

Oftentimes, HRIAs identify the business linkage to an adverse impact, meaning whether the business ‘causes’, ‘contributes to’, or is ‘directly linked’ to an adverse impact. The definitions of these categories are not rigid but the below table gives an overview of what the categories can include⁸⁷.

CAUSING

When a business’ actions or inactions on their own (without other stakeholders) are sufficient to cause the adverse human rights impact.

CONTRIBUTING TO

When a business incentivises, facilitates or enables the harm. This occurs in two broad categories:

- ★ Via a third party: “the business takes an action or decision that “creates strong incentives for the third party to abuse human rights (e.g. unrealistic purchase orders)” or “where a company facilitates or enables such abuse” (e.g. failing to take reasonable steps to prevent the harm that he knows or should know about from happening)
- ★ When acting in conjunction with another entity: “business activity leads to negative collective or cumulative impacts, such as drawing water from a well with other businesses that leaves little left for local residents or farmers (collective) or a relatively minor impact that over time leads to a significant impact (cumulative)”

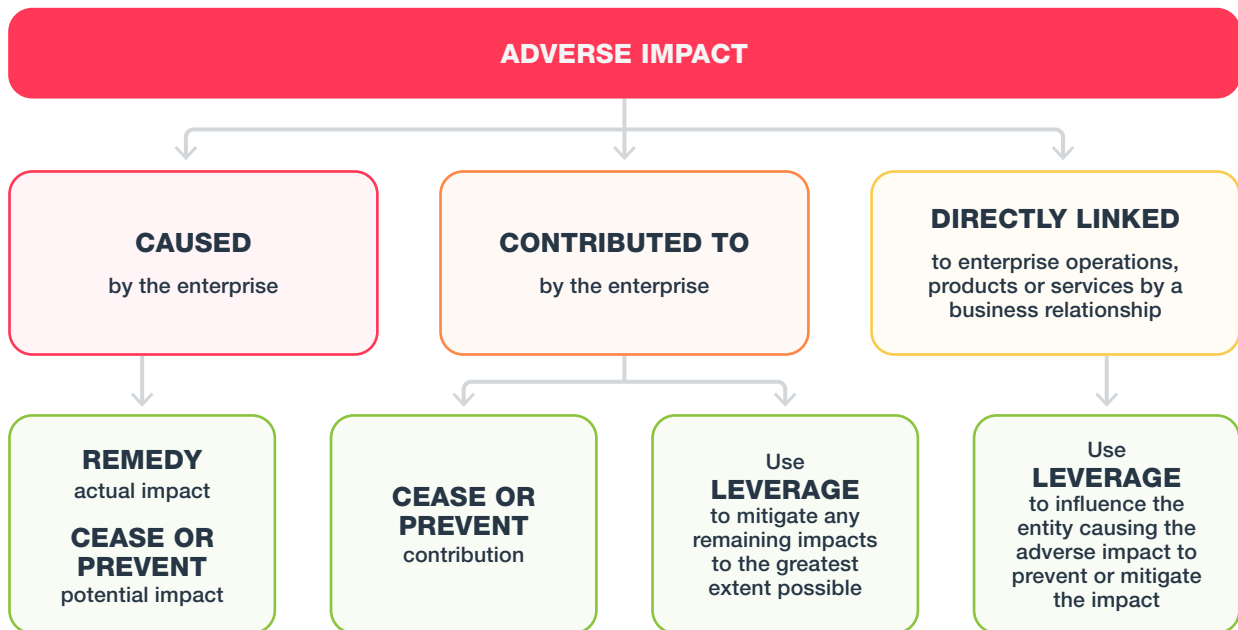
DIRECTLY LINKED

When a business has not caused or contributed to the harm, but the harm is directly linked to its operations, products, or services through its business operations.

The classification is important as these categories determine the responsibility of a company in terms of remediation and helps identify the next action steps. To illustrate, the UNGPs indicate that businesses owe remediation for a certain impact when they “cause” the human rights impact, but not when they “contribute to” or are “directly linked to” it. However, in the case where the latter two apply, a company is expected to use its leverage to prevent or mitigate the impact. See the visual at the bottom of this page for an explanation⁸⁸.

As this study is a sector-wide human rights impact analysis rather than an analysis of one specific supply chain from one specific buyer all the way down to its first, second and third tier suppliers, it is difficult to establish the business linkage of the adverse impact identified. This is because the study looked at FMFO factories as well as buyers more broadly, rather than looking at the impact from one specific perspective (e.g. one specific buyer or one specific factory). As such, when establishing business linkages in this context it risks generalising across factories and buyers as a practice can differ between factories and buyers. Nevertheless, it is useful to be mindful of this framework when assessing the adverse impact identified and for identifying the recommendations.

To illustrate, following the business linkage framework above, the adverse impact of smoke from the factories on peoples’ health is an impact that is caused by an FMFO factory (e.g. as this study found that the factories visited are causing the smoke and lack of smoke filters) and contributed to by its international buyers (e.g. as this study did not find that buyers are taking reasonable steps to prevent this harm from occurring whereas they should know about as it has been widely documented in global media). Therefore, the FMFO factory should provide a remedy to those community members affected by the smoke, as well as cease and prevent the impact from occurring again. In addition, the international buyer should try to cause remedy or prevent the impact from happening (e.g. engage with the FMFO factories to



install smoke filters) and use its leverage (e.g. through contractual terms) to do so.

On the contrary, the adverse impact of child labour on pirogues is contributed to by the FMFO factories (e.g. as this study found that the factories are not taking any steps to prevent child labour on pirogues (e.g. no policies, nothing in contractual terms, no awareness raising campaigns, and no social dialogue) while they should know about this issue as its easy observable on landing sites) and directly linked to international buyers (e.g. as this study found that international buyers buy the

products associated with child labour as small pelagic fish is used for FMFO). As a result, FMFO factories and international buyers do not need to mitigate this impact but should use their leverage to influence the entity causing the adverse impact. For FMFO factories, this could mean through contractual terms with boat owners. For international buyers, this could mean engaging with FMFO factories, government and civil society. The recommendations outlined in the next section take into consideration this framework of business linkages when outlining the practical actions that the FMFO factories and international buyers/investors ought to undertake.

5

Recommendations

Based on the findings of this study, several recommendations have been identified to improve the working conditions, livelihoods and human rights enjoyment of the small-scale fishers, their community members, and all workers in the small pelagic fish supply chain.

The recommendations are categorised per duty-bearer and it is recommended that the most severe impacts identified take priority. These include:

- 1 Environmental pollution impacting the right to a healthy environment and the right to health;
- 2 Food availability, accessibility and quality;
- 3 Loss of income and jobs;
- 4 Child labour; and
- 5 Occupational health & safety issues.

The recommendations have been developed based on input from affected stakeholders gathered during the field research and takes into consideration best practice examples of interventions implemented in similar industries and/or geographies to drive positive action. The section will also provide recommendations to the Mauritanian FIP specifically.

5.1. STATE AND LOCAL GOVERNMENT / POLICY MAKERS

Governments have a duty to protect human rights. The following recommendations have been identified for governments involved in fisheries in the regions to mitigate the adverse human rights impacts identified in the study.

1. Implement, monitor and enforce regulations on limiting 1) the number and capacity of FMFO factories and commercial vessels and 2) the production of FMFO, and on environmental practices to 1) promote more fish for human consumption; 2) improve the status of fish stocks; 3) improve livelihoods of artisanal fishers and processors; and 4) improve peoples' enjoyment of their right to a healthy environment.

Over the past months, the Mauritanian government has already started implementing policies to better regulate the industry. Though this is a step in the right direction, these policies will only prove successful when regulated and enforced well. The long-term effect of these policies are yet to be seen. For all states with fishing operations, the following policies are recommended to implement and enforce (some of them based on the current policies in Mauritania):

- Limit the number of commercial vessels by providing fewer licences and limit the fishing zones of the vessels;
- Insert/increase a quota of small pelagics reserved for human consumption (today 20% in Mauritania);
- Prohibit specific species to be used for FMFO production (today in Mauritania only sardine is allowed for FMFO production);
- Promote the use of fish waste for the FMFO industry rather than fresh fish
- Prohibit juvenile fish to be caught and used for FMFO and effectively limit the use of destructive fishing gear (such as monofilaments nets) with adequate penalties for perpetrators
- Determine protected zones of no-vessel fishing to improve the catch for artisanal fishers
- Prohibit dumping waste into the sea and on the beach and implement a waste management system
- Make it compulsory for all FMFO factories to invest on freezing facilities so as to increase the quantities of fish intended for human consumption.
- Only provide a licence to operate to those factories that are able to process fish-waste into FMFO to reduce fresh fish being used
- Prohibit factories without a smoke filter to operate
- Adopt regulatory instruments and policies outlining pollution reduction methods - based on scientific research into what best practice looks like (e.g. on water and smoke discharges)
- Put in place a system to allow women processors to have a quota on catches to ease their operations and avoid competition with FMFO factories
- Adopt regulatory instruments and policies on Occupational Health and Safety that explicitly address the safety of fishers on board boats and vessels including clear standards for fishing vessels and boats' conditions, protective and life- saving equipment for crew members, and carrying capacity

- Promote transborder collaboration between neighbouring countries, to ensure that fishing policies and stocks management are coordinated.

The effectiveness of these policies will depend on:

- **Policy coherence and avoiding ‘unintended’ consequences:** ensure an improvement in one area (e.g. environmental practices) does not impede progress in another area (e.g. livelihoods). For example, if limiting the number of vessels and FMFO factory operations or during ban periods, the government should provide a social safety net allowance to fishers/factory employees.
- **Monitoring and enforcement:** ensure regular monitoring and control using a carrot and stick approach (implement effective penalties for perpetrators and rewards for those showing best practices such as access to grants). Penalties and fines should be high enough to deter practices such as letting the fish rot at sea before landing.
- **Creating a level playing field:** ensure collaboration with other regional governments as it is a cross-border stock. Heavy regulations in one country could lead to a shift and a surge of the industry in another country.
- **Government’s ability to support:** ensure stakeholders are well-equipped to understand and adhere to the above-mentioned measures.
- **Applying a gender-lens:** ensure a gender-sensitive approach of policy making and implementation and recognise the vital role that women play in the artisanal fishing industry.
- **Communication of the policies:** ensure that all stakeholders are well informed about the changes in policies and ensure accessibility to the policies on the government’s website.
- **Regional collaboration:** Small pelagics being migrating species and a shared resource, one of the most important difficulty and risk for all stakeholders relying on them is the absence of a regional mechanism to ensure that catches are coordinated and managed jointly according to ecosystemic capacities. Recommendations regarding the necessary implementation of such binding regional management mechanisms have been raised for many years; but the three⁸⁹ existing regional organisations in charge of fisheries have not been able to sign binding agreements so far, and the likelihood that they will manage in the short or medium term is very low⁹⁰. As a result, for effectively implementing the above policy recommendations, regional collaboration is key.

2. Engage regularly with industry stakeholders and all right-holders to increase their participation in policy making efforts and improve effectiveness of policies and regulations

The government should promote people’s participation rights in decision-making efforts regarding the fishing industry. This could take the form of a public-private partnership and regular roundtables including representatives from each right-holder category, governmental actors (regional), international businesses, local FMFO factories and local and international industry experts. These roundtable discussions should act as a platform for staying updated on what is happening on the ground and to decide collaborative progress and actions. An example is the [Roundtable for Sustainable Palm Oil](#) which works with producers, processors and traders.

3. Provide for better infrastructure at landing sites and processing sites and evidence-based technical support to ensure people are well-equipped to understand and improve environmental practices

One of the salient impacts that this study found was the impact on the right to a healthy environment. In addition to the earlier identified policies, there are also a few provisions that the government should provide for in order to promote and respect this right. This could include:

- Commissioning a scientific research to inform the development of a (national and regional) benchmark of environmental practices that should be adopted by factories and fisheries to avoid pollution and promote good environmental practices, based on the IFC Environmental, Health, and Safety Guidelines for Fish Processing⁹¹.
- Ensure access to electricity and proper sanitary infrastructures at processing sites
- Invest in a better waste collection and management system
- Instil a working sewage system
- Instil a working and regular garbage/cleaning collection system for the processing, landing and landfill sites and install the landfill out of the city and far from the processing site
- Improve freezing infrastructure
- Providing technical support, funds and equipment to stakeholders where needed, necessary and appropriate - such as subsidies for factories to invest in smoke filters and water treatment systems as all factory managers mentioned these are expensive investments. This type of technical support should be grounded in scientific research into what best practices should look like.
- Space and landing and processing sites to store fish

4. Ensure the availability, accessibility, acceptability, and quality of primary and secondary education

One of the key issues identified in this study is child labour in the artisanal sector. This is not just an issue particular to Senegal or Mauritania but in the fishing industry globally⁹². As such, many measures have been identified and implemented to date to prevent child labour in the fishing industry - or agriculture more broadly. Therefore, in order to tackle the issue of child labour found in this study, it is key to learn from best practices. The following measures have been identified⁹³:

- Increase the number of schools to ensure all children of the mandatory school-going age have an available school in their proximity
- Improve the accessibility of schooling by providing transportation
- Improve the quality of schooling by investing in teacher's availability (skills training and social benefits)
- Implement a school-feeding programme to incentivise school attendance
- Community sensitisation on the importance of schooling, and the difference between child work and child labour including health messaging on the health hazards of child labour
- Invest in youth employment opportunities to prevent school drop-outs

5. Promote fishers' right to organise themselves in trade unions

While it seems that some fishers are organised in fishing organisations, none of the stakeholders interviewed are unionised. It is therefore recommended to the government to promote the existence of trade unions and allow trade unions to operate without repercussions and to enable fishers and factory employees to collectively bargain for better conditions at work where needed.

6. Secure artisanal fishers' access to microfinance and credit services

Setting up a credit scheme for artisanal fishers can help improve their economic development and prevent the risk of debt bondage to those financing a fishing operation. This has proved successful in Zanzibar and Tanzania. The Cooperative and Rural Development Bank Plc. (CRDB) in Tanzania and the National Savings Bank (NATSAVE) in Zanzibar⁹⁴ are an example of cost-effective measures to reach fishers and fish farmers in rural areas with financial services, through network improvements, use of agents and digital services. Given that financial literacy of many small scale fishers and fish farmers is still low, they should learn the basics of bookkeeping and to understand when they need credit and when they do not. The latter will also prevent them from becoming over-indebted. Some fishers' organisations and fish farmers associations can work effectively with the banks to improve financial literacy of their members. To facilitate access, governments should put policies

and programmes in place to facilitate access to microfinance and credit services to small-scale aquaculture producers and fishers.

7. Develop an enabling environment for other income-generating activities

Vocational and skills training to fishing communities can help them in securing alternative income sources. In Mauritania, the alternative to fishing is working in the mining industry. In Senegal, many artisanal fishers only have one source of income. The government, especially local authorities, can play a role in promoting and stimulating additional income-generating activities. In other industries, such as agriculture, crop diversification has worked well. Fishers could also offer eco-tourism activities, such as boat tours and fishing expeditions, to generate additional income. Alternative Income Generating Activities to fishing based on marine ecotourism in the Philippines have been successful⁹⁵.

5.2. FMFO FACTORIES / PROCESSING PLANTS

Businesses have a responsibility to respect human rights. Not only the human rights of those working in their own operations (e.g. within the FMFO factory) but also through their business relationships (e.g. the small-scale fishers and community members). Failing to uphold this respect, could result in legal action. The following recommendations have been identified for FMFO factories to ensure their respect for human rights throughout their supply chain - based on the adverse impacts found in this study. They are also applicable to other seafood processing plants.

1. Implement effective management systems to improve compliance to social and environmental standards and adhere to the UNGPs

- Commit to an external set of principles on human rights and ethical trade, e.g. the UNGPs, OECD Guidelines, ETI Base Code etc.
- Commit to a certification standard in the industry and obtain certification by one of the certification schemes mentioned in an earlier section of this report on industry actors.
- Develop clear policies on responsible sourcing and human rights for the organisation, including on areas such as health and safety, child labour, sexual harassment and abuse, discrimination etc. Make sure all employees and suppliers are informed and abide by the factory's sourcing policy.
- Ensure all employees are familiar with the policies of the factory through regular training to ensure all employees know their rights and responsibilities at work.
- Implement proper and regular risk management systems. Each factory should have a simplified, clear and transparent health/safety/environmental/social risk assessment for their permanent and seasonal employees, but also for artisanal fishers and surrounding communities. This should be shared with all relevant stakeholders.

- Implement an audit programme using a third party organisation to monitor the factories' environmental and social practices and identify areas for improvement.
- Implement effective grievance procedures (e.g. a hotline) anonymously accessible to employees and seasonal employees, but also to those outside of the workplace such as community members and fishers. Ensure these grievances are documented, monitored and followed up on.
- Include labour rights expectations into contractual agreements with commercial vessels in Mauritania, pirogues and purse seine pirogues - including expectations around health and safety, the use of PPE, prohibition of underage employees etc.
- Ensure keeping updated with new governmental regulations and ensure compliance to these new regulations. It should be clear to all employees that the factory is not allowed to buy and process forbidden species & juvenile fish. Quotas between frozen fish (20%) and FMFO production (80%) within the factory should be respected, measured and recorded.

2. Improve environmental practices

- Stop discharging untreated water into the ocean and install water treatment facilities.
- Install smoke filters to prevent damage to surrounding communities.
- Engage with local government to improve waste collection and prevent waste from being dumped at the beach
- Stop using juvenile fish for processing into FMFO and focus on (solely) processing fish waste.
- Factories or factory agents should not provide fishers with monofilament nets.

3. Engagement with factory employees, fishers and community members

- Improve social dialogue with community members and fishers to identify human rights and labour rights issues. This should also include regular 'monitoring visits' from the factory to observe the situation at sea of commercial vessels, pirogues and purse seine pirogues. Ensure identified issues are documented and followed up on. All stakeholders should have access to the companies' grievance procedures.
- Improve social dialogue with factory employees, including through creating worker representation and welfare committees.
- Within these dialogues, promote better working conditions for fishers, including encouraging the use of PPE and health and safety on pirogues and purse seine pirogues.
- Provide training sessions for artisanal fishers on good environmental and social practices (e.g. on health and safety, how to deal with waste, impact of prohibited fishing gear, etc).

- Provide timely and effective remedies to those already impacted by the adverse impacts of environmental practices to prevent those impacted from seeking a remedy in court. Determine together with the affected population what remedy is appropriate.

5.3. BOAT OWNERS / CAPTAINS / SUPERVISORS

For boat owners of pirogues, it is recommended to:

- Sensitise the issue of child labour and prevent children from working on board the boats at sea
- Make clear agreements with the rest of the crew on their roles and responsibilities at work
- Monitor working hours of crew members
- Ensure a safe environment on board (incl. ensure everyone in the boat wears appropriate PPE and arranging for a first-aid kit, appropriate storage of gas etc)

For boat owners, captains and supervisors of commercial vessels, it is recommended to:

- Adopt and implement policies to comply to labour standards on board (e.g. on healthy and safety, discrimination and abuse, etc)
- Establish an effective, accessible and anonymous grievance procedure so that if fishers want to report any issues at work, they can do so on-shore and off-shore
- Ensure fishers are aware of their terms on conditions at work and have formal agreements in place
- Ensure safe transportation of fishers from shore to the vessel at sea

5.4. INTERNATIONAL BUYERS AND INVESTORS

As explained in the previous section, businesses have a responsibility to respect human rights. This is also applicable to international buyers and investors - they have a responsibility to undertake due diligence and identify issues in their supply chain. Obviously, international buyers are not the only duty-bearers, and there are limitations to the amount of leverage they have to drive improvements - and it should be used strategically. With that in mind, the following recommendations have been identified.

1. Engagement with FMFO factories

- Provide trainings (e.g. on responsible sourcing and human rights and labour rights expectations) to strengthen the factories' capacity to identify and manage human rights impacts.
- Via contractual terms, encourage factories to:
 - ★ Commit to human rights, and address and review human rights impacts in their own operations and at fishing level
 - ★ Encourage them to implement a clear programme for the systematic identification of key (human rights) risks/impacts in its operations such as

- implementing risk mapping, a credible audit system and deep dive visits.
- ★ Develop clear policies on responsible sourcing and human rights for the organisation, such as an overarching human rights policy or an employee code of conduct
- Undertake social and environmental audits per factory, identifying issues and solutions. This would enable differentiating virtuous factories compliant with national and international environmental standards from other ones. This can divert purchasing orders to these virtuous factories and create an incentive to improve practice for others.
- Ask the factories for their sourcing policy and conduct audits on the sourcing practices.
- Ask the factories for details about their independent grievance mechanism in place and ask to review the cases documented.
- Provide financial and/or technical support to factories to improve their environmental practices.
- If factories are unwilling to cooperate and address adverse impacts identified (e.g. install a smoke filter and water treatment system), consider stop sourcing from these factories.

2. Engagement with NGOs and government

- Setting up a multi-stakeholder initiative with the government and NGOs and local businesses.
- With the multi-stakeholder initiative, establish a series of roundtable meetings with government, NGOs, FMFO factories, and rights-holders to discuss issues and find collaborative solutions to drive positive change.
- Based on the roundtable meeting outcomes, (financially & technically) contribute to implementing interventions - through the multi-stakeholder initiative - directed towards:
 - ★ Preventing child labour through, for example sensitisations and awareness raising campaigns, and school feeding programmes.
 - ★ Setting up additional income-generating activities for fishers
 - ★ Delivering skills and entrepreneurship trainings to fishers and artisanal processors
 - ★ Provision of PPE for artisanal fishers and processors, and improving health & safety on board vessels, boats and at processing sites
 - ★ Provision of freezing equipment for artisanal fishers and processors
 - ★ Regular studies to monitor the environmental and social situation on the ground
 - ★ Access-to-credit schemes for fishers to finance fishing operations themselves
 - ★ Promoting women's rights and gender equality through commissioning a gender analysis research and following up on the findings of that research (e.g.

ensure a social safety net for women if their husbands were involved in a fishing accident at sea etc)

- ★ Improving the safety of female processors at processing sites

5.5. CERTIFICATION STANDARDS

There are several certification standards developed for the fishing industry to improve compliance with international and national environmental and (to some degree) social standards. The following recommendations have been identified to optimise the results of certifications:

- Ensure the certification standard (i.e. the 'benchmark') is regularly updated and reflects updates in international law, as well as good practice.
- Ensure that the certification standard not only focuses on raw material/stock sustainability issues but also outlines expectations around factory-level environmental practices and social practices to improve working conditions and promote businesses to respect human rights.
- Ensure a rigorous and robust process for businesses to obtain certification and undertake frequent audits to measure compliance. These audits should not only look at documentation and policies, but also include interviews with management, workers and the surrounding community.
- Collect and analyse data of all audits (e.g. on frequent non-compliances) to better understand salient issues for businesses and inform stakeholders on this data to enable influence on next steps/policies/programming in the sector.

5.6. INTERNATIONAL CIVIL SOCIETY ORGANISATIONS / MULTI-STAKEHOLDERS INITIATIVES

It is important for international civil society and industry organisations to take on the role of 'watch-dogs'. Keeping updated on what is happening in sourcing countries and working with other actors, for example, local organisations, so that international actors are informed on what is happening and actions that should be taken. Civil society and industry organisations could undertake a series of actions, funded, for example, by a group of international businesses sourcing from the area or in combination with governments. They could, for example:

- Promote a 'positive engagement' mindset, highlighting the importance of positively engaging and collaborating with FMFO factories to encourage them to drive positive change. When factories are unwilling to collaborate and comply with local regulations in terms of environment, quotas, and labour rights, consider advocating publicly for

the need to stop sourcing from these non-compliant factories.

- Undertake scientific research and determine a benchmark of environmental practices that should be adopted by factories to avoid pollution and promote good environmental practices, based on the IFC Environmental, Health, and Safety Guidelines for Fish Processing⁹⁶.
- Undertake an environmental impact assessment per factory, identifying issues and solutions. This would enable differentiating virtuous factories compliant with national and international environmental standards from other ones. This can divert purchasing orders to these virtuous factories and create an incentive to improve practice for others.
- Encourage factories to engage with local communities and stakeholders involved in the small pelagics value chain (fishers, artisanal transformers, transporters, agents, etc) to better understand and respond to their grievances at the local level. Industry organisations could jointly ask factories to demonstrate results.
- Promote and invest in research for alternative sources of proteins to limit the amounts of fresh small pelagics needed by the FMFO industry.
- Undertake a risk assessment / study of the fishing industry in terms of Occupational Health and Safety and PPE, indicating where PPE is essential, good to have, and what type of PPE is needed during which tasks. This will set a good benchmark for all in the industry and clarify to all where PPE is non-negotiable.
- Awareness-raising on the importance and benefits of PPE and how to improve safety on board of pirogues and purse seine pirogues for example, through radio campaigns, trainings etc. to accelerate behavioural change
- Roll out women's empowerment initiatives such as financial literacy training, upskilling programmes, and initiatives to encourage positive gender norms in partnership with local partners.
- Roll out income generating activities and programming to promote other means of income in fishing communities
- Roll out school campaigns on the difference between child work and child labour and how child labour impacts education and direct, explicit health messaging on the health hazards of child labour.
- Roll out sensitisation campaigns to parents to allow and encourage their children to continue their education after primary school.
- Promote social change towards greater respect for women's rights
 - ★ Build public awareness on the equal rights of women and men, and what it takes to create a society where all can enjoy equal freedoms and personal integrity free from violence and abuse
 - ★ Target women with information campaigns and confidence-building, equipping them to demand dignity and freedom from

violence and exploitation, and seeking support and file legal cases when their rights are violated

- ★ Address the poverty and vulnerability of small-scale coastal fishing communities through targeted programming in the fields of education, vocational training, health, housing, water and sanitation

Participation should be key when implementing any of these recommendations - bearing in mind it should benefit people on the ground - and interventions to be designed with the participation of the SSF etc.

- Nurture local organisations and development of community resilience through social networks
- Make sure fishers' situation and voices are brought to the attention of local government actors as well as policy-makers at national level
- Build awareness among fishers on their human rights and labour rights
- Build awareness on the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries⁹⁷ among fishers as well as government authorities and policy makers

5.7. FIP

- Develop a mechanism to ensure there is more benefit for factories to be part of the FIP rather than not, to avoid free riders;
- Engage with the government to create FIP factories-specific benefits;
- Continue regularly engaging with the FIP factories' management but also with the employees and with the fishing community to understand the main challenges;
- Ensure the FIPs give opportunities to fishers and community representatives to explain issues, monitor fish prices and availability; In other words, engage at all levels of the supply chain and with all supply chain actors in sourcing countries, rather than looking mostly at the macro fishery level;
- Request that the factories put in place an external grievance mechanism so that community members, employees and any other stakeholders affected by their activity can report anonymously and raise issues;
- Financially and technically support projects aimed at improving the practices and infrastructures of fish-dependent people (e.g. fishers, artisanal processors, transporters, small scale fishmongers);
- Support factories in the FIP on labour rights expectations and with guidance on how to implement decent working conditions, both in factories and in chartered vessels - creating a toolkit with best practice examples, expectations etc and implementation tips and advice;
- Support and closely monitor factories on their environmental practices in terms of supply, air and water emissions.
- Reinforce the supply chain controls of FMFO factories to ensure they comply with the new regulations and do not foster malpractices (e.g. encouraging vessels to let the fish rot at sea).

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Annex I: Impact determination

ACTUAL / POTENTIAL

ACTUAL IMPACTS: Impacts that have already occurred

POTENTIAL IMPACTS: Impacts that have already occurred

SCALE Seriousness of the impact

MAJOR

Will cause death or adverse health effects that could lead to significant reduction in quality of life and/or longevity

MODERATE

A tangible human right infringement of access to basic life necessities (including education, livelihood, etc.) OR:
Impact to cultural, economic, natural and social infrastructure/assets that have been identified as highly valued by identified groups or subject matter experts in the impact assessment process, OR:
Impact to ecosystem services identified as priority to livelihoods, health, safety or culture in the impact assessment process

MINOR

All other impacts

SCOPE Number of people affected

LARGE

Affecting the vast majority of right-holders in the supply chain, or the vast majority of 1 identifiable group (e.g. female workers)

MEDIUM

Affecting a significant proportion of right-holders in the supply chain, or a significant proportion of 1 identifiable group

SMALL

Affecting some right-holders in the supply chain, or some of 1 identifiable group

REMEDIABILITY Any limits to restore the individual impacted to at least the same as, or equivalent to, their situation before the adverse impact occurred

DIFFICULT

Requires complex technical solutions or there is little acceptance of remediation by the identified group

MODERATE

Simpler technical requirements, acceptance by the identified group

EASY

Simple technical requirements, acceptance by the identified group, business can implement

LIKELIHOOD Likelihood of the risk that a potential impact becomes an actual impact over the next 5 years

HIGHLY LIKELY

Without necessary prevention measures, there is a 0-40% chance that an impact will happen over the next 5 years

LIKELY

Without necessary prevention measures, there is a 40-70% chance that an impact will happen over the next 5 years

POSSIBLE

Without necessary prevention measures, there is a 70-100% chance that an impact will happen over the next 5 years

OVERALL IMPACT RATING

MINOR

Scale, scope and remediability are all three minor/small/easy or a mix between minor/medium impacts. In case of the latter, either the scale, scope or remediability is taking priority to determine final impact rating - depending on the issue.

MODERATE

Scale, scope and remediability are all three moderate/medium or a mix between minor/medium or medium/large. In case of the latter, either the scale, scope or remediability is taking priority to determine final impact rating - depending on the issue.

MAJOR

Scale, scope and remediability are all three major or a mix between moderate and major. In case of the latter, either the scale, scope or remediability is taking priority to determine final impact rating - depending on the issue.

Annex II: Child labour in fisheries and aquaculture

II.3 CHILD LABOUR IN FISHERIES AND AQUACULTURE

TABLE 25: Tasks, hazards and health risks of children in fisheries and aquaculture⁴¹

Tasks	Hazards	Health risks
Sorting, unloading and transportation of catches	<ul style="list-style-type: none"> • Carrying of heavy loads • Use of large machines with moving parts • Exposure to loud noises 	<ul style="list-style-type: none"> • Joint and bone deformities • Blistered hands and feet • Lacerations • Back and muscle injuries • Amputation of fingers, toes and limbs • Hearing loss
Preparation of food on fishing vessels	<ul style="list-style-type: none"> • Use of sharp blades • Use of or working in vicinity of stoves in poor repair 	<ul style="list-style-type: none"> • Cuts • Burns
Diving for certain aquatic species, or to free snagged nets or scare fish into nets	<ul style="list-style-type: none"> • Diving in deep water • Working in polluted water • Working in vicinity of dangerous fish • Exposure to boat propellers • Entanglement in fishing nets 	<ul style="list-style-type: none"> • Death by drowning • Hypoxia • Decompression disease • Dizziness • Emphysema • Bites or stings from fish • Hearing loss from ear infections or rapid pressure change
Active fishing; hauling fish onto boat	<ul style="list-style-type: none"> • Carrying and hauling of heavy loads • Use of sharp objects 	<ul style="list-style-type: none"> • Blistered hands and feet • Lacerations • Back and muscle injuries • Fish poisoning
Going out to sea	<ul style="list-style-type: none"> • Lack of appropriate fishing ports, boat shelters and anchorages 	<ul style="list-style-type: none"> • Death or broken bones from surf crossing
Dangerous fishing operations	<ul style="list-style-type: none"> • Trawling vessel gear snagging on a fastener (due to obstacles on sea bed) • Small seiners capsizing under the downward pressure of a large catch of fish “sinking” during the last stage of net hauling • Entanglement in nets • Ropes running out while setting the gear • Attacks by marine animals 	<ul style="list-style-type: none"> • Death due to capsizing of vessels • Being swept overboard • Stings, bites, tail kicks
Working on boats and in water	<ul style="list-style-type: none"> • Working in crowded conditions • Working in deep, cold or polluted water • Slippery walkways • Fumes and odours • Use of loud equipment • Lack of drinking water • Working long hours and at night 	<ul style="list-style-type: none"> • Death by drowning • Hypothermia • Nausea • Claustrophobia • Parasitic infections (e.g. bilharzias, guinea worm) • Broken bones and head injuries

Tasks	Hazards	Health risks
Working on boats and in water	<ul style="list-style-type: none"> • Bad weather conditions, poor weather warning systems and lack of radio communication • Working on unsuitable boats • Sudden gales, major storms and heavy fog causing boat accidents • Capsizing, grounding, becoming lost, collisions • Physical or emotional abuse 	<ul style="list-style-type: none"> • Exhaustion • Hunger • Dehydration
Long periods at sea on boats or fishing platforms	<ul style="list-style-type: none"> • Sexual abuse, intimidation, exposure to and pressure or enticement to engage in adult behaviour 	<ul style="list-style-type: none"> • Sexually transmitted diseases and HIV/AIDS • Alcoholism, drug use and smoking-related diseases
Behavioural responses to fisheries management	<ul style="list-style-type: none"> • Risk-taking (in the case of spatial-temporal limits on fishing time or area, fishers may venture further offshore) • Becoming lost 	<ul style="list-style-type: none"> • Death by drowning • Physical exhaustion
Cleaning, processing, smoking and selling fish	<ul style="list-style-type: none"> • Use of sharp tools • Exposure to smoke and chemicals • Working long hours standing or bending 	<ul style="list-style-type: none"> • Blistered hands and feet • Lacerations • Backache and other musculoskeletal strains and disorders • Exhaustion
Repairing nets, vessels	<ul style="list-style-type: none"> • Use of sharp or heavy tools 	<ul style="list-style-type: none"> • Blistered hands and feet • Lacerations
Tending aquaculture farms	<ul style="list-style-type: none"> • Exposure to fish and mosquitoes 	<ul style="list-style-type: none"> • Injury from falls • Death by drowning • Malaria, dengue • Pesticide poisoning



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