



WORKSHOP REPORT

Transforming the value chain of small pelagic fish in West Africa, maximizing the value of catches

Nouakchott, Mauritania, 10-11 July 2025



المعهد الموريتاني لبحوث المحيطات و الصيد
Institut Mauritanien de Recherches
Océanographiques et des Pêches



FIP PP
Mauritanie

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ABOUT THIS REPORT

This document provides a summary of the objective, presentations, discussions and conclusions of the workshop entitled " *Transforming the Small Pelagic Fish Value Chain in West Africa, Maximizing the Value of Catches*", held in Nouakchott, Mauritania, on 10-11 July 2025.

The report was prepared by Ms. Véronique Jamin, from the Global Roundtable on Marine Ingredients (GRT), based on contributions from the workshop co-organizers (the Mauritanian Institute for Oceanographic Research and Fisheries – IMROP¹ – and the FIP Small Pelagics of Mauritania²) and the speakers. Our thanks go to Mr. Cheikh Baye Braham (IMROP) and Ms. Lena Westlund (FAO), for their proofreading and involvement.

¹ IMROP, the Mauritanian Institute of Oceanographic Research and Fisheries, is the only fisheries research institute in Mauritania. Established as a research institute by the decree of 2002-036, it is a public institution of an administrative nature, with a cultural and scientific objective. It succeeded the National Centre for Oceanographic Research and Fisheries, created in 1979 and which, in turn, was preceded by the Fisheries Laboratory, which was created in 1953. The IMROP is placed under the supervision of the MPIMP. <https://www.imrop.mr/>

² Fisheries Improvement Projects (FIPs) are multi-stakeholder initiatives that aim to improve the sustainability, practices and management of fisheries to meet the standards set by certification standards. <https://www.fip-petitspelagiques-mauritanie.org/>

ABBREVIATIONS

ADEPA: West African Association for the Development of Small-Scale Fisheries

ADPPC: Agency for the Development of Inland Fisheries and Fish Farming (Mauritania)

APAC: Asia Pacific

ECOWAS: Economic Community of West African States

ATLAFCO: Ministerial Conference on Fisheries Cooperation among African States bordering the Atlantic Ocean

CECAF: Fisheries Committee for the Eastern Central Atlantic

FCWC: Fisheries Committee for the Central West Gulf of Guinea

CRODT: Oceanographic Research Center of Dakar-Thiaroye

UNCLOS: United Nations Convention on the Law of the Sea

SRFC: Sub- Regional Fisheries Commission (West Africa)

FAO: Food and Agriculture Organization of the United Nations

FMFO: Fishmeal and Fish Oil

FNP: National Fishing Federation (Mauritania)

FIP: Fisheries Improvement Project

FiTI: Fisheries Transparency Initiative

GRT: Global Roundtable on Marine Ingredients

IFFO: The Marine Ingredients Organisation, a membership organisation representing the marine ingredients industry

IMROP: Mauritanian Institute for Oceanographic Research and Fisheries

INRH: National Institute of Fisheries Research of Morocco

ISSM: Higher Institute of Marine Sciences of Mauritania

IUU fishing: Illegal, unreported and unregulated fishing (IUU) fishing

MPIMP: Ministry of Fisheries, Maritime and Port Infrastructure of the Islamic Republic of Mauritania

RFO: Regional Fisheries Organization

RFMO: Regional Fisheries Management Organization

PAP-SP: Small pelagic fisheries management plan

SPs: small pelagics

RIM: Islamic Republic of Mauritania

SFP: Sustainable Fisheries Partnership (NGO)

SMCP: Mauritanian Fish Marketing Company

SNDP: National Fish Distribution Company (Mauritania)

TABLE OF CONTENTS

ABOUT THIS REPORT	2
ABBREVIATIONS	3
EXECUTIVE SUMMARY	7
CONTEXT	9
SESSION 1 – INTRODUCTION	12
SESSION 2 - Small pelagics: stocks, value chains and nutritional value in the sub-region	14
Overview of the status of stocks in the subregion	14
Sardinella value chains in The Gambia, Mauritania and Senegal	15
Small pelagic fish in the West African diet: balancing local and global needs	16
Discussions.....	16
SESSION 3 – Case Study: Mauritania	18
Regulatory framework for fisheries in Mauritania: the case of pelagics and its impacts	18
Socio-economic dynamics of small pelagic value chains in Mauritania	19
Towards sustainable fishing: between nutritional imperatives and industrial interests	19
Progress and work plan of the Mauritanian FIP	20
Improving data collection and transparency	20
Discussions.....	21
SESSION 4 – Main challenges: how to adapt?	23
What are the barriers to increasing the value of catches and making a better contribution of small pelagic fish to direct consumption?	23
Optimizing the use of small pelagics in Morocco	23
Link between local production of aquaculture ingredients and local aquaculture	25
Harmonizing and coordinating fisheries policies in West Africa to meet the challenges of sustainable management of fisheries resources: ECOWAS framework and areas of intervention	25
Synergies with the Octopus FIP	26
Synergies with the Global Marine Commodities 2 (GMC2) project	28
Presentation of the "Pathway to Sustainability" program	28
Discussions.....	29
SESSION 5 – DISCUSSION GROUPS	31
1. Fisheries Information System - Practical Case Study: Plant-Level Data Collection – Challenges and Opportunities	31

2. How can regional alignment with regulatory frameworks for small pelagics be strengthened?	34
3. How can the ongoing Fisheries Improvement Project (FIP) in Mauritania, and the concept of FIP, support bilateral and multilateral cooperation?	36
4. How to promote direct human consumption of small pelagic fish?	37
Discussions.....	41
CONCLUSION	42
APPENDICES	43
Stakeholders invited to participate in the workshop	43
Participants in the 11 July focus groups.....	45

EXECUTIVE SUMMARY

The workshop titled “Transforming the Value Chain of Small Pelagic Fish in West Africa: Maximizing the Value of Catches”, held in Nouakchott, Mauritania (10–11 July 2025), convened over 60 stakeholders from governments, international organizations, research institutions, civil society, and the private sector. The event was co-organized by the Global Roundtable on Marine Ingredients (GRT), IMROP, and the Mauritanian Small Pelagics FIP. It built on the momentum of the FAO’s 2023 Accra meeting and laid the groundwork for concrete, collaborative actions.

Purpose and focus

The workshop aimed to deepen understanding of the socio-economic dynamics of small pelagic (SP) fisheries in West Africa and to foster sub-regional cooperation for sustainable management, improved governance, and enhanced food security. It emphasized the need to maximize the value of SP catches, particularly through direct human consumption, and to align national and regional policies for better resource stewardship.

Key themes and outcomes

1. Sub-regional fisheries governance

- The workshop highlighted the urgent need for harmonized regulatory frameworks across West African countries, especially Mauritania, Senegal, and The Gambia, to manage shared SP stocks.
- Existing regional bodies such as SRFC, CECAF, ECOWAS, and ATLAFCO were identified as critical platforms for coordination, though their mandates and effectiveness require strengthening.
- Recommendations included revitalizing the Sub-regional Advisory Committee on SPs, establishing joint scientific and policy working groups, and promoting bilateral and multilateral consultations.

2. Fisheries Improvement Projects (FIPs) as catalysts for cooperation

- The Mauritanian SP FIP was presented as a model for regional collaboration, with potential expansion to neighboring countries.
- FIPs were recognized for their ability to align market incentives with sustainability goals, facilitate data collection, and support multi-stakeholder governance.
- Participants called for regional forums to share FIP experiences and coordinate efforts across borders.

3. Data systems

- The lack of harmonized and accessible fisheries data was identified as a major barrier to effective management.

- The FiTI initiative and FIP-supported data systems were praised for promoting transparency.
- A recommendation was made to establish a sub-regional observatory on SPs, integrating data from economic operators and scientific institutions.

4. Enhancing direct human consumption

- Despite the nutritional importance of SPs, their availability and affordability for local populations remain limited due to competition with FMFO industries and infrastructure gaps.
- The workshop proposed national and regional strategies to promote SP consumption, including awareness campaigns, processing infrastructure, and culinary diversification.
- Participants emphasized the need to recover co-products, support women-led artisanal processing, and target vulnerable groups.

5. Infrastructure and value chain optimization

- Case studies demonstrated the economic and environmental benefits of resource-efficient processing, circular economy practices, and value chain integration.
- Recommendations included investments in cold chains, landing infrastructure, and marketing strategies tailored to local contexts.

Conclusion

The workshop concluded with a strong call to transform the trajectory of SP value chains through sustained regional cooperation, policy harmonization, and inclusive governance. Participants stressed the importance of:

- Exploring sub-regional coordination mechanisms.
- Leveraging regional organizations to ensure the conservation and development of shared stocks.
- Integrating SP management into the broader blue economy and food security agenda.

CONTEXT

With a global population of more than 8 billion, there is an urgent need to strengthen food and nutrition security, especially in regions and communities vulnerable to environmental and socio-political challenges. Aquatic foods and marine products, with their high nutritional value and comparatively lower carbon footprint, can play a critical role in addressing food insecurity.

Since 2000, aquaculture has grown at an average annual rate of 5.2 percent, while capture fisheries production has remained relatively stable. Sustainable aquaculture is recognized as a key solution to food insecurity. Aquatic animal production is expected to increase by 10 percent by 2032, driven by the expansion of aquaculture and the recovery of fish stocks. With the expansion of aquaculture, 70 million metric tonnes of aquaculture feed could be needed by 2030.

At the same time, the nutraceutical sector, relying on omega-3s – known for their health benefits³ – continues to grow with growth of 3.2 percent in 2022, 1.4 percent in 2023. Growth is expected to continue at an average annual growth rate of 4.7 percent through 2026, with the fastest-growing regions in Asia (excluding APAC) and the developing markets of the Middle East⁴.

While the aquaculture sector globally used 91 percent of fishmeal and 63 percent of fish oil in 2023⁵, the nutraceutical sector used an increasing share of fish oil, 16 percent in 2023.

The amount of fish stocks used for fishmeal and fish oil (FMFO) production peaked in 1994 at more than 30 million tonnes, then declined to 17 million tonnes in 2022. This corresponds to about 20 percent of captures in marine waters. 89 percent of aquatic animal production (capture and aquaculture) is currently for direct human consumption⁶. The supply of FMFO remains stable and the growth of aquaculture has not led to an increase in fishing for FMFO production as these raw materials are increasingly used as strategic ingredients.

However, the growth of the aquaculture and nutraceutical industries maintains strategic interest in the FMFO industry globally, including in West Africa, where the majority of small pelagic (SP) stocks are overexploited. While FMFO exports peaked in 2023, with Mauritania

³ <https://doi.org/10.1080/23308249.2024.2388563>

⁴ Source: GOED

⁵ Source: IFFO

⁶ Source: FAO

accounting for the largest volumes – 70,000 tonnes of fishmeal mainly destined for Asia and 17,000 tonnes of fish oil mainly destined for Europe – a series of measures introduced by the Mauritanian government as part of the 2022 SP Management Plan (PAP-SP) led to a decline in FMFO exports in 2024.⁷

In order to better understand the challenges posed by the expansion of the FMFO industry in places where SPs are the cornerstone of food security and livelihoods of coastal communities, the Working Group on Small-Scale Fisheries of the Eastern Central Atlantic Fisheries Committee (CECAF⁸) commissioned a study on the *Socio-Economic and Biological Impacts of the Fish Feed Industry for Sub-Saharan Africa*⁹ published in 2022.

As for the Global Roundtable on Marine Ingredients (GRT),¹⁰ it commissioned a human rights impact study from Partner Africa, in 2022, examining the impacts of the marine ingredients industry in Mauritania and Senegal, published in 2023¹¹.

Based on these findings, an FAO workshop, co-organized with the Global Roundtable on Marine Ingredients and the Iceland Ocean Cluster¹², was held in Accra, Ghana, in December 2023. It resulted in the publication of an FAO report entitled *Maximizing Food and Nutrition Security and Livelihood Benefits of Small Pelagic Production in Sub-Saharan Africa*¹³. The report includes a review of good practices and learnings for better alignment of the fish products industry with considerations of food and nutrition security, secure livelihoods and sustainable use of resources.

⁷ Source: ANSADE (Mauritania)

⁸ The CECAF (Fisheries Committee for the Eastern Central Atlantic) on small pelagics includes, in its northern sub-group, Morocco, Mauritania, Senegal and the Gambia. It is a regional fisheries organization (RFO) established within the framework of the FAO with the main mission of making scientific assessments of the situation of fish stocks in the area of its competence.

⁹ [Socio-Economic and Biological Impacts of the Fish Feed Industry for Sub-Saharan Africa](#)

¹⁰ The [Global Roundtable on Marine Ingredients \(GRT\)](#) is a pre-competitive platform bringing together organizations from the marine ingredients value chain. It was created in 2021 by Sustainable Fisheries Partnership (SFP) and IFFO – The Marine Ingredients Organisation. IFFO members represent 50 percent of the world's production of fishmeal and fish oil and the organization does not have, at the date of the workshop, any producer member based in Mauritania, Senegal or The Gambia. The members of the Global Roundtable on Marine Ingredients are: Federation of European Aquaculture Producers (FEAP), Aquaculture Stewardship Council (ASC), Marine Stewardship Council (MSC), Nissui, Mars, BioMar, Cargill, Skretting, OLVEA, Nestlé, MarinTrust, SFP and IFFO.

¹¹ <https://marineingredientsroundtable.org/west-africa-hria>

¹² The Iceland Ocean Cluster is a platform based in Reykjavik, Iceland, that connects entrepreneurs, businesses, and researchers to drive innovation in the blue economy. <https://sjavarklasinn.is/en/>

¹³ <https://doi.org/10.4060/cd2489en>

Objective of the workshop

The objective of the workshop on 10 and 11 July 2025 in Nouakchott was to deepen the understanding of the socio-economic dynamics surrounding SP species in the West African sub-region. It has adopted a practical approach to foster mutual understanding and strengthen collaboration among all stakeholders in the SP value chain, including at the sub-regional level.

Expected results include the identification of:

- synergies between action plans and existing and future projects,
- ways to better exploit these synergies, with the aim of conserving the value of catches and maximising their use for direct human consumption.

Discussions focused on the following topics:

1. What are the current knowledge, trends and gaps regarding the socio-economic dynamics of SPs in West Africa? How can value chains be improved to better contribute to food and nutrition security? What are the barriers to increasing human consumption of SP in the region?
2. What is the state of the fisheries resources of the SPs in the region, what are the governance frameworks?
3. How can the ongoing FIP in Mauritania contribute to bilateral cooperation?
4. What are the current and future projects addressing policy and management processes to support the optimal use of fisheries resources in West Africa? What are the possible synergies and how can collaboration be a driver of success?
5. What are the barriers to increasing the value of catches and making a better contribution of SPs to direct human consumption?

The workshop brought together 60 participants, representing local communities in the sub-region, mainly from Mauritania (the list of participants is attached), governments, international organizations, private sector actors, research institutions and relevant professional and interest organizations.

SESSION 1 – INTRODUCTION

The workshop was opened by the Minister of Fisheries, Maritime and Port Infrastructure of the Islamic Republic of Mauritania (RIM), **Mr. El Vadil Ould Sidaty Ould Ahmed Louly**, who noted that "the development and processing of pelagic fish is a major axis of our sectoral strategy". He also insisted on the fact that the challenge today is to "move from a model of selling raw materials to a model of valorization and high-quality processing based on innovation, training and partnership, making our marine products a real source of added value".

For **Mr. Árni M. Mathiesen**, Independent Chair of the Global Roundtable on Marine Ingredients (GRT), the organization of the workshop comes in a context of pressing global challenges, including the need to strengthen food security for a world population exceeding 8 billion inhabitants: "Aquatic foods, with their high nutritional value and small environmental footprint, play a vital role in meeting this challenge. The West African sub-region is facing the decline of some fish stocks due to overfishing or climate change, economic competition and changing consumer tastes. Without strengthening regional institutional cooperation, we will face enormous challenges. »

The context of the workshop was then set by **Ms. Véronique Jamin** from GRT and **Ms. Lena Westlund**, from the Food and Agriculture Organization of the United Nations (FAO), who recalled the conclusions of the Workshop organized by FAO (in partnership with GRT and the Iceland Ocean Cluster) in Ghana in December 2023:

- The right to food and nutrition must be respected.
- The level of dependence on aquatic food consumption varies among countries in the subregion.
- The overexploitation of one species has an impact on the entire ecosystem.
- States play an essential role.
- Existing regional organizations and frameworks could be better utilized.
- Research is key.
- Participatory approaches should be encouraged.
- Producers and importers of marine ingredients must comply with the legislation in force.
- The good fishing practices of the different countries must be shared.

The recommendations from the working groups of the workshop in Accra in 2023 were structured into 5 themes: data and research; socio-economics; governance and public policies; fisheries management; Infrastructure.

Based on the structuring of the issues established in Accra, the Nouakchott workshop lasted two days and prioritized a number of themes:

- The first day was dedicated to plenary presentations:
 - Small pelagics: stocks, value chains and nutritional value in the sub-region
 - Case study: Mauritania
 - Key challenges: how to adapt?

- The second day was dedicated to small group discussions on the following topics:
 - Fisheries Information System - Practical Case Study: Focus on Plant-Level Data Collection – Challenges and Opportunities
 - How can regional alignment with regulatory frameworks for SPs be strengthened?
 - How can the ongoing FIP in Mauritania, and the concept of FIP concepts, develop bilateral and multilateral cooperation?
 - How to promote direct human consumption of SPs?

SESSION 2 - Small pelagics: stocks, value chains and nutritional value in the sub-region

Overview of the status of stocks in the subregion

The session opened with an overview of the status of stocks in the sub-region by **Mr. Cheikh Baye Braham**, scientist at IMROP and Chair of the CECAF-North.

The Canary Island current system is among the most productive marine ecosystems in the world, thanks to the upwelling of nutrient-rich water. Although it covers only 1 percent of the ocean, it accounts for 30 to 35 percent of global catches. In northwest Africa, SPs account for more than 80 percent of annual catches, playing a crucial role in regional food security. Their biomass, which varies greatly, is assessed by acoustic campaigns (Nansen, Russian campaigns and Mauritanian and Moroccan national vessels).

Since 2016, Mauritania has seen the development of coastal fishing and a processing industry, meeting strong national and international demand. SPs are divided into temperate and tropical groups and are bioindicators sensitive to climate change. Their subregional biomass is estimated at 7.5–8 million tonnes.

Between 2020 and 2024, average catches reached 2.3 million tonnes, with a recent drop in sardines, which are now in a worrying situation. In 2024, sardines accounted for 34 percent of catches, followed by horse mackerel (20 percent), mackerel (22 percent), sardinella (17 percent), anchovies (3 percent) and ethmalose (3 percent). Some species, such as round sardinella (whose biomass improves according to the status of CECAF stocks in 2025) and horse mackerel (whose biomass is exceptional according to the status of CECAF stocks in 2025), show positive trends.

According to CECAF, five stocks are overexploited and four are fully exploited. Climate change is accentuating these pressures, as shown by the 2023 Nansen campaign with abnormally high temperatures and the absence of sardines south of Cap Blanc.

Faced with these challenges, scientific and regional management of migratory stocks is essential. The implementation of management plans, investment in data monitoring and the promotion of the ecosystem approach to fisheries appear to be priorities. Finally, the sustainable development of FMFO industries must be reconciled with West African food security.

Sardinella value chains in The Gambia, Mauritania and Senegal

The presentation by **Mr. Mika Diop**, Regional Sub-Commission on Fisheries (SRFC), focused on the sardinella value chains in The Gambia, Mauritania and Senegal. Mr. Diop noted that sardinella play a vital role in the food security and economy of coastal countries in West Africa. The main actors are fishermen (artisanal and industrial), processors (often women), fishmongers, traders, FMFO factories, exporters and local markets. In The Gambia, fishing is mainly small-scale. The development of FMFO plants raises issues related to food safety. The country is highly dependent on Senegalese infrastructure for marketing. In Mauritania, the chain is marked by strong industrialization with foreign investment. The Mauritanian Fish Marketing Company¹⁴ (SMCP) manages exports. The country faces a dilemma between exporting and local access. Senegal promotes dynamic artisanal fishing, with recognized processing centers (Joal, Kayar). The local market is very active. Exports to the subregion are also important.

Mauritania is focused on industrial exports, Senegal values artisanal processing, while The Gambia has a shorter and more dependent chain. They all share a sustainability challenge.

Common challenges are overexploitation of stocks, conflicts between small-scale and industrial fisheries, competition between human consumption and FMFO, and the lack of effective regional regulation. Opportunities lie in strengthening regional governance (SRFC), improving artisanal processing practices, access to sustainable markets, and developing local value chains.

It is recommended to harmonize management policies, support women processors, regulate fishmeal factories, and encourage the development of products for local consumption.

Mr. Diop concluded that sardinella is a shared wealth. Regional cooperation is essential for sustainable, equitable and resilient management of value chains in the three countries.

¹⁴ The Mauritanian Fish Marketing Company (SMCP) is a semi-public company, with 70% owned by the Mauritanian government and 30% by national private operators in the fisheries sector and national primary banks. SMCP was created in 1984; it has a monopoly on the export of frozen fishery products caught in waters under Mauritanian jurisdiction and subject to the landing obligation. <https://smcp.mr/>

Small pelagic fish in the West African diet: balancing local and global needs

The session continued with a presentation by **Ms. Molly Ahern**, from FAO's Fisheries and Aquaculture Division. She began by presenting statistics on food security and malnutrition in the region, showing that the percentage of the population suffering from severe food insecurity ranges from 4 percent (Senegal) to 37.3 percent (Liberia), and that the percentage of children under 5 years of age suffering from stunting varies from 12.7 percent (Ghana) to 27.9 percent (Guinea). Ms. Ahern presented the critical role of fish for nutrition and health, contributing to good nutrition and health throughout the life cycle (during pregnancy, infancy, childhood, adolescence and adulthood). She presented statistics on the percentage of the population that does not consume an adequate amount of various nutrients that fish, and especially small whole fish, can contribute to, such as vitamin B12, vitamin D, calcium, zinc, iodine, and the omega-3 fatty acids EPA and DHA. The importance of SPs in the diets of various West African countries was also highlighted, as well as their affordability in many countries, compared to larger fish and other animal-based foods. It was noted that, although the importance of small fish in the diet of many West African countries is recognized, there is a lack of data on the amount and types of fish consumed, from detailed dietary surveys in the region. Ms. Ahern also presented evidence of trade contributing to the outflow of this critical food source from west Africa, while also contributing to greater distribution of small fish in other neighboring countries through regional trade.

Discussions

Discussions focused on the sustainable management of SPs, stressing the need for sub-regional coordination, harmonization of practices (particularly on catch sizes), and better economic development of these resources. They also highlighted the challenges related to scientific monitoring, infrastructure, price volatility, and the impact of climate change on these species.

Mr. Mahfoud Ould Taleb, from the Higher Institute of Marine Sciences of Mauritania (ISSM),¹⁵ stressed the need for good management of SPs at the sub-regional level, by all

¹⁵ The ISSM, Higher Institute of Marine Sciences, is an entity of the Naval Academy of Mauritania, created in October 2014 and located in Nouadhibou. The decree of creation of the Naval Academy dated October 24, 2014 in its article 16 Title IV stipulates that "the Higher Institute of Marine Sciences is responsible for the training of executives and agents of public and private administrations in the maritime sector and applied research".

stakeholders: "For the fisherman, fish has no value at sea; once disembarked, it is the market that determines its value. How can we arrive at the best use for countries that do not have a fleet? For countries that don't have infrastructure? SPs are very poorly monitored because such monitoring requires a lot of resources. Prices are volatile and there is a need for a lot of shock absorbers."

For **Mr. Ahmed Khouba**, of the National Fishing Federation (FNP), "there are stocks that should not be considered overexploited at the level of Mauritania because the catch rate remains low and the fishing effort is decreasing". **Mr. Abeid**, from the FNP – artisanal fisheries section, specified the problems related to zoning. "Three percent of the catches are paid to the SNDP at ridiculously low prices¹⁶."

Mr. Lamine Camara, from the MPIMP of Mauritania, then highlighted the existence of a debate on the size of the first catches and their possible harmonization. **Mr. Mohamed El Hamedh Ejiwen**, from IMROP, completed these remarks by expressing the hope that the SP management plan adopted by Mauritania would be harmonized at the sub-regional level, while noting however the limits of the term "small pelagics", which covers species that do not all have the same market value (the case of clupeidae).

For **Mr. Mika Diop**, of the SRFC, harmonization and homogenization are distinct from each other: it must be a question of complementarity. **Ms. Azza Jiddou**, MPIMP of Mauritania, confirmed that it would be necessary to separate clupeidae and carangidae, and to harmonize the sizes of the first catches at the subregional level. She stressed the importance of fish consumption campaigns, the impact of climate change on SPs and the need to monitor the microbiome closely: knowledge of biological indicators on reproduction and growth parameters is essential to understand the population dynamics of SPs. Scientific advice for the sustainable management of fisheries resources (such as biological shutdowns) is essentially based on these biological indicators.

¹⁶ The SNDP, the National Fish Distribution Company, is a Mauritanian national company created by Decree No. 2013-181 dated November 13, 2013, The SNDP is in charge of the distribution of fish, a product subsidized at 82percent by the Mauritanian State, throughout the national territory.

<https://sndp.mr/>

SESSION 3 – Case Study: Mauritania

Regulatory framework for fisheries in Mauritania: the case of pelagics and its impacts

Mr. Lamine Camara, Director of Resource Management and Studies at the MPIMP of Mauritania, presented the regulatory framework that Mauritania has adopted, aimed at reconciling economic exploitation and sustainability of fishery resources. After a long period of open access, several successive reforms (1979, 1987, 1998, 2000, 2015) led to the establishment of a modern system of management by quotas and fisheries management plans, in line with international commitments (UNCLOS, FAO, Pan-African Strategy, etc.).

The current system is based on:

- the setting of TACs (Total Allowable Catches),
- the allocation of conditional rights of use (species, zones, quotas, duration),
- a differentiated regime between national and foreign fishing,
- the obligation to license and royalty according to the species and value.

SPs, a strategic resource for food and industry of the FMFO, are the subject of a specific Management Plan (PAP-SP, 2022), introducing new rules: spatio-temporal management measures (Marine Protected Areas, zoning and temporary closures of areas), conservation measures (regulated gear such as mesh size, protective devices, minimum catch threshold, limitation of by-catch), regulatory measures (limitation of catches per tide (200 tonnes for coastal seiners), reduction in the number of tides per vessel), new measures (re-categorisation of the artisanal, coastal and offshore segments according to their technical characteristics, revisions of the zoning in 2019 and 2022).

The result of these action plans has been an increased organisation of the fishery and greater equity between segments (artisanal, coastal, deep-sea), a reduction in the production of FMFO, a reduction in direct jobs for seafarers, and the emergence of new practices (return of the purse seine, turlute fishing), which are sources of conflicts of use.

The future lies in strengthening national fleets, adaptive zoning management, and promoting local value chains. It will also be a question of compartmentalizing pirogues to guarantee the freshness of catches and to further enhance the value of SPs in the national and regional market.

Socio-economic dynamics of small pelagic value chains in Mauritania

Mr. Assane Fall of IMROP confirmed that SPs play a central role in the fisheries sector in Mauritania, accounting for 85 percent of the catch with an estimated potential of 1.2 million tonnes. They are essential for the economy as well as for food security and local employment. In 2024, total production reached 763,272 tonnes, mainly from coastal and artisanal fishing. The value chain shows a strong industrial orientation: almost 95 percent of production is destined for industrial processing, especially for FMFO exported to Asia. Although this sector is profitable (59 percent of value added), it does not create many local jobs. Conversely, freezing (26 percent of value) is more inclusive, while artisanal processing remains marginal despite its potential. On the trade side, 152,690 tonnes are exported, mainly to West Africa (77 percent), while 17 percent is consumed locally. National consumption remains modest, at about 16 kg per capita. The sector generates around 20,000 direct jobs and more than 80,000 indirect jobs, particularly in processing, fishmongering, transport and port services. Women play a central role, particularly in craft activities, often resulting from know-how passed on by migrant communities. The social dynamics are marked by a strong cultural anchoring of fishing, passed down from generation to generation, and by ethnic and religious diversity favouring community mutual aid. The sector also benefits from technical innovations and training aimed at strengthening local skills. Despite this potential, challenges persist: dependence on industry, low local development, marginalization of artisanal circuits. It is therefore imperative to rebalance the sector, support national consumption and strengthen participatory governance, while continuing research on the socio-economic and environmental dynamics related to SPs.

Towards sustainable fishing: between nutritional imperatives and industrial interests

For **Mr. Mohamed Ahmed Jeyid**, from IMROP, SPs in the North-West African zone are essential to food security and the national economy: they constitute shared resources with high ecological value because they play a strategic role in the marine, nutritional and socio-economic trophic chain. In Mauritania, they are under increasing pressures related to climate change, environmental variability and expanding industrial demand, especially for FMFO. Since 2005, the number of factories in Nouadhibou has increased from 5 to a maximum of 32, then stabilized at less than 20 factories in operation over the last three years, supplied by artisanal and coastal fishing. Historically, FMFO production has experienced booms and

falls, with a recent trend towards freezing and canning. The specific composition of catches has evolved, with a dominance of sardinella, especially round sardines at the beginning, and sardines in recent years as well as flat sardines, but also a significant share of "waste" (~50 percent) has appeared, requiring careful monitoring by species. This industry raises major issues: competition between uses (human consumption vs. animal feed), risk of overexploitation of key species, and impact on coastal communities. Questions are raised about the ability to reconcile economic profitability and ecological sustainability, to define appropriate quotas and restrictions, and to ensure that socio-economic benefits accrue to local populations. Sustainable management requires increased support from scientific research, rigorous monitoring of stocks and integrated governance geared towards food security and the preservation of ecosystems.

Progress and work plan of the Mauritanian FIP

Ms. Jo Gascoigne, International Coordinator of the SP FIP of Mauritania, briefly explained what a FIP is, as well as the history and objective of the Mauritanian SP FIP (to obtain the MarinTrust acceptance of the fishery). She summarized the FIP's environmental and social work plans, noting that they are available online¹⁷, and briefly briefed attendees on the main activities carried out so far in 2025, as well as the FIP's financial expenditures. She pointed out that the main stocks of SPs are distributed throughout the sub-region and that the FIP plans to expand to Mauritania's southern neighbouring countries (FIPs already exist in Morocco). Industry, government, the ecosystem and the wider economic sector can all benefit from the success of FIPs and recognition by certification standards. The industry can benefit from market access, certifications, and positive communication; authorities can benefit from additional added value for their fisheries research and management; fishermen can benefit from a more sustainable resource as well as social benefits; while the population can benefit from improved food security and economic benefits. In conclusion, Ms Gascoigne offered the support of the FIP to the actors of the neighbouring countries and invited them to contact her.

Improving data collection and transparency

For **Mansor Ndour** of the Fisheries Transparency Initiative (FiTI), the lack of transparency contributes to many problems in the fisheries sector, as highlighted by the FAO in its reports: IUU fishing, overcapacity, overfishing, harmful subsidies, corruption and poor management

¹⁷ <https://www.fip-petitspelagiques-mauritanie.org/>

decisions. Public access to information is therefore essential to ensure sustainable management, effective oversight and inclusive dialogue.

Despite its importance, the concept of transparency is not sufficiently known by most stakeholders. It is noted at the international level that there are several transparency initiatives targeting one of the following objectives: (i) the public availability of credible data to support fisheries governance (ii) the use of technologies to monitor the compliance of fishing activities of vessels in real time and (iii) the traceability of seafood products "from sea to plate". Countries can take a multi-faceted approach to transparency by pursuing several objectives.

The FiTI is an international standard that promotes transparency and multi-stakeholder participation in fisheries governance. Its 12 requirements aim to improve the accessibility, credibility and usability of information, in order to strengthen accountability, cooperation, trust and the quality of public decisions on fisheries. The FiTI provides technical and financial support to countries, assesses their progress and contributes to efforts to combat IUU fishing and corruption. Its membership, voluntary and free, brings benefits in terms of governance, investment and sustainability.

The first to join the FiTI in 2016, Mauritania has since published regular reports that make information on its fisheries sector accessible. In May 2025, it became the second country in the world to obtain "Compliant" status from the FiTI.

Discussions

During the ensuing discussions, **Mr. Hamadi Baba Hamadi** of the FNP highlighted the impacts of the Small Pelagic Management Plan (PAP-SP): "The pelagic fisheries sector is currently in a deep crisis. The measures implemented have been very restrictive. The PAP-SP led to many purse seine vessels leaving the sector. Indeed, while there were 45 Turkish purse seine vessels in 2021, only 8 to 10 remain in 2025. The reason for this decline is the zoning system imposed in 2022. The requirement to invest in onshore freezing facilities for human consumption has resulted in a significant increase in freezing and storage capacity".

The analysis of MPIMP data shows that the PAP-SP measures have impacted FMFO plants, several of which have ceased their activities from 2023 due to the low volume of supplies brought by the coastal purse seiners. The new categorization promoted by the PAP-SP has sent large purse seiners back to new fishing areas and promoted the orientation towards the purse seine business in order to better contribute to the availability of fresh pelagic fish on the local market.

Mr. Mahfoud Ould Taleb, from the ISSM, then referred to a study carried out as part of the end-of-studies project for the obtaining of a professional degree in Fisheries Sciences and Fisheries Industries to compare fishmeal factories and canneries through the case of the *Sardina pilchardus*. The canning industry uses sardines more efficiently despite the seasonality of fishing for this species and a high rejection rate (30 percent) due to the break in the cold chain before the product arrives at the factory. This waste is directly directed to FMFO plants. This shows a complementarity between these two industries. The canning industry also generates more jobs.

For **Mr. Mododou Kaly** of Greenpeace Africa, "the arrival of the FMFO factories was initially an imperative in view of the abundance of the resource. Today, it is difficult to make an inventory of the resource. FMFO plants let fresh fish rot to turn it into fishmeal". **Mr. Ely Beibou** of IMROP complemented these remarks by stressing that fisheries information systems are instrumental. The FiTI is intended to strengthen those systems.

Mr. Najib Charouki, from the National Institute of Fisheries Research of Morocco (INRH) then insisted on the need to think in a context of scarcity: "We need adaptive management and to think about the use of available resources; fishmeal is not necessarily to be banned."

For **Mr. Lamine Camara** of the MPIMP of Mauritania, "there are things that cannot be forced, there are cultural practices. For example, ethmalose in Mauritania is not eaten while it is eaten in Ghana. We have to use fish for something."

SESSION 4 – Main challenges: how to adapt?

What are the barriers to increasing the value of catches and making a better contribution of small pelagic fish to direct consumption?

For **Ms. Nedwa Nech** of Mauritania 2000, the transformation of the SP value chain in West Africa aims to maximize the value of catches and enhance their contribution to human consumption. However, several constraints are hampering this ambition: unsuitable production tools, insufficient storage on board and on land, lack of adapted transport, shortage of specialised fishermen and limited marketing infrastructure. Processing remains poorly diversified, dominated by fishmeal to the detriment of canned and artisanal products, often made by women but little valued. The lack of national and regional marketing and supply strategies, as well as the lack of hygiene standards for handicrafts, exacerbate these challenges. The recommendations relate to the structuring of the marketing link, investment in industrial and artisanal development, the improvement of logistics circuits and the implementation of a national fish consumption strategy.

Optimizing the use of small pelagics in Morocco

Mr. Lahsen Ababouch, international consultant, presented the main conclusions and recommendations of important studies and projects on the performance of SP value chains in Morocco and its coherence with the Halieutis Sector Strategy, in force since 2010.

The first round of studies (2014-2019) was the subject of an internal report and a publication (Naji et al., 2015).¹⁸ The data presented showed that the semi-preserved anchovy sector (especially salted anchovies) had the best economic and social performance in terms of turnover (turnover), value added (VA) and jobs created per ton of raw material. It was followed by (i) the subsectors of canned SP, fresh SP and frozen mackerel, (ii) frozen sardines and sardinella, and (iii) fishmeal and fish oil (FMFO). VA was created along the SP value chain, especially in fisheries (40 percent), processing (38 percent), distribution (18 percent), and fishmongering (4 percent). VA was created mainly by fishing for frozen sardines or mackerel (61 percent to 72 percent), processing (68 percent for FMFO and

¹⁸ Naji et al., 2015. Governance and Revenues in the Moroccan Artisanal Fisheries Sector: Analysis by the value chain. NEW MEDITATED N. 4/2015. <https://www.researchgate.net/publication/305448531>

63percent for canned tomatoes), and distribution for fresh SP for the domestic market (49 percent). The overall VA was distributed at the rate of about 43 percent for net operating income, 34 percent for salaries, 11 percent for depreciation, 8 percent for insurance and financial expenses and about 4 percent for taxes.

Lahsen Ababouch stressed that it was important, when creating a land-based development unit such as a cannery, to create the value chain that goes around it from fishing to consumption, including marketing. "In Morocco, many canneries are operating below their capacity (less than 60 percent for some) and raw material is starting to run out."

The second series of studies (Switchmed project 2020 – 2025) focused on improving the use of resources (water, energy and raw materials) and circularity for a better recovery of waste and by-products from the SP sector in Morocco. Through the example of actions considered by the Belhassan Industrial Complex (CIBEL), in its canning, freezing and FMFO units. Overall, the study identified 39 measures that have the potential to provide a total economic benefit of almost €7 million per year. These measures include saving energy, water and raw materials, as well as the development of new finished products with high added value.

Of the measures identified, 80 percent have been accepted by CIBEL's management, of which 20 percent are in the process of being implemented, 20 percent are planned and 38 percent have been selected for study. Integrating resource-efficient and cleaner production practices by design is the optimal scenario to achieve the greatest economic and environmental benefits. With an investment of around €13.5 million, with a maximum payback period of 5 years, the expected economic benefits for the CIBEL Group were estimated at almost €7 million/year, resulting from significant savings in energy (38 percent), water (24 percent) and raw materials (25 percent). In addition, the investments made would have led to a significant improvement in the impact on the environment expressed in terms of reduction in CO2 emissions (5,000 tonnes less per year) and pollution (1,820 tonnes COD: chemical oxygen demand and 1,328 tonnes BOD: biological oxygen demand less per year).¹⁹

¹⁹ Switchmed, 2021. Case Study: Resource Efficiency in Morocco's Fish Processing Industry for Canning, Fishmeal and Fish Oil
https://switchmed.eu/wp-content/uploads/2024/02/Buisness-case_Canning-and-fishmeal-Morocco_FR.pdf

Link between local production of aquaculture ingredients and local aquaculture

Mr. Hasni Tfeil, representative of the ADPPC²⁰, explained that the agency aims to make Mauritania a leader in sustainable inland aquaculture in West Africa, by focusing on local innovation and food sovereignty. Aquaculture is a growing sector, essential for food security and job creation. However, it remains dependent on imported inputs, which hinders its development. Aquaculture feed ingredients account for up to 70 percent of production costs. The ADPPC highlights the strategic interest of producing these ingredients locally. Local resources (agricultural by-products, fishery by-products, insects, moringa) reduce costs, recover waste, and create jobs. Concrete actions have been carried out: experimental production, awareness campaigns, food tests. The results show a significant reduction in costs and the emergence of micro-sectors. Pilot projects are underway in Gorgol, with the training of young people and women. The challenges remain technical, financial and organisational: lack of suitable equipment for local processing (crushers, dryers, extruders), difficulty in mastering the formulation and preservation processes, lack of cold chains for certain sensitive ingredients, lack of clear standards for artisanal aquaculture feed, poor quality control of finished products (protein content, stability, digestibility), low attractiveness of the sector for the private investors, lack of consolidated data, low financing available for small units or cooperatives, limited access to credit for young and women entrepreneurs, lack of technicians specialized in aquaculture feed formulation and production. The ADPPC plans to strengthen local capacities, structure value chains and mobilize partners for sustainable and inclusive aquaculture.

Harmonizing and coordinating fisheries policies in West Africa to meet the challenges of sustainable management of fisheries resources: ECOWAS framework and areas of intervention

Mr. Djiga Thiao, Programme Officer for the Development of Maritime and Inland Fisheries at the Commission of the Economic Community of West African States (ECOWAS), reviewed the context of the region, the challenges of resource management in West Africa as well as the institutional and operational framework and areas of intervention of ECOWAS.

²⁰ The Agency for the Development of Inland Fisheries and Fish Farming (ADPPC) is a public institution created in 2022 under the supervision of the MPIMP of Mauritania.

The West African region is characterized by the presence of two major marine ecosystems (Canary Current and Gulf of Guinea Current) as well as coastal upwelling systems and a multitude of large river deltas. This geographical context provides the region with a great biological richness, including a high abundance of SPs. In West Africa, ECOWAS is the leading regional organization with the mission of promoting cooperation and integration. Following the withdrawal of Burkina Faso, Mali and Niger following coups, ECOWAS is currently made up of 12 Member States. Mauritania signed an association agreement with it in 2017.

Despite the strategic socio-economic importance of fisheries resources, which are generally shared, the region faces several challenges. These include, among others, the lack of coordination of fisheries policies and harmonization of regulations, overcapacity of fishing with the consequent overexploitation of stocks, and the high cost and scarcity of fish products essential for the consumption of local populations. Faced with these challenges, ECOWAS' actions intend to build on its institutional and operational framework structured around several framework documents as well as agreements signed with fisheries organizations such as the SRFC and the Fisheries Committee for the Central West Gulf of Guinea (FCWC). To better promote the sustainable development of the fisheries sector, which was relatively neglected in the past, ECOWAS is now focusing on several areas of intervention, including: community fisheries regulations, joint regional assessment of fishery resources, coordinated regional negotiation of fisheries agreements, pooling of resources and information sharing, capacity building, promotion of intra-regional trade in fishery products, establishment of regional standards on fishery products, etc.

Synergies with the Octopus FIP

Mr. Cheikh Abdellahi Ould Inejih, from the Sustainable Development and Marine Ecosystems Network DDECOMAR, presented the Octopus FIP of Mauritania. The octopus fishery had a first improvement project supported by the FAO between 2016 and 2018, which was not followed up. In 2023, a pre-assessment study identified key gaps and developed an action plan. Since November 2024, this plan has been implemented through the Octopus FIP.

This restart, which includes all fishing units (deep-sea bottom trawling and artisanal and coastal fishing by traps, traps and jigs), is part of the national policy line aimed at improving the marketing of seafood, in particular through the labelling of Mauritanian products. It is the result of the joint commitment of several parties:

- National institutions responsible for fisheries management, scientific research and monitoring.
- SMCP: valorization, promotion and traceability of the product.
- The Mauritanian Association of Octopus Producers and Exporters (AMPEP): an association dedicated to octopus, created by the FNP and the Fishmongers' Fishing Federation (FPMEDC), with the support of the SMCP.
- The Sustainable Fisheries Partnership (SFP)²¹ and the Global Octopus Supply Chain Roundtable (SR), bringing together 25 European and American companies committed to responsible sourcing

The administrative management is based on a steering committee, a technical committee and the SMCP (focal point of the project). Core funding is provided by the SMCP and AMPEP, supplemented by support from the SR-Octopus, contributions from the MPIMP. The project will develop technical partnerships to ensure remedial actions at sea and on land, with a view to achieving MSC certification.

The project is referenced on the fisheryprogress.org platform, ensuring transparency and regular monitoring of progress. The project then regularly reports on the country's efforts to ensure the sustainability of the octopus fishery in Mauritania.

The first meeting of the steering committee was held in December 2024, followed by agreements between the SMCP, the IMROP and the Directorate of Resource Planning and Studies of the MPIMP of Mauritania. With the support of the SR and the SFP, a human rights impact assessment in the value chain is underway (results expected by the end of 2025).

Beyond the technical objectives, the FIP-Octopus supports national efforts in sustainable fisheries management and environmental protection, strengthens the country's international visibility, and mobilizes private actors to support sustainable management policies. It makes it possible to target deviations from MSC standards and to implement, over a defined period, the necessary actions to close them.

The Octopus FIP thus contributes to the strategic objectives of the MPIMP: to ensure the environmental, social and economic sustainability of a strategic fishery and to secure the

²¹ SFP is working toward a world where all fisheries and aquaculture are improving and everyone has access to responsibly sourced and produced seafood. The NGO works across the entire seafood value chain, from the world's largest retailers to artisanal fishers, to find practical solutions to difficult problems, focusing on impact, to help ensure abundant fisheries, healthy marine and coastal ecosystems, and resilient fishing communities. [About Us - Sustainable Fisheries Partnership](#)

access of Mauritanian octopus to remunerative markets by offering sustainable and certified octopus.

Synergies with the Global Marine Commodities 2 (GMC2) project

Ms. Carmen Gonzalez Valles from SFP presented the GMC2 project, which aims to strengthen the management of fisheries resources by integrating sustainability and social responsibility into seafood supply chains.

The GMC2, which is expected to start in 2025 (signatures from partner states were expected at the time of publication of the report), builds on the GMC1 market model by extending it from export to domestic markets and integrating the principles of bycatch reduction and social responsibility. Led by the United Nations Development Programme (UNDP) and funded by the Global Environment Facility (GEF) at USD 10,733,945 over 5 years, it has SFP as an implementing partner. The participating countries are Senegal (small pelagics, octopus), Guatemala (large pelagics), Mauritania (small pelagics, octopus), Morocco (small pelagics), Panama (large pelagics, shrimps) and Ecuador (large pelagics, pomada shrimps).

It is a market transformation project that aims to align the supply and demand for sustainable and responsible products to improve the entire supply chain. First, by collaborating with international and domestic buyers to generate demand through tools such as responsible sourcing standards, purchasing policies, and time-bound commitments; piloting and scaling national buyer engagement programs; documenting lessons learned for replication (project component 1). Secondly, by working to generate a sustainable product offer through co/participatory management platforms led by the competent authorities; designing and implementing or upgrading Fisheries Improvement Projects (FIPs) (Project Component 2). Third, by generating and maintaining transparent performance information (e.g., FishSource, FisheryProgress) to inform supply chain decisions, sharing evidence to inform national and regional decision-making), and documenting and sharing project learnings for a wider audience (project component 3).

Presentation of the "Pathway to Sustainability" program

Ms. Laura Rodriguez, Marine Stewardship Council (MSC), introduced her organization as an international non-profit organization that sets a global standard for sustainable seafood. More than 19 percent of the world's wild fish are currently covered by the MSC program.

The MSC program offers different levels of environmental performance and recognition:

- MSC certification: highest level of performance and recognition, allowing the MSC logo to be obtained.
- Improvement program: intended for fisheries that do not yet meet the standard but are in the process of certification. It is a verified tool and limited in time (5 years).
- Pathway Projects: a collaborative platform to collaborate with several fisheries in a given region in order to improve their performance compared to the MSC standard. The methodology builds on MSC pre-certification tools and includes fisheries mapping, pre-assessment and development of action plans. The involvement of local actors (government, NGOs, producers, scientists, supply chain) is a key element of these projects. Fisheries participating in the Pathway program are not formally enrolled in the MSC program, but can access the improvement program or certification at a later date.

The MSC has developed several Pathway projects in West Africa, specifically focused on SPs. These projects involved fisheries and stakeholders from Mauritania, Senegal, The Gambia, Guinea-Bissau and Cape Verde. International funders such as the Mava Foundation and Clairmondial have supported these initiatives, in collaboration with the MSC's Ocean Stewardship Fund.

At the end of these presentations and exchanges, **Mr. Mohamed El Hafedh Ejiwen**, from IMROP, insisted that the proposals of the workshop participants be followed over time and be integrated into the theme of the blue economy and food security. Thus, the progress made since the Accra workshop in December 2023 – "an initiation workshop" – is based on the continued implementation of the SP FIP in Mauritania. Regarding fisheries data systems, it is necessary to define the terminology: it is not just a question of collecting data from FMFO factories. The financial viability of production is essential, as is food security. Value chain analysis requires data and information from economic actors along the chain (financial and employment data, but also consumption data, including environmental, social and economic data).

Discussions

Mr. Mahfoudh Ould Taleb, from the ISSM, added by insisting on the fact that there are "profitability choices to be made when we talk about food security. Previously, 300,000 tonnes

of SP in Mauritania were not landed and recycled. Is the transformation of clupeids into FMFOs compatible with the stated food security objective of 20 kg of fish per capita per year?”.

The comparison of the Direct Human Consumption versus Indirect Human Consumption value chain is not based solely on national food security considerations, but rather:

- the type of resource, the mode of its exploitation and various other considerations, particularly environmental and social.
- on economic profitability
- national redistribution of rent, environmental impact,
- energy consumption.

In addition, additional resources would make it possible to ensure this security in connection with the production of FMFO, for example through a knock-on effect on the poultry and aquaculture sectors (a factor in the attractiveness of investments).

For further discussions, ECOWAS' **Djiga Thiao** suggested that the FCWC be invited to participate.

SESSION 5 – DISCUSSION GROUPS

The second day of the workshop, 11 July, was exclusively dedicated to small group discussions on the following themes. Participants had previously been invited to register in the group of their choice.

The distribution of the groups is indicated in the appendix.

- Fisheries Information System - Practical Case Study: Plant-Level Data Collection – Challenges and Opportunities
- How can regional alignment with regulatory frameworks for SPs be strengthened?
- How can the ongoing Fisheries Improvement Project (FIP) in Mauritania, and the concept of FIP, support bilateral and multilateral cooperation?
- How to promote direct human consumption of SPs?

1. Fisheries Information System - Practical Case Study: Plant-Level Data Collection – Challenges and Opportunities

Chaired by **Mr. Lahsen Ababouch**, the discussions were the subject of a report in plenary session by **Mr. Ely Beibou**.

The discussions were framed by a list of questions provided to the participants:

- How can the FIP in Mauritania help factories to set up a robust technical data collection system (staff training, IT systems, etc.)?
- Now that factories are increasingly using pirogues, which can be cross-border, for their supplies, how can data collection be coordinated at the regional level? How can the Mauritanian FIP's data collection efforts contribute to regional cooperation?
- How does the FIP collaborate with the FiTI on data transparency? How to improve this?
- Regarding market requirements, how do you ensure that data collection does not stop at the entrance to the factory?
- How can data collection and sharing better ensure compliance with Mauritanian government regulations regarding the ingredients allowed for FMFO and the proportions required to integrate the different supply chains?

The group established a strengths-weaknesses-opportunities and threats (SWOT) analysis before proposing its recommendations:

- Strengths:
 - Existence of collection facilities in some factories.
 - Presence of observatories and trained staff.
 - Active engagement in the FITI for transparency.
 - Structured data for industrial fishing.
 - Use of digital tools by partners (coast guards).
- Weaknesses:
 - Fragmented, non-unified collection system.
 - Insufficient artisanal and coastal data.
 - Lack of training of staff.
 - Lack of a centralized computerized system.
 - Insufficient data sharing between actors.
 - Surveillance sometimes circumvented (species banned in fishmeal).
- Opportunities:
 - FIP support to strengthen the system.
 - International demand for traceability and sustainability.
 - Regional harmonization via SRFC or other.
 - Possible integration of environmental criteria (CO₂, water, energy).
 - Digital tools already tested (tablets, software).
 - Inter-institute collaboration (IMROP, CRODT, etc.).
- Threats:
 - Lack of data exchange – Mauritania-Senegal Agreement.
 - Lack of cross-border coordination.
 - Difficulty in enforcing existing regulations.
 - Reluctance of manufacturers to share certain data.
 - Risk of institutional slowness.

The group made the following recommendations:

- The FIP is called upon to raise awareness among economic operators of the need to collect the necessary data and share the necessary information, while maintaining the required confidentiality;
- The capacities of economic operators on environmental and social issues should be strengthened.
- It is important to take stock of existing data collection and sharing systems;
- The GRT should facilitate the exchange of information between the countries of the sub-region, particularly through existing initiatives (FIP Mauritania, FIP Morocco) and underway;
- A sub-regional observatory on SPs, including data from economic operators, should be established.

During the plenary discussion, **Mr. Hamadi Baba Hamadi** from FNP emphasized that industrial fishing, which accounts for 90 percent of the catch, is well-documented in the information systems (fishing logbooks, fishing area mapping with the use of tracking devices, quotas, licenses, etc.). In Mauritania, artisanal fishing is not primarily focused on pelagic species, but rather on octopus. "Data sharing for statistical purposes is regulated, with restrictions on its dissemination. It would be beneficial to streamline the system for monitoring fishing activities at sea. The statistical classification used to calculate GDP should be revised, as it underestimates the contribution of the fishing sector, with the contribution of certain segments of the sector being incorrectly attributed to others."

Mr. Sidi Ahmed Abeid, from the FNP artisanal section, confirmed the orientation of artisanal fishing towards octopus and insisted on a need for support from the FIP regarding transport.

2. How can regional alignment with regulatory frameworks for small pelagics be strengthened?

Chaired by **Mr. Mika Diop**, from the SRFC, the exchanges were the subject of a report in plenary session by **Mr. Ismaïla Ndour** of the Center for Oceanographic Research of Dakar-Thiaroye (CRODT).

The discussions were framed by a list of questions provided to the participants:

- What regulatory instruments could help to better manage resource use (quotas, licenses, use restrictions) to prevent overexploitation of SP stocks?
- Should states impose stricter regulations on the destination of catches?
- How could States make better use of existing frameworks (CECAF, SRFC, ECOWAS, ATLAFCO, etc.)?
- How could Mauritania, Senegal and The Gambia work better together to manage common sardinella stocks? Should there be, for example, an annual meeting of the respective ministries? A joint committee? A process of consultation (or even information) with regional partners on changes to the management regime? Consultations on management plans?
- Does this cooperation have to be formal or can it take place in a more informal way? How can new cooperation frameworks be financed?
- How do governments use CECAF's scientific advice?

In his introduction, the group's rapporteur recalled that, in order to define regulatory instruments, it was imperative to define management objectives and to integrate social and economic aspects. The group proposed the use of the quota system combined with spatio-temporal restrictions.

He recommended promoting a system of incentives for more investment and not restrictions, with support through regulation based on appropriate taxation

- Tax incentives: implement regulations oriented towards the taxation of products according to the destination (FMFO factories, semi-preserved; canned, frozen)
- Promoting fit for purpose infrastructure

- Adapt these measures or regulations according to the country

Existing regulatory frameworks should be used to stimulate consultation, harmonization and revitalization of management systems. The SRFC can help facilitate the harmonization of measures across countries by involving research, administration, and the profession. It is also a question of strengthening the power of regional frameworks (CECAF, SRFC, ECOWAS, ATLAFCO, etc.) for example, by giving the SRFC a management mandate.

At the bilateral level, these are:

- Encouraging countries to strengthen their bilateral collaboration through regular meetings for the monitoring and evaluation of agreements
- Strengthening scientific cooperation between research institutions
- Establishing a framework for consultation between professional organisations

At the regional level:

- Revitalizing and strengthening sub-regional collaboration frameworks (SRFC, CECAF, ECOWAS, ATLAFCO, etc.).

The formal framework for cooperation exists in the form of the Sub-regional Advisory Committee on SPs, and needs to be revitalized, in order to ensure that the functioning of this existing cooperation framework is improved and to strengthen the regional working groups: research working group, planning working group, "control and surveillance" working group.

The group acknowledged that some scientific advice (CECAF) is not being applied by governments. To overcome this, it proposed consultations through the SRFC to find mechanisms for their implementation.

The plenary discussion made it possible to specify that some of CECAF's opinions were not applied because they were not applicable. Each context is different and calls for different measures.

Ms. Nedwa Nech of Mauritania 2000 recalled the need to take into account existing frameworks and organizations (e.g. ADEPA – Association for the Development of Artisanal Fisheries). It should also be noted that the SRFC has only 7 members while the ATLAFCO has more.

3. How can the ongoing Fisheries Improvement Project (FIP) in Mauritania, and the concept of FIP, support bilateral and multilateral cooperation?

Chaired by **Ms. Carmen Gonzalez** of SFP and **Ms. Jo Gascoigne**, of the FIP SP of Mauritania, the discussions were the subject of a report in plenary session by **Mr. Jeyid** of IMROP.

The exchanges were framed by a list of questions provided to the participants:

- Is the concept of FIP well understood? How is it communicated? Could steps be taken to promote it further?
- What are the main requirements for the creation of a FIP?
- What are the advantages of a FIP?
- Are there any stakeholders interested in creating additional FIPs? What are their expectations?
- Social issues: should they be integrated?
- The international supply chain is a key source of funding for the Mauritanian FIP, but what about elsewhere?

The Group stressed that the communication on the FIP should serve the objectives of the FIP. To do this, it would be necessary to develop a communication policy and strategy and to simplify the messages. At the basis of this communication, it is important to understand the requirements of FIPs:

- Establishing an inventory of the fishery
- Aligning with external or domestic market demand
- Establishing a governance framework
- Raising awareness and engaging stakeholders
- Ensuring product transparency and traceability

There is also a need to adapt FIPs to local markets and realities, encourage bilateral and/or multilateral cooperation on specific issues, identify other key partners (fleets), and set up an

information system for the FIP. The FIP should take the stock scale, be proactive with partners outside the FIPs, and create a forum for discussion at the regional level.

To ensure the sustainability of the FIP over time, and its financing, it is necessary to maintain a steering committee for the FIP and to find a funding system and anchor it in the governance of the project.

4. How to promote direct human consumption of small pelagic fish?

Chaired by **Mr. Mahfoudh Ould Taleb** of the ISSM, the discussions were the subject of a report in plenary session.

The discussions were framed by a list of questions provided to the participants:

- What are the current barriers to direct human consumption of SP in West Africa?
- What dietary recommendations are available in schools?
- What has been the impact of seafood promotion campaigns on consumption?
- How are the prices of SPs for direct human consumption evolving? Is there competition between the prices of raw materials?
- Is the infrastructure sufficiently developed to ensure the processing and stabilization of the catch?
- How is the new cannery being used in Mauritania?
- Are FMFO plants in Mauritania compliant with freezing equipment regulations? What is the end market for the products from these units?
- What is the current role of traditional (dried fish) supply chains?
- What has been the impact of recent regulations restricting the entry of fish into FMFO plants (prohibition of certain species, percentages required for human consumption) on the supply of SP to the local (or regional) market for human consumption? On prices? Are these rules fully applied and respected?

The group considered that in Senegal (18 million inhabitants, 27 kg per capita per year), SP consumption is at least twice as high as in Mauritania (5 million inhabitants, 11 to 16 kg per capita per year). On the other hand, the annual catches of SPs in the Mauritanian zone are two to three times higher than those landed in Senegal.

The group recalled that the fish consumption market is usually classified into four growth phases:

- Introduction
- Growth
- Maturity
- Decline.

While the market in Mauritania is still in the introduction phase, in Senegal it is in a declining phase.

Given the very specific local contexts, the group's recommendations focused on Mauritania.

The group found that the main drivers of the growth in fish consumption in Mauritania can be summarized as follows:

- Proximity to fishing port points and landing points
- Increasingly favourable eating habits
- SP production: highly variable depending on the season
- Physical accessibility of the product: competition from the transformation of FMFO and in freezing
- Very expensive prices: prices are often not affordable for vulnerable populations even during fishing seasons:
- Quality of a highly perishable product with the risk of high histamine levels
- Consumer income

After these introductory remarks, the group considered each issue one after the other.

The constraints to direct human consumption of SPs are:

- Overexploitation and overfishing
- SP rarity
- Inaccessibility (price and availability)
- Quality of the raw material
- Eating habits

Several awareness-raising campaigns for schoolchildren have taken place in Mauritania (canned goods, dried fish). These campaigns should be extended to all children and the entire population. However, the scarcity of fish is a hindrance as well as the quality of the product.

SP prices are high in relation to purchasing power ($\text{SNDP} = \text{Price multiplied by } 4$). The seasonality of the species is not considered. There is strong competition from FMFO and frozen SPs. The obstacles are also due to the remoteness of fishing areas and the increase in the price of fuel as a result of the scarcity of these resources.

If we consider the infrastructure, the group estimated that the pirogues were carrying out bulk storage on board, affecting quality during production peaks. As a result, for example, only 13 tonnes out of the 30 tonnes fished on average per trip during the peak production period in Mauritania are usable for direct human consumption.

The group noted a lack of landing infrastructure. The difficulties are also related to the raw material, its nature, its seasonality, its availability, the multiplicity of landing points with their consequences on quality management and monitoring. Storage capacity is insufficient and the cost of energy is prohibitive. Artisanal processing workshops closed and mainly women's jobs were destroyed.

In Mauritania, the production of the new cannery is oriented towards school canteens and Malian refugees (18 million boxes in 2024 for a capacity of 30 million). The expectations of the population are high: 4,800 tonnes of canned fish imported in 2020. Seasonality is a factor to be taken into account with a 6-month shutdown in 2024.

Discussions on the compliance of FMFO plants with the regulations revealed that the specifications were generally not respected.

Artisanal processing of SP is marginal in Mauritania due to the scarcity of the product and competition with the FMFO and freezing industries. The specific composition of the species to be processed is generally respected. The group noted a non-compliance with quotas and quantities intended for local consumption (product degraded on arrival).

Based on this diagnosis, the group provided a SWOT analysis:

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Diverse small pelagic species • Fee in the form of a 2% catch of deep-sea small pelagic vessels • Establishment by the SNDP of a fish distribution system covering at least all the capitals of Willaya • Emergence of a canning industry • School awareness operation • High consumption of fish in some countries (Senegal, The Gambia) 	<ul style="list-style-type: none"> • Weakness of the cold chain (highly perishable product, frequent damage) • Post-harvest loss still significant • Weak enforcement of regulations • Weakness of the artisanal processing system • High selling price • Inadequacy of the regulations for artisanal processing
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Increasing Demand for Fish • Comprehensive regulatory framework and incentive • Creation of new roads within countries • Major electrification projects • Interests of several technical and financial partnerships • Promotion of inland fisheries and fish farming in the interior of the country 	<ul style="list-style-type: none"> • Collapse of small pelagics • Climate change • Strong fluctuation in abundance • Termination of fisheries agreements: 2% fee • Risk of food poisoning in the context of poor hygiene • Strong export competition (frozen fishmeal) • Lack of concerted management of shared stocks

The panel's recommendations are as follows:

- Design short- and medium-term policies to increase direct consumption taking into account a population growth rate of more than 2.9 percent in 2024 in Mauritania, 2.3 percent in Senegal and The Gambia in 2023;
- Implement a marketing strategy for direct consumption of fish;
- Promote varied, healthy culinary preparation methods (tagine, couscous, etc.) in addition to the eternal fish rice;
- Encourage processing workshops in different landing sites;
- Vary the assortment of SP species: sardines, round sardinella, flat sardinella, ethmalose, horse mackerel and mackerel;
- Recover the co-products and use them for direct human consumption;
- Target specific groups through awareness campaigns: pregnant and breastfeeding women, and school canteens and university canteens;

- Characterize the long-term trend of fish consumption by country based on the stage of market growth by taking into account economic, geographical and cultural contexts.

Discussions

In plenary, the participants pointed out that in some months, the price of sardinella is higher in Mauritania than elsewhere on the international markets, even though it is a locally caught fish. Sixty percent of SPs by volume are exported to African countries, or 15 percent by value. These may be transit countries only.

Regarding infrastructure, the SNDP has a 200-tonne storage platform while production is 12,000 tonnes.

Mr. Djiga Thiao of ECOWAS highlighted the contradiction between a desire to promote the consumption of SP through campaigns and the scarcity/seasonality of fish. "Mauritania can play a fish diplomacy role at the level of the sub-region," he said.

Mr. Mahfoudh Ould Taleb of the ISSM noted that, when the need to reduce fishing capacity becomes necessary, following the onset of biological overexploitation, Mauritania withdraws fishing authorizations from foreign industrial fleets abruptly or gradually depending on the level of the threat. This was the case in 1981-1983, 1994-1995, 2005-2007, 2012-2015 and since 2022.

ONISPA representatives indicated that the current regulations for small-scale fisheries were inadequate. The organisation has proposed to set up a laboratory to support the profession in the promotion of products.

CONCLUSION

The workshop ended with interventions from the podium by **Mr. Mohamed El Hafedh Ejiwen**, from IMROP, **Mr. Árni Mathiesen** from the GRT, **Mr. Lahsen Ababouch**, international consultant, and **Mr. Hamadi Baba Hamadi** from the FNP.

The hosts, organizers and speakers were warmly thanked. The exchanges were praised for their quality. The need to follow up on actions and recommendations was recalled. "Small pelagics are part of the future but also of the past and present, as a resource of great nutritional richness and a provider of jobs. During this workshop, the participants began to touch opportunities, they must be seized."

Speakers concluded on the need to transform the trajectory of the value chain, with follow-up over time on recommendations, to implement sustainable management by SP species.

In this context, the harmonization of measures in the sub-region through the establishment of legal means formalizing, either directly or within the framework of a regional or subregional organization, the coordination of policies and modes of governance, must be a strategic lever; the role of regional fisheries management organizations (RFMOs) remains to be filled in the subregion in order to "agree on the measures necessary to coordinate and ensure the conservation and development of shared stocks located in the exclusive economic zones of the coastal states of the subregion" (Article 63 of UNCLOS).

In addition, the valorization of SPs through the establishment of appropriate infrastructure, the adoption of marketing strategies and public policies encouraging their direct human consumption (by ensuring the quality of the product over time, via appropriate infrastructure) is a central element in better guaranteeing the food security of local populations.

Further work needs to be done based on present and past activities. Resources need to be sought from those currently benefitting from the use of the stocks, remembering their living renewable nature and thus the paramount importance of sustaining them over time, a core component of healthy oceans, food security and the blue economy.

APPENDICES

Stakeholders invited to participate in the workshop

Atelier de Nouakchott des 10-11 juillet 2025			
Organisation	Prénom Nom	Pays	Statut
Ministère des Pêches, des Infrastructures Maritimes et du Portuaire	Lamine Camara	Mauritanie	Invitation acceptée
Ministère des Pêches, des Infrastructures Maritimes et du Portuaire	Azza Jiddou	Mauritanie	Invitation acceptée
Ministère des Pêches, des Infrastructures Maritimes et du Portuaire	Deddah Ahmed Babou	Mauritanie	Invitation acceptée
Ministère des Pêches, des Infrastructures Maritimes et du Portuaire	Hasni Tfeil	Mauritanie	Invitation acceptée
Ministry of Fisheries and Water Resources	Momodou Bailo Sidibeh	The Gambia	Invitation acceptée
Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP)	Mohamed El Hafedh Ejiwen	Mauritanie	Invitation acceptée
Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP)	Mohamed Elmoustapha Bouzouma	Mauritanie	Invitation acceptée
Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP)	Assane Dedah Fall	Mauritanie	Invitation acceptée
Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP)	Cheikh Baye Braham	Mauritanie	Invitation acceptée
Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP)	Mohamed Ahmed Jiyid	Mauritanie	Invitation acceptée
Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP)	Ely Beibou	Mauritanie	Invitation acceptée
Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP)	Beyah Meissa	Mauritanie	Invitation acceptée
Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP)	Mamadou Dia	Mauritanie	Invitation acceptée
Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP)	Cheikh Ould Hejbou	Mauritanie	Invitation acceptée
Institut supérieur des sciences de la mer (ISSM)	Mahfoud Ould Taleb	Mauritanie	Invitation acceptée
Centre de Recherches Océanographiques de Dakar-Thiaroye (CRODT)	Ismaila Ndour	Sénégal	Invitation acceptée
Conférence Ministérielle sur la Coopération Halieutique entre les Etats Africains Riverains de l'Océan Atlantique	Najib Charouki	Maroc	Invitation acceptée
Office National d'Inspection Sanitaire des Produits de la Pêche et de l'Aquaculture (ONISPA)	Ciré Mamadou Wane	Mauritanie	Invitation acceptée
Office National d'Inspection Sanitaire des Produits de la Pêche et de l'Aquaculture (ONISPA)	Abdoulaye Samba Sao	Mauritanie	Invitation acceptée
Société Mauritanienne pour la Commercialisation de Poisson (SMCP)	Seyid Elhousseine	Mauritanie	Invitation acceptée
Communauté économique des États de l'Afrique de l'Ouest (CEDEAO / ECOWAS)	Djiga Thiao	Nigeria	Invitation acceptée
Commission sous-régionale des Pêches (CSRP / SRFC)	Mika Diop	Sénégal	Invitation acceptée
Food and Agriculture Organization of the United Nations (FAO)	Lena Westlund	Italy	Invitation acceptée
Food and Agriculture Organization of the United Nations (FAO)	Molly Ahern	Italy	Invitation acceptée
Expert Indépendant	Babana Yahya	Mauritanie	Invitation acceptée
Expert Indépendant	Cheikh Abdellahi Ould Inejih	Mauritanie	Invitation acceptée
Expert indépendant	Lahsen Ababouch	Maroc	Invitation acceptée
Agence allemande de coopération internationale pour le développement (GIZ)	Verena Stiebing	Mauritanie	Invitation acceptée
Agence allemande de coopération internationale pour le développement (GIZ)	Mohamed Vail	Mauritanie	Invitation acceptée
Agence allemande de coopération internationale pour le développement (GIZ)	Rouguiata Kane	Mauritanie	Invitation acceptée
Overseas Fishery Cooperation Foundation Japan	Takuya Koimaru	Mauritania	Invitation acceptée
Spanish Embassy in Mauritania	Mar Prieto Hergueta	Mauritania	Invitation acceptée
Fisheries Transparency Initiative (FITI)	Mansor Ndour	Sénégal	Invitation acceptée
International FIP coordinator	Jo Gascoigne	UK	Invitation acceptée
Winterisation Mauritania	Sid Ahmed Sidha	Mauritanie	Invitation acceptée
Africa Ocean Group	Aziz Boughourbal	Mauritanie	Invitation acceptée
Africa Ocean Group	Szymon Jagiello	Mauritanie	Invitation acceptée
Mah El Turk	Mohamed Horma Mohamedou Ami	Mauritanie	Invitation acceptée
FIP social coordinator	Moustapha Taleb	Mauritanie	Invitation acceptée
Lem Seafood	El Atigh Lemrabott	Mauritanie	Invitation acceptée
Mauritania Fishmeal	Saad Bouh Khateira	Mauritanie	Invitation acceptée
Alfa Services	Papa Demba Diakité	Mauritanie	Invitation acceptée
Alfa Services	Mohamed Hady Gueye	Mauritanie	Invitation acceptée
SINORIM	Hamady Mohamed Hamady	Mauritanie	Invitation acceptée
Olvea	Christophe Godard	France	Invitation acceptée
Fédération Nationale de Pêche (FNP)	Ahmed Khouba	Mauritanie	Invitation acceptée
Fédération Nationale de Pêche (FNP)	Hamadi Baba Hamadi	Mauritanie	Invitation acceptée
Groupeement d'Intérêt Économique des Usines pour le Développement de la Pêche Artisanale	Kerbally Isselmou	Mauritanie	Invitation acceptée
Fédération Nationale de Pêche (FNP)	Bechir Ahmed Labeid	Mauritanie	Invitation acceptée
Groupeement d'Intérêt Économique des Usines pour le Développement de la Pêche Artisanale	Abidine O sidaty	Mauritanie	Invitation acceptée
Fédération Nationale de Pêche (FNP)	Sid Ahmed Abeid	Mauritanie	Invitation acceptée
Sustainable Fisheries Partnership	Carmen Gonzalez Valles	Spain	Invitation acceptée
ZAKIA / Association Mauritanienne pour la cohésion sociale et la promotion des droits de l'homme et du développement	Bekaye Sy Samba	Mauritanie	Invitation acceptée
Mauritania 2000	Nedwa Nech	Mauritanie	Invitation acceptée
Greenpeace Africa	Mamadou Kaly Ba	Sénégal	Invitation acceptée
Afric Azote	Aristide Aka	Sénégal	Invitation acceptée
Marine Stewardship Council	Laura Rodriguez	Spain	Invitation acceptée
Global Roundtable on Marine Ingredients	Arni Mathiesen	Iceland	Invitation acceptée
Global Roundtable on Marine Ingredients	Véronique Jamin	UK	Invitation acceptée

Organisation	Name	Country	Status
Ministere des Peches du Sénégal	Ismaila Ndiaye	Senegal	Unable to attend
EU LDAC	Alexandre Rodriguez	Spain	Unable to attend
EU Delegation in Mauritania	Alain Houyoux	Mauritania	Unable to attend
Expertise France (WASOP)	Laure Bruma	Togo	No response
EU Delegation in Senegal	Baptiste Bobillier	Senegal	Declined
Zakia	Mensour Boidaha	Mauritania	Unable to attend
EJF			No response
CFFA - Coalition for Fair Fisheries Agreement	Beatrice Gorez	Belgium	Declined
Leibniz Centre for Tropical Marine Research	Raymond Ayilu	Germany	Unable to attend
Leibniz Centre for Tropical Marine Research	Achim Schlüter	Germany	Unable to attend
Université Cheikh Anta Diop de Dakar	Pr Adama Diouf	Senegal	No response
MarinTrust	Nicola Clark	UK	Declined
CAOPA	Gaoussa Gueye	The Gambia	Declined

Participants in the July 11 focus groups

Participants au Groupe 1 :

Groupe de discussion 1		
ONISPA	<u>Ciré Mamadou Wane</u>	Mauritania
FIP social coordinator	Moustapha Taleb	Mauritania
<u>Olvea</u>	Christophe Godard	France
FNP / National Fishing Federation	Ahmed Khouba	Mauritania
Greenpeace Africa	Mamadou Kaly Ba	Senegal
Mah El Turk	Mohamed <u>Horma Mohamedou</u> Ami	Mauritania
SINORIM	Hamady Mohamed Hamady	Mauritania
Mauritania Fishmeal	Saad Bouh <u>Khateira</u>	Mauritania
Alfa Services	Papa Demba Diakité	Mauritania
IMROP	Ely <u>Beibou</u>	Mauritania
GIE UDPA	<u>Kerbally Isselmou</u>	Mauritania

Groupe 2

Comment renforcer l'alignement régional des cadres réglementaires pour les petits pélagiques

<u>Président</u> : M. Mika DIOP	(CSRP)
<u>Rapporteur</u>: M. Ismaïla NDOUR	(CRODT, Sénégal)
<u>Membres:</u>	
• M. Hamadi Baba HAMADI	(Président FNP, Mauritanie)
• M. Sidi Ahmed ABEID	(FNP / Pêche artisanale, Mauritanie)
• M. <u>Djiga</u> THIAO	(CEDEAO)
• M. Lamine CAMARA	(DAR/MPIMP)
• Mme Lena WESTLUND	(FAO)

Participants au Groupe 3

Ministry of Fisheries, Maritime Infrastructure and Ports	<u>Deddah</u> Ahmed Babou	Mauritania	Africa Ocean Group	Szymon Jagiello	Mauritania
IMROP	Mohamed Bouzouma	Mauritania	Marine Stewardship Council	Laura Rodriguez	Spain
Independent expert	Cheikh Inejih	Mauritania	IMROP	Cheikh Baye Braham	Mauritania
Sustainable Fisheries Partnership	Carmen Gonzalez Valles	Spain	Overseas Fishery Cooperation Foundation Japan	Takuya Koimaru	Mauritania
IMROP	Mohamed Ahmed Jiyid	Mauritania	Lem Seafood	<u>El Atigh Lemrabott</u>	Mauritania
FIP international coordinator	Jo Gascoigne	UK			
Alfa Services	Mohamed Hady Gueye	Mauritania	Global Roundtable on Marine Ingredients	Arni Mathiesen	Iceland
ONISPA	Abdoulaye Samba Sao	Mauritania	Winterisation Mauritania	Sid Ahmed Sidha	Mauritania
SMCP	Seyid Elhousseine	Mauritania	INRH –ATLAFCO	<u>Najib Charouki</u>	Morocco
Afric Azote	Aristide Aka	Senegal			

Groupe 4

	Nom et prénom	Structure
1	Rouguiata Kane	GIZ
2	SAO Abdoulaye	ONISPA
3	Beyah Habib	IMROP
4	Mamadou Dia	IMROP
5	Molly Ahern	FAO
6	Momodou Sidibeh	Ministry of Fishing and Water Resources, Gambia
7	Mansor N'Dour	FITI
8	Boughourbal Aziz	A06
9	Cheikh Abdalalhi Inejih	Expert indépendant
10	Mahfoudh Taleb	Directeur ISSM
11	Nedwa Moctar Nech	Mauritanie 2000
12	Bekaye Sy Samba	Zakia / AMCSPDHD
13	Babana Yahya	Expert