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**USAID/COMFISH Plus Project - Feed the Future (FTF) and
Conservation of Biodiversity
*PENCOO GEJ***

(Collaborative Management for a Sustainable Fisheries Future in Senegal)

(Cooperative Agreement Number: AID-685-A-16-00007)

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ACRONYMS

ANACIM	National Agency of Civil Aviation and Meteorology
CINSERE	Climate information services for increased resilience and productivity in Senegal project, USAID/Senegal
CL	Local Agreement (Convention Local)
CGPP	Committee for the Management of Small Pelagics
CLPA	Local Artisanal Fisheries Councils (Conseils Locaux de Pêche Artisanale)
CNAAP	National Committee for Fisheries Management Support
CNGPP	National Committee for Collaborative Management of Small Pelagics
COMNACC	National Committee on Adaptation to Climate Change
CRC	Coastal Resources Center
CRODT	Oceanographic Research Center Dakar, Thiaroye
CSE	Ecological Monitoring Center
CSRP	Sub-Regional Fisheries Commission
DAMCP	Department of Community Based Marine Protected Areas
DEEC	Department of Environment and Classified Establishments
DGID	Internal Revenue Service
DITP	Department of Fisheries Processing Industries
DPC	Department of Inland Fisheries
DPM	Department of Marine Fisheries
FtF	Feed the Future
FMP	Participatory Fisheries Management Plans
GIS	Geographical Information System
ICC	CLPA Coordination and Advisory Committee
IR	Intermediate Result
IRD/IFAN	Refers to the Biological and Ecological Laboratory of Fish in West Africa
IUPA/UCAD	Institute for Fisheries and Aquaculture - Cheikh Anta Diop University
IUU/INN	Illegal, Unreported and Unregulated
LPSD/PA	Sector Policy Letter for the Development of Fisheries and Aquaculture
MEDD	Ministry of Environment and Sustainable Development
MEF	Ministry of Economy and Finance
MoU	Memorandum of Understanding
MPEM	Ministry of Fisheries and Maritime Economy
NAP	National Adaptation Plan
NDC	Nationally Determined Contributions
NOAA	National Oceanic and Atmospheric Administration
PMP	Performance Management Plan
PN-PCC/SN	National Platform for Fisheries and Climate Change
SDG	Sustainable Development Goal
UNFCCC	United Nations Framework Convention on Climate Change
URI	University of Rhode Island
USAID	United States Agency for International Development
USG	United States Government
URM and UZM	FPM Local Unit of Implementation and Zonal Unit of Implementation

I. EXECUTIVE SUMMARY

The USAID/COMFISH Plus project objective is to support the Government of Senegal's efforts to reform the fisheries sector and increase the resilience of fishing communities and their livelihoods. This includes strengthening the enabling conditions for improved governance, improved access to science to support decision-making processes, and identifying and adopting measures to increase resilience to climate change.

The USAID/COMFISH Plus extension phase focuses on the priorities already identified by the USAID/COMFISH project in the framework of the 'Feed the Future' Initiative (FtF), climate change and biodiversity conservation. It also retains the integrated approach of the USAID/COMFISH project in addressing crosscutting themes such as capacity building in governance, gender and empowerment of women processors, and adaptation to climate change impacts in the fishing sector.

This report describes the progress made in implementing Quarter 3 of the fiscal year 2018 USAID/COMFISH Plus project work plan.

As regards policy reforms, this quarter included implementation of the Fisheries and Aquaculture National Adaptation Plan, support for the functioning of the National Platform for Fisheries and Climate Change (PN-PCC/SN), and implementation of a priority activity in the platform's annual workplan, capacity development in climate financing, with technical and financial assistance provided by the USAID/CEADIR project. The project also continued its' collaboration with the Directorate of Literacy and National Languages (DALN) to deliver literacy classes for women processors at 14 sites. In accordance with the new Sector Policy Letter for the Development of Fisheries and Aquaculture (LSPD-PA) in the context of the program for modernization of artisanal processing areas, the project continued to support the Ministry of Fisheries and Maritime Economy (MPEM) by strengthening the organizational dynamics of women's processing groups in Mbao, Fass Boye, Pencum Senegal and Goxxu Mbaac. Support was also provided by the project to MPEM for operations and activities of the national network of Local Artisanal Fisheries Councils (CLPAs). Finally, USAID/Senegal, USAID/Washington and the USAID/COMFISH Plus project collaborated to organize a U.S. study tour on the control of IUU fishing for a MPEM Ministerial delegation.

Capacity strengthening also continued with the **institutions and stakeholders** through the Organizational Capacity Assessment (OCA) of the CLPAs of Saint-Louis and Kafountine, in parallel with monitoring implementation of the OCA action plan in the CLPAs of Cayar and Sindhia Nord. After supporting the establishment of CLPA networks, the project supported the development and implementation of the National CLPA Network roadmap. The projects' important institutional and management capacity building program has been continued this quarter to support the process of implementing local conventions (CLs), participatory management plans (FMPs) and climate change adaptation plans.

On improved **scientific research to support management decision-making**, the scientific partners (IUPA, CRODT, IFAN/IRD and CSE) have implemented their research activities and results were presented and discussed at a workshop at the end of June. This includes work carried out mainly on small pelagic fisheries, outcomes of a joint participatory data collection pilot and mapping and GIS, and the status of the *Ethmalosa* stock in the Sine Saloum. Findings on gear selectivity have been integrated into the *Ethmalosa* FMP with a larger mesh size now proposed.

Implementation of the *Sardinella* FMP is ongoing in Grande Côte Sud, Cap Vert and Petite Côte. **Implementation of the *Ethmalosa* FMP for Sine Saloum** started this quarter following approval by the CLPAs concerned and by the Minister of Fisheries and Maritime Economy (MPEM) in June. To this end, in addition to strengthening the capacities of the monitoring bodies (Local Units and Zonal Units of Implementation) and improving stakeholders' knowledge of the regulations, an extract from the Fisheries Code (on 'artisanal fishery') was prepared and made available to the actors. This led to a widespread awareness campaign on the payment of fees (fishing license and wholesaler cards) and the mounting of license plates.

On Climate and Gender, in addition to actions taken at the strategic level, to support implementation of the Fisheries and Aquaculture NAP by strengthening the functionality of the National Platform on Fisheries and Climate Change (PN-PCC), significant support has been given to institutions, to contribute to the Early Warning System (EWS) for safety-at-sea. This was done in collaboration with the USAID/CINCERE project and the DPSP, in the context of monitoring units established in Mbour and Saint Louis. Partnership with the National Agency for Renewable Energies (ANER), resulted in 4 solar dryers installed and women trained in their use at the modern processing unit of Cayar this quarter, thus promoting the use of clean and renewable energy in artisanal fishery products processing. At the local level the project supported implementation of local climate change adaptation plans in the CLPAs of Ziguinchor, Kafountine and Saint Louis, with the setting up of surveillance/steering committees and the first local platform for fisheries and climate change in Mbour.

With regard to "modernizing artisanal processing sites", initiatives on-going this quarter in addition to those already mentioned include; capacity building for women in financial management; support for alternative Income Generating Activities (IGA); rehabilitation and commissioning of the processing areas of Mballing village, Yénne Todd and Pointe Saréne; monitoring and evaluation of the management of the modern artisanal processing unit of Cayar, of products diversification and improvement of food processing and preservation techniques.

Governance/Decentralization. In addition to capacity building activities, 2018 was particularly marked with the implementation of fisheries resource management tools, such as CLs and internal fundraising activities at CLPA level. New CLs have been adopted in the CLPAs of Sine Saloum, via feedback and validation workshops attended by all the stakeholders (individual and institutional). Production of radio programs and surveillance missions at sea and on land through participatory monitoring are on-going in support of CLs and FMPs.

Communication this quarter focused on the production of capitalization documents and evaluation of archiving capacity at the CLPA level. A highlight this quarter was the visit of the U.S. Ambassador to Senegal, Tulinabo S. Mushingi to women processors at Guéréo. He noted that he expected to find fish, but what he found was an exemplary model of good governance.

In terms of performance, the indicator table in annex shows the results obtained during the quarter. Training of the 31 CLPA relays on the Mobile-To-Web Data Tracking Platform, which took in place from 7-9 June 2018, facilitated the operationalization of computerized data collection. The post-training follow-up mission by the project's monitoring and evaluation officer (from June to July) will help the relays improve their mastery of the tool. One of the drivers of success noted at the end of the Mobile-to-Web training of relays was materialized by the creation of the first Community Relays Association of the fishery sector.

II. INTRODUCTION

The USAID/COMFISH Plus project is a two-year initiative (October 1, 2016 - September 30, 2018) funded by the United States' Agency for International Development (USAID). It is a follow-on of the USAID/COMFISH Project (14 February 2011 - 30 September 2016) implemented through a Cooperative Agreement between USAID and the University of Rhode Island (URI). The main partners are government entities, professional fisheries associations, universities, research institutes and non-governmental organizations (NGOs) working in the coastal and marine fisheries sectors.

The project objective is to support the Government of Senegal's efforts to reform the fisheries sector and increase the resilience of fishing communities and their livelihoods. The project does this by strengthening the enabling conditions for improved governance, including gender empowerment; improving access to science for decision making; and identifying and taking actions that increase resilience to climate change.

The USAID/COMFISH Plus project contributes to the achievement of three main results:

IR1: Institutional and stakeholder capacity strengthened at all levels to implement an ecosystem based, co-management approach towards sustainable fisheries, taking into account climate change impacts in the fisheries sectors;

IR2: Governance strategies, policies and best practices identified, tested, assessed and applied to build ecosystem resilience to threats to biodiversity conservation and climate risk;

IR3: Enhanced social and economic benefits to artisanal fishing communities provide incentives to a continued sustainable fisheries agenda.

This report describes the activities carried out by the USAID/COMFISH PLUS project during the third quarter of FY 2018. It contains a description of the main achievements during the quarter, a section on crosscutting activities (climate change, governance, communication, project management etc.), and a description of activities planned for the next quarter followed by annexes.

III. ACHIEVEMENTS IN THE THRID QUARTER FY 2018

3.1. Dialogue/Policy Reforms

Actions carried out this quarter include implementation of the Fisheries and Aquaculture National Adaptation Plan, support for the functioning of the National Platform for Fisheries and Climate Change (PN-PCC/SN) and implementation of a priority activity in the platform's annual workplan, capacity development in climate financing. The project also continued its' collaboration with the Directorate of Literacy and National Languages (DALN) to deliver literacy classes for women processors at 14 sites. In accordance with the new Sector Policy Letter for the Development of Fisheries and Aquaculture (LSPD-PA) in the context of the program for modernization of artisanal processing areas, the project continued to support the Ministry of Fisheries and Maritime Economy (MPEM) by strengthening the organizational dynamics of women's processing groups in Mbao, Fass Boye, Pencum Senegal and Goxxu Mbaac. Support was also provided by the project to MPEM for operations and activities of the national network of Local Artisanal Fisheries Councils (CLPAs). Finally, USAID/Senegal, USAID/Washington and the USAID/COMFISH Plus project collaborated to organize a U.S. study tour on the control of IUU fishing for a MPEM Ministerial delegation. More detail on these activities are provided in the sections below.

3.2. Capacity Building for Stakeholders and Institutions

Renewing the CLPAs of Lompoul and Potou. Renewal of CLPA governing bodies is a key function of an operational and well governed CLPA. In conformity with the legislation governing the composition and functioning of the CLPAs, each CLPA must renew its coordination bodies every two years. The USAID/COMFISH and COMFISH Plus projects have helped to put this legal obligation into practice through the implementation of local agreements (CLs). In quarter 3, the project supported the CLPAs of Lompoul and Potou to renew their Coordination and Advisory Committees (ICC). The process followed the same approach used in other CLPAs: General Assembly of delegates, training on the roles and responsibilities of the new ICC members and the official installation ceremony for the new delegates. Préfets and Sous-Préfets and representatives of local authorities and deconcentrated fisheries and surveillance technical services for the areas concerned were in attendance.

Organizational Capacity Assessment (OCA) of the Saint Louis CLPA. To support CLPA revitalization, the USAID mission is assisting the USAID/COMFISH Plus project to assess and develop the organizational capacity of a number of CLPAs. The first targeted CLPAs were Cayar and Sindia Nord. After the initial assessment and development of action plans, follow-up sessions on implementation of planned activities were held in these two CLPAs in Q2. In parallel with the implementation of the Cayar and Sindia Nord OCA action plans, USAID continued the process of assessing the organizational capacity of two additional CLPAs, Kafountine and St Louis. The initial OCA was conducted in Kafountine at the end of March (Q2) and in St. Louis in April. The OCA is a tool used to identify the organizational weaknesses of CLPAs and the associated risks. It is also an empowering approach for CLPA members to self-assess. These meetings and workshops were led by the USAID/Senegal mission, chaired by the administrative authorities of the locality, and attended by the project staff and ICC members from the CLPAs, with the participation of representatives from the local communities and the fisheries and surveillance technical services.

In St Louis, the assessment and participatory action planning highlighted the following areas for improvement:

- Strengthen the functioning of the committees of the CLPA Saint-Louis;
- Define the CLPA vision, missions and values;
- Strategic planning;
- Training in project monitoring and evaluation and implementation of a monitoring and evaluation plan
- Project Management Training;
- Training in financial management and implementation of an efficient financial system;
- Develop an administrative and financial management procedures manual;
- Establish a communication plan;
- Strengthen the promotion of women to positions of responsibility

The OCA follow-up process will continue in July.



Figure 1. The OCA process in St. Louis

Administrative and Financial Management Training for the Saloum CLPAs. To implement CLs, one of the first activities needed is to strengthen the financial management capacity of the CLPAs concerned. This provides them the right tools to effectively manage the internal or external funds entrusted to them. Training sessions on Administrative and Financial Management (AFM) were organized from May 9 to 12, 2018 in the CLPAs of Toubacouta and Foundiougne. In Toubacouta, the guardian of the Bamboung MPA, representing the Sous-Préfet, opened the workshop. In Foundiougne, the Head of the Departmental Fisheries Protection and Surveillance Unit, representing the Préfet chaired the meeting. Office holders of all the CLPAs of Saloum (Toubacouta, Niodior, Bassoul, Foundiougne, Missirah, Djirnda and Sokone) attended these meetings. Points relating to the administrative and financial management of CLPAs were discussed, including the regulatory and legal framework of the CLPAs; the organizational format of the CLPAs; the vision and missions of the CLPAs; the techniques and methodologies for developing CLPA action plans; the preparation and management of CLPA meetings; and the definition and usefulness of financial management and financial management tools.



Figure 2. Administrative and financial management workshops in Foundiougne and Toubacouta

Capacity building in participatory monitoring, management plans and climate change adaptation plans. Capacity building activities were rolled out in Sine Saloum for the start of participatory surveillance and the implementation of FMPs and adaptation plans. The actions carried out will be developed in the section below on “Development and implementation of new CLs.”

National CLPA Network information meetings. The USAID/COMFISH Plus project has supported establishment of four regional CLPA networks (Saint-Louis, Louga, Ziguinchor, Fatick) and the National CLPA Network. It supported operationalization of these networks, through development of a National CLPA Network roadmap and annual action plan. The first activity to be implemented was the organization of a national information and exchange tour in all the maritime regions of Senegal: Fatick, Ziguinchor, Saint Louis, Louga, Kaolack, Thies and Dakar, with the objective of popularizing the mission of the network among stakeholders and collecting and consolidating feedback on constraints related to sustainable fisheries management and CLPA operations. In quarter 3, these meetings were conducted in the Saint Louis, Louga and Thiès Nord maritime regions, in particular the CLPAs of Fass Boy and Cayar. Attendees included the administrative authorities (Governors, Préfets and Sous-Préfets), representatives of local communities (representatives of municipality mayors and village chiefs), decentralized fisheries units, representatives of the CLPA network, the project representative and ICC members of the visited CLPAs. In these three regions an estimated 418 people, including 360 men and 58 women, participated.

Development of an administrative and financial procedures manual for the National CLPA Network. The USAID/COMFISH Plus project supported development of an administrative and financial procedures manual for the National CLPA Network to strengthen its’ management capacity. After fieldwork by a consultant, a workshop was organized on June 29, 2018 in Ngaparou to review and validate the draft manual. The manual is a reference tool for the operation of the National CLPA Network. It allows the network and its’ CLPAs to respond to administrative and financial management in a more standardized and rigorous manner. It is primarily intended for use by the National CLPA Network coordination team for day-to-day management of the network. Its implementation meets the following objectives:

- Provide a formal framework for the proper execution of administrative and financial operations: financing agreements; legislation in force in Senegal;

- Ensure the smooth running of the network by specifying the attributions and tasks assigned to each position, optimizing information channels and establishing transparency within the network to build trust among members and partners.



Figure 3. Lifejacket, GPS and sailing slickers provided to 18 CLPA surveillance committees

Provision of Equipment for Participatory Surveillance to CLPA Surveillance Committees. Following CL validation and an exchange visit/study tour among CLPA surveillance committees, as well as on-going support for surveillance missions, the project reinforced the capacity of 18 CLPA surveillance committees this quarter with the provision of safety-at-sea equipment. A total of 190 lifejackets, 7 GPS and 35 sailing slickers were distributed.

3.3. Natural Resources/Management Plans/Conservation of Biodiversity and Marine Ecosystems

3.3.1. Strengthening the scientific and documentary base of the CLPAs and MPEM

Development of the Fisheries and Aquaculture Sector GIS web application. Development of the GIS web application started with the USAID/COMFISH project and has continued with implementation of the database component and configuration of the different functionalities of the GIS platform. Based on the recommendations of a knowledge-sharing workshop on implementation progress in February 2018, training sessions were organized for representatives of the different institutions involved. Official transfer of the system to the DPM is scheduled for July 31, 2018.

Size Structure of Landed *Ethmalosa* and Biological Samples (IFAN)

Eight monthly sampling missions were conducted along the Senegalese coast (Saint-Louis and Joal) from November 2017 to June 2018. The purpose of these missions was to estimate the size structure of landed *Ethmalosa* and to subsample some of the individuals for age and size at sexual maturity. Analysis of the data has produced the following results.

Size structure. The size frequency distribution provides an image of the demographic structure of harvested populations. A random sample of 250 fish was collected monthly from each landing site. They were measured (total length and fork length) and weighed. Size frequency histograms of landings based on these samples are shown in the figure below.

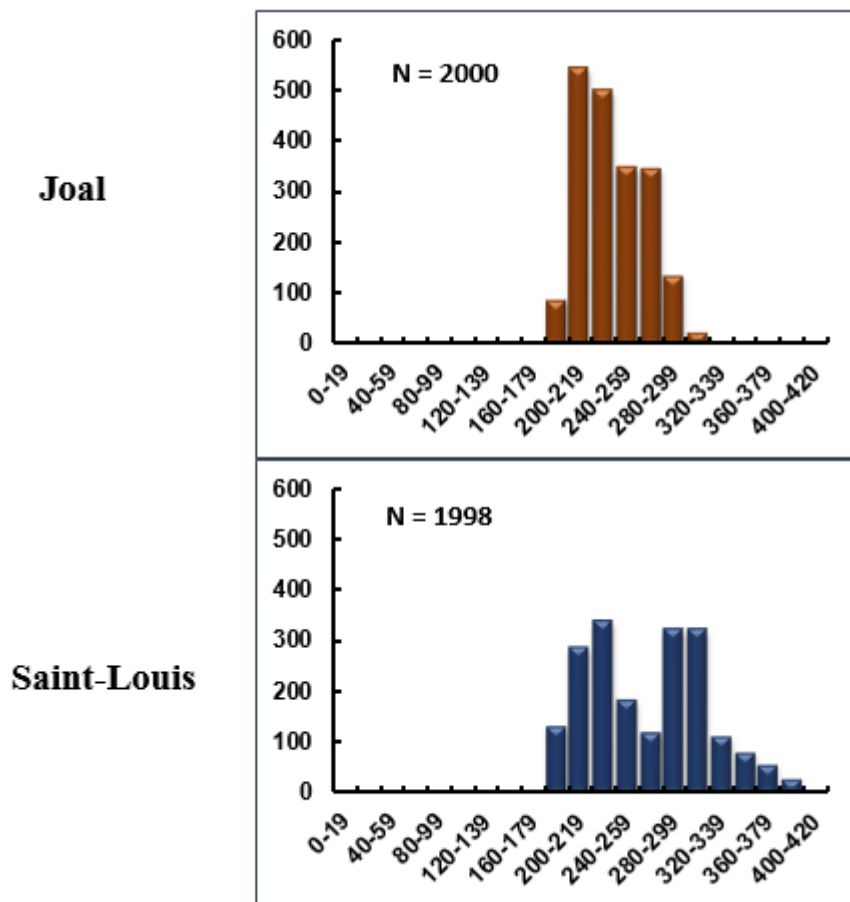


Figure 4. Size structure of *E. fimbriata* in Joal and Saint-Louis, November 2017 to June 2018

The graphs show that with *E. fimbriata* the general size distribution is more spread out in St. Louis (Figure 1). In Joal, catches are dominated by individuals with sizes ranging from 200 to 279 mm, representing 87% of ethmalose landings. The modal class is 200-219 mm. In Saint-Louis, landings are dominated by individuals ranging in size from 219-239 and 280-319, which is 64% of ethmalose landings, with a modal class of 220-239. The average sizes are 241 ± 28 and 260 ± 45 in Joal and St. Louis, respectively. These sizes are significantly different between the two landing sites (Student's t-test, $p < 0.05$). Larger individuals (above 340 mm) are only present in the St. Louis sample.

Field subsampling and sample collection. In the field, 30 fish per site were subsampled from the 250 fish measured. This subsampling was stratified by size class. All subsampled fish were dissected in the field (Figure 2) and some individual parameters were measured: total length, fork length, total weight, gutted weight, and gonad weight. Sex and stage of sexual maturity were determined for each individual, and then the mature gonads were extracted and stored in Gilson's fluid for later estimation of fecundity. Otoliths (growth recording calcified parts of the inner ear) were removed, cleaned in water, dried and stored dry in referenced tubes.



Figure 5. Dissection Session in Saint-Louis

Construction of the Otolith Image Database. Otolith image databases were constructed after each sampling and sample collection phase. The images were acquired on otoliths immersed in 95° alcohol and under reflected light against a dark background (Leica EZ4 HD stereomicroscope, TNPC software).

Reproduction. Reproduction was discussed through the study of the **gonadosomatic index (GSI)** for the determination of reproductive period, size at first sexual maturity, and fecundity. The gonadosomatic index is one of the variables used to assess the seasonality of reproduction.

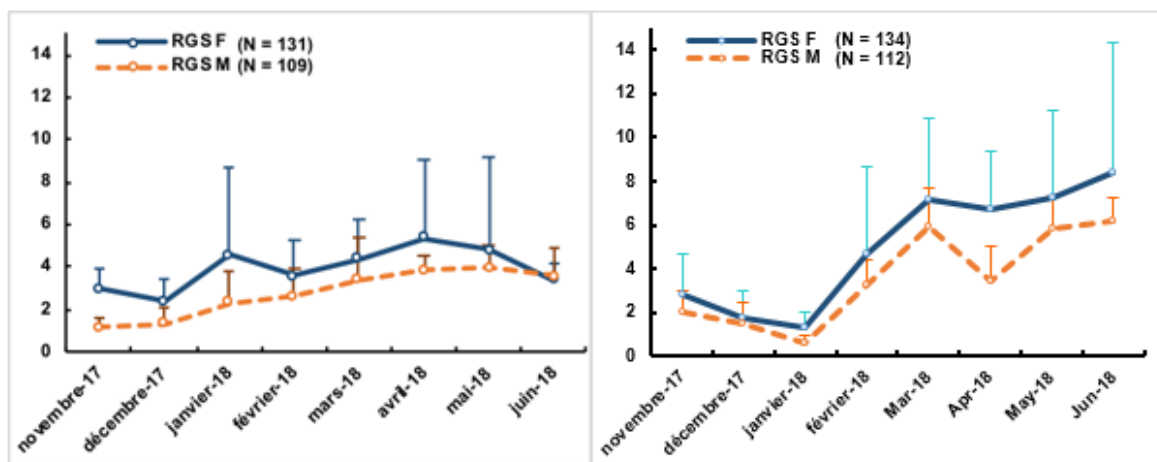


Figure 6. Monthly variation of GSI in *E. fimbriata* in Joal (left) and Saint-Louis (right), from November 2017 to June 2018.

In *E. fimbriata*, breeding takes place from January to May in Joal, with a first peak in January and a second in April for females and May for males. The GSI reaches its minimum value in December. In Saint-Louis, this breeding season is spread from February to June with two peaks in March and June. The lowest value of the GSI is observed in January.

The average size at first maturity. (L50) is defined as the length at which 50% of individuals are mature for the first time. In *E. fimbriata*, the smallest measurements of mature fish in Joal are 160 mm for females and 166 mm for males, while the largest sizes are 270 mm for females

and 254 mm for males. The first sexual maturity sizes for Joal are 197 mm for females and 185 mm for males. In Saint-Louis, the sizes of mature individuals vary between 157 mm and 340 mm for females and 111 mm and 325 mm for males. Their sizes at first sexual maturity are 212 and 202 for females and males, respectively.

Fecundity is the number of oocytes that make up the most advanced modal group and corresponds with the number of eggs that will be shed (Bagenal 1973, Fontana & Pianet 1973). Fecundity was calculated from stage 5 female gonads. For each individual, both gonads were weighed. Considering the large number of oocytes, a gonad section of 0.05 g was taken and stored in Gilson's fluid (100 ml of ethanol, 9 ml of glacial acetic acid, 20 ml of nitric acid at 60%, 20 g mercury (II) chloride and 875 ml distilled water) to facilitate the mechanical separation of the oocytes and their manual counting. After separation, the eggs were manually counted under a binocular magnifier. Absolute fecundity (AF) is the number of mature eggs that can be released at the next shedding.

The study shows very high mean (absolute and relative) fecundities (with high individual variability) in *E. fimbriata*, with small oocytes. (Absolute and relative) Fecundities were compared between Joal and Saint-Louis, using Student's t test. The results of the test (t test, $p > 0.05$) show no difference between (absolute and relative) fecundities in Joal and Saint-Louis.

Age and growth. The estimation of the age of each individual was made from the growth marks recorded on the otoliths. Otolith readings consist of counting the seasonal growth marks contained in the otoliths of *E. fimbriata*. In this study, translucent marks were identified and counted. The annual deposit of the translucent marks of the *E. fimbriata* has been validated in previous studies by several authors (Boëly et al (1982), Panfili et al (2004) and Samba (2017). The results obtained after modeling the growth show asymptotic total lengths of 361 and 432 mm in Joal and Saint-Louis. The age observed is 7 years in Joal and 8 years in Saint-Louis.

In conclusion, the study shows a size distribution more spread out in Saint-Louis than in Joal. The largest sizes were observed in St. Louis. The average size is significantly higher in Saint-Louis. The two populations of *E. Fimbriata* appear to have different breeding times and size at first maturity is higher in St. Louis. Absolute and relative fecundities are similar between the two sites. The maximum age observed between the two populations is comparable and growth is faster in Joal.

Joint Data Collection Unit on *Sardinella* and *Ethmalosa* fisheries (CRODT).

A pilot joint data collection program has been set up since November 2017 at four sites (Mbour, Joal, Cayar and Hann) selected to collect landings and effort data over a period of 7 months with involvement of CLPAs. The main objective of this pilot program is to improve collaboration between research agencies and actors in the field. This collaborative research, bringing together CRODT, DPM and representatives of stakeholders at the CLPA level helped to:

- Build the capacity of stakeholders;
- Improve the process of collecting information on fishing effort, vessels, landings, size of landed species and fish prices on landing, as well as master data entry and data processing and analyze the results obtained.
- Popularize research results by relying on project facilitators and community relays.
- Eliminate duplication of efforts between DMP and CRODT and improve the quality of sampling through the collaborative efforts of the two agencies.

Preliminary results on migration of Hann and Cayar fishermen have also been presented. The pilot joint data collection program consolidated landings and effort data into one single database that can be shared between CRODT and DPM. It improved the quality of the data and cut time and cost in the daily operation by the two agencies. The two agencies collect the same information using different sampling methodologies which produced conflicting figures on landings and effort. This discrepancy in the figures has a significant negative impact on the stock assessment and management decision-making.

Study and synthesis of available information on the use of monofilament. As a contribution to scientific debates on the harmful effects of the use of monofilament on fish resources and on the marine and coastal environment, a literature review was done on the use of monofilament.¹ Field missions were carried out to Joal, Pointe Sarène, Loumpoul and Cayar in March 2018 to collect the fishermen's perceptions on the use of monofilament gear in Senegalese artisanal fisheries. Focus group discussions were conducted with the CLPA in each locality. An individual survey was also administered to individual fishermen using various gear types. The topics discussed focused on:

- The ability of the monofilament to catch larger quantities of fish, larger individuals and a wider variety of species;
- The impact of monofilament on product quality and the environment;
- The comparison between monofilament and cotton rig nets in relation to their purchase price, their availability on the market, their maintenance cost, their physical strain in use and their financial profitability;
- Fishers' knowledge of the monofilament regulations;
- The acceptability of the monofilament nets buy-back by the State and the time required to complete the process.

The results show that:

The prohibition of the use of nylon monofilament is based mainly on the argument that when a net is lost or abandoned at sea it will continue to catch sea life for a very long time given that nylon is not biodegradable. The fishers argued that it is impossible for any lost or abandoned fishing net, including those made with nylon monofilament, to passively keep fishing for a long time. Because of the physical conditions of the sea, any net which is not regularly maintained will be quickly entangled and become incapable of fishing. Moreover, lost or abandoned nets are, in time, washed ashore by strong wave-action. This has been confirmed by several studies worldwide (Ayaz et al.2016; DeAlteris et al 1991; Queirolo and Gaete 2014; Brown and Macfadyen 2007).

Because of the lack of substantial evidence regarding the harmfulness of monofilament, the prohibition of the monofilament net in Senegal has been constrained by important social, economic and political factors. The subject of monofilament use should rather be included in wider integrated fisheries-governance approaches in which a higher priority is given to reducing overcapacity and ensuring the use of more-sustainable harvesting practices.

Indeed, the opinions of fishermen surveyed are very different depending on the site. For example, in Loumpoul, fishers praise the benefits of the monofilament net, unlike Cayar where

¹Framing the need for further understanding of the significance of this issue is for example: D Thiao, A Mbaye, M Dème & HD Diadiou (2017) Focusing on monofilament nets while overlooking the priorities of artisanal fisheries governance in Senegal, African Journal of Marine Science, 39:3, 339-348, DOI: 10.2989/1814232X.2017.1377634

fishermen do not find it beneficial. Only further experiments at sea with the use of the monofilament net, will be able to confirm or deny the harmfulness of this net.

From a **socio-economic point of view**, the fishers of Cayar are in favor of an outright ban of monofilament nets. Those of Lompoul, Joal and Pointe Sarène consider it more judicious to focus on a certain number of technical measures, notably managing fishing capacity, reducing the number of juveniles in landings by increasing the mesh size of nets, prohibiting fishing activities in nursery areas, creating new Protected Fishing Areas (PFAs) and holding field-level information sessions on the new Fisheries Code, which is not well known to them.

Participation in scientific committee meetings on *Ethmalosa* fishery in support of the implementation of management plans for this species. A scientific workshop was held at CRODT on June 27 and 28, 2018. It included local experts from the local scientific institutions (IUPA, LABEP-WA, CSE, SRFC, DPC) involved in fisheries, the senior fisheries managers of DPM and the Ministry, representatives of CLPAs, members of the media and faculty and students of local universities. During the workshop a status of the stock was presented by CRODT using a data-poor model (Catch-MSY). It was determined that the stock is slightly overfished by about 20% over MSY and that the average size is diminishing as fishing mortality is increasing. In addition, the average mesh size in use by fishermen (averaged 28 mm) is smaller the optimum (sustainable) mesh size of 36 mm determined by the selectivity study of IUPA. This activity is part of a consultation process for the diagnosis of *Ethmalosa* fishery in Senegal, in collaboration with the various stakeholders to support its management plan.

3.4. Support for the Implementation of Participatory Fishery Management Plans (FMPs)

Several activities were conducted this quarter to support development and implementation of small pelagic FMPs, including *Sardinella* FMP implementation and *Ethmalosa* FMP development and implementation in the Sine Saloum.

Technical Working Team (ETT) meeting. Following-up on the ETT meeting held in February 2018 to get feedback on the progress of *Sardinella* FMP implementation and *Ethmalosa* FMP development, another ETT meeting was organized at the DPM on June 5, 2018.

Sardinella FMP implementation. Implementation of the *Sardinella* FMPs of the Grande Côte Sud, Cap Vert and the Petite Côte started this year with the Local Implementation Units (URM). Most of the activities relate to the implementation of upstream measures specifically related to compliance with regulations.

Printing fisheries code extracts. As an aid to popularize the fisheries code and sensitize users on sustainable management of the resource, extracts of the fisheries code were printed and distributed to stakeholders in order to compensate for the widespread lack of familiarity with the law governing the exploitation of fisheries resources. The sections on artisanal fisheries were extracted and combined with images. Some segments were highlighted and translated into local languages. The 3500 copies were reproduced and distributed to stakeholders, with each CLPA receiving 100 copies.



Figure 7. Extract from the fisheries code

Training of Trainers on the Fisheries Code. In parallel with the preparation of the extracts of the code, training sessions for trainers were organized in 7 CLPAs to popularize the fisheries code. A total of 105 people including 17 women were trained as trainers. The trainer shared with participants the relevant (artisanal fisheries) articles of the code and extension strategies were identified for wider dissemination.



Figure 8. Training of Trainers on the Fisheries Code extract

Popularizing the fisheries code. For popularization of the code, 32 sessions were organized in various locations (villages, rest areas, colleges). Stakeholders exchanged on the different articles of the code during these sessions. A total of 3,277 people, including 988 women, participated in these meetings and increased their knowledge of concepts like fish species identification, management plans, fees, fishing licenses, size of first sexual maturity, gear size, etc. Alongside these meetings, radio programs were designed with a focus on topics related to the Fisheries Code extracts on fees, prohibitions, safety-at-sea, etc.



Figure 9. Popularization of the Fisheries Code through landing site sessions and radio broadcasts

During the sessions, participatory surveillance operations were carried out for illustrative purposes. In one case, 100 crates of juvenile *Sardinella* were seized in Joal Fadiouth, leading to heavy fines as a result of their processing.

Raising awareness for fee payment. This is a mass awareness raising campaign for the payment of fishing licenses and wholesaler cards. The strategy used involves radio programs, meetings in informal sheds called “*Mbaar*” and sometimes using a town crier. In total, more than 5,000 people were reached. During these sessions 2,557 licenses and 175 wholesaler cards were purchased in 7 CLPAs. This activity is also part of CL implementation.

Finalizing the mounting of the registration plates and assessing the level of execution of the National Registration Program (PNI). In 2006, the Government of Senegal set up a computerized boat registration system, with the support of Technical and Financial Partners such as the World Bank (PRAO-SN). The Government of Senegal must now ensure the sustainability of this National Registration Program (PNI) for an effective control of the fishing effort in the context of fisheries management policies and in order to consolidate the achievements of registration. Due to CL and FMP implementation supported by the project, 7 fisheries control posts know the status of their license plates, following audits and sensitization to remove plates after a duplication is ascertained, or after a boat is no longer operational or has temporarily settled at another site.

With the difficulties noted in the registration and mounting of the plates and tags, the DPM has requested the USAID/COMFISH Plus project to organize a mission in the maritime regions to assist the deconcentrated services in upgrading the national database. The general objective of the mission, to be held from July 15 to August 19, 2018, is to have a clear picture of the status of boat licensing and mounting of plates on the ground, in order to consolidate the achievements of the now three-year old PNI, and to have better control of artisanal fishing capacities and access to the resource.

Monitor implementation of the Sardinella fishery FMPs. Twenty-one monthly evaluation meetings were held at the local implementation units (URM) of the FMPs during which the monthly action plans were evaluated and new plans designed. At the zonal level, two meetings were held on June 6 and 7 in the Petite Côte and Cap Vert zones, respectively. Strong recommendations were made for further popularizing the Fisheries Code, updating boat registration in all CLPAs, and holding national consultations on participatory surveillance.



Figure 10. URM Meeting in Cayar and URM Meeting in Mbour

Support implementation of local management initiatives on night fishing. As part of the development and implementation of the *Sardinella* FMPs, almost all CLPAs have considered local management initiatives for regulating night fishing. To accompany this process carried out by the CLPAs through the National CLPA Network, a 4-month annual closure of night fishing from June 1st to September 30th was agreed and confirmed with a draft order submitted to the Minister of Fisheries and signed on May 28, 2018 (Order/Arrete No. 012336 of June 4, 2018). For wide dissemination of this measure, the USAID/COMFISH Plus project supported the organization of an information and awareness-raising mission from June 3 - 12, 2018 to the main fishing centers concerned by the decree (Kafountine, Elinkine, Cap-skiring, Missirah, Djifer, Joal-Fadiouth, Mbour, Yen-dialaw, Rufisque-Bargny, Hann and Pikine). The mission included representatives of the DPM (Saidou Kandé, Mamadou Thiam, Ndao Amy Gueye, and Momath Ba), the USAID/COMFISH Plus project (Pape Jean Ndiaye), and the National CLPA Network (Abdoulaye Ndiaye, Ndiaga Cissé, Yayi Bayam Diouf, Thiane, Pierre Mboup and Babacar Ciss). In total, these meetings mobilized 423 people, including 60 women.



Figure 11. Meeting with the Palmarin CLPA

3.4.1. Ethmalosa FMP development and implementation

Ethmalosa FMP Validation. Following the establishment of FMP implementing bodies, the local implementation units (URM) and zonal implementation units (UZM) in the Sine Saloum in Quarter 2, FMP validation workshops were organized from April 9-17, 2018 in the CLPAs of Foundiougne, Djirnda, Bassoul, Niodior, Toubacouta, Missirah and Fimela/Palmarin in the presence of the respective area administrative authorities. At the end of the meetings, all CLPAs unanimously approved the FMP, which was subsequently approved by the administrative authority through a decree. The document, validated and approved at the local level, has been sent to the DPM, the line authority to extend it to the Minister of Fisheries for final approval.



Figure 12. FMP validation workshops in Djirnda, Missirah, and Toubacouta

Ethmalosa FMP Implementation. Implementation started immediately after validation with the development of a monthly action plan, the training of trainers on the fisheries code, and its popularization. The capacity of URM members was strengthened to follow up on FMP implementation, specifically on the practical modalities of meeting organization (preparation, reporting and follow-up of meeting recommendations).



Figure 13. Workshop in Palmarin/Fimela

The first zonal implementation unit (UZM) zonal meeting. This meeting was organized on June 22, 2018 in Foundiougne as part of activity monitoring. During the meeting, the strategy and the missions of the UZM were shared with UZM members. The CLPAs individually reviewed the activities implemented to popularize the Fisheries Code. In accordance with the mission of this zonal unit, consultations also included *Ethmalosa* trade. Given the complexity of the sector, it was agreed to continue discussions at all levels of the industry for better pricing of *Ethmalosa* in the Sine Saloum.

Training on the Fisheries Code. Three workshops were organized in the 8 CLPAs of Sine Saloum, from 14 to 22 May 2018, to strengthen the capacity of trainers to popularize the fisheries code. A total of 123 people including 17 women were trained. During the workshops, the trainer shared with the participants the various (artisanal fisheries) articles of the fisheries code for a good understanding. Outreach strategies were also identified with participants during the workshops.

Popularizing the Fisheries Code. After the training, the CLPAs started to popularize the code. The actors developed various strategies (public space meetings, home visits, college meetings, family ceremonies, radio programs, and places of worship). More than 1,463 people have increased their knowledge of the following concepts: fish species identification, management plan, fees, fishing licenses, size of authorized species, and size of gear.

3.4.2. Mainstreaming Illegal, Unreported and Unregulated Fishing (IUU fishing)

This quarter, activities focused on the exchange visit to the United States by the Ministry of Fisheries and on discussions with fisheries and conservation stakeholders to improve the participatory surveillance system, which greatly contributes to addressing IUU fishing. “Participatory Surveillance” is discussed in more detail in the section on CLs.

Exchange visit to the USA on Illegal, Unreported and Unregulated (IUU) Fishing

A study tour was organized by the USAID/COMFISH Plus project from April 28 to May 4, 2018 in collaboration with USAID/Senegal, USAID/Washington and other U.S. Government agencies. The delegation visited Rhode Island and Washington DC, and shared experiences on the management of fisheries resources, including strategies to address illegal, unreported and unregulated fishing (IUU) and to identify avenues for collaboration with US institutions working in the same field. These included meetings with the University of Rhode Island

Graduate School of Oceanography, the Rhode Island Department of Environmental Management, Rhode Island Congressman Jim Langevin, a fishing gear manufacturer, USAID/Washington Africa Bureau, E3 Bureau, and the Bureau for Food Security, as well as NOAA, USCG, the State Department and the Stimson Center. The delegation was led by the Minister of Fisheries and Maritime Economy (MPEM), and included the Director of Fisheries Protection and Surveillance (DPSP), the Director of Fisheries Processing Industries (DITP), the Coordinator of the Research and Planning Unit (CEP) of the MPEM, and the Head of the Inspection and Control Division of the DPSP. The USAID/Senegal COMFISH Plus Activity Manager also participated.

This visit provided a number of key lessons in addressing IUU fishing:

- The importance of coordination and information exchange between national and regional institutions;
- Mutual understanding of the management and surveillance system for an improved grasp of the roles and responsibilities of the different structures involved;
- The US and Senegal share a similar vision on many issues of IUU fishing;
- The importance of research and scientific input to decision-making;
- The importance of the ecosystem approach with a broad coordination of the institutions involved in the management of maritime and territorial issues;
- The importance of statistical data (fishing effort, catches) in the management policy governing the stocks and fisheries;
- The importance of traceability of fishery products.
- The capacity of Senegal as a regional leader on IUU fishing. The opportunity of the upcoming Our Ocean Conference in Bali in October 2018 for Senegal to bring visibility to the issues through its commitments.

An action plan was developed at the end of the visit and a debriefing was held at USAID/Senegal following the delegation's return. Follow-up on Action Plan activities are in process with the various agencies involved.



Figure 14. The MPEM Study Tour delegation to the U.S. on IUU Fishing at their first stop, The University of Rhode Island's Graduate School of Oceanography

3.5. Crosscutting Themes

3.5.1. Climate Change Adaptation and Gender

Activities to support implementation of national and local adaptation plans for the resilience of ecosystems and coastal communities were carried out this quarter. At the policy level, these included support to implement the Fisheries and Aquaculture NAP, to operationalize the PN-PCC and to implement a priority activity in the PN-PCC's annual workplan to strengthen their capacity in climate financing. At the institutional level, as a contribution to the Early Warning System (EWS) for safety-at-sea, synergies have been reinforced with the CINCERE project and the DPSP in the context of the Surveillance Units established in Mbour and Saint Louis, in order to sustain the benefits of the EWS. Partnership with the National Agency for Renewable Energies (ANER) is on-going, with installation of 4 solar dryers for the women processors of Cayar (the Modern Unit) and capacity building in their use, monitoring and maintenance.

For women processors' resilience, initiatives implemented this quarter include: on-going implementation of 14 functional literacy classes in collaboration with the DALN; capacity building for women in financial management; support for Income Generating Activities (IGAs), materials and equipment; rehabilitation of the processing areas of Mballing Village, Yéne Todd and Pointe Saréne; monitoring and evaluation of Cayar modern artisanal processing unit management; product diversification and improvement of processing and preservation techniques in order to strengthen the fisheries value chain. As part of the program to modernize artisanal processing areas in Mbao, Fass Boye, Pencum Senegal and Goxxu Mbaac, the project continued support the MPEM to strengthen the organizational dynamics of women in accordance with the LPSD-PA.

Support to implement the Fisheries and Aquaculture National Adaptation Plan. The aim of this activity is to integrate climate change into fisheries policies, implement the fisheries and aquaculture NAP by 2035, and support operation of the PN-PCC/SN. In this context, several activities were carried out this year. To support implementation of the PN-PCC/SN's operational plan, five thematic groups were established at the end of March on: External Relations, Capacity Building, Communication, Monitoring and Evaluation and Fundraising. These groups will do advocacy, including a civic call to all the stakeholders, for strong engagement and responsible involvement of the population in the management of environmental issues. Thematic group meetings were held from April 26 to May 10, 2018 to designate the coordinators, define the operating procedures and draw up the work plans. As these thematic groups are the technical arms of the PN-PCC/SN coordination bureau, their operation is essential for implementation of the actions identified in the management documents of the Platform (Rules of Procedure, Communication Plan & Annual work plan).

Communication and visibility of the National Platform for Fisheries and Climate Change (PN-PCC/SN). In order to better communicate with government authorities and grassroots communities, a logo has been produced and validated for the PN-PCC/SN. A website is being created with project support that will be accessible to all stakeholders and coastal communities, so that they are assured of a level playing field in terms of information and are capable of synergizing and harmonizing their efforts and their resources to ensure that climate change mitigation measures are coordinated and effective at all levels to the benefit of the adversely impacted populations.



Figure 15. PN-PCC/SN Thematic working groups



Figure 16. PN-PCC/SN Logo

In order to better contribute to the integration of climate change adaptation best practices and knowledge into policies, the first local fisheries/climate change platform will be set up on July 10 – 12, 2018 in Mbour. These local platforms will constitute the technical arms of the PN-PCC/SN at the local level to better take into account the needs and specificities of community actors. The multi-stakeholder and sector-wide platforms will be the integrated framework for shared governance of climate change issues between local and national levels, but also for harmonization of adaptation measures for more durable financing.

Support to implement the PN-PCC/SN Annual Work Plan: Workshop on climate change financing, June 19-21 2018. The PN-PCC/SN Annual Work Plan includes important capacity-building actions, in particular those on climate change financing and accessing the UNFCCC Green Climate Fund that are considered a priority for implementation of the Fisheries and Aquaculture NAP. USAID/COMFISH Plus collaborated with the USAID/CEADIR project (Climate Economic Analysis for Development Investment and Resilience) to organize a workshop on this topic. The workshop brought together all the members of the PN-PCC/SN and the members of the National Platform for Science - Policy Dialogue for the adaptation of agriculture and food security to climate change, “CCASA/SENEGAL Platform”. The workshop aimed to help participants better understand the UNFCCC Green Climate Fund for adaptation and mitigation, but also to understand its mechanisms, procedures and financial tools that could increase the chances for Senegal and the platform to have bankable projects and programs with the fund. The USAID/COMFISH Plus project and the CCASA agriculture platform shared with participants the local initiatives implemented in Senegal for funding adaptation for fisheries and agriculture.



Figure 17. USAID/COMFISH Plus/CEADIR/PN-PCC /SN Workshop on Climate Change Financing



Figure 18. Climate Change Financing workshop participants and presenters



Figure 19. Working groups feedback on Climate Change financing project portfolios developed

The hands-on approach of group work introduced participants to project development methods for each sector, (fisheries and agriculture) so that they could develop project portfolios addressing and integrating environment-friendly issues, financial aspects, and availability of data and information. This initiative has been of paramount importance for the members of the PN-PCC/SN, but also for implementation of the Fisheries and Aquaculture National Adaptation Plan by 2035.

USAID/COMFISH Plus project experience-sharing on strategies to mainstream adaptation into national and local fisheries policies in Senegal. The USAID/COMFISH Plus project has been requested to organize a webinar on the following: The NAP development experiences: The cases of the fishery sector NAP in Senegal and the NAP of Burkina Faso. This activity was initiated by the Scientific Support Project for National Climate Change Adaptation Plan Processes in the Sub-Saharan African Least Developed Countries (PAS-PNA); a cooperation initiative between the States of Benin, Burkina Faso, Senegal and the Federal Republic of Germany. It is implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, in collaboration with Climate Analytics GmbH for the period 2016-2019. The aim of the webinar, which will take place on July 19, 2018, is to share with key stakeholders, the successful experiences and processes in the development and validation phases of the Senegal Fisheries and Aquaculture NAP and the Burkina Faso NAP. The webinar will be done in collaboration with GIZ, the University Agency of *La Francophonie* (AUF), the *Francophonie* Institute for Sustainable Development (IFDD), the Department of Environment and Classified Establishments (DEEC) of Senegal, USAID/COMFISH Plus and the Department in charge of coordinating the Environment-based International Conventions in Burkina Faso.

Support for implementation of the National Adaptation Plan for Fisheries and Aquaculture at the local level. The aim of this activity is to integrate climate change into local fisheries sector planning to support vulnerable ecosystems and coastal communities to improve their resilience by developing and implementing local adaptation plans. To this end, six local adaptation plans have been developed since 2016, with USAID/COMFISH Plus project support in Rufisque/Bargny, Saint Louis, Ziguinchor, Kafountine, Sindh Nord/Sud. The activities carried out this quarter contribute to implementation of these plans.

Implementation of Ziguinchor/Kafountine/Saint Louis local adaptation plans by surveillance and steering committees. In quarter 2, 10 terms of reference for adaptation plan implementation were developed and validated for the CLPAs of Ziguinchor, Kafountine and Saint Louis with the local administrative authorities. In Kafountine and Ziguinchor, these are mainly for women's empowerment activities on good practices and the use of alternative energy sources; fishers' empowerment on seaworthiness and safety-at-sea; institutional support to the MPAs (Marine Protected Areas) of Saint Louis, Kassabalanta Counda, Niamone Kalounaye, and Abéné for monitoring mangroves and other risk areas; and outreach missions on sand mining in Saint-Louis. During the quarter, support for implementation of these activities was provided, including a total of 46 participatory monitoring trips at sea.



Figure 20. Restauration of degraded sites in Nianfrang and Dianah Abéné



Figure 21. A participatory surveillance mission at sea

Monitoring Units of Mbour/St. Louis use of climate information monitoring and reporting tools. Establishment of surveillance units, which are piloted in the CLPAs of Mbour and Saint Louis is part of the sustainability strategy for the early warning system (EWS). As part of the ANACIM/USAID-CINSERE/USAID-COMFISH Plus synergy, the monitoring units of Mbour and St. Louis were established and their members provided capacity development in quarter 2. The activity was aimed primarily at providing the members of these units with monitoring, evaluation and climate data collection tools. In quarter 3, each unit has begun reporting monthly on data relating to the use of and access to climate information, which are essential for measuring the impact of the service provided to local CLPA actors. The action is focused on creating baselines for the CLPAs through inventories at the college level within each CLPA. Outreach and communication missions to the general public have also been organized this quarter in Mbour and St. Louis in collaboration with ANACIM and USAID/CINSERE.

Support the resilience of women in artisanal fish processing. This line of action focuses on improving the fisheries value chain through the development of joint and inclusive initiatives with all stakeholders in the sector. This intervention translates into strengthening the socio-economic, technical and organizational dynamics of women, promoting local development and maintaining processing areas in good condition (hygiene rules in processing areas and with equipment for individual and collective use), value-addition and improvement of processing

and preservation techniques. In addition, other initiatives were supported this quarter, including inter-committee exchanges, rehabilitation of three processing areas (Yenne Todd, Mballing and Pointe Saréne), introduction of new technologies through the solar dryer installation test phase in the modern unit of Cayar, and the on-going implementation of 14 functional literacy classes.

Capacity building of women processors in governance/hygiene-quality, financial and administrative management. The USAID/COMFISH Plus project has invested in supporting the strengthening of the managerial capacities of the women processors in Mballing village in particular this quarter. In collaboration with the relevant Ministerial Departments, the training program focuses on themes aimed at improving the good practices and hygienic conditions of processing areas, the quality of and value-addition to products, administrative and financial management, functional literacy, roles and responsibilities (organizational dynamics). The training sessions significantly improved the capacity of the women processors of Mballing village in the following areas: site management, use of adapted administrative and financial management tools and procedures to facilitate monitoring and improve site productivity. Women have benefited from other training sessions in monitoring/evaluation to sustain their achievements and to allow them to better monitor the management tools (minutes, production, revenue/sales records), but also their other daily activities. To facilitate learning by doing, women from 14 sites (Mballing site, Mballing village, Missirah, Diamniadio, Sendou, Yenne/Dialaw, Pointe Sarene, Guereo, Ndayane, Saly, Nbeppe, Tanne Khelkome, Domaine Bi) have also benefited from functional literacy courses in collaboration with the DALN. Follow-up missions were carried out in the field with DALN agents. Final evaluation missions of the program are scheduled for July 2018, in order to identify strengths and weaknesses, and to propose a long-term monitoring mechanism.



Figure 22. Literacy training for women processors (A Class in Diamniadio)

Supporting the Organizational Dynamics of women processors of Mbao, Pencum Senegal, Fass Boye and Goxxu Mbaac. To support the effective management of modern artisanal processing sites set up by the Government of Senegal, modelled after the modern unit of Cayar, the USAID/COMFISH Plus project this quarter continued the process of strengthening the organizational and managerial capacities of women processors in Mbao, Pencum Senegal, Fass Boye and Goxxu Mbaac. In quarter 2 their management documents were validated. These documents define the administrative, financial and environmental management rules and measures, as well as hygiene rules. As a collaborative endeavor, implementing these measures

will contribute to improve the socio-economic and environmental conditions of women. For their empowerment, they also received training on topics related to good governance, roles/responsibilities, and administrative and financial management. These sessions are part of a process of sustaining the project’s achievements in providing women with management tools to inform their respective activities, and ensure transparency at all levels of governance.



Figure 23. Capacity building for women in Fass Boye and Mbao



Figure 24. Capacity building for women in Pencum Sénégal and Saint Louis

Rehabilitation of and material support to the processing areas of Mballing village/Yénne Todd and Pointe Saréne. To increase women’s productivity and working conditions, the USAID/COMFISH Plus project supported the repairs and rehabilitation of artisanal processing areas in Yenne Todd, Pointe Saréne and Mballing Village. Inauguration took place this quarter. This process further added value to products processed in these areas with adequate equipment and infrastructures, integrating the hygiene and sanitation aspects in accordance with the health and hygiene charters of these committees.



Figure 25. Mballing Village Processing Site – BEFORE



Figure 26. Mballing village Processing Site – AFTER

Installation of 4 blocks of solar driers for women processors of the modern unit in Cayar. In partnership with the ANER, the women processors of the modern unit of *Cayar* were trained and equipped with 4 blocks of “*Kiraye*” solar dryers to improve the drying and quality of the unit’s products. The prototype was developed by the Albert Schweitzer Ecological Center (CEAS), an international NGO. This will especially help women during the rainy season, as the products will dry safely sheltered from the rain. A theoretical and practical training of about twenty women by the ANER followed installation of the solar dryers before their use. These facilities are part of an alternative dynamic of modernization of processing areas with standardized, environment-friendly and energy-saving equipment (reducing the pressure on firewood, litter, mangrove wood, etc.). In addition, this new technology improves the quality and the quantity of production and further increases fishers’ income.



Figure 27. Solar dryers installed at the Cayar modern processing center



Figure 28. Women receiving practical (left) and theoretical (right) training in use of solar dryers

Inter-committee Exchange Visit. In addition to the women processors capacity building sessions, other mechanisms have been developed this quarter, such as inter-site exchange visits. These exchange meetings were organized in Guéréo, Cayar in Q2 and in Missirah in Q3, on topics related to fundraising and financial management, hygiene, quality and value-addition to processed products, and group/organizational dynamics. These informative exchange visits that are highly valued by beneficiaries and use participatory and interactive facilitation methods to foster mutual learning, identification of good practices, knowledge acquisition and sharing, and development of know-how. They have brought changes in women's practices and behavior, and awareness of the management measures and initiatives developed by their peers, as well as maximizing their effectiveness upon their return. Such very rich practices need to be scaled up to improve the organizational framework of the processors. This will also facilitate their networking, which in turn will positively impact on their supplies and markets access. Thus, during these visits, successful experiences are popularized, to encourage an improvement of women's know-how and practices.



Figure 29. Exchange Visit in Missirah

Fundraising and Alternative Income Generating Activities. These activities were on-going in quarter 3. For example, the women of Yenne Todd site have continued to manage their revolving credit fund of 1,000,000 fcfa positively, growing it to 1,150,000 fcfa in quarter 2 and to 1,500,000 fcfa in quarter 3.

Monitoring the management of the Mantoulaye Guene modern artisanal processing unit of Cayar. In the unit of the GIE Mantoulaye GUENE of Cayar, support activities by the USAID/COMFISH Plus project ended this quarter. The main highlights are capacity building programs, the installation of new processing equipment by the MPEM to improve processed products, strengthen financial assets and greatly increase outbound production (sub-region and beyond).

During the period, women received support from a team of experts to monitor their business plan and evaluate the overall management and implementation of a price negotiation system for the products processed within the unit. Through this process, a guarantee or advocacy system has been put in place with banks and other private partners to further attract private investment and contribute to women's progressive financial empowerment. Alternatives have been proposed to improve use of the unit at capacity, for example, a refrigerated truck to supply primary product from other fishing zones, like Mbour, the fishing dock of the Port of Dakar, and Joal, where fish is landed all year. At the end of the consultation and thanks to the advocacy of the Cayar women, the Minister of Fisheries asked the CEO of CAPSEN SA (which lands almost all the tuna at the port of Dakar) to grant a quota to the women of Cayar. Following a visit by the CEO and Director of marketing of CAPSEN to the Cayar unit, fish pricing and supply modalities were negotiated, and they made the commitment to supply the unit with 60 tons of tuna per month for the production of "dried-salted fish" as long as the women demonstrate that they will consistently purchase this quantity and have the financial capital to do so. The women have already supplied one client with a large order for export.

In terms of operation, maintenance of the unit and capacity building, a quality manager has been provided to women since 2016 at the request of the DITP, for control and compliance with the requirements of the international food standards. She is responsible for monitoring maintenance on the site and quality control for goods produced by the unit to continue enjoying the national and European Union certification. All programs (disinfection and rat control, medical check-ups, etc.) are conducted regularly to comply with the HACCP principles. She

also helps women in the sound financial management of the GIE; for that purpose, she was trained on Saari software. The women were given a computer and a printer, to help them in their accounting. For market access and diversification to other innovative fish products, women were trained in Q2 on both smoking techniques (hot and cold) for large fish such as barracuda, lesser African threadfin and tuna. This 4-day session involved about 20 women, *Cayar* Fisheries Department officials, the CLPA Coordinator, the COMFISH Plus Facilitator and the Quality Manager. A survey will be administered to hotels, restaurants and supermarkets in Senegal (Casino, Auchan, etc.) to probe for a possible outlet. The training received not only reinforced the standards needed to maintain the EU certification, but also facilitated FDA (*Food and Drug Administration*) certification through a private actor for exporting the unit's smoked products to the United States.

As for the unit's production: In addition to the African market (containers of dried-salted tuna are shipped to Congo Brazzaville), the visibility of the unit has allowed access to the European and American markets (dried-smoked shrimp is shipped to the USA). It is during this quarter that the *Cayar* women have just produced their first 20-foot container (12,600kg) of dried salted tuna; it took them four days to finalize the operation within the unit. Previously, fish waste (heads, guts, etc.) were not valued, but with the various hands-on training they received, the women have now found an outlet and signed a contract with a factory called *Afrique Azote*, which will buy all their production waste, failing which they can also sell it to Burkinabé traders. Empty salt bags that they did not know what to do with are now sold for recycling to other uses.



Figure 30. Women loading the container with dried-salted tuna bound for Congo Brazzaville and Packaged smoked shrimp for export to the USA



Figure 31. Dried salted Tuna and Smoked Barracuda for export to France

As for financial management, two bank accounts have been opened: one account for the funds generated by the alternative activities (revolving credit, reforesting a *casuarina* stretch, prizes/decorations) and another for the production activities of the unit and the occasional revenue from the services delivered by the unit (training, visits etc.). In addition to its equity, the GIE has benefited this year from a FCFA 10 million funding from the Ministry of Fisheries and Maritime Economy through the Kuwaiti funds. This initiative brought them some autonomy vis-à-vis the donors.

Table 1. Summary of the production unit's revenue from diversified products and sources

YEAR 2015-2018			
Raw Material Production	Quantity (KG)	Value (FCFA)	Destination
Dried-salted (Tuna, Lesser African Threadfin, Marine Catfish)	79,250	31,550,000 (US\$57,363)	France, Germany, Congo Brazzaville
Smoked (Jackfish, Croaker, Marine Catfish, Shrimp, Barracuda)	4,123	1,236,900 (US\$2249)	France, England, United States of America, Canada
Dried-braised (<i>sardinella aurita</i> , <i>sardinella maderensis</i>)	9,788	6,085,300 (US\$11,064)	Local and national markets
OTHER ACTIVITIES			
Training service provided inside the unit			FCFA 250,000 (US\$455)
Revolving Credit			FCFA 7,940,260 (US\$14,436)
Francophone Africa Climate Initiative Prize (ICAF), COP22 2016 edition and Gowamer Prize, 2016 edition			FCFA 2,250,000 (US\$4090)

3.5.2. Governance/Decentralization

Continued implementation of Local Agreements (CLs)

Radio programs. Community radio programs are an essential component to support the implementation of local agreements. In accordance with the contracts linking them to the USAID/COMFISH Plus Project, the partner radios have prepared programs for the fishers' communities. At the same time, the thematic selection committees set up in the CLPAs under the supervision of the project facilitators made monthly plans based on the stakeholders' concerns. Overall, 50 programs were produced in the CLPAs of *Ziguinchor*, *Kafountine*, *Mbour*, *Rufisque/Bargny* and *Saint-Louis*. The main themes presented relate to the active counting of unregistered canoes; the freeze of registration; climate change (impact on artisanal fishing activities); conflict prevention and resolution; illegal fishing (good and bad fishing practices); sensitization to implement the participatory *Sardinella* management plans (URM); the internal fundraising in CLPAs; coastal erosion (climate change); functional literacy for women processors; safety-at-sea; fisheries resources management; etc.

Internal fundraising in the CLPAs. The annual follow-up of action plans on the internal fundraising in the CLPAs helped them to collect the funds summarized in the table below:

Table 2: Implementation status of CLPA internal fundraising strategies

CLPA	Amount in FCFA
<i>Joal</i>	4,593,000
<i>Sindia Sud</i>	674,000
<i>Mbour</i>	1,257,000
<i>Sindia Nord</i>	660,000
<i>Yene</i>	950,000
<i>Saint Louis</i>	4,000,000
<i>Ziguinchor</i>	1,918,500
<i>Kafountine</i>	3,433,295
TOTAL	17,485,795

In Joal, the amounts collected come from canoe boarding drawbacks, renting of the meeting room and the warehouse of the actors' house and a sizeable contribution from the ADUPES project for the execution of the CLPA annual work plan. In Sindia Sud, the amounts collected mainly come from the monthly contributions of the Local Fisheries Committee (CLP) members who develop income-generating activities, but also from the contribution of the Departmental commission for the sinking of the octopus pots. In Mbour, these are contributions received from members of the various colleges and, like Sindia Sud, the contribution of the Departmental commission for the sinking of the octopus pots. In Sindia Nord, two main sources of fundraising are noted: canoe boarding drawbacks and contributions levied on the per diem received by the actors when attending meetings. In Yene, the sale of college membership cards, the contribution of partners for the execution of the 2018 AWP were noted as a strategy, including the ADUPES project, which significantly supported the CLPA with FCFA 750,000. In Saint Louis, the CLPA is active in the rental of sound equipment and the meeting room of the CLPA. Finally, in Ziguinchor and Kafountine where convincing results were obtained, the strategies identified are based on the sale of college membership cards, the contribution of factories and gas stations with a monthly allocation of 25 liters of bonded gasoline for participatory surveillance.

Overall, CLPA internal resource mobilization has been a rewarding experience in the context of CLPA empowerment. The financial situation of the CLPA is no longer in the red, unlike at the beginning of the process. Significant amounts have been collected and are used to finance meetings, participatory monitoring, the CLPA AWP, travel by CLPA officials, etc. It should also be noted that the expenses are executed in a transparent way by using the financial management tools provided to the actors by the Project (receipts, cash book, call for funds, etc.). In the CLPAs of Cayar and Rufisque, a failure of fundraising strategies was noted. This is related to problems internal to the CLPA. In view of these results and the importance of

seeking additional resources, initiatives should continue to support CLPAs with a particular focus on those whose results have remained weak in 2018, as well as the CLPAs in the Sine Saloum.

Implementation of the new CLs of Sine Saloum

Popularizing the new CLs. The USAID/COMFISH Plus Project has supported the 7 CLPAs of Sine Saloum to set up a consensual CLs validated by the authorities for the sustainable management of fisheries resources. In quarter 3, to popularize the new rules of these conventions, the project printed copies (40 for each CLPA) and distributed them to the actors. After distribution, the relays, under the supervision of the Heads of fishing stations and the project facilitator, made village level visits to explain the contents of the document and its usefulness as a tool for the management of fisheries resources. Participation is summarized in the table below:

Table 3: Participation in CL popularization sessions at the village level in Sine Salouom

CLPA	Villages	Number of men	Number of women	Total number
<i>Sokone</i>	<i>Sokone</i>	13	66	79
	<i>Lérane Coly</i>	10	01	11
	<i>Bangalère</i>	21	28	49
	<i>Bambougar Malick</i>	26	33	59
	<i>Bambougar Elh</i>	16	09	25
	<i>Bambougar Momath</i>	23	01	24
	<i>Bambougar Massamba</i>	17	16	33
	<i>Bouldiamé</i>	17	13	30
<i>Toubacouta</i>	<i>Toubacouta</i>	15	00	15
	<i>Soucouta</i>	16	30	46
	<i>Sandicoloy</i>	11	41	52
	<i>Médina</i>	21	12	33
	<i>Sangako</i>	06	44	50
	<i>Badoudou/Ndiambang</i>	09	05	14
	<i>Némabah</i>	21	33	54
<i>Missirah</i>	<i>Missirah</i>	08	01	09
	<i>Bossingkan</i>	48	14	62



Figure 32. CL session in Toubacouta and Sokone CLPA

Participatory monitoring. During the year, three actions were carried out as part of participatory surveillance: a participatory surveillance training for the *Sine Saloum* CLPAs; the financing of surveillance operations; and, exchange meetings with the surveillance brigades on the constraints of participatory surveillance.

As part of the implementation of CLs, the surveillance committees of 7 CLPAs of *Sine Saloum* received capacity building on participatory monitoring. Several topics were covered during the training, including: the legal and institutional framework of fisheries surveillance in Senegal; participatory surveillance mission modalities (strategic approach, mission team composition, equipment, mission implementation, inspection and reporting); safety-at-sea; role and responsibility of the fisher supervisor; and, the fisheries code. From May 1-5, a total of 28 people attended the training session in Foundiougne facilitated by an official of the Directorate of Protection and Monitoring of Fisheries (DPSP).

For participatory surveillance operations, support to the CLPAs continued with the co-surveillance brigades for the implementation and enforcement of CL rules. Periodic trips at sea were thus made by the co-surveillance brigades in the fishing zones, at the fishing docks, and at fish processing sites. This year to date, a total of 178 sea trips and thirteen 13 land trips were supported by the Project for the CLPA of Mbour, Joal Fadiouth, Sindia Sud, Sindia Nord, Rufisque/Bargny, Yenne/Dialaw, Kafountine, Ziguinchor, Palmarin and Saint-Louis. During these trips, 2,660 canoes were inspected by the co-surveillance brigades. The main offenses noted are: non-wearing of lifejacket, absence of the fishing license, non-registration of boats, use of prohibited nets (monofilament and non-regulatory mesh size), catching of juvenile *sardinella*, spearfishing at the *Petite Côte*, non-compliance with hygiene conditions in the fishing docks, processing on ground. The nature of the infractions indicates the continuing need to popularize the Fishing Code at the same time participatory surveillance is conducted.

Exchanges with stakeholders on the constraints of participatory monitoring. A mission was organized with the co-surveillance brigades to discuss with the actors in order to improve the efficiency of the system and propose a competitive system to monitor the joint data collection units in the framework of FMP implementation. The objectives were: i) identify constraints in participatory monitoring; ii) exchange on the contents of the minutes of trips and surveillance reports; iii) make proposals to better inform the indicators.

Meetings with Marine Protected Areas. The meetings with the Marine Protected Areas (MPA) teams aimed to see how the DPSP surveillance brigades and the management committees of the MPAs can pool their efforts for an effective participatory surveillance of fisheries. It should be noted that upstream synergies do exist because the same actors make up the CLPA participatory surveillance brigades and MPA management committees. Synergizing is more visible in Saint Louis, where the MPA sends an agent to the CLPA/DPSP co-surveillance brigade during sea trips. At the MPA of Joal Fadiouth and Cayar, joint operations are rare. The MPAs are better equipped than CLPA/DPSP co-surveillance brigades. The exchanges with the MPA teams showed willingness and availability of these teams to synergize better for a more effective participatory monitoring.

Meetings with the co-surveillance brigades. Following the meetings in quarter 2 where constraints and solutions were proposed, the detailed description of infringements in Figure 3 below for use by the brigades was proposed:



Figure 33. Participatory surveillance training in Foundiougne

<p><u>Fishing in a prohibited area</u></p> <ul style="list-style-type: none"> • MPA • PFA (Protected Fishing Zone) • Artificial Reef Sinking Zone (ZIRA) <p><u>Fishing during closed periods</u></p> <ul style="list-style-type: none"> • Biological Rest • Night Fishing <p><u>Prohibited Gears</u></p> <ul style="list-style-type: none"> • Prohibited gear: Type (explosives, toxic substances, etc.) • Outlawed Types of Gear • Type of Fishing • Non Regulatory Dimension <ul style="list-style-type: none"> ▪ Mesh Size ▪ Hook Size <p><u>Catching/Holding protected species</u></p> <ul style="list-style-type: none"> • Species <p><u>Catching of juveniles</u></p> <ul style="list-style-type: none"> • Species • Size/Weight of Some Individuals <p>No License</p> <ul style="list-style-type: none"> • Type of Fishing • Absence of License • License Not On board <p><u>No Registration Number</u></p> <ul style="list-style-type: none"> • Not Registered • No Plate • Plate Not Appropriately Mounted <p>Absence of Lifejackets On board</p> <ul style="list-style-type: none"> • Not a Single lifejacket On board • Non Wearing of Lifejacket • Number of Lifejackets/Number of Fishers • Number of Fishers Wearing a Lifejacket/Number of Fishers <p><u>Artisanal Processing</u></p> <ul style="list-style-type: none"> • No Professional Card • Poor Hygiene on Site; Standing Water, No Waste Bin • Inobservance of Rules: On-ground Processing, Use of Non-regulatory Energy Source, List the Source of Energy Utilized • Processing of juveniles: Species, Sizes.
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Figure 34, Detailed description of infringements for use by brigades

3.5.3. Communication/Sensitization

Radio programs to popularize local agreements. Through protocols signed with 11 partner radios, more than 300 programs were planned and conducted collaboratively this year through the end of quarter 3 with the support of program planning committees. These programs have focused on several themes, varying from one CLPA to another according to the issues and

current events specific to each CLPA. In general, the following topics were addressed in the programs: popularization of the LPSD-PA, Fisheries Code, conflict prevention and management, participatory management plan for sardinella, local adaptation plans, participatory surveillance, internal fundraising, good and bad practices in artisanal fisheries, safety at sea, hygiene and safety in processing areas, MPAs, payment of fishing licenses/wholesaler cards, management and harvesting of oysters in the Saloum Delta, etc.

Evaluation of radio programs. In accordance with the protocols signed with partner radios, programs were evaluated in eight partner CLPAs to date. These are the CLPAs of Foundiougne, Toubacouta, Missirah, Ziguinchor, Kafountine, Rufisque/Bargny, Yen/Dialaw and Saint-Louis. The evaluations were jointly conducted with six community radio stations: Foundiougne FM, Betenty Niokock FM, Sud FM Ziguinchor, FM Kaf, Jokko FM and Teranga FM.

Below is a consolidated summary of the recommendations:

- Strengthen women's participation in programs, with the exception of *Betenty* where they already participate fairly well in programs;
- Strengthen the capacities of radio presenters on specific themes (Fisheries Code, Sector Policy Letter for Fisheries and Aquaculture...);
- Involve the management committee of MPAs in the planning of radio program topics, especially in the CLPA of *Foundiougne*;
- Offer long-term contracts to sustain the partnership between the radio, the CLPA and the project;
- Provide hardware/equipment support to radio stations, namely Dictaphones for *Jokko FM*, *Sud FM Zig*, *Foundiougne FM* and *Kaf FM* and a computer (*Kaf FM*);
- Increase the transport allowances of resource persons coming from remote islands to participate in radio programs (eg *Bossingkan Sokone*.);
- Sign a protocol with an additional community radio in *Ziguinchor* (*Zik FM*, *GMS*) in order to reach a larger number of actors;
- Consider integrating *Niodor* and *Sokone* into the radio network working with the project to reach more players;
- Encourage the CLPAs to partially contribute to the financing of the protocols with the radios for the sake of program durability (for instance through the fund provided by the Minister of Fisheries, but also through the FAF once it is operational);
- Explore the possibility of working with traditional communicators to strengthen communication with stakeholders;
- Support hygiene charter sensitization through posters;
- Diversify guest resource persons for radio programs to reinforce ownership among all the actors (*Jokko FM*, *Missirah* and *Foundiougne*);
- Organize decentralized/outdoor programs, in this case *Kaf FM* and *Jokko FM*;
- Systematically rebroadcast programs at *Sud FM Zig*;
- Reach out with other audiences to put across some key messages discussed during mosque/church sermons and also use town criers.

Production of videos and capitalization documents. The USAID/COMFISH Plus Project has facilitated a participatory production of several documents and videos in order to capitalize on its experiences over the past seven years.

Capitalization videos (in French. English subtitled versions will also be produced)

1. [Development and implementation of local agreements](#) (Q2 posted and shared with partners on uTube).
2. Empowering women through improved processing techniques (Q4);
3. COMFISH experiences in adapting the fisheries sector to climate change (Q4).

Document Production. Key government of Senegal documents developed with project support published in French and disseminated to stakeholders to date are:

1. Fisheries and Aquaculture Sector National Adaptation Plan: adaptation to the impacts of Climate Change, by 2035;
2. Participatory Management Plan for *Sardinella* Fisheries in the *Grande Côte Sud, Cap Vert, and Petite Côte*;
3. [Extracts from the Fisheries Code](#). (see www.clpa.sn)

Four other documents are being finalized in French and English and will be published before the end of the project in September 2018:

1. Climate Change and Fisheries: USAID/COMFISH Plus Project Experiences;
2. CLPAs Emergence in the Governance of Artisanal Fisheries in Senegal;
3. Women's Empowerment in Artisanal Fish Processing;
4. USAID/COMFISH Plus Approach to Co-management of Artisanal Fisheries.

Additional technical documents and materials now available in French include the following:

1. [Establishment of implementation units for the Ethmalosa FMP in the Sine Saloum CLPAs and training of their members.](#)
2. [Participatory diagnosis of women fish processor GIEs in Cayar, Yenne Todd, Guéréo, Pointe Sarène and Missirah](#)
3. [Report on training for female fish processors at the Missirah, Pointe Sarrene, Guéreuw, Yenne Todd and Cayar sites](#)
4. [Guide to Good Hygiene Practices](#)

Communication capacity building for staff and partners.

Training of project facilitators in photography. In order to improve the quality of the photographs used by the project in its communication materials, a one-day training session on how to take quality photos was organized in April 2018 for the project facilitators. Training was provided after the facilitators were given cameras, relays could be the next targets. The quality and availability of photos should subsequently improve.

Training on the development of communication plans. The officials of the St. Louis CLPA were trained on how to develop a communication plan. The training should allow the CLPA in Saint-Louis to better organize its communication for a greater impact.

Evaluation of training courses on electronic archiving. Following the training sessions on electronic archiving carried out for the CLPAs during FY 2017, in April 2018 the project conducted an assessment of these in order to verify if they helped to improve archiving in the CLPAs. It appeared from the assessment that despite the merits of this training, some

prerequisites need to be addressed for these trainings to be more productive. As a result, the following recommendations were made:

- Assess the level of computer knowledge of the CLPAs duty bearers and organize IT induction/retraining sessions for some members, including the electronic archiving officer;
- Regular repair/maintenance of computer hardware dedicated to electronic archiving, in the CLPAs concerned;
- In each CLPA, select the archivist and his/her alternate on the basis of well-defined criteria and share the terms of reference with them;
- Think of how to incentivize them;
- Provide storage cabinets for each CLPA;
- Provide each CLPA with a modem for connection;

Other communication activities. Other communication activities took place during the quarter: support for the GIS transfer process from the CSE to the DPM; support for organizing the visit of the US Ambassador to *Guéréo*, and support for the development of a communication strategy for the NAP.

Visit of the United States Ambassador to Guéréo: As part of his visit to learn about US Government support for sustainable fisheries in Senegal, His Excellency the Ambassador of the United States to Senegal and Guinea Bissau, visited the Guéréo site (Sindia Nord) to meet these communities of women working in artisanal fish processing, with the support of the USAID/COMFISH Plus project. He hailed the effort the project is making to improve fisheries governance. He said, *“Coming to Guéréo, I was only hoping to find fish, but in reality I found more than that: fish, vegetables, cereals, understanding, dialogue, dialogue between actors, literacy, that allows women to write in these registers, their names, dates of birth, phone numbers and even pictures, which is what we call good governance, and I'm happy to see that cooperation between the US and Senegal can help to establish good governance in Senegal. I will tell politicians to come and learn good governance in Guereo”* U.S. Ambassador to Senegal, Tulinabo S. Mushingi



Figure 35. U.S. Ambassador to Senegal visiting women processors in Guéréo

USAID/Senegal field visit to Sine Saloum from June 28-30, 2018. This activity is part of the evaluation missions organized each year by the mission in the project's intervention zones to discuss with stakeholders on:

- Achievements in their locality and prospects for their sustainability;
- Implementation performance of established tools and rules.

The CLPAs of Missirah and Djirnda hosted these meetings, which also included the University of Rhode Island, Coastal Resources Center's new Director, Dr. J.P. Walsh. The exchanges focused on the following achievements:

- Mangrove management by the CLPA
- Popularization of the local convention
- Radio broadcasts made as part of the management of fisheries resources
- Capacity building of CLPA actors (GAF, fisheries code and participatory monitoring)
- Support to women processors for the valorization of *Ethmalosa*
- Results of functional literacy classes
- Organizational dynamics of women processors (management tools, materials, etc.)
- In Diamniadio, support for the valorization of *Ethmalosa* and market gardening

These meetings enabled the mission to note the involvement of the main beneficiaries in the strategies and tools supported by the project. USAID/Senegal expressed its' satisfaction with the participatory approach and the results achieved in these areas.



Figure 36. Meeting with the women processors of Missirah

IV. ACTIVITIES PLANNED FOR THE FOURTH QUARTER

For the next quarter, the main activities planned are presented under the three intermediate results.

IR1: Institutional and stakeholder capacity strengthened at all levels to implement an ecosystem based, co-management approach towards sustainable fisheries, taking into account climate change impacts in the fisheries sectors.

Component 1: Institutional capacity strengthening

- Monitor implementation of CLPA internal fundraising action plans;
- Continue evaluation of CLPA organizational capacities (OCA) with the technical support of the USAID mission;

Component 2: Formulation of CLs as an FMP implementing tool (Sine Saloum)

- Popularize the validated CLs (distribution of copies, extension work by community agents in colleges);

Component 3: Enhanced capacity to address IUU fishing

- Support participatory surveillance in 12 CLPAs;
- Support DPM to conduct canoe registration monitoring to update the registration database.

Component 4: Fisheries National Adaptation Plan

- Develop a PN-PCC/SN Platform website;

IR2: Governance strategies, policies and best practices identified, tested, assessed and applied to build ecosystem resilience to threats to biodiversity conservation and climate risk.

- Implement the *Sardinella* FMP: Grande Côte Sud, Cap Vert and Petite Côte;
- Analysis of *Sardinella* stock status conducted and report produced
- Fisheries GIS platform handed over to DPM

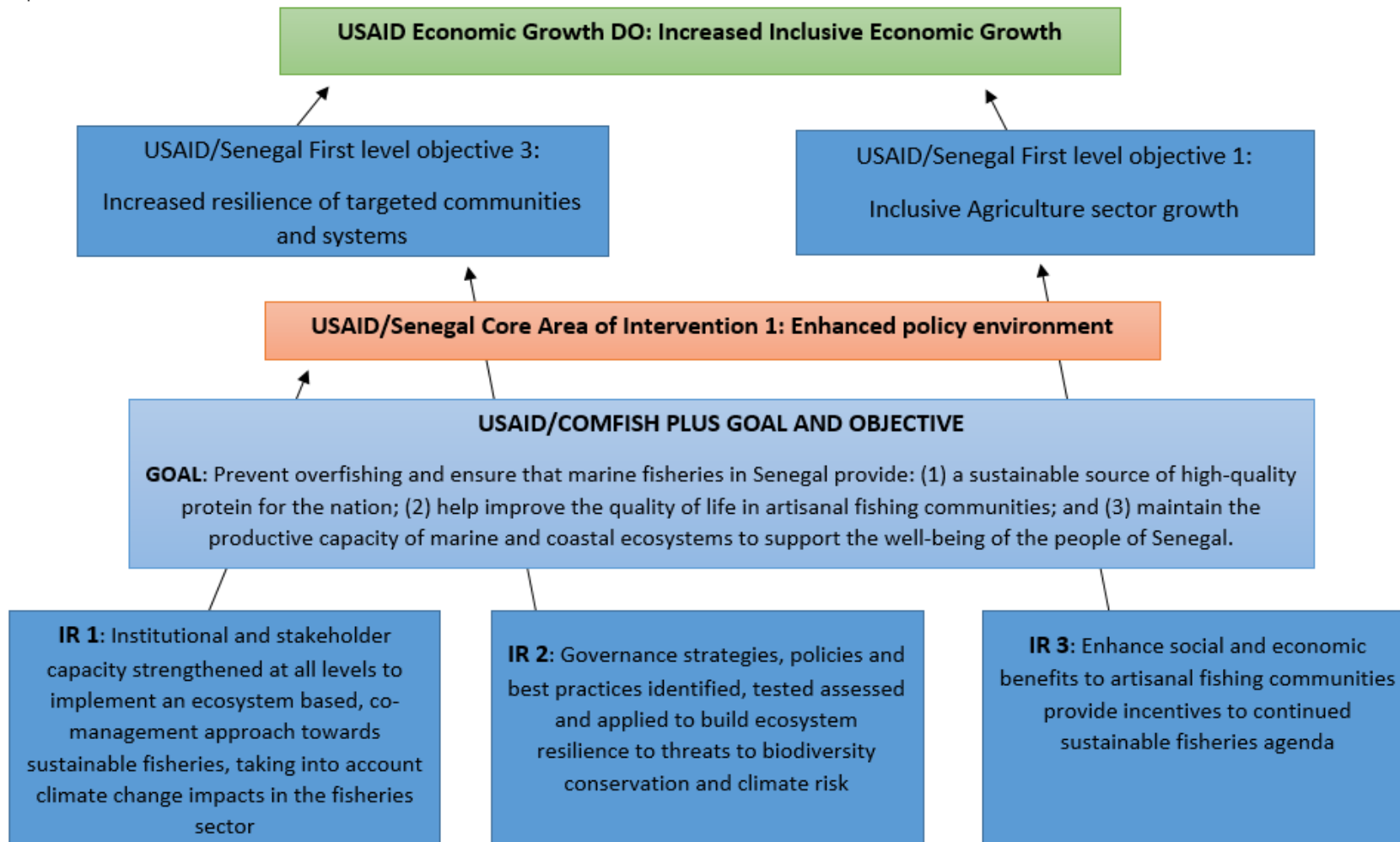
IR3: Enhanced social and economic benefits to artisanal fishing communities provide incentives to a continued sustainable fisheries agenda.

- Finalize study of outcomes of project investments in capacity development of women processors, including a case study of the modern processing unit of Cayar.
- Finalize economic analysis and future business plan recommendations of modern processing unit of Cayar
- Provide materials to hygiene committees of 4 processing sites. Mbao, Pencum Senegal, Fass Boye and Goxxu Mbaac.

Communication activities planned for the next quarter

- Finalize, publish and distribute project capitalization documents;
- Hand over event GIS transfer to the DPM (July);
- USAID/COMFISH Plus Close out workshop on September 10th and close out event with the presence of USAID Director and Minister of Fisheries scheduled for September 11th.

Annex 1. USAID/COMFISH Plus Results Framework



Annex 2. FY 18 Third Quarter Performance

Indicator Statement	Base-line year	Baseline value	LOP Target	Year 1 FY17 Actual	Year 2 FY18 Target	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	YR2 FY18 Actual	Observations
1. Number of individuals who have received USG supported short term agricultural sector productivity or food security training (EG.3.2-1)	2016	3557	6650	M=2534 F=1486 T=4020	3150	M=704 F=329 T=1033	M=1601 F=829 T=2430	M=1084 F=498 T=1582			54 training workshops (20 exchange workshops on implementation of Sardinella and Ethmalosa FMPs. Training on roles and responsibilities of members of the CLPA network.
2. Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance (EG.10.2-4)	2016	3557	6650	M=2534 F=1486 IUUF=4020 T=4020	3150	M=704 F=329 IUUF=1033 T=1033	M=1601 F=829 IUUF=2430 T=2430	M=1084 F=498 T=1582			The start of participatory surveillance in the CLPA de Palmarin/Djifère has trained 11 fishermen supervisors.
3. Number of people supported by the USG to adapt to the effects of climate change (EG.11-5)	2015	109,329	109,329	109,329	109,329	109,329	109,329	109,329			109,329 fishers continue to benefit from climate services provided by ANACIM due to the SMS platform put in place by the project.

Indicator Statement	Base-line year	Baseline value	LOP Target	Year 1 FY17 Actual	Year 2 FY18 Target	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	YR2 FY18 Actual	Observations
4. Number of laws, policies, regulations, or standards addressing climate change adaptation formally proposed, adopted, or implemented as supported by USG assistance (EG.11-3)	2016	13	9	8	4	5	1	0			There are no proposed regulations for this quarter.
5. Number of people trained in climate change adaptation supported by USG assistance (EG.11-1)	2016	1116	2090	M=488 F=932 T=1420	990	M=182 F=251 T=433	M=121 F=226 T=347	M=157 F=343 T=500			19 training workshops in financial management, administrative, literacy and good governance of processing sites.
6. Number of fishery users to whom tailored Climate Information Services (CIS) are made available (custom)	2015	109,329	109,329	109,329	109,329	109,329	109,329	109,329			ANACIM platform supported by the project continues to distribute early warning weather alerts to 109,329 fishers across Senegal
7. Number of fishery beneficiaries with effective access to and understanding of CIS (custom)	2016	961	1100	961 (Continuing) 156 (New)	100	0	M=264 F=42 T=306	0			During this quarter, ANACIM suspended training sessions because of very intense weather

Indicator Statement	Base-line year	Baseline value	LOP Target	Year 1 FY17 Actual	Year 2 FY18 Target	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	YR2 FY18 Actual	Observations
				T=1117							forecasting activities during the rainy season.
8. Number of people using climate information or implementing risk-reducing actions to improve resilience to climate change as supported by USG assistance (EG.11-6)	2015	109,329	109,329	109,329	109,329	109,329	109,329	109,329			The 109,329 fishers continue to use climate services distributed by ANACIM through the platform and other channels
9. Number of farmers and others who have applied improved technologies or management practices with USG assistance (EG.3.2-17)	2016	42,837	23,323	20,952	9,330	20,952 continuing in 10 CLPA	20,952 continuing 6862 new	27814 continuing 2024 new			2024 fishermen of Palmarin / Djifère and Fimela / Ndangane CLPAs have started to apply new technologies or good practices
10. Number of local fishery organizations able to disseminate CIS (custom)	2016	0	32 (CLPAs)	35	32	35 continuing	35 continuing 4 new	0			ANACIM did not train CLPA this quarter because of its intense forecasting activities during the rainy season

Indicator Statement	Base-line year	Baseline value	LOP Target	Year 1 FY17 Actual	Year 2 FY18 Target	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	YR2 FY18 Actual	Observations
11. Number of hectares of biologically significant areas under improved natural resource management as a result of USG assistance (EG.10.2-2)	2016	1,404,565	1,484,206	1,404,565	1,484,206	1,404,565	1,404,565	1,484,206			In estuarine areas (Saloum and Casamance) implementation of Ethmalose FMPs has started, adding 79,641 ha under improved management in estuary areas of Casamance, Saloum and Gandiol.
12. Number of institutions with improved capacity to assess or address climate change risks supported by USG assistance (EG.11-2)	2016	0	250	58	100	32	39	23			Through participation in workshops on climate change
13. Number of fishery organizations that are represented in the Steering Committee and governance structure of CINSERE (custom)	2016	0	1 ASPRO-DEB represents CLPAs	0	1	0	0	0			No Steering Committee held this quarter
14. Number of for-profit private enterprises, producers organizations,	2016	0	100	63	90	30	65	17			17 CLPAs, women's groups and associations have benefited from

Indicator Statement	Base-line year	Baseline value	LOP Target	Year 1 FY17 Actual	Year 2 FY18 Target	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	YR2 FY18 Actual	Observations
water users associations, women's groups, trade and business associations, and community based organizations (CBOs) receiving USG food security related organizational development assistance (EG.3.2-4)											capacity building in organizational development
15. Number of households benefiting directly from USG interventions (EG.3-1)	2016	16,533	17,000	16,533	17,000	16,533 continuing	16,533 continuing 2,398 new	18,931 continuing and 627 new			627 households of Palmarin / Djifère and Fimela / Ndangane CLPAs added to the list of beneficiaries this quarter
16. Number of hectares of biologically significant areas showing improved biophysical conditions as a result of USG assistance (EG.10.2-1)	2016	0	1,404,565	n/a	1,404,565	n/a	n/a				To be reported at the end of FY 2018 with the CRODT stock status study

Indicator Statement	Base-line year	Baseline value	LOP Target	Year 1 FY17 Actual	Year 2 FY18 Target	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	YR2 FY18 Actual	Observations
17. Number of people with improved economic benefits derived from sustainable natural resource management and/or biodiversity conservation as a result of USG assistance (EG.10.2-3)	2016	0	2,151	140	1,151	n/a	n/a				To be reported at the end of FY 2018 with the impact study underway
18. Number of laws, policies, or regulations that address biodiversity conservation and/or other environmental themes officially proposed, adopted, or implemented as a result of USG assistance (EG.10.2-5)	2016	28	8	11	5	11	6	5			5 decrees implementing the Ethmalose FMPs for the CLPAs of Palmarin, Fimela, Toubacouta, Missirah, Djirnda and Foundiougne.

Annex 3. Financial Report Q3-FY18

Expense Reporting for the period: April 1 to June 30, 2018

	Approved Y2 Budget	Y2Q1	Y2Q2	Y2Q3	Cumulative Expense	Balance
Personnel (includes student assistant and summer recontracting)	\$ 257,175	\$ 57,665	68,365	57,520	\$ 183,550	\$ 73,625
Fringe	\$ 143,951	\$ 31,832	34,100	27,356	\$ 93,288	\$ 50,663
Consultants and In country Staff	\$ 841,721	\$148,175	150,628	348,238	\$ 647,041	\$ 194,680
Local Staff					\$ -	
Local Staff fringe benefits					\$ -	
Local consultants and service providers					\$ -	
Subcontracts	107,269	\$ 47,629	31,212	54,607	\$ 133,448	\$ (26,179)
Other direct costs	438,454	\$ 27,795	244,999	91,467	\$ 364,260	\$ 74,194
Travel	335,587	\$106,474	8,351	255,058	\$ 369,883	\$ (34,296)
Capital Equipment	\$ -	\$ -	-		\$ -	\$ -
Total Direct	\$2,124,158	\$419,569	537,656	834,246	\$1,791,471	\$ 332,687
Indirect	\$ 541,805	\$105,398	137,327	156,811	\$ 399,535	\$ 142,269
Total Direct and Indirect	\$2,665,963	\$524,967	674,982	991,057	\$2,191,006	\$ 474,957

Note: Life of project subcontract total is \$199,880. \$26,179 of year 1 expense hit in year 2.

Annex 4. Environmental Mitigation and Monitoring Plan (EMMP) Q3-FY18

Category of Activity from Section 3.5, 3.7 and 3.10, of the Senegal EG Food Security and Natural Resource Management PIEE (April 2016)	Environmental Threats	Mitigation Measures	Who is Responsible for Monitoring?	Sources of Verification	Monitoring Method	Frequency of Monitoring
<p>Engaging the government, supporting local communities, planning and outreach</p> <p>Education, technical assistance, and training of stakeholders</p> <p>Technical studies, research and analyses</p> <p>Awareness, outreach and behavior change communications</p> <p>Study tours and peer to peer exchanges</p> <p>Training of government employees</p> <p>Supporting CLPAs and fisherman groups to enforce laws and regulations around fishing practices</p> <p>Realizing behavior change and achieving co-management</p>	<p>Activities that aim to increase public participation in policy making including engaging the government in dialogue at the local and central level to better manage marine fisheries and combat IUU fishing; mobilization of communities for development and enforcement of laws and regulations protecting natural resources; community planning and strategy development present no foreseeable adverse environmental impacts. Per section 3.10 of the Senegal EG Food Security and Natural Resource Management PIEE, these activities are determined to be Categorical Exclusions.</p>	No mitigation measures	CoP	Workplans, Quarterly Reports, and materials prepared for capacity building, training, and studies	Review of materials	Quarterly
<p>Influencing government policies</p> <p>Building the capacity of stakeholders at all levels of governance (fisheries administration and CLPA institutions, research and education)</p>	<p>All activities that may directly affect fish production and marine resources must evaluate how activities to be implemented will interact with the environment.</p>	Inclusion of fishers in sustainable fisheries management, monitoring and enforcement of management measures	CoP and Senior Fisheries Officer	Local Conventions and FMPs CLPA meeting	Review of implementation of Local Conventions and FMPs	Quarterly

Category of Activity from Section 3.5, 3.7 and 3.10, of the Senegal EG Food Security and Natural Resource Management PIEE (April 2016)	Environmental Threats	Mitigation Measures	Who is Responsible for Monitoring?	Sources of Verification	Monitoring Method	Frequency of Monitoring
Improving the sustainability of fishery resources and coastal and marine ecosystems by promoting best practices	<p>Environmental impacts of capture marine fisheries include overharvesting; catch of unwanted or undersized (juvenile) fish stocks; destructive fishing practices (destructive gear, bottom structure damage, use of toxic substances, and dynamite fishing); lost gear and nets ("ghost" fishing leading to additional depletion of resources and damage to non-target species such as turtles, marine mammals, and birds); ecosystem stress; and changes in fish population structures.</p> <p>Additional information for impact and mitigation planning related to fisheries can be found at the USAID's Sector Environmental Guidelines: http://www.usaidgems.org/Sectors/fisheries.htm</p> <p>And at https://www.usaid.gov/sites/default/files/documents/1865/FishAquaGuide14Jun13Final.pdf</p>	<p>Training, demonstration, and enforcement of fisheries rules that reduce over-exploitation, destructive fishing practices, and catch of non-target fish and juveniles.</p> <p>Insurance program which supports participatory enforcement thereby reducing bad fishing practices.</p> <p>Co-management capacity development with CLPAs and coordination and collaboration at the central and local level</p> <p>Ecosystem-based fisheries management strategies</p> <p>Use of local and scientific knowledge in fisheries planning and management</p>		minutes and reporting	CLPA reports and consultations	
<p>Post-harvest fisheries activities including:</p> <ul style="list-style-type: none"> - Improved processing methods, equipment, storage, packaging, transport and sales 	Improved facilities could result in disturbance to existing landscape/ habitat and sensitive ecosystems, or degrade water resources, cause	A technical monitoring construction committee monitors construction and evaluates its compliance with validated plans and ensures that building	CoP	Construction plans/ designs and photos of all facilities constructed	Review of approved plans and documents, site inspection,	Quarterly

Category of Activity from Section 3.5, 3.7 and 3.10, of the Senegal EG Food Security and Natural Resource Management PIEE (April 2016)	Environmental Threats	Mitigation Measures	Who is Responsible for Monitoring?	Sources of Verification	Monitoring Method	Frequency of Monitoring
<ul style="list-style-type: none"> - Small scale construction to improve landing sites, and processing facilities - Small scale construction and rehabilitation for water and sanitation structures - Development of Best Practice Processing Compacts (including handling and food safety) with groups of women processors - Strengthening the role of women in the fisheries value chain through management training and support for women fish processing associations <p>Fish processing is addressed by section 3.7 of the PIEE (Post-harvest and food processing activities).</p>	<p>sedimentation to surface waters or contamination of groundwater and surface water.</p> <p>Increasing the demand and value of fish products, packaging, and marketing could in theory give incentive to increase fishing effort and contribute to overfishing.</p> <p>Fish processing effluents and solid waste may produce adverse effects on the receiving coastal and marine environment.</p> <p>Land use change related to small-scale construction may disturb habitat and local hydrology. Runoff from cleared ground or materials stockpiles during construction can result in sedimentation/fouling of surface waters. Construction may result in standing water on-site, which readily becomes breeding habitat for mosquitoes and other disease vectors; this is of particular concern as malaria is endemic in most of Senegal.</p> <p>Increased and air and noise pollution can result during construction or rehabilitation from the actions of construction equipment and workers.</p> <p>Local procurement of construction materials (timber, fill, sand and gravel, etc.) may have adverse local impact</p> <p>Smoke drying fish may have safety and health risks for fish processors and fish processing may generate odor pollution.</p> <p>Discharge of waste water to may degrade coastal and aquatic habitat</p>	<p>permits and licenses are obtained as appropriate and necessary.</p> <p>No activities at sites within 30 meters of a permanent or seasonal stream or water body.</p> <p>During periodic site visits questions are raised and improvement measures proposed.</p> <p>Codes of good practice are developed and adopted by all members of fish processing groups, including safeguards to protect workers from occupational safety and health hazards.</p> <p>Codes of Good Practice include agreement to not purchase or process juvenile fish</p> <p>Fisheries management plans (FMP) and Local Conventions developed and implemented to prevent overfishing and illegal fishing.</p>		<p>Official government approvals of construction</p> <p>FMPs and Local Conventions to prevent overfishing</p> <p>Technical reports</p> <p>Codes of Good Practice (hygiene and agreement to not process juvenile fish)</p>	<p>photos, and periodic review of performance related to Codes of Good Practice</p> <p>Consultations with CLPA Committees</p>	

Category of Activity from Section 3.5, 3.7 and 3.10, of the Senegal EG Food Security and Natural Resource Management PIEE (April 2016)	Environmental Threats	Mitigation Measures	Who is Responsible for Monitoring?	Sources of Verification	Monitoring Method	Frequency of Monitoring
	<p>Inefficient smoke drying with wood contributes to deforestation</p> <p>Impacts related to small-scale construction are found in Section 3.5 of the PIEE (Building productive infrastructure)</p>	<p>Support for medium to large scale fish processing activities will require Positive determination and an EA.</p> <p>Review USAID Food Processing sector guide:</p> <p>http://www.usaidgems.org/Documents/MSEs/USAID_MSE_Sector_Guideline_Food_Processing_2013.pdf</p> <p>And small scale construction guidelines: http://www.usaidgems.org/sectorGuidelines.htm) http://www.usaidgems.org/Documents/VisualFieldGuides/ENCAP_VisFidGuide--Construction_22Dec2011.pdf</p>				
<p>Adaptation to global climate change activities including:</p> <ul style="list-style-type: none"> - Planting vegetation or trees for coastal protection - Improved fish processing to increase resilience of fisheries sector households 	<p>Implementation of adaptation measures may involve alteration of nearshore sediment patterns resulting in displaced or accelerated erosion of beachfronts.</p> <p>Adaptation measures may disturb natural habitat and sensitive ecosystems, result in marine pollution from soil erosion, alter local hydrology, and cause biodiversity loss from land fragmentation.</p>	<p>Vulnerability assessments</p> <p>Formally approved Adaptation Plans and implementation of adaptation actions with no foreseeable adverse environmental impacts.</p>	<p>COMFISH Plus Climate Change Officer</p>	<p>Reports, adaptation plans, Local Conventions and FMPs</p>	<p>Review of reports and monitoring implementation of adaptation measures</p>	<p>Quarterly</p>

Category of Activity from Section 3.5, 3.7 and 3.10, of the Senegal EG Food Security and Natural Resource Management PIEE (April 2016)	Environmental Threats	Mitigation Measures	Who is Responsible for Monitoring?	Sources of Verification	Monitoring Method	Frequency of Monitoring
<ul style="list-style-type: none"> - Support to protect life and property at sea, including weather alerts and safety at sea programs - Coastal development setbacks - Inclusion of climate change considerations in fisheries management plans and CLPA Local Conventions 		Avoidance of hard structures and beach nourishment in favor of soft solutions, e.g. restoration of natural vegetation for erosion and flood control.				

Annex 5. Environmental Mitigation and Monitoring Report (EMMR) Q3-FY18

Category of Activity from Section 3.5, 3.7 and 3.10, of the Senegal EG Food Security and Natural Resource Management PISE (April 2016)	Monitoring/mitigation measure	Responsible party	Monitoring Plan			Monitoring method	Cost estimate (USD)	Monitoring Log		
			Indicator	Source of verification	Reporting frequency of monitoring			Date	Result	Follow-up
<p>Engaging the government, supporting local communities, planning and outreach</p> <p>Education, technical assistance, and training of stakeholders</p> <p>Technical studies, research and analyses</p> <p>Awareness, outreach and behavior change communications</p> <p>Study tours and peer to peer exchanges</p> <p>Training of government employees</p> <p>Supporting CLPAs and fisherman groups to enforce laws and regulations around fishing practices</p> <p>Realizing behavior change and achieving co-management.</p>	<p>No mitigation measure. The stakeholders were trained on sustainable management of fisheries resources, fishing code and fisheries legislation, hence contributing to a positive impact on the environment.</p>	Project Manager (CoP)	<p>-Number of people trained</p> <p>-Number of institutions strengthened</p>	<p>AMELP Workplans, Quarterly Reports, and materials prepared for capacity building, training, and studies</p> <p>Technical reports</p>	Quarterly	<p>- Collection of data by the field staff</p> <p>- Review of materials by the M&E and CoP</p>	No cost	All year	<p>1582 stakeholders trained</p> <p>17 CLPA and fisherman groups</p>	<p>Field visits</p> <p>Training summary reports</p> <p>Interviews with Technical Staff</p>
Influencing government policies	Inclusion of fishers in sustainable fisheries management,	CoP and Senior	-Types of participants in the processes	AMELP Workplans, Quarterly	Quarterly	Collection of data by	Cost	All year	46 participatory	Field visits

<p>Building the capacity of stakeholders at all levels of governance (fisheries administration and CLPA institutions, research and education)</p> <p>Improving the sustainability of fishery resources and coastal and marine ecosystems by promoting best practices</p>	<p>monitoring and enforcement of management measures</p> <p>Training, demonstration, and enforcement of fisheries rules that reduce over-exploitation, destructive fishing practices, and catch of non-target fish and juveniles.</p> <p>Insurance program which supports participatory enforcement thereby reducing bad fishing practices.</p> <p>Co-management capacity development with CLPAs and coordination and collaboration at the central and local level</p> <p>Support to the CLPA Network setting up</p> <p>Ecosystem-based fisheries</p>	<p>Fisheries Officer</p>	<p>of elaboration and implementation of the various strategies and policies developed</p> <p>-Number of people and institutions trained in sustainable and participatory resource management</p> <p>-Number of participatory monitoring trips</p> <p>-Number of activities to monitor and evaluate implementation of strategies developed</p> <p>Implementation of joint research units at local level</p> <p>Implementation of the consultation</p>	<p>Reports, and materials prepared for capacity building, training, and studies</p>		<p>the field staff</p> <p>Review of materials by the M&E and CoP</p> <p>Review of implementation of Local Agreements and FMPs</p> <p>CLPA reports and consultations</p>	<p>2,030 \$US</p>		<p>monitoring trips</p> <p>5 decrees for Ethmalos a FMP implementation in Palmarin, Fimela, Toubacouta, Missirah, Djirnda and Foundiougne CLPAs</p>	<p>Training summary reports</p> <p>Interviews with Technical Staff</p>
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	management strategies Use of local and scientific knowledge in fisheries planning and management		framework for sardinella FMPs							
<p>Post-harvest fisheries activities including:</p> <ul style="list-style-type: none"> - Improved processing methods, equipment, storage, packaging, transport and sales - Small scale construction to improve landing sites, and processing facilities - Small scale construction and rehabilitation for water and sanitation structures - Development of Best Practice Processing Compacts (including handling and food safety) with groups of women processors - Strengthening the role of women in the fisheries value chain through management training and support for women fish processing associations <p>Fish processing is addressed by section 3.7 of the PIII (Post-harvest and food processing activities)</p>	<p>A technical monitoring construction committee monitors construction and evaluates its compliance with validated plans and ensures that building permits and licenses are obtained as appropriate and necessary.</p> <p>No activities at sites within 30 meters of a permanent or seasonal stream or water body.</p> <p>During periodic site visits questions are raised and improvement measures proposed.</p> <p>Codes of good practice are developed and adopted by all members of fish</p>	CoP and Climate change officer	<p>-The modern processing unit</p> <p>-Equipment: number of fish-drying racks</p> <p>-Number of ovens</p> <p>-Number of potable water sources</p> <p>-Number of loans</p> <p>Code of conduct</p> <p>Local convention</p> <p>Number of assessment and monitoring of code of conduct implementation</p>	<p>AMELP</p> <p>Workplans Quarterly Reports, and materials prepared for capacity building, training, and studies,</p> <p>Code of conduct</p> <p>Monitoring and assessment reports</p>	Quarterly	Field visits Evaluation and monitoring Meetings, Data collected by the field staff or partners	No cost	All year	<p>Survey on access and use of CIS in CLPAs of Mbour and Saint Louis</p> <p>1 workshop on Climate Finance in Dakar</p> <p>3 workshops on Hygiene and Quality for women of Guéréo, Yène Todd & St. Louis</p> <p>3 workshops on</p>	<p>Follow up on maintenance of processing site and of its equipment M&E visit</p> <p>Follow up on the implementation of action plans</p> <p>Follow up on use of financial and admin. management tools</p>

	<p>processing groups, including safeguards to protect workers from occupational safety and health hazards.</p> <p>Codes of Good Practice include agreement to not purchase or process juvenile fish</p> <p>Fisheries management plans (FMP) and Local Agreements developed and implemented to prevent overfishing and illegal fishing.</p> <p>Support for medium to large scale fish processing activities will require Positive determination and an EA.</p> <p>Review USAID Food Processing sector guide:</p> <p>http://www.usaidgems.org/Documents/MS_Es/USAID_MSE_Sector_Guideline_Food_Processing_2013.pdf</p>		Fisheries plans						<p>Good governance for women of Goxu Mbacc, Pencium Senegal and Fasse Boye</p> <p>5 Thematic Groups set up for studies, research, training, Project & program design, information, Communication & awareness raising, fund-raising & external relations, & M&E</p>	
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	And small scale construction guidelines: http://www.usaidge.ms.org/sectorGuidelines.htm) http://www.usaidge.ms.org/Documents/VisualFieldGuides/ENC-AP_VsIFldGuide--Construction_22Dec2011.pdf								Missirah Women's Training Workshop on Processing Techniques	
<p>Adaptation to global climate change activities including:</p> <ul style="list-style-type: none"> - Planting vegetation or trees for coastal protection - Improved fish processing to increase resilience of fisheries sector households - Support to protect life and property at sea, including weather alerts and safety at sea programs - Coastal development setbacks - Inclusion of climate change considerations in fisheries management plans and CLPA Local Agreements 	<p>Vulnerability assessments</p> <p>Formally approved Adaptation Plans and implementation of adaptation actions with no foreseeable adverse environmental impacts.</p> <p>Avoidance of hard structures and beach nourishment in favor of soft solutions, e.g. restoration of natural vegetation for erosion and flood control.</p>	COMFIS H Plus Climate Change Officer	<p>Number of Plans, policies, strategies, adaptation rules/regulations</p> <p>-Number of hygiene charters</p> <p>Number of monitoring committees</p>	AMEPL Strategic documents Activities Reports etc.		Field visits Evaluation and monitoring Meetings, Data collected by the field staff or partners	cost 2,000 \$US		none	Field visit Training Assessments