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FIRST LESSONS
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SMALL PELAGICS SUSTAINABILITY FISHERY

Improvement Project Ecuador

OCTOBER **2020**

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First Lessons learned from the Small Pelagics Sustainability Fishery Improvement Project Ecuador
October 2020

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I. Abbreviations

ASC	Aquaculture Stewardship Council
BAP	Best Aquaculture Practices
CASS	Conservation Alliance for Seafood Solutions
CNP	National Chamber of Fisheries
CPP	Fisheries Commission for Small Pelagic Fish - Spanish acronym
ETP	Endangered, Threatened and Protected species
FAO	Food and Agriculture Organization of the United Nations
FAP	Fisheries Action Plan
FIP	Fisheries Improvement Project
GMC	Global Sustainable Supply Chains for Marine Commodities
MoU	Memorandum of Understanding
PPP	Small pelagic fish
IPIAP	Public Institute for Aquaculture and Fisheries Research (formerly the National Fisheries Institute, INP)
ONG	Non-governmental Organisation
SFP	Sustainable Fisheries Partnership
SPS-FIP	Small Pelagics Sustainability Fishery Improvement Project
SRP	Undersecretariat of Fisheries Resources
UNDP	United Nations Development Programme
VAP	Vice ministry of Aquaculture and Fisheries

II. Executive summary

This document summarizes the lessons learned in the first three phases of implementation of the Ecuadorian Small Pelagics Sustainability Fishery Improvement Project (SPS-FIP), which involves 16 Ecuadorian fishmeal processing companies, two ingredient marketers and four international producers of animal feed.

This project arose from the need to respond to the market demand to demonstrate the sustainability of the raw material for the aquaculture feed manufacturing industry. The SPS-FIP is led by the National Chamber of Fisheries (CNP, for its acronym in Spanish), with technical support from the United Nations Development Programme (UNDP) through the "Global Sustainable Supply Chains for Marine Commodities" (GMC) project, and the non-governmental organization (NGO) Sustainable Fisheries Partnership (SFP).

To generate this first lessons learned document, information was collected on the key issues that have contributed to the progress of the Fishery Improvement Project (FIP) and the challenges that could affect its implementation. Therefore, it was possible to identify three main lessons:

a. The increased demand for sustainable products is the main incentive for the industry to implement fisheries improvements;

b. To compete in the contemporary fishing market, it is necessary to establish cooperation and coordination fora that promote the sustainability of the production chain; and

c. Having a transparent and formal administration and coordination mechanism generates confidence to attract investment and strong commitment from industry and other private and public stakeholders.

Although the Fishery Improvement Project is still ongoing, the most relevant conclusion during its first three phases of implementation is that the demand for sustainable fishery products can be a critical driver to achieve technical and financial contributions from the participating parties. This is shown in the fact that, despite the organisational and economic challenges, the stakeholders have found mechanisms to collaborate in the FIP because its success will generate the conditions necessary to access the MarinTrust certification.

This in turn will allow them to demonstrate that their marine ingredients are responsibly sourced and produced.

III. General information about the project

Country	Ecuador
Name of the Fisheries Improvement Project (FIP).	Small Pelagics Sustainability Fishery Improvement Project SPS-FIP
Start and end date of the initiative	October 2018 - December 2023
Participating government entities	Ministry of Production, Foreign Trade, Investments and Fisheries / Vice ministry of Aquaculture and Fisheries Public Institute for Aquaculture and Fisheries Research
Participating interested parties	The SPS-FIP includes 16 Ecuadorian companies that process marine ingredients (i.e., fishmeal and fish oil), two traders of marine ingredients and four international producers of aquaculture feeds.
Website	smallpelagics.org
Date of report	October, 2020

SMALL PELAGICS SUSTAINABILITY

IV. Background and results of the project to date

Concerns about the environmental impacts of fishing and aquaculture, coupled with the increased growth of the world market for seafood products, has led to a rise in the demand for sustainable aquaculture products. This, in turn, has motivated feed producers, processors, and buyers to request evidence that the marine ingredients used to make their products come from sustainable sources (Veiga et al., 2018).

Fisheries certifications have gained prominence as mechanisms to provide evidence to the markets that fisheries meet sustainability standards. In fact, certifications use market incentives to encourage more sustainable fishing practices (Bellchambers et al., 2015; Stratoudakis et al., 2015; Gutierrez et al., 2016). Obtaining certifications not only guarantees fishing supply chains a place in the market, but it can also facilitate access to potential new markets (Gutiérrez et al., 2016).

However, meeting the requirements to be certified can be a long and complex process (Travaille et al., 2019). For this reason, fishery improvement projects (FIP) have become one of the main tools to achieve performance levels that allow compliance with certification (Cannon et al., 2018). These multi-stakeholder efforts, which include the private sector, provide a way to promote improvements in fishing practices and to drive lasting changes in fishing policies (CASS, 2016).

In this context, 16 Ecuadorian fishmeal processing companies, two traders of marine ingredients and four international producers of aquaculture feed, through the coordination of the National Chamber of Fisheries (CNP), established the "Small Pelagics Sustainability Fishery Improvement Project" (SPS-FIP).

The aim of this FIP is to improve fisheries management and, above all, to demonstrate to the markets the sustainability of the production chain. The SPS-FIP is led by CNP, and received technical support from the United Nations Development Programme (UNDP) through the "Global Sustainable Supply Chains for Marine Commodities" project (GMC), and the Non-Governmental Organisation (NGO) Sustainable Fisheries Partnership (SFP).

The present document identifies the lessons learned during the first **three stages of the development and implementation of the SPS-FIP, according to the FIP classification system[1] of the Conservation Alliance for Seafood Solutions (CASS) (CASS, 2016).**

[1] According to the CASS guidelines, the five stages of development of a FIP are: Stage 0. FIP identification. Stage 1. FIP development. Stage 2. FIP launch. Stage 3. FIP implementation. Stage 4. Improvements in fishing practices or fishery management. Stage 5. Improvements on the water.

V. Methodology used for collecting lessons learned

The lessons learned from the Small Pelagic Fisheries Improvement Project in Ecuador seek to provide information based on the experience obtained during the development and implementation of a FIP in a reduction fishery in a developing country. Having access to this information can provide FIP implementers and stakeholders with evidence about actions that had good and bad results in the implementation of these types of projects. Furthermore, such knowledge can serve as a reference for future initiatives in similar contexts.

The identification and documentation of the lessons learned were based on the descriptions of the life cycle and development of the SPS-FIP made by various actors and partners who participated directly and

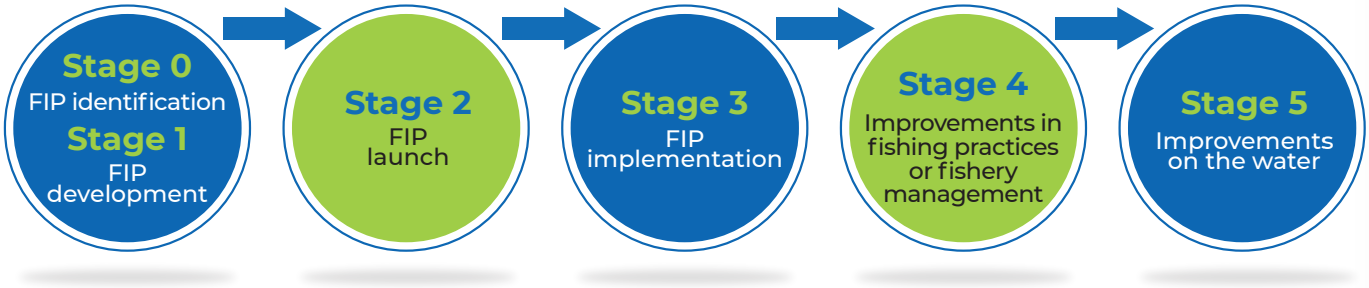
indirectly in the FIP. These descriptions were verified afterwards using project documents, meeting minutes, assessments, progress reports and literature on sustainable fisheries.

Additionally, to document the lessons learned during each phase of the SPF-FIP, a series of open-ended interviews were conducted with a sample of key SFP-FIP participants. Representatives of all parties involved were contacted for this purpose. First, two questions were first established to guide the interview process:

1. What key factors contributed to the progress of the SPS-FIP in Ecuador?
2. What problems or challenges delayed the progress of the SPS FIP in Ecuador?

From these two questions, a series of open discussions were generated, designed to offer the interviewees the freedom to reflect, according to their own views, on the actions, the strategies and the actors that contributed to the progress of the SFP-FIP. Semi-structured interviews (Annex 1) were conducted with representatives of each of the organisations involved.

To describe the progress of the SFP-FIP, the stages of the model agreed upon CASS members were used as a reference:



The SPS-FIP participants who were interviewed expressed their views on the **key factors for the progress achieved at each stage. For the analysis of the data, a coding scheme[2] was used to find the relationship between actions, stakeholders, and outputs among the frequent responses.**

[2] The coding scheme is based on grouping most frequent responses.

V. Lessons learned

▸ Stage 0
FIP identification (2014 – 2017)

Ecuador's small pelagic fishery began in the 1970s (Canales et al., 2020). This fishery mainly exploits six species, which are used both for direct human consumption and to produce fishmeal and fish oil (González et al., 2007) and is made up of an industrial fleet and an artisanal fleet. According to national regulations, the artisanal fleet is authorized to operate within the eight-mile limit; although artisanal beach seine fishers operate within the first mile reserve[3]. The industrial fleet must operate outside of eight miles. The small pelagic fishery is one of the country´s largest industrial fisheries. It generates between 200,000 and 300,000 t per year and sustains about 25,000 jobs, ranking second in terms of income after the tuna purse seine fishery (UNDP, 2019).

Currently, the majority of the production of the South American small pelagic fisheries is certified under the MarinTrust standard (formerly known as IFFO Responsible Seafood) (Veiga et al., 2019). However, Ecuadorian production of fishmeal and fish oil has lagged in terms of meeting sustainability standards, especially when compared to the main producers of the region: Chile and Peru. The small pelagic fishery in these two countries operate on monospecific stocks. Furthermore, the high catch volumes of small pelagic fish and their economic relevance have generated greater investments in research and fisheries management, allowing a more accessible path for MarinTrust certification in both countries.

[3] The first nautical mile is a reserve area for the reproduction of aquatic species, where fishing is prohibited.

In Ecuador, the small pelagic fishery is multispecies and there is limited historical evidence on the priority given to this fishery by the corresponding authorities. As a result, there was limited knowledge of the status of the stocks and the impacts of the capture of small pelagic fish on the ecosystem. In addition, Ecuador has limitations regarding participatory fisheries co-management mechanisms to achieve a more transparent and inclusive fisheries management (UNDP, 2019). Before the start of the SPS-FIP, evidence suggested a decreasing trend of the biomass of small pelagic fish (Canales, 2019) and an increasing trend in illegal fishing and illegal fishmeal production.

Aware of this, in 2014, fishmeal producers began exploring the process to achieve the MarinTrust certification, which allows producers to demonstrate that their marine ingredients are sourced and produced responsibly. In 2016, the CNP formed the Fisheries Commission for Small Pelagic Fish (CPP for its Spanish acronym) in which representatives of the fishmeal industry and the capture sector participate to strengthen the sector and to promote the certification of the fishery. At the same time, other representatives of the fishing sector requested support from the Public Institute for Aquaculture and Fisheries Research (IPIAP) to achieve the same objective.

In 2016, SFP, an organization dedicated to protecting the oceans and generating sustainable fisheries, created the "Latin American Reduction Fisheries Supply Chain Roundtable" (SR) with the aim of promoting improvements in the reduction fisheries from which the industry is supplied in the region. Through this instance, formed by the main buyers of marine ingredients (i.e., feed-producing companies) in the region, SFP sought to promote the purchase of certified fishmeal, and the commitment to ensure that suppliers generate fisheries improvements. In this same space, the Ecuadorian small pelagic was identified as one of the priority fisheries to support the development of a FIP.

In 2017, the GMC project was launched. SFP, an implementing partner of this project, presented to the CNP a work proposal to develop a FIP in the small pelagic fishery, a sector prioritized by the Government of Ecuador to receive support through the project.

In this context, given the growing demand for certified aquaculture feeds, the Ecuadorian industry of fishmeal and aquaculture feed production was motivated to advance towards a fishery certification to guarantee market access and to ensure business continuity. Globally, more and more aquaculture producers are demanding from their supply chain sourcing from sustainable sources. For example, certifications such as Best Aquaculture Practices (BAP) and Aquaculture Stewardship Council (ASC) require that at least 50% of the fishmeal used for feed production must be certified as sustainable or under improvement.

Lesson learned one:
The increased demand for sustainable products is the main incentive for the industry to implement fisheries improvements.

According to the Food and Agriculture Organization of the United Nations (FAO), between 1961 and 2017 the global demand for fish for food increased at an annual rate of 3.1% (FAO, 2020). This growth in demand is an opportunity for countries like Ecuador that have an important fleet and fishing industry. In recent years, this market has become increasingly competitive and the consumer has begun to demand responsible fishing based on the sustainable management of the resource throughout the production chain.

As mentioned before, although there were several initiatives that aimed to achieve a certification, the path to achieve it was not clear. It was in this context that the SPS-FIP created a space in which fishmeal and aquaculture feed producers managed to address the sustainability challenges of the fishery to achieve the MarinTrust certification.

▸ Stage 1
FIP development (2017 – 2018)

When the CNP began the process of preparing the SPS-FIP, there were few fishery improvement projects in Ecuador, and little was known about the MarinTrust standard (then called IFFO RS). Given that the country lacked local capacities for the development and implementation of a successful FIP that would allow it to achieve certification, the CNP chose to partner with SFP through a collaboration agreement. In this framework, the work of an external consultant team accredited by MarinTrust was financed to carry out the preliminary assessment of the small pelagic fishery who worked in partnership with SFP's experts.

Despite having various technical proposals, the CNP preferred to establish an alliance with SFP for three reasons:

a. The FIP would be led by industry (i.e., CNP) and not by a third party,

b. SFP works with the largest buyers of marine ingredients at the regional level in fisheries improvements through the Latin American Reduction Fisheries Supply Chain Roundtable, and

c. The FIP would receive technical support from the GMC project in which SFP is an implementing partner.

During the MarinTrust pre-assessment process, SFP played the role of a mediator providing technical guidance about the process with the CNP, and a facilitator to access key information. In this context, SFP supported the generation of a forum to clarify the participatory decision-making processes to establish fisheries management measures. In this way, the assessment team was able to detect that, although the formal establishment of an intersectoral group

between the government and the interested actors had not materialized as established in the Ministerial Agreement 047 of 9 April 2010, there were ongoing meetings focused on achieving agreements to adopt closures among other decisions relevant to the sector.

As part of the pre-assessment methodology, the consulting team carried out an additional review of the fishery through the rapid assessment tool as a requirement for the FIP profile in the Fishery Progress database (fisheryprogress.org) .

Following the MarinTrust pre-assessment, SFP provided technical advice for the initiation of the SPS-FIP and for adopting the recommendations of the consulting team with a view to achieving certification.

The FIP organising process was strengthened by CNP's decision to invite the largest Ecuadorian fishmeal and fish oil producers, whether they were associated or not with this process. This union of efforts along the production chain is a sign of interest in adapting to market requirements.

The decision of the feed production plants to participate in the FIP confirmed their intention to ensure a sustainable supply; this decision motivated fishmeal and fish oil producers to join the FIP and to commit to the process. As a result, numerous feed production plants began to require their suppliers to join the FIP.

At this point, SFP identified additional stakeholders that could be invited to participated as FIP funder and be part of the FIP governance structure. For example, the fleet of Class I vessels (⩽ 35 t net registered tonnage). In this regard, certain considerations were expressed regarding the participation of this segment of the fleet. First, there was a general perception that the Class I fleet ought to establish a sufficiently

representative and well-structured associative scheme. In addition, the CNP noted that Class I vessels would have little interest in achieving a fishmeal certification because most of their catch is used for human consumption.

To meet the need of certified fishmeal, the feed-producing plants saw two options: a) to import certified fishmeal, or b) to support their suppliers to implement a FIP that allows them to access nationally produced certified fishmeal. This chain reaction, driven by market pressure, motivated collective action to engage in a FIP that eventually leads to certification. In this way, it is confirmed that market incentives promote industry participation in FIPs when the search for sustainability becomes a means to ensure market participation (Cannon et al., 2018; Crona et al., 2019).

In the end, the consensus was that the funding for the SPS-FIP´s Fishery Action Plan (FAP) will be covered by the fleet associated with the CNP and the industries of fishmeal & fish oil, aquaculture feed production and trade of marine ingredients; they shared the same interests and motivation to achieve the necessary commitment to start the SPS-FIP.

While different industry stakeholders had varying motivations to participate in the FIP, a common and key objective for all of them was to achieve the certification. Other certifications, such as BAP and ASC that legitimise the sustainability of aquaculture products (e.g., shrimp, salmon, tilapia), require that the feed used in the production of these organisms be made with a minimum percentage of MarineTrust certified fishmeal. This is why feed plants require sourcing MarineTrust certified fishmeal.

Lesson learned two:
To compete in the modern seafood market, it is necessary to establish fora for cooperation and coordination that promote sustainability in the production chain.

It was identified that participation in the current seafood market requires fora in which the various actors of the production chain can together cooperate and coordinate to promote sustainability and in a precompetitive basis.
A clear example is the SPS-FIP, in which fishing organisations, private companies and public actors converged with the aim of achieving the MarinTrust certification, which will ultimately improve their position in the market. In addition to having a common objective, formal investment, information exchange and Public-Private partnerships were reached to achieve the objectives of the FIP, and above all to lay the foundations for a more sustainable production that proactively responds to the requirements of global demand.

▸ Stage 2
FIP launch (2018)

Once the pre-assessment was complete and considering the recommendations for improvement, SFP prepared a Fishery Action Plan detailing the activities that the private and public sectors would need to complete to achieve the MarinTrust certification. The FAP provided an array of objectives, activities, indicators, estimated budget, responsible parties, funding sources for each activity, and a time frame to meet the objectives.

At this moment, two discrepancies emerged among the parties. First, the stakeholders expressed doubts about the need for such an expensive investment of USD 1.2 million in five years, in a context of crisis in both the Ecuadorian economy and the small pelagic fishery, which had suffered losses in recent years. This investment would have a fixed allowance for salaries, administrative costs and logistics, and a variable allocation that would cover the costs of hydroacoustic cruises, to be carried out by IPIAP using the fishing vessels of the members of the FIP. Second, there were reservations about the allocation of funding sources since the FAP proposed that most of the contributions for fisheries improvements be made by the SPS-FIP stakeholders, especially the industry. Some parties proposed that fisheries research and the increased budgetary burden should be the responsibility of the state as the manager of fisheries resources. However, it was recognized that the Ecuadorian State did not have sufficient financial resources and required support from the private sector.

In this context, SFP intervention was important to reach consensus among the parties. SFP made evident the government contribution to the FAP, which, in budgetary terms, would provide in-kind contributions through the institutional and technical support of IPIAP and SRP. Among the contributions that IPIAP and SRP (state entities) would make, were fishery observers for the collection of scientific data and data analysis, fisheries inspectors in charge of fisheries control and IPIAP scientists and fishery managers, among others. On top of this was the support of the GMC project for the establishment of the "Ecuadorian Small Pelagic Fishery Dialogue Platform". By incorporating these contributions, the total of the SPS-FIP summed USD 8,213,510 (7'115,400 USD in sate kind and 1'098,110.5 USD from FIP participants).

Thus, the input of the Ecuadorian government was made visible with respect to data collection and to guarantee the application of the proposed measures to improve the fishery. However, it was also evidenced that, although some activities in the FAP were the responsibility of

IPIAP (for example, hydroacoustic cruises, the salaries of additional technical staff and training processes to strengthen the knowledge and technical skills of those in charge of monitoring the fishery), the lack of financial resources in this institution would make impossible the implementation of improvements to reach a certifiable status, possibly affecting the achievement of joint objectives. For this reason, these amounts were included in the budget to be financed by the SPS-FIP actors.

Another result of this dialogue was the acknowledgment of the joint need to improve the condition of the fishery and to obtain the MarinTrust certification. Therefore, the contributions to the FAP were evidenced as a necessary investment for the future of the sector. Likewise, it is worth mentioning that, although the aquaculture feed industry had the option of importing fishmeal, it committed to work with the local industry as part of the decision to invest in improving Ecuador's fisheries. To consolidate this public-private partnerships, the parties signed cooperation agreements with the government entities to achieve the objectives of the FAP.

Moreover , once the FAP was approved and as a requirement for the MarinTrust certification, a memorandum of understanding (MoU) was signed to formalise the commitments and responsibilities of the parties. Additionally, this instrument established a set of rules to safeguard the investment of the initial SPS-FIP participants, who would assume the greater budgetary burden and the risks of implementing the FAP. It was decided that new entrants would require the approval of a majority of FIP members, and before joining, new entrants would have to pay a fee equal to the amount each SPS-FIP member had invested in the process.

The MoU also specified a governance structure and a financing mechanism for the FAP. The FIP structure includes: a) a General Assembly, made up of all SPS-FIP participants; b) an

Executive Committee which facilitates the execution of the fishery improvement project and serves as the management body and representative of the SPS-FIP; and c) an SPS-FIP Coordinator, responsible for coordinating and monitoring the FAP activities. The Executive Committee will receive technical assistance from SFP, the CNP advisers, and the SPS-FIP coordinator.

Thanks to this collaborative environment, it was also possible to establish the financing mechanism designed by the SPS-FIP coordinator. Through an inclusive and participatory process, it was ensured that costs were shared among three feed production plants, fourteen fishmeal plants and three traders who participated in the creation of the SPS-FIP. The final financing agreement was:

- The feed production contributes 40% of the budget,
- The fishmeal industry contributes 37.2%,
- The fishmeal by-products industry contributes 18%, and
- The trade companies contributes 4.8%.

This process of dialogue and generation of agreements among the actors of the fishing sector made possible the signing of the MoU. Subsequently, SFP, in coordination with the CNP and the pre-assessment consulting team, submitted all the approved documentation (the FAP and the signed memorandum of understanding) for the application to the MarinTrust Improver Programme.

Lesson learned three:
Having a transparent and formal administration and coordination mechanism builds confidence to attract investment and strengthens the commitment of industry and other private and public stakeholders.

Despite having the common goal of achieving the MarinTrust certification, the FIP formulation process faced a series of challenges related to mistrust in the management of the resources and the level of commitment of the parties involved. These challenges were counteracted with the establishment of an inclusive and participatory forum, which was perceived as a guarantee of the process and made possible a greater collaboration among the parties. In addition, both the FAP and the MoU were key instruments to overcome these challenges and to chart the way to invest in the FIP. On the one hand, the MoU established the rules for investment, decision-making, resource management, targets, and benefits of implementing the SPS-FIP, in addition to defining the safeguards for initial investors against possible new participants in the process. On the other hand, the FAP detailed the SPS-FIP budget so that the sources of financing and budget allocations were clearly stipulated and explained. In addition, objectives, indicators, targets, and responsibilities for the execution of each activity were established.

▸ Stage 3
FIP implementation (2018 – 2020)

This phase of the SPS-FIP includes the execution of the activities established in the FAP, and the monitoring of FIP progress. During 2018, the SPS-FIP began to implement and monitor the FAP. The established objectives were:

a. to ensure a transparent, inclusive and participatory decision-making process;

b. to improve IPIAP´s data collection system;

c. to conduct stock assessments of all small pelagic fish species;

d. to adopt management measures for the small pelagic fishery; and

e. to mitigate the impacts of the fishery on ecosystems, habitats, and endangered, threatened, and protected species (ETP).

The first two years of SPS-FIP implementation included the achievement of the first three objectives. These were accomplished successfully and within the agreed time frame. One of the key factors for success and efficient execution was the SPS-FIP coordinator´s knowledge of the dynamics of the sector. The coordinator provided advice to the CNP and contributed to the development and implementation of the first phases of the SPS-FIP. The understanding of the current

situation allowed this person to have a direct relationship with the industry players, and to understand the certification procedure, the market, and the sustainability standards.

a) To ensure a transparent, inclusive, and participatory decision-making process.

An intersectoral working group with public and private fisheries actors was established through the Ministerial Agreement 047 of April 9th, 2010. Though this working group had not been formally inaugurated, in practice it has met, especially to analyse fishing closures. Hence, one of the

recommendations of the FIP pre-assessment was to formalise a participatory, transparent, and inclusive decision-making process to improve the governance of the fishery and to adopt the recommended actions based on stock assessments.

In parallel to the development of the SPS-FIP, the "Ecuadorian Small Pelagic Fishery Dialogue Platform" was implemented as a governance mechanism for the small pelagic fishery[4]. This process, led by the Undersecretariat of Fisheries Resources (SRP, for its acronym in Spanish) with technical support from IPIAP and facilitated by the United Nations Development Programme (UNDP) through the GMC project, aided the SPS-FIP by establishing a governance mechanism to advance the action plan and the management of the fishery. It is worth mentioning that the platform is an open space which is not limited to the participants of the SPS-FIP, but rather has the participation of representatives from all the stakeholders of this fishery (i.e., artisanal fishers and all the industrial fleet, including the Class I vessels) because any action to improve the fishery would have an impact on all its stakeholders.

The implementation of a FIP requires a governance structure that establishes a participatory decision-making process. Therefore, it is important to differentiate the two established dialogue instances:

1. on the one hand, the governance structure of the FIP for decision-making related to the SPS-FIP, and
2. on the other hand, the "Ecuadorian Small Pelagic Fishery Dialogue Platform", a forum for multisectoral consultation in which public and private sector representatives participate and where proposals for management measures are channelled and new related legal instruments are analysed.

[4] https://globalmarinecommodities.org/wp-content/uploads/2020/05/Mecanismo-de-gobernanza-ECUADOR.pdf

The FIP governance structure only included the institutions who fund the FIP, that is the fishmeal, feed, and trade companies.
The class I ships (the largest fleet) and the artisanal sector did not participate directly funding and in the FIP making decision process, even though they were part of the dialogue platform.

In turn, the Ecuadorian Small Pelagic Fishery Dialogue Platform facilitated the achievement of the following FAP objectives: "to ensure a transparent, inclusive and participatory decision-making process", "to adopt management measures for the small pelagic fishery", and "to mitigate impacts on ecosystems, habitats and endangered, threatened and protected species (ETP)". Both, the fishery management measures and the conservation measures to mitigate environmental impacts, will be discussed within the dialogue platform and included in a management plan. In fact, the goal of the platform is to develop a management and action plan for this fishery, to be adopted during early 2021.

The complementarity of these dialogue fora favoured the establishment of management measures and contributed to the formulation of government policies.

b) To improve IPIAP´s data collection system

IPIAP is the national entity responsible for collecting fisheries data, evaluating the condition of the small pelagic fish stocks, and assessing the impacts of fishing (i.e., on ETP

species and ecosystems). However, lack of funding has limited IPIAP in fulfilling these functions which are required to achieve the objectives of the SPS-FIP. For this reason, the FIP stakeholders assented to provide assistance to this entity. Through an inter-institutional cooperation agreement, signed between the IPIAP and the CNP, funding was commited for research purposes, which led to the establishment of an inter-institutional research team, the reactivation of hydroacoustic cruises, and the promotion of scientific research of mutual interest.

Thanks to this type of public-private collaboration, it has been possible to ensure that data about the small pelagic fishery are collected and made available to the public. Another result of this alliance was the reactivation of hydroacoustic cruises to estimate the biomass and distribution of small pelagic fish. At the time of writing this report, there have been four cruises. These research campaigns have the financial support of FIP members, who also allow IPIAP to install hydroacoustic equipment in their fishing vessels.

Relevant historical information about the small pelagic fishery, including past and present regulations, is available on the FIP (smallpelagics.org/fishery-data/) and IPIAP (www.institutopesca.gob.ec) portals.

c) To conduct stock assessments of all small pelagic fish species

Within the framework of the GMC project, IPIAP was supported in the development of adequate stock assesment models and the impacts of the fishery on the ecosystem. The stocks of the following species were assessed: pinchagua, chub mackerel, chuhueco, frigate tuna, shortfin scad and round herring. Based on this initiative, an inter-institutional research team hired by the FIP was formed.

The team, together with IPIAP, improved and updated the protocols to collect data from the artisanal fleets (beach seines) . With this information, several reports were prepared with estimates of artisanal landings.
Also, with the data collected and the observer

programme, studies have been prepared on the interactions of the purse-seine fishery for small pelagic fish with habitats and ETP species (Jurado et al., 2020). One of the benefits of incorporating public actors such as IPIAP in the FIP process is the possibility of generating scientific information without causing conflicts of interest.

Finally, within the framework of the inter-institutional cooperation agreement between the SRP, the IPIAP and the CNP, electronic fishing logs were implemented to collect data of the small pelagic fishery. SPS-FIP staff contributed to the design and adjustment of the mobile application, improving data collection, and making the information transparent.

These initiatives were assessed by the MarinTrust Improver Programme within the first six and 12 months of FIP implementation. The reports from these assessments provided positive feedback on the progress of the SPS-FIP and and built increased trust in this process and in the FIP participants.

The SPS-FIP was strengthened by the administrative capacity of the CNP, which also gave it the necessary legitimacy to promote cooperation agreements with both IPIAP and the Vice Ministry of Aquaculture and Fisheries (VAP, for its acronym in Spanish). Thus, it has been possible to continue the work undertaken by different public administrations during the implementation of the FIP. Also, the agreement signed with the VAP and the SRP allowed the SPS-FIP coordinator to follow up on the actions of the Ecuadorian Small Pelagic Fishery Dialogue Platform.

VI. Conclusions

During the first three stages of implementation of the Small Pelagics Sustainability Fishery Improvement Project, some relevant factors became evident to consider when implementing this kind of initiative. This document compiles the three most relevant lessons. The first lesson shows that the demand for sustainable products is a critical driver for the industry and other actors to commit both technically and financially to implement fisheries improvements. The second lesson is linked to the first, since, in response to market demands, interested parties been able to work in precompetitive environment that promotes sustainability along the production chain, which in turn ensures the survival and profitability of the related companies. Finally, the third lesson highlights the importance of having a transparent administration and coordination mechanism to motivate that key stakeholders invest economic and technical resources in these types of initiatives.

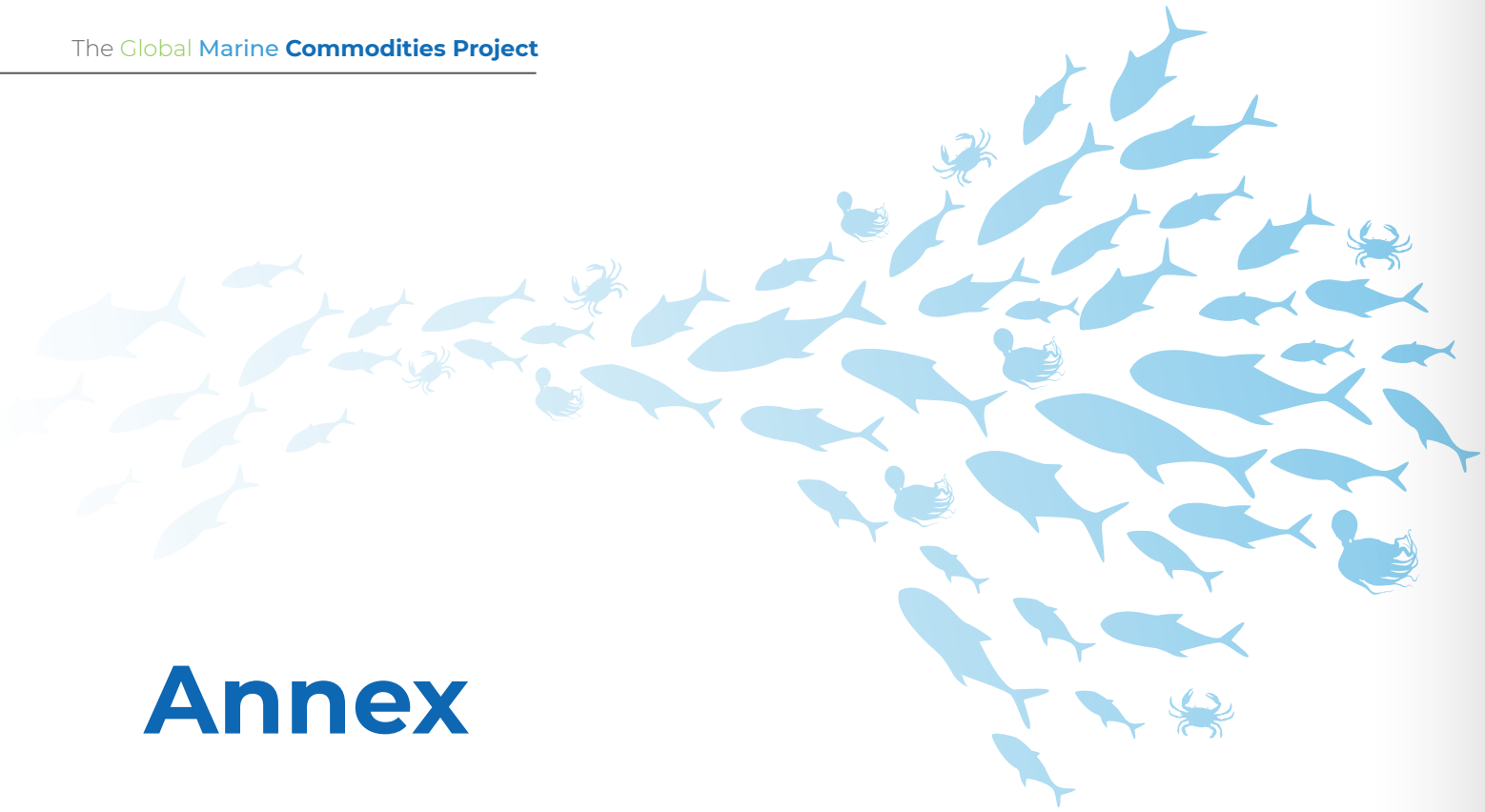
One of the most important aspects of the implementation of this Fishery Improvement Project was the commitment of the CNP, as a representative of the fishing industry, to administer the SPS-FIP. Given that the CNP is a business chamber with a management structure, it brought together various actors

of the fisheries production chain that faced similar market problems. Along with this, the clear administrative structure and governance mechanisms, achieved through inclusive and participatory dialogue with a view to promote the MarinTrust certification, established the right conditions to secure the investment from industry and the commitment from institutions such as IPIAP to foster this initiative.

On the technical side, it was evident that there was a need to have experienced entities such as SFP helping with the design and advising during the implementation of the FIP. Due to its experience, SPF was able to advise on the establishment of a viable management mechanism given the conditions of the fishery and the aim of the project. In addition, SFP was a strategic ally along the process of improving the sustainability performance of the fishery and for the development of key research to achieve certification. Likewise, the affinity among the actors of the production chain and the positive support of the research institution IPIAP enabled greater technical collaboration which in turn facilitated FIP implementation and the achievement of its objectives, mainly considering that many of the improvements required by the fishery included better scientific knowledge for decisison making purposes.

The commitment of the Government of Ecuador through the Vice Ministry of Aquaculture and Fisheries shows the importance of creating a forum for structured, participatory, and inclusive dialogue. The "Ecuadorian Small Pelagic Fishery Dialogue Platform" aided the construction of policies that contribute to achieving fisheries sustainability based on participatory fisheries governance. This kind of co-management is being considered to generate dialogue fora in other fisheries.

Finally, it is necessary to emphasize that, in the case of the SPS-FIP, the level of commitment of the parties involved both at the technical and financial levels was related to the market pressure for sustainable products. Since the profitability of the related companies depends on being able to demonstrate the sustainability of the raw material, they facilitated funds and demonstrated the greatest possible spirit of collaboration to implement the FIP. In this sense, the power of the market constituted an important incentive to promote sustainability throughout the links of the production chain. This, in addition to being convenient at an economic level, favours the conservation of the fishery resource and the mitigation of environmental impacts related to the fishing activity.



Annex

Annex 1. Interview template

INTERVIEW FOR THE ANALYSIS OF LESSONS LEARNED IN THE PROCESS OF CREATION AND IMPLEMENTATION OF THE SMALL PELAGIC FISHERY FIP IN ECUADOR

Interviews of FIP members:

Name of the interviewee:	
Company or institution:	
Date of interview:	

The confidentiality of the information provided is guaranteed, its use is only for research purposes.

1. **In your opinion, what were the key factors that motivated the creation of a FIP in the small pelagic fishery?**

-
-

2. **Identify person (s) or entity (ies) that have been key to start the process of creating the FIP. Tell us about the role they played:**

3. **Identify person(s) or entity(ies) who are key to sustain the FIP implementation process. Tell us about the role they played:**

4. **Of the following institutions, which do you consider to be the most important for the organisation and creation of the FIP? List the institutions from 1 to 7, considering 1 the most important and 7 the least important.**

	1	2	3	4	5	6	7	8
Fisheries authority								
National Fisheries Institute								
National Chamber of Fishery								
Sustainable Fisheries Partnership (SFP)								
Feed producers								
Fishmeal producers								
Global Marine Commodities project								
Other: specify:								

5. **Do you agree with CNP's decision to have invited companies that were not members to participate in the creation of the FIP? Mark with an X**

Strongly disagree	Disagree	Undecided	Agree	Totally agree
Comments:				

6. **Do you think that actors other than fishmeal and feed producers should participate in the FIP? Mark with an X**

Strongly disagree	Disagree	Undecided	Agree	Totally agree
Comments: ¿Why?				

7. **Do you consider that the absence of Class 1 ship owners, known as chinchorreros, as members of the FIP has affected the development of the project? Mark with an X**

Strongly disagree	Disagree	Undecided	Agree	Totally agree
Comments: What advantages or disadvantages could its inclusion have?				

8. **Do you consider that the incorporation of new shipowners and processors from other production chains within the FIP could hinder the achievement of the certification objective of the fishmeal and feed producers who are members of the project? Mark with an X**

Strongly disagree	Disagree	Undecided	Agree	Totally agree
Comments:				

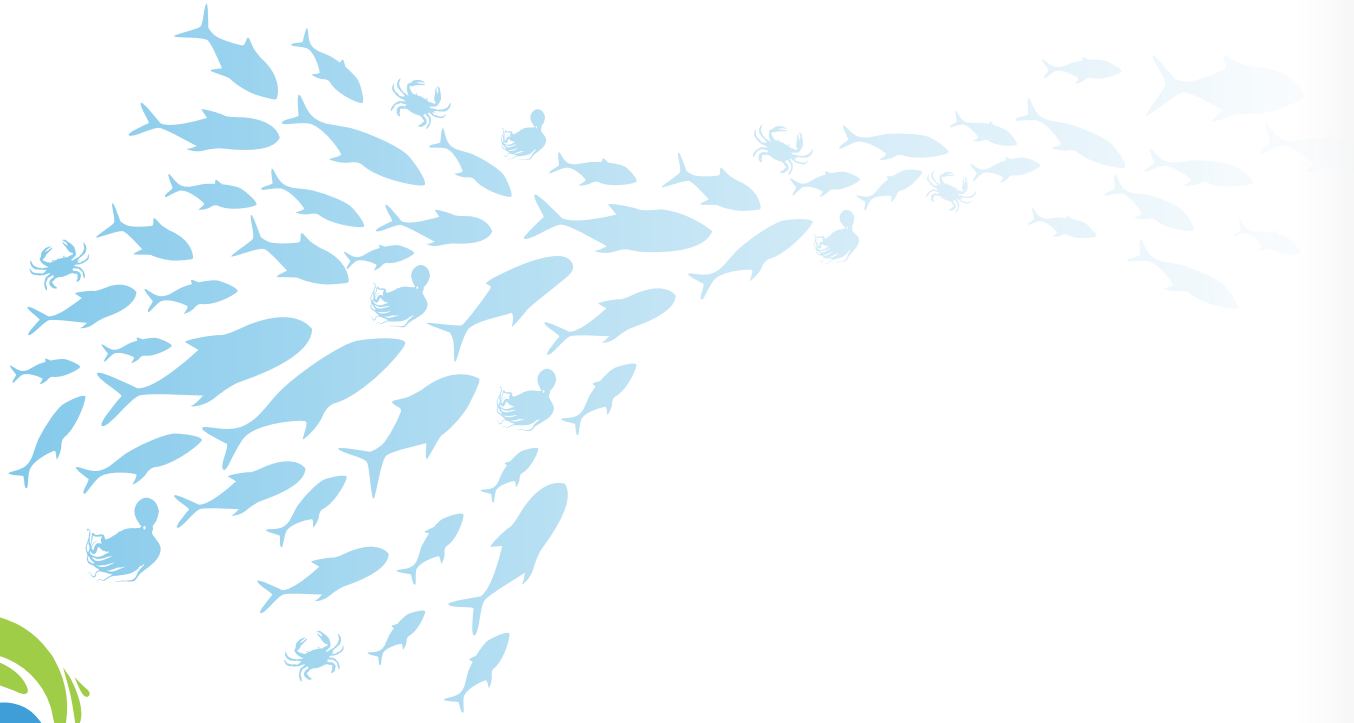
9. **Do you agree with the rules for the entry of new FIP participants? Mark with an X**

Strongly disagree	Disagree	Undecided	Agree	Totally agree
How could they be improved?				

10. **Do you agree with the rules for the exclusion of participants from the FIP? Mark with an X**

Strongly disagree	Disagree	Undecided	Agree	Totally agree
¿ How could they be improved?				

11. **What do you think have been the key factors for companies to decide to finance the FIP?**



12. **Rate the importance of the following factors for the implementation of the FIP? Mark with an X**
(0) not important, (1) slightly important, (2) moderately important, (3) important, (4) indispensable

	0	1	2	3	4
Pre-existing organization of the fishmeal industry in the CNP					
CNP political and institutional capital and its managers to support and promote the project					
Direct involvement of the president of CNP´s Small Pelagic Fish Commission to promote the project					
CNP administrative support for procurement and project organisation					
Sustainable Fisheries Partnership (SFP) technical advice					
CNP technical advice					
Have a coordinator hired by the industry to manage the execution of the project					
Have own resources from the contributions of the FIP member companies					
Have own resources from international cooperation financing					
Involvement of feed producers in the project					
Involvement of fishmeal producers who are not members of CNP					
Support from the Global Marine Commodities project					
Support from the Fisheries Authority					
INP support					

13. **Do you agree with the current FIP funding scheme? Mark with an X**

Strongly disagree	Disagree	Undecided	Agree	Totally agree
Comments:				

14. **What could contribute to improve the funding system by FIP members?**

15. **Do you agree that the Fishery Improvement Project should be mainly financed by companies?**

Strongly disagree	Disagree	Undecided	Agree	Totally agree
Comments:				

16. **In your opinion, who is the most important actor in the governance structure for the progress of the FIP?** *(List the most important with 1 and the least important with 3)*

	1	2	3
Assembly of participating companies			
Project executive committee			
Project coordinator			

17. **Do you agree that the industry implements the project directly through its own coordinator, or do you consider that the FIP should be implemented by an NGO or the government?**

Comments: Why?

18. **What do you think should be the role of an NGO like Sustainable Fisheries Partnership (SFP) in the implementation of the FIP?**

19. **To date, how would you rate the importance of the following actors for the activities carried out by the FIP? Mark with an X.**
(0) not important, (1) slightly important, (2) moderately important, (3) important, (4) indispensable

	0	1	2	3	4
Fisheries authority					
National Fisheries Institute					
National Chamber of Fishery					
Sustainable Fisheries Partnership (SFP)					
Feed producers					
Fishmeal producers					
Global Marine Commodities project					
Other: specify:					

20. **In your opinion, what are the most significant advances of the FIP and what were the key factors that have enabled its progress. Do you think the FIP can improve its progress? How?**

21. **In your opinion, what are the key factors that have delayed the performance of project activities and what could be done to improve this situation?**

22. **Do you think that the FIP support has been important to improve the knowledge of the small pelagic fishery? Why?**

23. **What do you consider to be or will be the determining factors for the FIP to achieve its goal of making the fishery sustainable so that fishmeal production can be certified?**

24. **Now that you understand how a FIP works, if there were no demand for certified sustainable fishmeal in the market, would you implement a FIP? What other factors might motivate you to implement a FIP?**

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