

WESTERN ASTURIAS OCTOPUS TRAPS FISHERY OF ARTISANAL COFRADÍAS

MSC Certificate code: MSC-F-31230 (F-BV-1065)



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Fourth Surveillance

September 2020



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Fishery client	Asociación de armadores de la pesquería de pulpo con certificado de sostenibilidad (ARPESOS)
Assessment Type	Fourth Surveillance

Contents

GLOSSARY	3
1 EXECUTIVE SUMMARY.....	4
2 REPORT DETAILS.....	6
2.1 SURVEILLANCE INFORMATION	6
2.2 BACKGROUND.....	7
2.2.1 PERSONNEL INVOLVED IN SCIENCE, MANAGEMENT OR INDUSTRY	7
2.2.2 CERTIFIED FLEET AND CLIENT GROUP	7
CERTIFIED FLEET	7
CLIENT GROUP.....	8
2.2.3 FISHERY MANAGEMENT AND REGULATORY FRAMEWORK	8
2.2.4 COMPLIANCE	9
2.2.5 TRACEABILITY ISSUES.....	11
2.2.6 SCIENTIFIC BASED INFORMATION RELATED TO P1	11
2.2.7 SCIENTIFIC BASED INFORMATION RELATED TO P2	18
2.3 VERSION DETAILS.....	20
3 RESULTS.....	21
3.1 SURVEILLANCE RESULTS OVERVIEW.....	21
3.1.1 SUMMARY OF CONDITIONS.....	21
3.1.2 TOTAL ALLOWABLE CATCH (TAC) AND CATCH DATA.....	22
3.1.3 RECOMMENDATIONS	22
3.2 CONDITIONS.....	22
3.2.1 TABLE 3.4. CONDITION 1	23
3.2.2 TABLE 3.6. CONDITION 3	30
3.2.3 TABLE 3.7. CONDITION 4A	35
3.2.4 TABLE 3.8. RECOMMENDATION 1	43
3.3 CLIENT ACTION PLAN.....	44
3.4 RE-SCORING PERFORMANCE INDICATORS	44
3.4.1 PI 3.2.2 – DECISION-MAKING PROCESSES	44
4 REFERENCES.....	51
5 APPENDICES.....	53
5.1 EVALUATION PROCESSES AND TECHNIQUES.....	53
5.1.1 SITE VISIT	53
5.1.2 STAKEHOLDER PARTICIPATION.....	53
5.2 STAKEHOLDER INPUT	53
5.3 REVISED SURVEILLANCE PROGRAM	54
5.4 HARMONISED FISHERY ASSESSMENTS.....	54

Glossary

ARPESOS	Certified octopus ship owners' association (Asociación de armadores de la pesquería de pulpo con certificado de sostenibilidad)
B_{MSY}	Biomass (population size) that enables a fish stock to deliver the maximum sustainable yield (MSY).
BOPA	Official Gazette of the Principality of Asturias
BV	Bureau Veritas
CEDER	Local Development Center (Centro de Desarrollo Navia-Porcía)
CEP	Fisheries Experimentation Centre (Centro Experimentación Pesquera)
CFP	Common Fisheries Policy
COFWG	Certified Octopus Fishery Working Group
CPUE	Catch per unit effort
DGPM	General Directorate of Maritime Fisheries, Government of the Principality of Asturias (Dirección General de Pesca Marítima, Gobierno del Principado de Asturias)
ETP	Endangered, threatened and protected species
EC	European Commission
EU	European Union
F	Fishing mortality
FCP	Fisheries Certification Process
FCR	Fisheries Certification Requirements
HCR	Harvest Control Rules
MCS	Monitoring, Control and Surveillance system
MSC	Marine Stewardship Council
MSY	Maximum Sustainable Yield
OFMC	Octopus Fishery Monitoring Committee
OFMP	Octopus Fishery Management Plan
OMA	Asturian Marine Observatory (Observatorio Marino de Asturias)
P1, P2, P3	MSC Principles 1, 2, 3 respectively
PCR	MSC Public Certification Report
SA	Surveillance audit
SGP	General Secretariat for Fisheries, Spanish Government (Secretaría General de Pesca, Gobierno de España)
TAC	Total Allowable Catch
UoA	Unit of Assessment
UoC	Unit of Certification

1 Executive summary

The fishery is certified (against FCR 2.0) since February 10th, 2016. The fishery was assessed against version 2.0 of the MSC Certification Requirements. Current surveillance audit was conducted against FCP v2.1 and MSC Full Assessment Reporting Template v2.01 was used to elaborate current report.

As summarised in **table 3-1**, four conditions were raised on Performance Indicators (PI) 1.2.2 (HCRs & tools), 3.2.1 (Fishery specific objectives), 3.2.2 (Decision-making processes), and 3.2.3 (Compliance & enforcement). However, during the 1SA, PI 3.2.3 was re-scored based on new findings and downgraded; condition 4 was therefore modified and a new condition was established (modified condition was called 4A). In the 2SA, condition one (PI 1.2.2) was found 'ahead target', and the other three (C2-PI 3.2.1, C3-PI 3.2.2 and C4A-PI 3.2.3) were 'on target'. In relation to the 3SA, PI 3.2.1 was rescored to 80 and therefore, condition 2 was closed, while condition 3 (PI 3.2.2) was 'on target'. A second version of the surveillance report was published on the 2nd of July 2020 including corrections on conditions 1 and 4A against PIs 1.2.2 and 3.2.3, respectively; as a result, condition 1 (PI 1.2.2) was found 'on target' while condition 4A (PI 3.2.3) was found 'behind target' and a remedial action was set.

As a result of current 4th surveillance audit, condition 1 (PI 1.2.2) was found 'behind target' and a remedial action was set, condition 2 (PI 3.2.1) was already closed on 3SA, PI 3.2.2 was rescored to 85 and therefore condition 3 was closed, and condition 4A (PI 3.2.3) was found 'on target' but condition remains open). Progress on these two open conditions will be checked during the preparation of the ACDR (the client has already expressed its interest in recertify the fishery) and the site visit planned for the beginning of 2021. Both pending conditions should be closed before the certificate expires on 9th August, 2021.

Table 1-1 presents scores given to each MSC Principle as published at the PCR and after subsequent surveillance audits, while **table 1-2** presents scores for each Performance Indicator.

Table 1-1. Scores obtained by the fishery for each MSC Principle as published at the PCR and subsequent surveillance audits.

Final Principle Scores					
Principle	Score (PCR)	Score (1SA)	Score (2SA)	Score (3SA)	Score (4SA)
Principle 1 – Target Species	80.7	80.7	=	=	=
Principle 2 – Ecosystem	83.3	85.7	=	=	=
Principle 3 – Management System	85.4	84.2	=	86.7	87.9

Table 1-2. PIs scores of the certified fishery as published at the PCR and subsequent SAs (in orange scores below 80, meaning a condition was raised for that PI).

Principle	Component	Performance Indicator (PI)	Score	1SA	2SA	3SA	4SA
One	Outcome	1.1.1 Stock status	82	=	=	=	=
		1.1.2 Stock rebuilding	-	-	-	-	-
	Management	1.2.1 Harvest strategy	85	=	=	=	=
		1.2.2 Harvest control rules & tools	75	=	=	=	=
		1.2.3 Information & monitoring	80	=	=	=	=
	1.2.4 Assessment of stock status	80	=	=	=	=	
Two	Primary species	2.1.1 Outcome	100	=	=	=	=
		2.1.2 Management strategy	80	85	=	=	=
		2.1.3 Information/Monitoring	85	90	=	=	=
	Secondary species	2.2.1 Outcome	80	=	=	=	=
		2.2.2 Management strategy	80	100	=	=	=
		2.2.3 Information/Monitoring	85	90	=	=	=

	ETP species	2.3.1	Outcome	85	=	=	=	=
		2.3.2	Management strategy	80	=	=	=	=
		2.3.3	Information strategy	80	=	=	=	=
	Habitats	2.4.1	Outcome	95	=	=	=	=
		2.4.2	Management strategy	80	=	=	=	=
		2.4.3	Information	80	=	=	=	=
	Ecosystem	2.5.1	Outcome	80	=	=	=	=
		2.5.2	Management	80	=	=	=	=
		2.5.3	Information	80	=	=	=	=
Three	Governance and policy	3.1.1	Legal &/or customary framework	100	=	=	=	=
		3.1.2	Consultation, roles & responsibilities	95	=	=	=	=
		3.1.3	Long term objectives	100	=	=	=	=
	Fishery specific management system	3.2.1	Fishery specific objectives	60	=	=	80	=
		3.2.2	Decision making processes	75	=	=	=	85
		3.2.3	Compliance & enforcement	75	65	=	=	=
		3.2.4	Monitoring & management performance evaluation	80	=	=	=	=

The main findings of current surveillance audit are listed below:

- A collaborative atmosphere between different stakeholders (ARPESOS, CEP, DGPM, SIGMA and Univ. Oviedo) still exists and works towards closing conditions.
- A stock assessment model was done in 2019 for the first time in this stock, showing that fishing mortality of the stock is low and that the exploitation is biologically sustainable by a good margin. The fishery has therefore not affected the abundance of spawning.
- A new and preliminary HCR has been proposed based on this stock assessment and it has been well-received in the OFMC. Nevertheless, since this HCR has not been yet implemented in the fishery, the Condition 1 (PI 1.2.2) is considered 'behind target' and a new milestone was set under a remedial action.
- Data collected by observers on board the vessels working under the OFMP during the last fishing season (2019/20). Some percentages of P2 species are different from previous years (in terms of catch composition). Considering that the ACDR for the re-assessment is under development and a detailed analysis of the catch composition over the four years of certification will take place, the team decided not to do a whole re-classification of P2 species at this surveillance audit. The team will assess the long-term average catch composition of P2 species when designating 'main' and 'minor' species at the ACDR.
- Improvements in the decision-making process has allowed to close Condition 3 (PI 3.2.2).
- Relevant improvements have been implemented in the MCS system (lines of traps marking and *Guardapescas* protocol). Nevertheless, other pending issues, as the shortage of operational means in the Surveillance and Control Unit and the lack of accountability and transparency in the MCS system (no record of final penalties for violations and deliberate omission of information from the CEP on-board observers monitoring) prevents closing Condition 4A.
- No progress has been observed in the Recommendation regarding bait species.

The assessment team concludes that **the MSC Certificate for this fishery shall remain active.**

2 Report details

2.1 Surveillance information

According to the 'MSC Surveillance Reporting Template v2.01', the following table shall be included.

Table 2-1. Surveillance information

1 Fishery name			
Western Asturias Octopus Traps fishery of Artisanal Cofradías			
2 Unit/s of Assessment/s			
UoA	<p><u>Stock</u>: Octopus vulgaris stock from Asturian waters (metapopulation description). <u>Fishing area</u>: The fishing grounds where the UoA operates stretch along the Asturian coastline between 7° 01' W and 6° 04' W, always within internal Spanish waters (<12nm) and within a depth range of 0-100m. <u>Fishing method/gear</u>: Artisanal traps <u>Fleet</u>: vessels from Comarca del Comarca del Navia-Porcía (Tapia de Casariego, Viavélez, Ortiguera, Puerto de Vega)¹. An updated list can be found on the MSC website. <u>Other Eligible fishers</u>: vessels that are members of a fishing guild within the management plan (MP). Therefore, the guilds <i>Cofradías</i> de Cudillero, Oviñana, Luarca and Figueras may become eligible to join the UoC under the Certificate Sharing.</p>		
3 Certificate details			
Certificate code	MSC-F-31230 (F-BV-1065)		
Date certified	10 Feb 2016	Date of expiry	09/08/2021
4 Surveillance level and type			
Level	<p>The surveillance level set out in the Public Certification Report (PCR) was Level 4. The surveillance requirements for level 4 are 2 on-site surveillance audits and 2 off-site surveillance audits.</p> <p>The type of surveillance audit in years 3 and 4 was modified in the 2nd surveillance report. The off-site audit was moved from the 4th to the 3rd surveillance audit, while the on-site visit was moved from the 3rd to the 4th surveillance audit since the 4th surveillance audit was meant to match the re-certification.</p> <p>The 4th surveillance audit was finally undertaken off-site due to COVID19 and separately from the re-certification process. Therefore, the level was changed to Level 3. The information was published in the Appendix 2 of the surveillance announcement.</p>		
Type	The 4th surveillance audit was finally undertaken off-site due to COVID19 and separately from the re-certification process.		
5 Surveillance number			
1st Surveillance			
2nd Surveillance			
3rd Surveillance			
4th Surveillance	X		
Other (expedited etc)			
6 Assessment team ²			
Team leader	Macarena García		

¹ The latest vessel list includes 31 fishing vessels, including some vessels from Luarca, Oviñana and Figueras.

² See the Surveillance announcement at the MSC website for more details on how the team meets the competency criteria and the areas that they are responsible for.

Team member 1	Gonzalo Macho
7	Audit/review time and location
Off-site visit. Meetings held remotely on 21 July, 2020	
8	Assessment and review activities
During the remote audit, the team conducted assessment activities in accordance with FCP 7.28.15-18. In the case of the octopus fishery, the team concentrated in: (i) checking for any relevant modification affecting the fishery; (ii) assess progress against conditions set to the fishery. See Appendix 5.1 for details on the people interviewed, topics discussed, locations inspected, and Appendix 5.2 for details on the stakeholder engagement strategy. There are no overlapping fisheries exist, so no harmonization activities were needed.	
9	Conformity Assessment Body (CAB)
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2.2 Background

Major changes to the fishery since the last surveillance are outlined below:

2.2.1 Personnel involved in science, management or industry

No major changes were identified by the team in relation to personnel involved in management and the fishing sector involved in the artisanal octopus' fishery in Asturias. However, the team wants to note that the Director of the Surveillance and Control Unit confirmed that the staff capacity issues found in the 3SA due to numerous retirement and temporary leaves, have been partially solved. Out of 16 inspectors of the unit in Asturias (12 inspectors full time and 4 part time), currently 2 full time inspectors openings are still pending to be filled. Nevertheless, the octopus' fishery is a priority for the unit therefore, the number of inspections compromised in the fishery, according to the minimum approved by the Surveillance and Control Unit (DGPM, 2017), has been fulfilled in the current fishing season 2019-20.

In relation to research, the OMA confirmed that they keep collaborating with the independent consultant Rubén Roa-Ureta on the stock assessment for this fishery. José Luis Acuña (head of the OMA) confirmed that the OMA has applied for a national research project, which includes the evaluation of candidate HCRs based on depletion models for the octopus' fishery. On the other hand, the CEP confirmed that they are interested on this model, and they signed in 2019 a contract to hire Ruben's services to hand them the model and provide the necessary training to the CEP staff. The model has been run and a HCR has been designed based on model results, although the HCR has not been yet implemented in the fishery.

2.2.2 Certified fleet and client group

Certified fleet

The certified fleet remains unchanged since the previous SA. The latest list of certified vessels was published at the MSC website on January 22, 2020.

Client group

The client group remains unchanged since the previous SA. The latest version of the certificate was published at the MSC website on July 30, 2020. The certificate expiry date was extended by 6 month (9 August 2021) due to the MSC Covid Derogation.

2.2.3 Fishery management and regulatory framework

The OFMP for the fishing season 2019-20 (Resolución de 21 de noviembre de 2019), currently in place, has kept the new changes introduced in the 2018-19 OFMP and only two small changes have been introduced related to the objectives of the fishery and the frequency of data reporting:

1) OFMP Objectives: a slight change has been added in the objective related to P1 based on the current availability of a stock assessment for the fishery.

II. MANAGEMENT PLAN

First. — Objectives.

1- The main objective of the management plan is to guarantee the sustainability of the resource. For this, it is considered appropriate to maintain the general rules of previous fishing campaigns and also, for the fishing season 2019-20, to establish the following specific objective:

*• Determine if there is a risk of overfishing based on early indicators of the state of the stock **and/or reference points based on stock assessment**, and limit the fishing effort in the event that such risk is detected.*

2) Data reporting: the fishers' guilds should report landings data weekly (before the OFMP 2019-20 this requirement was only monthly).

III. ADITIONAL REGULATIONS

*First. — Fishers' guilds are obliged to send to the General Directorate of Maritime Fisheries of the Regional Ministry of Rural Development, Agriculture and Fisheries, the precise information concerning the weighing of the catches of common octopus, **on a weekly basis**. The vessels included in the management plan that do not facilitate to the fishers' guild the control of the weighing of catches, may have their authorisation revoked.*

Besides the changes in the OFMP three other topics deserves attention:

1) **Harvest Control Rules (HCRs)**: two possible HCRs were discussed within the OFMC in the previous fishing seasons. During the 2019-20 a third HCR, based on a stock assessment model (combining generalized depletion models and a Pella-Tomlinson surplus production model) was presented in the OFMC in February 2020. The new HCR presented by the CEP established a TAC for each fishing season of 189 t, after reaching this TAC, the fishery would close. This new HCR was unanimously approved by all stakeholders present in the OFMC meeting. The CEP confirmed during the 4SA site visit that they will formally recommend to include this HCR in the OFMP for the next 2020-21 fishing season, which will be drafted along autumn 2020. Since the HCR is still not in place, the Condition 1 (PI 1.2.2) remains open.

2) **Decision-making process protocol in place**: the DGPM has just approved on February 2020 a Protocol for the Decision-making Process in the Octopus Fishery Management Plan of the Principado de Asturias (DGPM, 2020a). This protocol has gone through several versions and was extensively discussed within the consultative OFMC where all stakeholders of the fishery are actively participating. The DGPM has approved the protocol that came from the OFMC. Under this protocol the DGPM, after considering the meeting notes from the OFMC, will make a proposal for the next OFMP which will be sent to all fishers' guilds who can make formal allegations. These allegations will be answered back by the DGPM on a written document. After this, the final OFMP will be sent by the Managing Director for publishing in the BOPA, the Official Gazette of the Principality of Asturias. The fishers' guilds still have a new opportunity to, if they wish so, bring an administrative appeal before the Board of Administrative Litigation of the Superior Court of Justice of Asturias. This new protocol provides accountability and transparency of the management system and decision-making process. Condition 3 (PI 3.2.2) was re-scored in this 4SA reaching all SGs 80 and therefore, closed.

3) **Implementation of the traps marking program**: although a new regulation was approved in the 2017-18 OFMP regarding the marking of the line of traps, this regulation had not been implemented in the fishery

by the Surveillance and Control Unit due to a reduction in the number of enforcement officers in the last years. This measure was finally implemented in this current fishing season 2019-20 in which, 25 of the 43 vessels licensed (all vessels from the fishers' guilds of Luarca, Figueras, Tapia and Viavélez, and one vessel from Ortiguera), representing 58% of the OFMP fleet, have now the lines of traps marked. The head of the Surveillance and Control Unit confirmed during the 4SA site visit that the whole octopus fleet from the OFMP will have the traps marked for the next fishing season (2020-21). Condition 4A (PI 3.2.3) was re-scored in this 4SA taking this information into account and the score was risen to 75, but since not all SGs 80 were meet the condition remains open.

2.2.4 Compliance

The main relevant issue concerning the MCS in the past years had been the weakening of the surveillance capacity in the octopus' fishery due to a reduction in the number of enforcement officers in the Surveillance and Control Unit because of retirement and medical leaves of part of the staff. For the 2019-20 fishing season, this weak point was partially solved by incorporating more officers and by giving priority to this fishery in terms of surveillance and control. Out of the 16 inspectors of the unit in Asturias (12 inspectors full time and 4 part time), currently 2 full time inspectors openings are still pending to be filled. Nevertheless, the octopus' fishery is a priority for the unit so the number of inspections compromised in the fishery, according to the minimum approved by the Surveillance and Control Unit (DGPM, 2017), has been fulfilled in the current fishing season 2019-20. Some of the staff retired could not be replaced in time due to the long administrative process, but will be done along next fishing season according to the head of the unit.



Figure 2-1. Marking system in the OFMP with the unique ID seals attached to the buoys of the line of traps.
Source: Valentín García (Head of Surveillance and Control Unit).

The main novelty in the fishery was the implementation this fishing season 2019-20 of the **procedure for marking the line of traps**, which was pending to be set in place since it was approved in the 2017-18 OFMP. This measure was implemented this season in 25 of the 43 vessels licensed (all vessels from the fishers' guilds of Luarca, Figueras, Tapia and Viavélez, and one vessel from Ortiguera), representing 58% of the OFMP fleet which have now the lines of traps marked. The marking system (Fig. 2-1) is as follows: the line of traps has two buoys, one in each end, where a seal is set with a unique ID (silk-screen printing in relief) that identifies the boat name, plate number of the boat and the number of lines of traps of that boat (for cross-checking during the inspections, the DGPM has a database with the number of lines of traps of each boat and the number of traps included in each line). If both seals from a line of traps are lost, that ID is removed from the database (becoming a non-valid ID) and a new ID is issued to that line of traps (so far this has only happened once in the fishery). Before the start of the fishing season 2019-20, the CEP sent to all *cofradías* part of the OFMP directions for the skippers regarding this marking system, under which all boats should identify the number of lines of traps and the amount of traps in each line. Based on that, the DGPM issued the seals.

Regarding the number of **inspections** in the fishery and according to the report provided by Valentín García (Head of Surveillance and Control Unit) (DGPM, 2020d), the following actions were done during the 2019-20 fishing season: 7 boats (16% of the total boats in the OFMP) were inspected while unloading the fish (mostly to control the weight-limit regulation), 34 lines of traps (10% of the total) from 12 boats were checked at sea for controlling the compliance in the new trap marking regulation recently implemented in the fishery, the weight-limit regulation and other fishery measures. Moreover, 18 lines of traps in 7 of those boats inspected were being lifted on board while the enforcement officers were present, so the number of traps were counted (592 traps which correspond to 5% of the total) in order to check compliance with the maximum number of traps per boat allowed). Finally, 4 boats (9% of the fleet) were inspected at sea for checking compliance with all other management measures (license, dispatch of crewmembers, weight-limit, fish loading sanitary conditions, etc.).

Regarding the number of **infractions**, during the 2019-20 fishing season a **100% compliance** with all management measures has been found in the boats belonging to the OFMP according to the information provided by Valentín García (Head of Surveillance and Control Unit) during the site visit and its subsequent report (DGPM, 2020d). The only infractions set for setting illegal octopus' traps have been issued to **recreational fishers** (35 illegal traps found in Asturias during the 2019-20 fishing season, 18 of them found in the area of the OFMP); 13 infractions were issued due to having octopuses under the weight limit and 1 infraction for using an illegal fishing gear.

The fishery has done in recent years a strong progress regarding **compliance with the maximum number of traps per vessel** allowed since the fishing season 2014-15, when a high degree of non-compliance was found. A work done during the fishing season 2014-2015 in the four fishers' guilds of the UoC revealed a "high degree of non-compliance in the number of traps used" (CEP-SIGMA, 2016). This study was done by on-board biologists from the CEP and SIGMA SL for characterizing the octopus' fishery and it just had a descriptive intention, without any surveillance purposes. In the 2017-18 fishing season just a single excess in the number of traps was observed based on the on-board observers' program report (Fernández, 2018c). Nevertheless, since this report, although observers keep registering this data, the information is not any more shown on the report. M^a del Pino Fernández (CEP biologists in charge on the on-board observers program) confirmed us during the 4SA site visit that they decided not to report the number of traps data for not interfering with the Surveillance and Control Unit, avoiding in this way a potential loss of trust from the fleet in the monitoring work done from CEP. Nevertheless, stakeholders consulted during the site visit, as in previous years, considers that fishers' compliance regarding this measure is very high, and only in the fishing port of Luarca (part of the UoA but outside the UoC) the problem still persists.

The above circumstance was confirmed by the Surveillance and Control Unit. Based on their report (DGPM, 2020d), in the 2017-18 fishing season, 4 **sanctions** (fines between 400-1,250 euro) were issued due to excess of traps (all in the port of Luarca) and 2 sanctions were issued due to individuals smaller than the minimum weight (one of the sanctions was issued to a boat part of the MSC UoC) to boats from the OFMP. In the 2018-19, only one sanction was issued due to fishing during the closure period, and in the 2019-20 no sanctions were issued since no infractions were found. During the 4SA site visits we asked to Valentín García (Head of Surveillance and Control Unit) about the resolution of these sanctions, but the final result of them was unknown.

Another source of information regarding the fishers **compliance with the minimum weight** comes from the CEP monitoring at port. In the 2018-19 fishing season, the percentage of individuals below the weight limit (1 kg) was kept all the season below 5% of the landings (Fernández, 2018a), showing a slight decrease from last season (4-8%) (see 2SA report). Nevertheless, during June and July, percentages go up to 15% (Fernández, 2018a). In the last fishery monitoring report available (fishing season 2018-19) (Fernández, 2019c) monthly information on octopus below the weight limit (1 kg) is not shown anymore, although it is still being registered. M^a del Pino Fernández (CEP biologists in charge of the monitoring) confirmed us during the 4SA site visit that they decided not to report this information anymore, for not interfering with the Surveillance and Control Unit, avoiding this way a potential loss of trust from the fleet in the monitoring work done from CEP. The only information shown about this is a general statement; in the 2018-19 and 2019-20 fishing seasons the proportion of individuals below 1kg was the lowest of all the historic time series, being <1%, and moreover, no individuals were found below 900 g (Fernández, 2019b, 2019c, 2020b).

So far, the DGPM still has **no ability to seize and remove lines of traps** at sea because of the lack of a vessel large enough to do it. In June 2020, the Asturias Government released a press note announcing the

tender of a vessel for the DGPM (21 m length, 1,500 horse power) with a multiannual budget (2020-22) of 1.7 million € (GPA, 2020). Moreover, in May 2020 the Maritime Service of the Civil Guard (Ministry of the Interior, Spanish Government) in Asturias received a new vessel (20.5 m length, 2,400 horse power) designed for surveillance and control activities of coastal fisheries, rescue and drug traffic in the maritime Asturias waters. The Surveillance and Control Unit from the DGPM collaborates with the Civil Guard in the surveillance of the coastal marine waters in Asturias.

Regarding the **roles and duties of the *guardapescas*** in Asturias, a *Protocol of Guardapescas Action in the OFMP* (DGPM, 2020b) was delivered in February 2020. The protocol details the roles the *guardapescas* should take regarding the monitoring of the landings and the control and surveillance of the professional octopus' fishery as well as the recreational fishing occurring in their areas. Regarding the **landings monitoring**, the protocol establishes that the *guardapescas* shall control and follow up the daily activity of all vessels in their fishers' guild, register and weight the landings, check for individuals below the 1kg weight limit and send all this information to the CEP, as well as collaborating with them in their monitoring of the fishery. Regarding the **control and surveillance**, the *guardapescas* shall check for compliance on weight limit, control que quotas (daily, weekly and annually) established in the OFMP, collaborate with the DGPM Surveillance and Control Unit on the control of the maximum number of fishing traps and with the implementation and development of the marking system for the line of traps, and check for compliance in any other measure of the fishery, including the closed periods. The protocol also establishes the possibility that the *guardapescas* can take action on control and surveillance at sea, although the reality is that they do not have the resources for doing it (*i.e.* a vessel). Moreover, the *guardapescas* shall also control the recreational fishing in their areas. The *guardapescas* do not carry out inspections or monitoring of catches at sea and have never imposed any sanctions for any violation on any vessels/fishers included in the OFMP. They have, however, imposed sanctions on recreational fishers, for which they often request assistance from the Civil Guard (SEPRONA) because of their proximity and rapid response.

Regarding the compliance with other measures like the fishing time (vessels must be at port before 17:00 h), and after analysing 1,380 fishing days from 40 different vessels based on the GPS tracking system (see *Section 2.2.6*), it has been observed that compliance with this measure is practically absolute, with just very rare cases of non-compliance (Fernández, 2019a).

The assessment team has not found any other non-compliance of the UoA to the management measures in place.

Lastly, the DGPM released on September 2020 an update of the minimum number of inspections (on land and at sea) compromised in the fishery to be applied in the coming 2020-21 fishing season (DGPM, 2020c). According to the new program for the MCS system, the minimum number of actions to be done by the Surveillance and Control Unit in the OFMP each fishing season are: 1) On land actions: minimum of 15% of the boats randomly selected will be checked while landing (but if any infringement is detected in a boat, its landings will be checked at least once a month during the current and next fishing seasons), 2) At sea actions: minimum of 5% of the lines of traps will be inspected for checking their correct marking according to the directions issued by the DGPM, minimum of 5% of the total number of traps will be seized for checking compliance with the maximum number of traps per boat allowed and with the line of traps marking system, a minimum of 5% of the boats will be inspected to check compliance with other management measures (license, dispatch of crew members, weight-limit, fish loading sanitary conditions, ...).

2.2.5 Traceability issues

Authorized landing and auction points remain unchanged since the PCR.

No changes in the traceability system described in the PCR and comments included in the previous SA report. The system allows segregating the certified octopus from the one that is not certified.

2.2.6 Scientific based information related to P1

The assessment team considered that the information presented below means that the information for P1 PIs has not changed and no re-scoring is needed.

The CEP **annual report of the fishing season 2019-20** was still not available (expected to be available in fall 2020) during the off-site visit of this SA, so information showed below is from the 2018-19 fishing season monitoring report (Fernández, 2019c). Apart from the yearly report produced when the fishing season finishes, the CEP is now also producing **mid-term reports** during the fishing season in March, in order to

come up with early indicators on the status of the fishery (Fernández, 2020a). The main novelty regarding P1 is the **new stock assessment model** (combining generalized depletion models and a Pella-Tomlinson surplus production model) of the octopus' stock of Asturias (Roa Ureta, 2019). Moreover, a **new HCR** has been approved in the OFMC based on this stock assessment, although it has not yet been endorsed by the DGPM.

The following information is based on the **yearly fishery monitoring report** (Fernández, 2019c). The number of vessels in the OFMP has been around 40-50 vessels per season in the last 5 years (47 vessels in the last 2018-19 fishing season) (Fig. 2-2). **Catches** in 2015-2016 went up considerably to 140 t for descending drastically to 64 t the next season, and increasing again in the following three years up to again 140 t in the last 2018-19 fishing season (Fig. 2-2). The main fishing ports this last fishing season and historically are Luarca, Puerto de Vega and Viavélez (all of them are part of the UoC except for Luarca that is part of the UoA) (Fig. 2-3). Monthly **effort** (number of vessels) in the first half of the 2018-19 fishing season was similar to the historic average, but octopus' catches (kg) during those months (December to February) were way over the historic averages for the 2001-18 period (Fig. 2-3). From March onwards, the catches were drastically reduced. No boats went to fish octopus in July, a month that historically has the lowest number of boats fishing (5-10 boats) (Fig. 2-3).

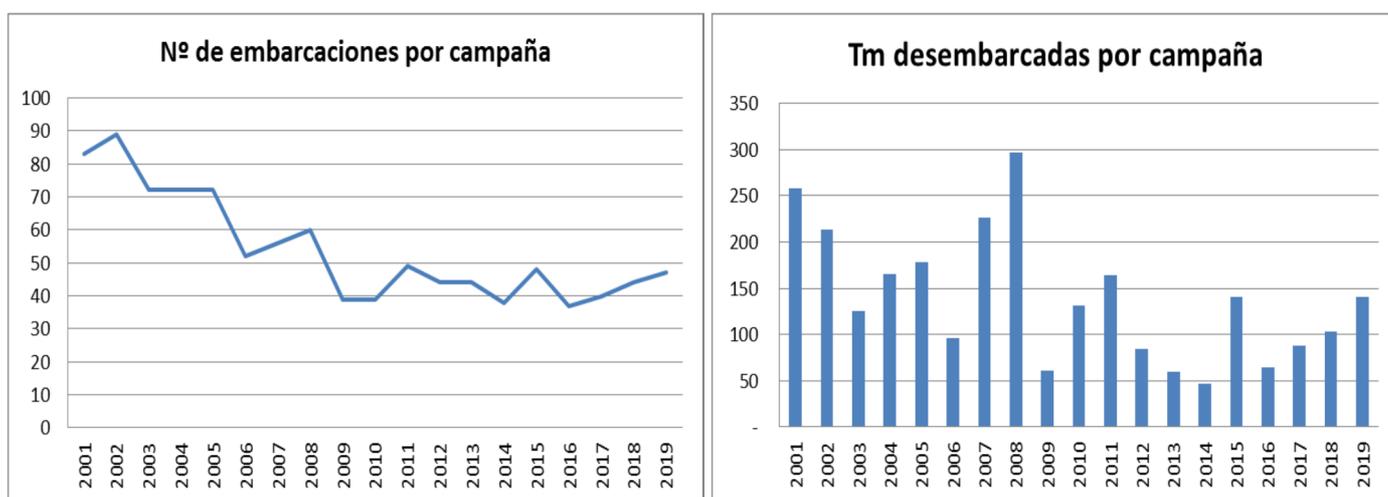


Figure 2-2. Historic number of vessels assisting to the octopus' fishery in Asturias (left graph) and historic catches (right graph) since 2001. Source: Fernández, 2019c.

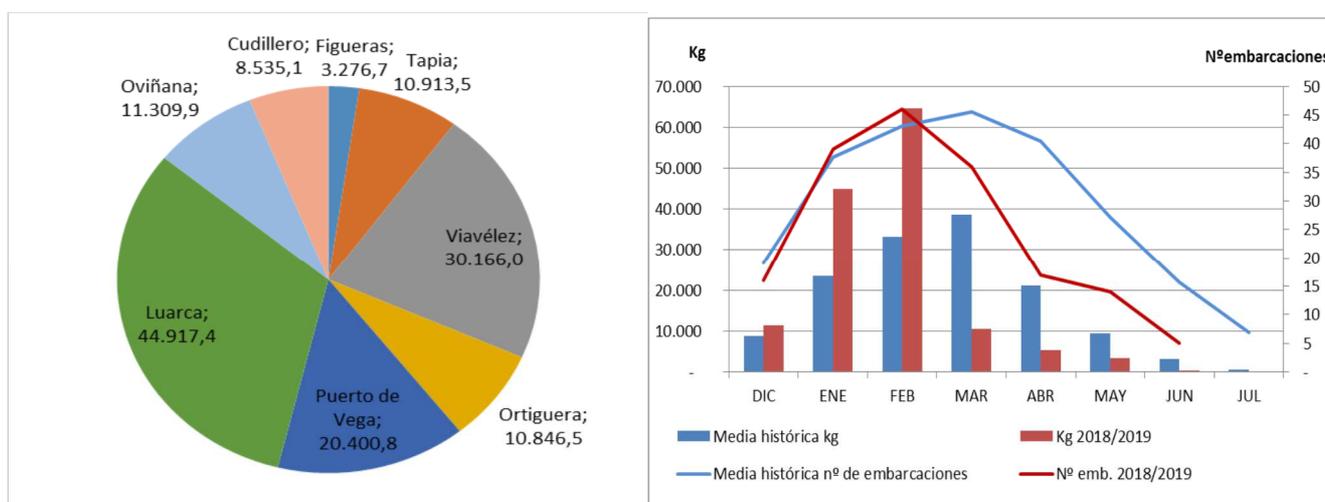


Figure 2-3. Historic octopus' landings by fishing ports part of the OFMP in Asturias (left graph) and monthly effort ((lines: number of vessels) and catches (bars: kg) comparing the last fishing season (in red) with the average historic data from 2001-18 (in blue) (right graph). Source: Fernández, 2019c.

Last **CPUE** available for the 2018-19 fishing season was almost 82 kg per fishing day, the highest since 2007-08 (Fig. 2-4). Monthly CPUEs in the first half of the season (December-February) were much higher (around 100 kg/day) to the historic data observed (~70 kg/day) in those months, but in the second half, when the assistance of the boats to the fishery was drastically reduced, the CPUE (10-40 kg/day) was similar or below historic data. As in past years the highest CPUEs were observed in January (~105 kg/day) while the lowest were in June (10 kg/day), the last month with octopus' catches this year.

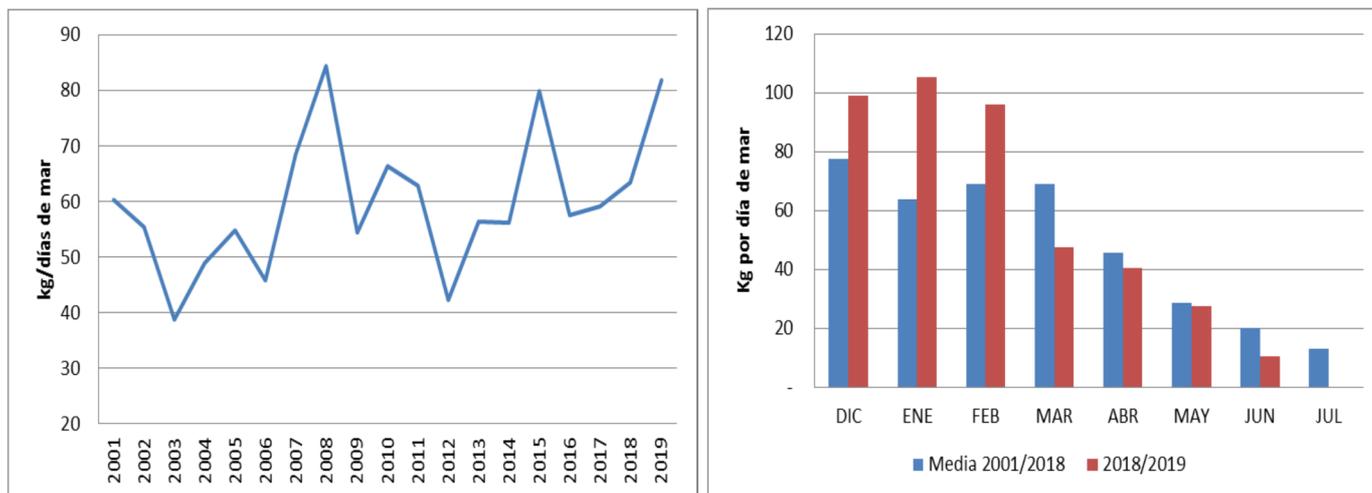


Figure 2-4. Historic yearly CPUE (kg per fishing day) (left graph) from 2000-01 fishing season and monthly CPUE (comparing last 2018-19 fishing season to 2001-18 average) for the octopus' fishery in Asturias. Source: Fernández, 2019c.

During the 2018-19 fishing season, all the vessels that assisted to the fishery were tracked by **GPS**, although in 8 boats the device did not work properly and could not be replaced along the fishing season, so only 40 vessels were finally tracked. In 20 of those vessels a 100% of the fishing days were monitored, while in the rest of the boats only partial monitoring was achieved, since the GPS device was not installed since the beginning of the fishing season. Based on the speeds of the 40 vessels (1,380 fishing days, representing 80% of the total fishing days in the OFMP) a map of relative fishing intensity could be drawn (Fig. 2-5). From this information, it is clear that most of the octopus' catches (88%) are done very close to the coast (<1.5 miles) and at shallow depths (95% at <50 m) (Fig. 2-5).



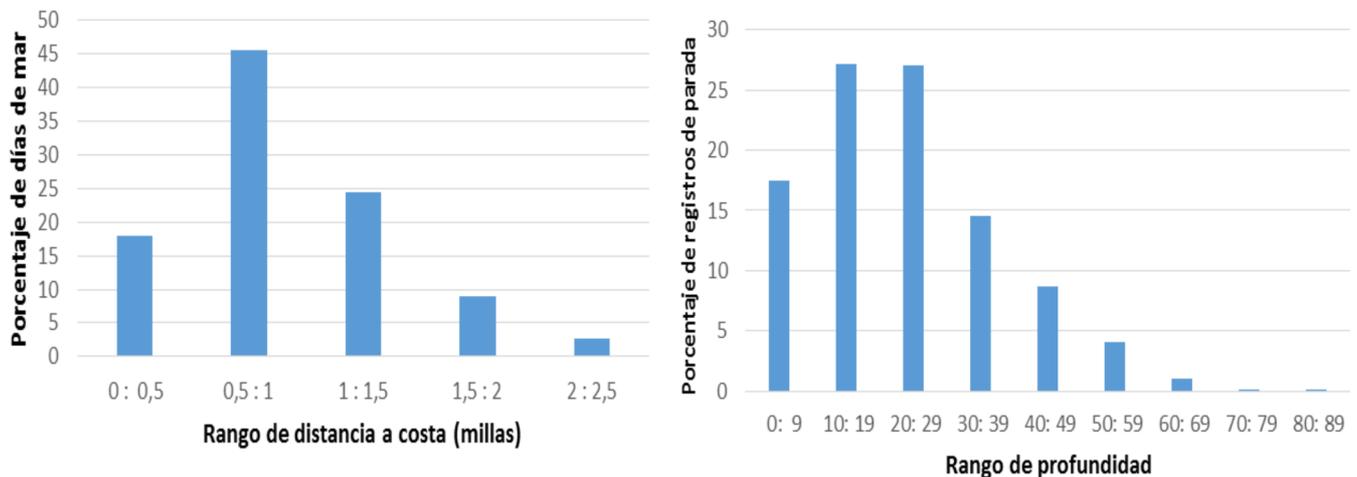


Figure 2-5. Fishing intensity (top graph) (high in red, medium in yellow and low in green), distance to the coast in miles (down-left graph) and fishing depth range (down-right graph) of the 40 octopus' vessels tracked by GPS in the coast of Asturias during the fishing season 2018-19. Source: Fernández, 2019c.

After the fishing season 2014-15 the ex-vessel **price** per kg for octopus in the UoA suffered a great increase, from an average that historically had been always around 4-6 €/kg in the previous 15 years, reaching a maximum of 10 €/kg in the 2017-18 fishing season. In the last season, 2018-19, octopus price went down to 7.8 €/kg (Fig. 2-6).

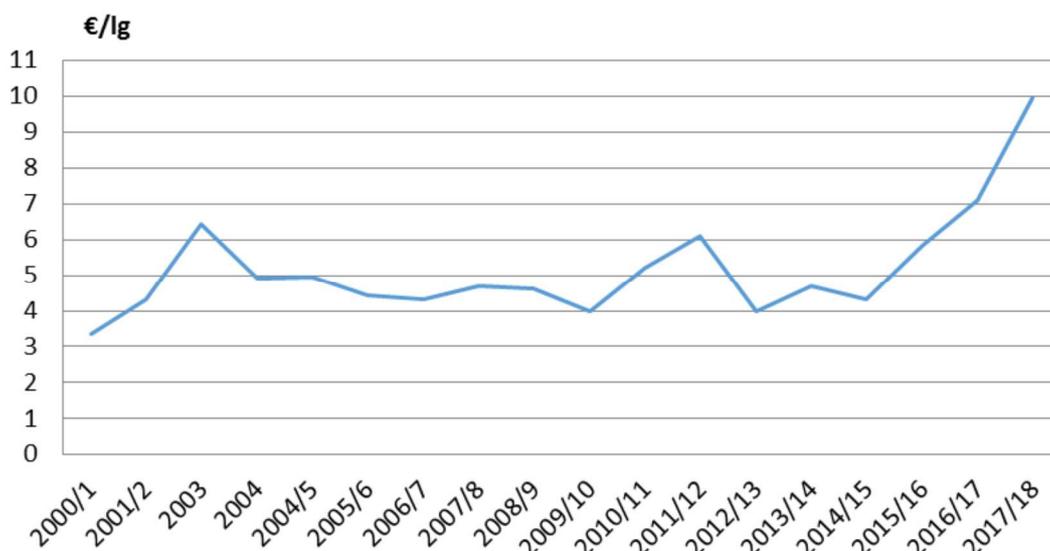


Figure 2-6. Historic octopus' price (in €/kg) in the UoA. (Note: price in 2018-19, not shown, was 7.8 €/kg). Source: Fernández, 2019c.

Besides the yearly report when the fishing season is finished, the CEP is now producing **mid-term reports during the fishing season** in March, in order to come up with early indicators (octopus' weight and CPUE) on the status of the fishery (Fernández, 2020a). This mid-term assessment is linked to one of the objectives of the OFMP; "determine if there is a risk of overfishing based on early indicators of the state of the stock and/or reference points based on stock assessment, and limit the fishing effort in the event that such risk is detected". This mid-term report uses data from the on board observers' program and also from the monitoring of landings.

Regarding the landings monitoring the 2019-20 mid-term fishing season report concludes that:

1. Regarding **catches**: *the average catches per day of fishing this year are lower than the average for previous years, which can be interpreted as a lower abundance of the resource.*

2. Regarding **fishing effort**: *although there was a slight increase in fishing effort in December compared to previous years, due to the longer fishing season, this trend has not been maintained in January.*

Regarding the **on board observations**, the 2019-20 mid-term fishing season report found that December and January **CPUEs** (in both, weight and number of individuals) **and average weight of retained octopus' individuals were generally lower than in the last 5 fishing seasons.**

Despite these findings, no effort reduction of precautionary catches (daily-monthly limits) was set in the fishery, since the informal HCR (only approved in the OFMC, a consultative forum, but not set in place by the DGPM) establishes that restrictive measures would only be taken if the current indexes are "below the minimum found in the last 5 fishing seasons". Moreover, the report considers that since a HCR based on a stock assessment was about to be implemented in the fishery, it is better to manage the fishery based on the stock assessment outcomes rather than using these early indicators.

Besides the monitoring done by CEP and the work done in the past by the OMA from the University of Oviedo (see 2SA report), the fishery has just approved a third option for setting **HCRs based on a stock assessment** (combining generalized depletion models and a Pella-Tomlinson surplus production model) of the octopus' stock of Asturias (Roa Ureta, 2019). This new HCR was approved in the February 2020 OFMC meeting, although it has not yet been endorsed by the DGPM and set in place. The HCR, although not detailed yet, seems that will be based on a **TAC of 189 t** for each fishing season. When and what decisions will be set if the fishery gets close to this TAC, has not been established yet.

The **new stock assessment**, combines a generalized depletion model and a **Pella-Tomlinson surplus production model** in a hierarchical inference framework. In order to apply this model, daily catches by boat from the fishing season 2000-01 has been compiled and a database on weekly effort and catches has been constructed. The biological composition of the catch (weight and sex of each individual) is also used. The generalized depletion model estimates several parameters for each fishing season, between them, the abundance and biomass at the beginning of the fishing season, natural mortality (M), spawning biomass (emigrating females), recruitment, fishing mortality (F) and exploitation rate (U). On a second step, the estimates of spawning abundance in one year and recruitment in the following year were used to obtain a **stock-recruitment relationship** using Ricker's model. Finally, the estimations of initial biomass for each of the 19 fishing seasons (from 2000-01 to 2018-19) from the depletion model were used as inputs in a Pella-Tomlinson surplus production model to estimate the total latent productivity which corresponds with the surplus production that is biologically sustainable and that economically produces the maximum use of the resource. The main conclusions of this new assessment of the octopus' stock in Asturias, as stated in the report (Roa Ureta, 2019), are:

- 1. An appropriate stock assessment model and open source software have been developed for the octopus fishing in Asturias and adapted to the fast population dynamics that characterizes these organisms.*
- 2. 19 fishing seasons have been evaluated from 2001 to 2019 and parameters of abundance and natural and fishing mortality in each of these seasons have been estimated, with good numerical quality, statistical accuracy and biological realism.*
- 3. Recruitment, defined as the growth of the year's new juveniles to the minimum weight of capture [1 kg] occurs in the middle of winter and the escape of the spawned females to care for their eggs occurs later, also in winter.*
- 4. A Pella-Tomlinson surplus production model has been estimated with widespread depletion models yielding results of good statistical quality and realism biological, which shows a stock that fluctuates between two equilibrium points [of 1,500 and 2,500 t] in alternate years (Fig. 2-7).*
- 5. **Fishing mortality of the stock is low** compared to natural mortality, exploitation rates are low, especially after 2008 and up to now (Fig. 2-8), and landings are significantly lower than the productive capacity of the stock, represented by the average total latent productivity [239 t], especially in recent years (Fig. 2-9).*
- 6. A Ricker-type spawning-recruitment model with good statistical quality and of great scientific interest has been estimated (Fig. 2-10).*
- 7. **Exploitation is biologically sustainable by a good margin** but the economic return is below the sustainable productive potential of the fishery.*

8. The sustainable harvest control rule [HCR] obtained from the results of this study is that the **total catch per annual season is lower than the average total latent productivity, estimated at 239 tones**, with a statistical range of two standard deviations equal to [189, 289].

Another key result from the report is that “the annual exploitation rate (percentage of the initial biomass captured by the fishers during the season) has not exceeded 20%, in most seasons it is even less than 10% and is often less than 5%. It is apparent then that **octopus fishing in Asturias exerts a low pressure on the stability and renewal capacity of the stock**. Fishing mortality in all the seasons studied is well below natural mortality. The **fishing mortality has not affected abundance of spawning** so, in the end, fishing has not impacted on the capacity of the stock to be renewed”.

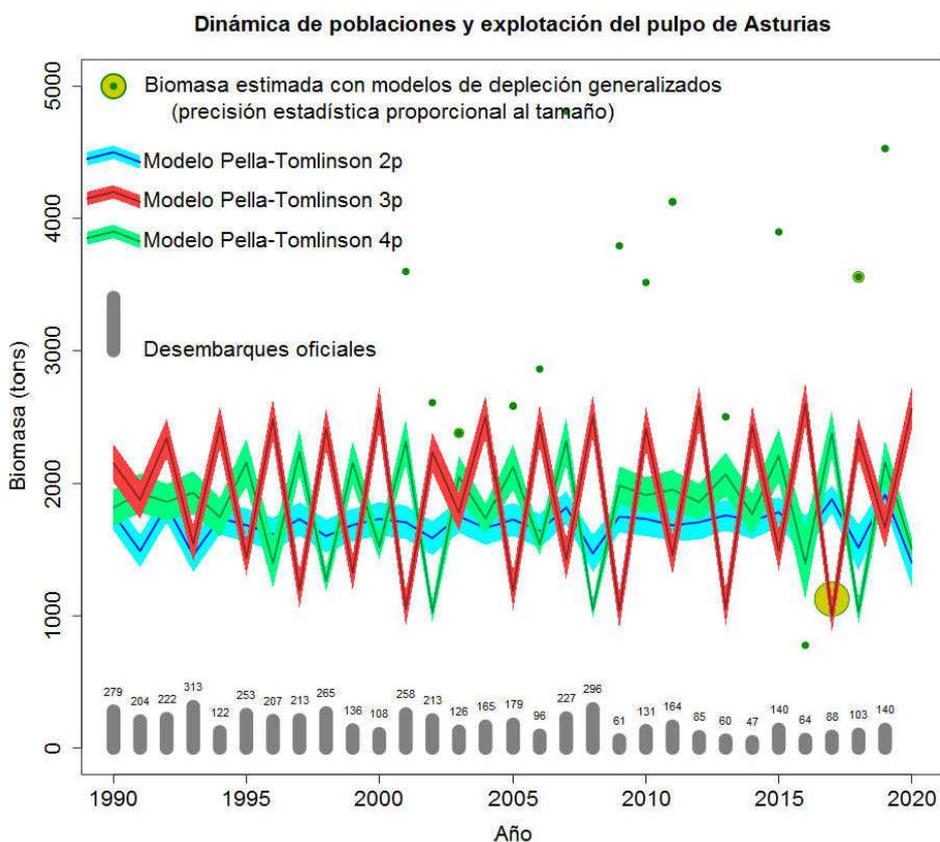


Figure 2-7. History of abundance and exploitation of octopus in Asturias according to the results of the estimation of the Pella-Tomlinson production models (the model finally selected was Pella-Tomlinson 3p). Green dots are biomass estimations based on the generalized depletion models. Grey bars are official catches (in tonnes). Source: Roa Ureta, 2019.

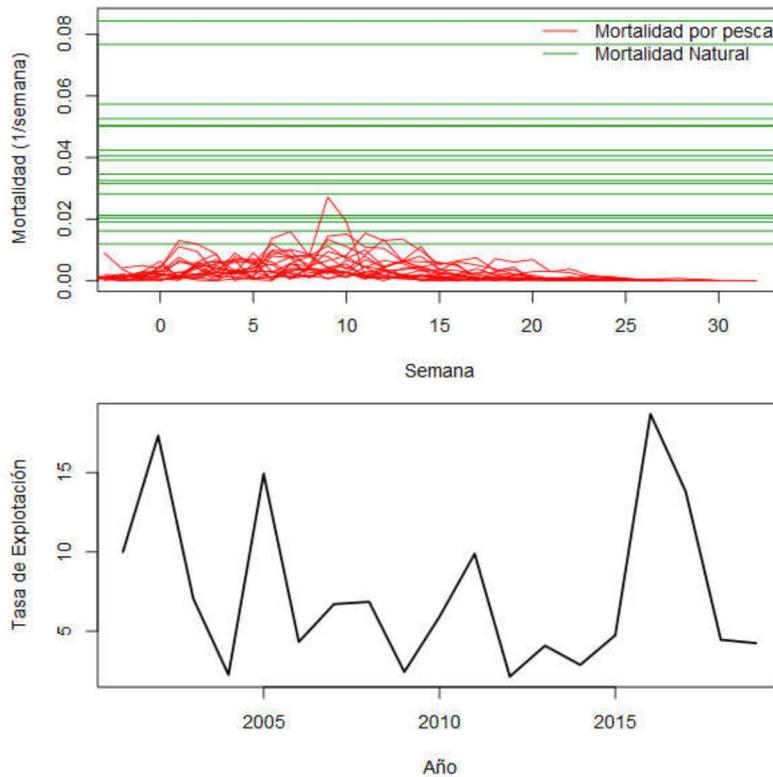


Figure 2-8. Intensity of the fishing pressure on the octopus' stock in Asturias. Upper panel: weekly fishing mortality (red variable lines) compared to natural mortality (green straight lines) in each of the 19 fishing seasons. Bottom panel: annual exploitation rate measured as percentage of the biomass at the beginning of the season that was removed by fishing during all season. Source: Roa Ureta, 2019.

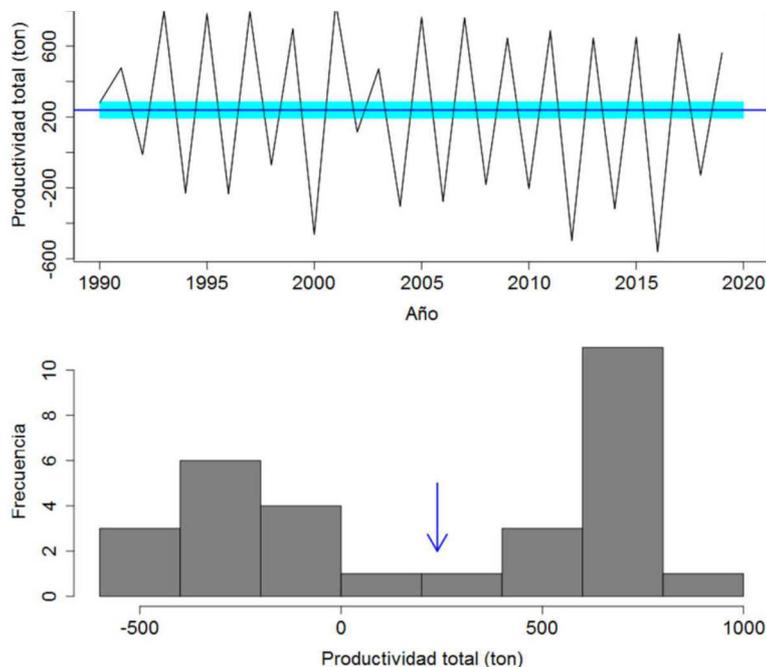


Figure 2-9. History of total latent productivity and its frequency distribution in the exploitation of octopus in Asturias according to the results of the production model estimation Pella-Tomlinson 3p. The blue line in the top panel is the average total productivity along the series (239 t) with a band of ± 2 standard deviations. The arrow on the bottom panel also indicates the average total productivity value. Source: Roa Ureta, 2019.

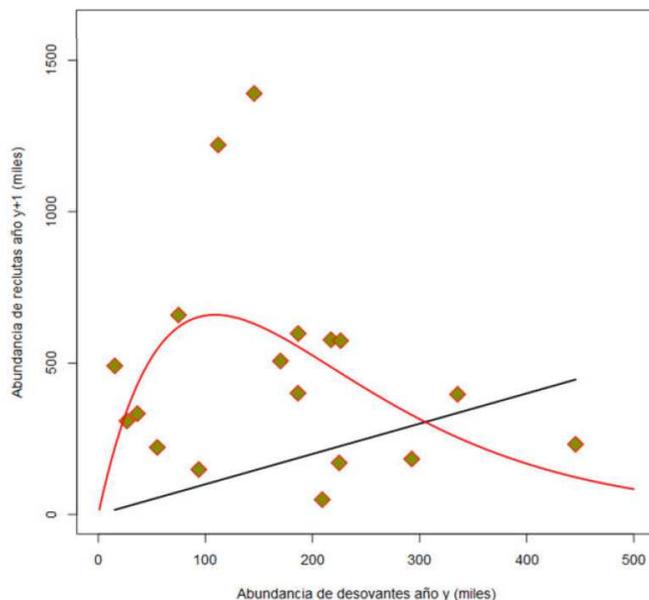


Figure 2-10. Estimates of spawning abundance in one year and recruitment the following year (diamonds), replacement line (abundance of spawning that produces the replacement in the following year's recruitment, 304,000 individuals) (black line) and Ricker's fitted model (red line). Source: Roa Ureta, 2019.

2.2.7 Scientific based information related to P2

Data collected by observers on board the UoC between December 2014 and July 2015 provided a comprehensive insight on the catch composition of this fishery. This information was considered in the previous SA report and as a result, all Primary and Secondary Species P2-Components were re-scored (Rios & Macho 2017).

Since 2016, all vessels included in the 2016/17 OFMP are bound to collaborate with this sampling (by getting a biologist on board) under CEP request. Therefore, this on board sampling has been extended to the whole UoA in the latest years. This observer program continued during 2019/20 and this fishery is now integrated within the observer program put in place by the DGPM, which aims a total of 4 observed fishing trips per month distributed among the different local fisheries in Asturias and, according to the objectives included in the OFMP 2 out of those 4 will always correspond to the octopus' fishery. Taking into account that the fishing campaign lasts 7 and a half months, the total 15 on-board days. This would correspond to around 1% of observer coverage in this fishery.

Results collected during the fishing season 2019/20 by the observers on board the fleet targeting octopus and also by the biologists working at the CEP were compiled and analysed at Fernandez 2020b. This report also shows data from the biological sampling performed by CEP biologists at ports. These monthly samplings started in 2000/01 and involved weights, sex ratio and maturity. This data is being used for the depletion model. The information collected by the observers related to catch composition, discarding and bait used is presented below was extracted from Fernandez 2020b.

Catch composition from sampling catches on board at least 10 different vessels from 5 different ports (Figueras, Tapia de Casariego, Viavélez, Ortiguera, Puerto de Vega) along 14 fishing trips between the 2nd of December 2019 and 15th of July 2019 are presented in **table 2-2**. Results are slightly different from those presented in previous years. Octopus comprised between 81.18% of the total catches, and 100% of the retained catches. Apart from the octopus, the significant commercial species being retained are the velvet crab (*Necora puber*), slipper lobster (*Scyllarus arctus*), conger (*Conger conger*) and comber (*Serranus cabrilla*) accounted for 6.49%, 0,31%, 2,15% and 1.59% respectively of the total catches in weight. The only ETP species listed is the *Charonia lampas*, and 100% of the catches are discarded alive (**Table 2-3**).

Observers also recorded whether the catches were alive or dead at the moment of being removed from the traps, and 98% (in number of individuals) of those discards were alive (**Table 2-3**). The lowest % of survival in number of individuals are for: *Serranus cabrilla* (96%), *Coris julis* (90%), *Ctenolabrus rupestris* (94%) and *Gaidropsarus mediterraneus* (89%) while for most of the species survival rates is 100%.

Furthermore, this study also provides some qualitative information of the type of bait used by the sampled fleet in the sampled ports. The different types of bait used are (with similar order of importance): artificial, bogue, mackerel, sardine and chicken. However, the report does not provide the volumes of bait used. These results are consistent with previous data.

Table 2-2 Catch composition recorded by observers on board the UoA during the 2019/20 fishing season. Retained (RET) and discarded (DESC) catches in number (N) and in weight (Peso). Source: Fernandez 2020b

Nombre Comun	Nombre Científico	Nº RET	Nº DESC	Nº TOTAL	PESO RET	PESO DESC	PESO TOTAL	%N	% PESO
Alitán	<i>Scyllorhinus stellaris</i>	0	4	4	0	1516	1516	0,20%	0,24%
Anémona	<i>Anemonia sulcata</i>	0	1	1	0	129	129	0,05%	0,02%
Atelecyclus	<i>Atelecyclus undecimdentatus</i>	0	4	4	0	77	77	0,20%	0,01%
Atelecyclus pequeño	<i>Atelecyclus rotundatus</i>	0	1	1	0	25	25	0,05%	0,00%
Bertorella	<i>Gaidropsarus mediterraneus</i>	0	9	9	0	668	668	0,45%	0,11%
Blenio	<i>Parablennius pilicornis</i>	0	21	21	0	284	284	1,04%	0,05%
Blenio portugués	<i>Parablennius ruber</i>	0	2	2	0	52	52	0,10%	0,01%
Bogavante	<i>Homarus gammarus</i>	0	1	1	0	190	190	0,05%	0,03%
Buey de mar	<i>Cancer pagurus</i>	0	6	6	0	1070	1070	0,30%	0,17%
Cabrilla	<i>Serranus cabrilla</i>	0	159	159	0	9857	9857	7,89%	1,59%
Cabruza	<i>Parablennius gattorugine</i>	0	43	43	0	1927	1927	2,14%	0,31%
Cangrejo de arena	<i>Liocarcinus marmoreus</i>	0	1	1	0	2	2	0,05%	0,00%
Cangrejo de arena	<i>Liocarcinus vernalis</i>	0	1	1	0	13	13	0,05%	0,00%
Capellán	<i>Trisopterus minutus</i>	0	1	1	0	52	52	0,05%	0,01%
Caracola	<i>Charonia lampas</i>	0	3	3	0	1075	1075	0,15%	0,17%
Centollo	<i>Maja squinado</i>	0	1	1	0	90	90	0,05%	0,01%
Chínfanu (sin determinar)	<i>Syngnathus sp</i>	0	1	1	0	1	1	0,05%	0,00%
Congrio	<i>Conger conger</i>	0	16	16	0	13341	13341	0,79%	2,15%
Erizo de corazón púrpura	<i>Spatangus purpureus</i>	0	1	1	0	6	6	0,05%	0,00%
Erizo de mar común	<i>Paracentrotus lividus</i>	0	1	1	0	48	48	0,05%	0,01%
Erizo violáceo	<i>Sphaerechinus granularis</i>	0	7	7	0	1034	1034	0,35%	0,17%
Estrella de mar común	<i>Marthasterias glacialis</i>	0	445	445	0	32674	32674	22,10%	5,27%
Estrella de siete brazos	<i>Luidia ciliaris</i>	0	7	7	0	740	740	0,35%	0,12%
Estrella espinosa	<i>Echinaster sepositus</i>	0	3	3	0	74	74	0,15%	0,01%
Farro	<i>Centrolabrus exoletus</i>	0	1	1	0	21	21	0,05%	0,00%
Gallano	<i>Labrus mixtus</i>	0	7	7	0	894	894	0,35%	0,14%
Gobio	<i>Gobius cobitis</i>	0	1	1	0	14	14	0,05%	0,00%
Holoturia negra	<i>Holothuria forskali</i>	0	9	9	0	559	559	0,45%	0,09%
Holoturia negra sin determinar	<i>Holothuria spp</i>	0	1	1	0	58	58	0,05%	0,01%
Holoturia tubulosa	<i>Holothuria tubulosa</i>	0	6	6	0	591	591	0,30%	0,10%
Inachus	<i>Inachus sp</i>	0	2	2	0	4	4	0,10%	0,00%
Inachus (placas)	<i>Inachus thoracicus</i>	0	32	32	0	171	171	1,59%	0,03%
Julia	<i>Coris julis</i>	0	10	10	0	814	814	0,50%	0,13%
Lota	<i>Gaidropsarus vulgaris</i>	0	7	7	0	1562	1562	0,35%	0,25%
Morena del Mediterráneo	<i>Muraena helena</i>	0	1	1	0	2244	2244	0,05%	0,36%
Nécora	<i>Necora puber</i>	189	123	312	29465	10733	40198	15,49%	6,49%
Ofiura lisa	<i>Ophioderma longicauda</i>	0	58	58	0	622	622	2,88%	0,10%
Patexo	<i>Polybius henslowii</i>	0	136	136	0	539	539	6,75%	0,09%
Pintarroja	<i>Scyllorhinus canicula</i>	0	1	1	0	282	282	0,05%	0,05%
Pulpo	<i>Octopus vulgaris</i>	174	403	577	253350	249624	502974	28,65%	81,18%
Quisquilla	<i>Palaeomon serratus</i>	0	43	43	0	269	269	2,14%	0,04%
Santiago	<i>Scyllarus arctus</i>	22	6	28	1680	235,5	1915,5	1,39%	0,31%
Sastre	<i>Galathea strigosa</i>	0	12	12	0	366	366	0,60%	0,06%
Tabernero	<i>Ctenolabrus rupestris</i>	0	31	31	0	568	568	1,54%	0,09%
TOTAL		385	1.629	2.014	284.495	335.116	619.611	100,00%	100,00%

Table 2-3. Species discarded in sampling on board made during the 2019/2020 campaign. For each species total number of discarded specimens in number and weight (g) is indicated, as well as the total discards that were alive (vivo) at the time of extracting from the traps (absolute value and %). Source: Fernandez 2020b.

Nombre Común	Nombre Científico	Nº DESC	PESO DESC	Nº VIVO	PESO VIVO	%VIVO (N)	% VIVO (W)
Alitán	<i>Scyllorhinus stellaris</i>	4	1516	4	1516	100%	100%
Anémona	<i>Anemonia sulcata</i>	1	129	1	129	100%	100%
Atelecyclus	<i>Atelecyclus undecimdentatus</i>	4	77	4	77	100%	100%
Atelecyclus pequeño	<i>Atelecyclus rotundatus</i>	1	25	1	25	100%	100%
Bertorella	<i>Gaidropsarus mediterraneus</i>	9	668	8	598	89%	90%
Blenio	<i>Parablennius pilicornis</i>	21	284	21	284	100%	100%
Blenio portugués	<i>Parablennius ruber</i>	2	52	2	52	100%	100%
Bogavante	<i>Homarus gammarus</i>	1	190	1	190	100%	100%
Buey de mar	<i>Cancer pagurus</i>	6	1070	6	1070	100%	100%
Cabrilla	<i>Serranus cabrilla</i>	159	9857	153	9505	96%	96%
Cabruza	<i>Parablennius gattorugine</i>	43	1927	43	1927	100%	100%
Cangrejo de arena	<i>Liocarcinus marmoreus</i>	1	2	1	2	100%	100%
Cangrejo de arena	<i>Liocarcinus vernalis</i>	1	13	1	13	100%	100%
Capellán	<i>Trisopterus minutus</i>	1	52	1	52	100%	100%
Caracola	<i>Charonia lampas</i>	3	1075	3	1075	100%	100%
Centollo	<i>Maja squinado</i>	1	90	1	90	100%	100%
Chínfanu (sin determinar)	<i>Sygnathus sp</i>	1	1	1	1	100%	100%
Congrio	<i>Conger conger</i>	16	13341	16	13341	100%	100%
Erizo de corazón púrpura	<i>Spatangus purpureus</i>	1	6	1	6	100%	100%
Erizo de mar común	<i>Paracentrotus lividus</i>	1	48	1	48	100%	100%
Erizo violáceo	<i>Sphaerechinus granularis</i>	7	1034	7	1034	100%	100%
Estrella de mar común	<i>Marthasterias glacialis</i>	445	32674	444	32523	100%	100%
Estrella de siete brazos	<i>Luidia ciliaris</i>	7	740	7	740	100%	100%
Estrella espinosa	<i>Echinaster sepositus</i>	3	74	3	74	100%	100%
Farro	<i>Centrolabrus exoletus</i>	1	21	1	21	100%	100%
Gallano	<i>Labrus mixtus</i>	7	894	7	894	100%	100%
Gobio	<i>Gobius cobitis</i>	1	14	1	14	100%	100%
Holoturia negra	<i>Holothuria forskali</i>	9	559	9	559	100%	100%
Holoturia negra sin determinar	<i>Holothuria spp</i>	1	58	1	58	100%	100%
Holoturia tubulosa	<i>Holothuria tubulosa</i>	6	591	6	591	100%	100%
Inachus	<i>Inachus sp</i>	2	4	2	4	100%	100%
Inachus (placas)	<i>Inachus thoracicus</i>	32	171	32	171	100%	100%
Julia	<i>Coris julis</i>	10	814	9	728	90%	89%
Lota	<i>Gaidropsarus vulgaris</i>	7	1562	7	1562	100%	100%
Morena del Mediterráneo	<i>Muraena helena</i>	1	2244	1	2244	100%	100%
Nécora	<i>Necora puber</i>	123	10733	108	9210	88%	86%
Ofiura lisa	<i>Ophioderma longicauda</i>	58	622	58	622	100%	100%
Patexo	<i>Polybius henslowii</i>	136	539	136	539	100%	100%
Pintarroja	<i>Scyllorhinus canicula</i>	1	282	1	282	100%	100%
Pulpo	<i>Octopus vulgaris</i>	403	249624	401	249355,2	100%	100%
Quisquilla	<i>Palaemon serratus</i>	43	269	43	269	100%	100%
Santiago	<i>Scyllarus arctus</i>	6	235,5	6	235,5	100%	100%
Sastre	<i>Galathea strigosa</i>	12	366	12	366	100%	100%
Tabernero	<i>Ctenolabrus rupestris</i>	31	568	29	542	94%	95%
TOTAL		1.629	335.116	1.601	332.639	98%	99%

2.3 Version details

Details on the version of the fisheries program documents used for this assessment are presented in **table 2.4**, as required in the ‘MSC Surveillance Reporting Template v2.01’.

Table 2.4. Details on the versions of the fisheries program documents used for this assessment

Document	Version number, date of publication (and date effective)
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MSC Fisheries Certification Process	FCP v2.1
MSC Fisheries Standard	Version 2.0, 1 October 2014 (1 April 2015)
MSC General Certification Requirements	Version 2.4.1, 7 May 2019 (28 September 2019)
MSC Surveillance Reporting Template	Version 2.01, 28 March 2019 (28 March 2019)

3 Results

3.1 Surveillance results overview

3.1.1 Summary of conditions

On **Table 3.1** it is listed the conditions raised in the PCR of the fishery, and also presents their status after current surveillance audit. As a result of current 4th surveillance audit, condition 1 (PI 1.2.2) was found 'behind target' and a remedial action was set, condition 2 (PI 3.2.1) was already closed on 3SA, PI 3.2.2 was rescored to 85 and therefore condition 3 was closed, and condition 4A (PI 3.2.3) was found 'on target'. See section 3-4 for the re-scoring table on PI 3.2.2. Both pending conditions should be closed before the certificate expires on 9th August 2021. Progress on these two open conditions will be checked during the preparation of the ACDR (the client has already expressed its interest in recertifying the fishery) and the site visit is planned for the beginning of 2021.

Table 3.1. Summary of conditions

Condition number	Condition	Performance Indicator (PI)	Status	PI original score	PI revised score
1	Before the end of the certification cycle, evidence must be presented that shows there are well-defined HCRs in place which are responsive to the state of the octopus stock in the coast of Asturias. Management tools and measures should ensure that the exploitation rate is adequate to the octopus population status and are expected to keep the stock fluctuating around a sustainable long-term highly productive level and above an acceptable risk range.	1.2.2	Behind target (remedial action set)	75	Not revised
2	By the third surveillance audit, short and long-term objectives for the fishery which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, need to be explicitly included within the fishery management plan. There should also be a clear means of assessing performance relative to these objectives.	3.2.1	Closed (3SA)	60	80 (3SA)
3	By the third surveillance audit, evidence shall demonstrate that Information on the fishery's performance and management action is available on request, and explanations for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity occurs	3.2.2	On target (Closed)	75	85 (4SA)
4A	By the fourth year, the fishery must provide evidence that: (i) the monitoring, control and surveillance system implemented in the fishery has demonstrated an ability to enforce relevant management measures, strategies and/or rules (including the	3.2.3	On target	65	Not revised

	regulation limiting the maximum number of traps per vessel), and (ii) that professional fishers are being inspected consistently and sanctions applied.				
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3.1.2 Total Allowable Catch (TAC) and catch data

No TAC is set for the octopus' fishery in Asturias but instead a maximum catch of 10 t is fixed per vessel and fishing season (see **Table 3.2**), regardless of the total number of vessels targeting octopus. Since the fishing season stretches from mid-December until mid-July, UoC landings from the latest fishing season (2019/20) were already available at the time of preparing the current SA report.

Table 3.2 Total Allowable Catch (TAC) and catch data

	Fishing season	Volume (tons)
TAC	2018/19	N/A
UoA share of TAC	2018/19	N/A
UoA share of total TAC	2018/19	N/A
Total green weight catch by UoC	2019/20	39.1
Total green weight catch by UoC	2018/19	77.7

Table 3.3 shows an initial increasing trend in the sales of MSC certified octopus caught by the UoC and sold in the authorised auction points as established in the PCR. Nevertheless, this last 2019-20 fishing season a strong reduction was observed, mainly due to bad weather and covid-19 measures that prevented boats to go out fishing. Total OFMP catches during the 2019/20 fishing season amounted to 39 091 Kg. Therefore, 98.7% of the octopus caught under the OFMP was sold as MSC certified.

As a final note, pointing that 98.7% of the octopus sold at the authorised auction points is identified as MSC, only 1.3% is sold with the generalistic code (OCT, not MSC-OCT).

Table 3.3 Kilograms of MSC certified octopus sales in the different authorised auction points by the 29 vessels included in the certificate.

Auction points	Kg / fishing season			
	2016/17	2017/18	2018/19	2019/20
Puerto de Vega	23 533	25 032	31 803	13 047
Tapia de Casariego	10 023	14 105	16 794	4 825
Viavélez (*)	23 968	25 944	29 082	20 724
Ortiguera	<i>Catches sold at Puerto de Vega auction point</i>			
TOTAL	57 523	65 081	77 679	39 091

(*) Data provided on annual basis for the years 2016, 2017, 2018 and 2019 respectively, instead of fishing season

3.1.3 Recommendations

No recommendations were initially set to the fishery. However, during the first surveillance audit a recommendation was set. See **table 3-8** to see progress achieved by the client.

3.2 Conditions

As of the 4th annual surveillance there were three open conditions related to PIs 1.2.2 (Condition 1), 3.2.2 (Condition 3) and 3.2.3 (Condition 4A). Condition 2 (PI 3.2.1) was already closed in the 3SA.

Condition 1 (PI 1.2.2) was found 'behind target' and a remedial action was set, placing a new milestone to be met before the certificate expires on August, 9th 2021. The CAB has also described what constitutes a successful overall outcome to achieve the SG80 performance level by the next certification cycle, but both

the CAB and client have considered that there is no need to review the original Client Action Plan to meet this new milestone.

Condition 3 has been closed in this 4SA since PI 3.2.2 was rescored to 85 due to recent improvements in the accountability and transparency of management system and decision-making process.

Condition 4A (PI 3.2.3) was found 'on target'. Recent progress has been made in the compliance and enforcement of the fishery, particularly regarding the implementation of the MCS system and the overall record of compliance of fishers with the controls and regulations in the fishery. However, the condition could not be closed because so far, there is no evidence that sanctions to deal with non-compliance are consistently applied and thought to provide effective deterrence; therefore, SG80 is not met in SI b for this PI.

Both pending conditions (1 and 4A) should be closed before the certificate expires on 9th August 2021. Progress on these two open conditions will be checked during the preparation of the ACDR (the client has already expressed its interest in recertify the fishery) and the site visit planned for the beginning of 2021.

3.2.1 Table 3.4. Condition 1

Performance Indicator	1.2.2 SI(a) SG80- Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY
Score	75
Justification	Well defined HCRs are not in place for this fishery and some of them are not responsive to the state of the stock. Several management tools and measures (like the TAC) are not well defined and have not changed in the last 15 years, and cannot ensure that the susceptibility of octopus to removal is no higher than that which would cause the risk to octopus to be above an acceptable risk range
Condition	Before the end of the certification cycle, evidence must be presented that shows there are well-defined HCRs in place which are responsive to the state of the octopus stock in the coast of Asturias. Management tools and measures should ensure that the exploitation rate is adequate to the octopus population status and are expected to keep the stock fluctuating around a sustainable long-term highly productive level and above an acceptable risk range.
Milestones (as in 3SA -2019-)	The following actions can be verified during annual surveillance audit: <u>Year 1:</u> The client shall demonstrate that it has taken steps to support the development of comprehensive HCRs. <u>Year 2&3:</u> The fishery shall demonstrate that options for HCRs have been outlined and discussed with stakeholders, and a policy document developed. <u>Year 4:</u> The fishery shall demonstrate that the HCRs are responsive to the state of the stock and the policy changes agreed in previous years and have been formally accepted by the government of the Principality of Asturias with clear evidence of the implementation of the agreed HCRs.
Revised milestones 4SA -2020-	During the first 4 years of the certification period the fishery has implemented several actions to support the development of comprehensive HCRs (i.e. continuation of the fishery on board monitoring, tracking devices in almost all vessels, CEP analysis of the CPUE indicator, OMA study and a recent stock assessment depletion model). Several possible HCRs to reduce the exploitation rate have been proposed and discussed with stakeholders within the OFMC, and options appears in several policy documents. Nevertheless, issues have arisen with candidate HCRs, and a stock assessment model has been applied to the fishery this last year. A new HCR derived from this new stock assessment was approved in the OFMC meeting in February

	<p>2020. The CAB considers this HCR to be responsive to the state of the stock. But the OFMC is just a consultative body, and so far the HCR has not been endorsed by the DGPM and set in place in the fishery, therefore this condition has found in the 4SA 'behind target' and a remedial action was set.</p> <p>As a remedial action a new milestone has been set to be met before the certificate expires on 9th August, 2021, in order to close the condition on time. Both the CAB and client have considered that there is no need to review the original Client Action Plan to meet this new milestone, which is proposed as follow:</p> <p>New milestone: before the certification expires (9 August, 2021) the fishery shall demonstrate that well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRL is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY.</p>
<p>Consultation on condition</p>	<p>The action plan was consulted with the CEP and therefore with the DGPM. They agreed to closely collaborate with the fleet.</p>
<p>Progress on Condition</p> <p>Year 1 -2017-</p>	<p>As a result of the multi-stakeholder COFWG meetings (see Section 2.4 for more details on the COFWG), certified vessel owners agreed on the following proposals aimed to help the design and later implementation of HCRs responsive to the state of the octopus stock in the coast of Asturias:</p> <ul style="list-style-type: none"> ▪ To promote the implementation of a daily and/ or weekly quota per vessel (notwithstanding current maximum quota per fishing season -10t/vessel). This proposal includes an operational methodology: (i) every February fishery data would be reviewed and assessed by the CEP; (ii) daily/weekly quotas would be discussed and agreed by the MC; (iii) agreed quotas would be implemented in the second half of the fishing season (mid-March - mid-July) ▪ To promote a limitation on the number of fishing hours/day: Current regulation establishes that fishing is allowed from dawn to dusk from Monday until Friday (no fishing during weekends is allowed). Participants would agree to include in the OFMP a regulation establishing an earlier hour of arrival to limit fishing effort (Note: later on, when ARPESOS was created, the members decided to limit their arrival time at 17h). ▪ To promote research on the adequacy of the different available indicators to be used as CPUE (Kg/day, Kg/trap*day, €/day), and how to integrate them in the fishery management. ▪ To collaborate with the CEP in relevant data gathering. Certified vessels agreed to collaborate with the CEP to collect detailed information on the fishery (biologists on board taking samples, GPS installed under CEP requirement, 1 vessel in each <i>cofradía</i> fills a log-book with information on fishing operations – number of traps hauled and re-hauled and their respective octopus catches- using a specific form). Some of these requirements, such as the obligation to install the GPS tracking devices under CEP requirement, have already been incorporated in the OFMP. ▪ To promote a drill on the next fishing season (2017/2018) to test drafted management measures. <p>ARPESOS has committed to elaborate a report compiling all these proposals, so they can be brought up for discussion within the fishery MC, which integrates all vessels included in the fishery MP. The following OFMC meeting is scheduled for next autumn, before the next fishing season (2017/18) starts.</p> <p>On the other hand, the CEP works in parallel with the following initiatives aimed to gain knowledge on the fishery to improve its management and support the development of HCRs:</p> <ul style="list-style-type: none"> ▪ Biological sampling on board fishing vessels. This project started 3 years ago and it is kept in place. A consultancy firm, SIGMA, S.L., is hired for sampling twice a month throughout the fishing season (initially the sampling frequency was 4 times/month, and it was lowered after the first year). Two biologists get on board for sampling, visiting each <i>cofradía</i> every 10 working days approximately. They collect information

	<p>on fishing operations and sample octopus catches, other retained species and discards. Samplings are also used for other supplementary studies that may provide information on stock structure (i.e. genetics, tagging³...).</p> <ul style="list-style-type: none"> ▪ GPS/GPRS tracking of the vessels. As explained in section 2.5 the installation of tracking devices already started in the fishing season 2014/15 through a project commissioned to the SIGMA SL. This measure has been included in the OFMP for the 2016/17 fishing season, and although not all vessels are tracked, it is mandatory for the vessel owner to allow the installation of the device under CEP requirement. According to CEP representatives, the aim for the next fishing season (2017/18) is to have a 100% GPS/GPRS coverage in the fleet included in the OFMP. ▪ A self-monitoring program was implemented during last fishing season (2016/17). CEP designed and distributed among the fishers a form to collect detailed information on fishing operations (number of traps hauled and re-hauled and their respective octopus catches). 1 vessel per <i>cofradía</i> was committed to use this form daily. ▪ Recently, the OMA (from the University of Oviedo) has been commissioned to study the possible applicability of new tools for a scientific assessment of the octopus' fishery and asses different monitoring indicators used in other alike fisheries around the world (see section 2.3 for more details). This study was tendered by the DGPM at the CEP's request, and it is expected to be finished by the end of 2017. <p>The result of these initiatives will help CEP to achieve a detailed understanding of the fishery, which allows identifying the best CPUE indicators and how to integrate them in the management. So far, no other possible index is thought to be used as an indicator on which a HCR could be based on.</p> <p>As CEP representatives are participating in the COFWG and OFMC meetings these results have been presented and discussed with the fishers in these fora. Furthermore, CEP representatives confirmed they share the proposed operational methodology in relation to the implementation of future HCRs discussed within the COFWG (see above). During the site visit the assessment team confirmed that certified fishers and CEP are aligned on this issue. However, both certified fishers and CEP acknowledge that discussions on the fishery management must be held at the OFMC as they would affect the whole fleet included in the MP.</p> <p>Finally, the client included in its action plan the organization of a technical workshop on the octopus fishery at a regional level (Asturias, Galicia and Portugal) to discuss scientific information on the octopus fishery and to draw conclusions on potential measures to improve the different management plans. During the site visit the assessment team could check that a similar workshop, but restricted to the Asturian fishery, was planned to be held in June 2017. The draft agenda was shown to the assessment team during the site visit. This workshop was finally postponed due to funding issues. However, although in its action plan the client mentions that WWF-Spain would collaborate in this event, the WWF representative interviewed during the site visit confirmed that no contacts were made in relation to this issue.</p>
<p>Progress on Condition</p> <p>Year 2 -2018-</p>	<p>The monitoring implemented by the CEP aimed to gain knowledge on the fishery to improve its management and support the development of HCRs is still ongoing:</p> <ul style="list-style-type: none"> • Biological sampling on board fishing vessels. This project started in the 2014-15 fishing campaign and it is kept in place. A consultancy firm, SIGMA, S.L., is hired for sampling twice a month throughout the fishing season (initially the sampling frequency was 4 times/month, and it was lowered after the first year). Two biologists get on board for sampling, visiting each <i>cofradía</i> every 10 working days approximately. They collect information on fishing operations and sample octopus catches, other retained species and discards. Since 2016 all vessels included in the 2016/17 OFMP are bound to collaborate with this sampling (by getting a biologist on board) under CEP request. Therefore, this on board sampling has been extended to the majority of the UoA in the latest years. In the 2017-18 fishing campaign, samplings were done on 7 different vessels from 5 different ports

³ Tagging experiments were implemented but recaptures were very low and showed very little displacement. As a result CEP decided to abandon this technique

(Figueras, Tapia de Casariego, Ortiguera, Puerto de Vega and Cudillero) along 16 fishing trips.

- GPS/GPRS tracking of the vessels. The installation of tracking devices already started in the fishing season 2014/15 through a project commissioned to the SIGMA SL. This measure has been included in the OFMP for the 2016/17 fishing season. In the 2017-18 fishing campaign this measure is mandatory for all vessels included in the OFMP; 43 vessels out of 45 were tracked (only two vessels that started late in the fishery did not install a GPS, although it is CEP intention to do it before the next fishing campaign).

- A self-monitoring program was implemented during last fishing season (2016/17). CEP designed and distributed among the fishers a form to collect detailed information on fishing operations (number of traps hauled and re-hauled and their respective octopus catches). Only 1 vessel per *cofradía* was committed to use this form daily in 2016-17. This data has not been analysed and the assessment team did not receive new information on the status of this program.

The CEP is using data from the different monitoring explained above to try different CPUE that better show the status of the stock. The intention is to compare current CPUE with the CPUE in the last 5 years and take decisions before and/or along the fishing season if some additional harvest control would be necessary. Using this CPUE indicator a proposal will be discussed inside the OFMC and if agreement is achieved, the proposal will be shifted to the DGPM to being implemented. The two harvest control measures that has been proposed so far for reducing the effort are: 1) reduce the fishing hours per day and 2) establish a daily and/or weekly quota per vessel. At the March 2018 meeting of the OFMC the CEP proposed a weekly quota of 400 kg per crew member (a similar measure was preliminary discussed in the October 2017 OFMC meeting). This proposal was sent to all fishing guilds included in the OFMP for consulting. Due to the lack of transparency at this stage of the decision making process, the assessment team does not know how supported is this proposal by the fishing sector, and if it is the DGPM intention to include it in the OFMP for the next fishing campaign. Based on the OFMC meeting notes, 3 out of 4 of the ARPESOS (=UoC) fishing guilds agreed with this measure, but other fishing guilds of the UoA participating in the OFMP did not agree. ARPESOS has also sent a similar proposal to discuss in the October 2017 OFMC meeting.

Another con-current initiative for developing a HCR has been developed by the Asturian Marine Observatory (OMA, University of Oviedo). The DGPM commissioned the OMA a work for studying the possible applicability of new tools for a scientific assessment of the octopus' fishery. The objectives of this study are directly related to the development of a HCR:

1. Gain understanding on the biology of octopus and its changes along time.
2. Describe and analyze the fishery statistics and its evolution along time.
3. Find forecasting variables that could be used as management tools.
4. Develop and propose a HCR incorporating the forecasting capacity of some of the variables analyzed, and propose reference points.

Forecasting variables: in the OMA report a positive relationship of the CPUE has been found with the sea surface temperature of the occidental coast of Asturias 5 and 13 months before the starting of the fishing season (see **section 2.8**). Other possible forecasting variables checked were winds, upwelling index and the North Atlantic Oscillation (NAO), but no relevant results were found. Nevertheless, the head of the study considers that the relationship found with temperature is weak for establishing a HCR based on it.

HCRs: the OMA has proposed several possible HCR based on the relationship between CPUE in December and total catch at the end of the fishing season (see **section 2.8**). These possible HCRs were explained and discussed in the March 2018 meeting of the OFMC. The debate was polarized between the fishing guilds more motivated to the establishment of a HCR (ARPESOS was in favor) and the rest of the UoA.

The OMA study also tried a forecasting model to estimate an annual TAC for the fishery. A Surplus Production Models was tried but results were not reasonable and with a large uncertainty, so the model was dismissed. While a new formal study gets funded, the OMA is committed to informally keep working on this topic. Actually, after the report was delivered, the OMA successfully tried depletion models on this fishery in collaboration with Rubén Roa-

	<p>Ureta, an independent consultant; since this work is still preliminary the assessment team did not have access to the analysis' results.</p>
<p>Progress on Condition</p> <p>Year 3 -2019-</p>	<p>There are currently 3 initiatives in order to set in place a well defined HCR:</p> <ol style="list-style-type: none"> 1) OMA study: TAC proportional to $CPUE_{DEC}$ 2) CEP monitoring: daily quotas after April if $CPUE_{DEC-JAN}$ is below historic levels 3) Stock assessment depletion model: HCR not defined yet <p>In the first two years after the certification, options 1 and 2 of the HCR have been developed and discussed with the fishing sector and stakeholders within the Octopus Fishery Monitoring Committee (OFMC). Option 1 has been extensively explained in the 2SA report. Along the 3SA the CEP provided documentation and explained the CAB the second option considered for setting a HCR.</p> <p>This second option has been developed by the CEP using the $CPUE_{DEC-JAN}$ (CPUE at the beginning of the fishing season during the months of December and January) based on both, the on-board monitoring and the fishery landings data (see section 2.2.6 for details). Under this option, effort reduction measures would be only implemented in April if the CPUE is below the minimum observed in the previous 5 years. The measures to reduce effort would be an early daily closure of the fishery at 16h (instead of at 17h) and a maximum daily quota of 60, 120 or 180kg for 1, 2 or >2 crew members respectively.</p> <p>The CAB considers that the first option for a HCR is consistent with SI(a) SG80, since it seems to ensure that the exploitation rate is reduced as the PRI is approached, and it is expected to keep the stock fluctuating around a target level consistent with (or above) MSY. Nevertheless, we do not consider that option 2 for HCR would actually reduce significantly the exploitation rate since it would only take place late in the season (April), when the number of boats and octopus landings are considerably reduced. Moreover, the daily quotas proposed (60, 120 or 180kg for 1, 2 or >2 crew members respectively) were set way over the observed $CPUE_{APR-JUL}$ usually between 20-50 kg/boat (Fernández 2018a), so most probably no exploitation rate reduction would be expected if applied. Moreover, if this measure is applied only after April, most of the females have already laid the eggs and therefore its effectivity would be limited (José Luis Acuña, personal communication).</p> <p>Both HCR options have been discussed in several meetings of the OFMC (CS 2018, 2019) and are included in the 2017-2018 fishing season report as possible measures to include (Fernández, 2018a). The second option for HCR was better accepted by the fleet and has been finally proposed to be included in the OFMP (Fernández 2018b). Despite its consideration in the previous policy documents, at the end none of the HCRs discussed were finally included in the OFMP for the 2018-19 fishing season (Resolución de 4 de Diciembre de 2018).</p> <p>Currently the fishery is working on a third option for setting HCRs based on a stock assessment depletion model that the DGPM has recently commissioned (July 2019) to Rubén Roa-Ureta, an independent consultant with strong expertise in this type of fisheries and models (DGPM 2019b). The model is expected to estimate reference points (MSY, B_{MSY},...) and a HCR would be set based on the reference points derived from the model results. No more information was given to the CAB regarding this third HCR option during the site visit. For more information on this model see section 2.2.6 of this report.</p>
<p>Progress on Condition</p> <p>Year 4 -2020-</p>	<p>The fishery has worked so far on 3 initiatives in order to set a well-defined HCR:</p> <ol style="list-style-type: none"> 1) OMA study: TAC proportional to $CPUE_{DEC}$ 2) CEP monitoring: daily quotas after April if $CPUE_{DEC-JAN}$ is below historic levels 3) Stock assessment model: HCR not detailed yet but based on a TAC of 189 t. <p>The first two HCRs were discussed within the OFMC in the previous fishing seasons, the second one was approved within the OFMC but it was never set in place since it was not endorsed by the DGPM. In 2019 the DGPM commissioned to the independent consultant Rubén Roa-Ureta to develop a stock assessment model for this fishery and propose a HCR based on this assessment.</p>

The **new stock assessment**, combines a generalized **depletion model** and a **Pella-Tomlinson surplus production model** in a hierarchical inference framework. In order to apply this model daily catches by boat from the fishing season 2000-01 has been compiled and a database on weekly effort and catches has been constructed. The biological composition of the catch (weight and sex of each individual) is also used. The generalized depletion model estimates several parameters for each fishing season, between them, the abundance and biomass at the beginning of the fishing season, natural mortality (M), spawning biomass (emigrating females), recruitment, fishing mortality (F) and exploitation rate (U). On a second step, the estimates of spawning abundance in one year and recruitment in the year following were used to obtain a **stock-recruitment relationship** using Ricker's model. Finally, the estimations of initial biomass for each of the 19 fishing seasons (from 2000-01 to 2018-19) from the depletion model were used as inputs in a Pella-Tomlinson surplus production model to estimate the total latent productivity which corresponds with the surplus production that is biologically sustainable and that economically produces the maximum use of the resource. The main conclusions of this new assessment of the octopus' stock in Asturias, as stated in the report (Roa Ureta, 2019), are:

1. *An appropriate stock assessment model and open source software have been developed for the octopus fishing in Asturias and adapted to the fast population dynamics that characterizes these organisms.*

2. *19 fishing seasons have been evaluated from 2001 to 2019 and parameters of abundance and natural and fishing mortality in each of these seasons have been estimated, with good numerical quality, statistical accuracy and biological realism.*

3. *Recruitment, defined as the growth of the year's new juveniles to the minimum weight of capture [1 kg] occurs in the middle of winter and the escape of the spawned females to care for their eggs occurs later, also in winter.*

4. *A Pella-Tomlinson surplus production model has been estimated with widespread depletion models yielding results of good statistical quality and realism biological, which shows a stock that fluctuates between two equilibrium points [of 1,500 and 2,500 t] in alternate years (Figure 2-6).*

5. **Fishing mortality of the stock is low** compared to natural mortality, exploitation rates are low, especially after 2008 and up to now (Figure 2-7), and landings are significantly lower than the productive capacity of the stock, represented by the average total latent productivity [239 t], especially in recent years (Figure 2-8).

6. *A Ricker-type spawning-recruitment model with good statistical quality and of great scientific interest has been estimated (Figure 2-9).*

7. **Exploitation is biologically sustainable by a good margin** but the economic return is below the sustainable productive potential of the fishery.

8. *The sustainable harvest control rule [HCR] obtained from the results of this study is that **the total catch per annual season is lower than the average total latent productivity, estimated at 239 tonnes**, with a statistical range of two standard deviations equal to [189, 289].*

Another key result from the report is that *"the annual exploitation rate (percentage of the initial biomass captured by the fishers during the season) has not exceeded 20%, in most seasons it is even less than 10% and is often less than 5%. It is apparent then that **octopus fishing in Asturias exerts a low pressure on the stability and renewal capacity of the stock**. Fishing mortality in all seasons studied is well below natural mortality. **The fishing mortality has not affected abundance of spawning so, in the end, fishing has not impacted on the capacity of the stock to be renewed**".*

This new HCR was presented by the CEP in the OFMC in February 2020. The CEP proposal to establish a TAC of 189 t for the current fishing season 2019-20 was unanimously approved by all stakeholders present in the OFMC meeting, conditioned not to make any changes in the management measures unless reported landing were approaching the 189 t, and after deliberations with the octopus' fleet (CS, 2020). How to proceed in the future fishing seasons and what and when decisions will be set if the fishery gets close to this TAC, has not been established yet.

<p>Status</p>	<p>The fishery has implemented several actions to support the development of comprehensive HCRs (i.e. continuation of the fishery on board monitoring, tracking devices in almost all vessels, CEP analysis of the CPUE indicator, OMA study and a recent stock assessment model). Currently a preliminary HCR based on a TAC derived from a stock assessment model has been approved in the OFMC. But the OFMC is just a consultative body, and so far the HCR has not been endorsed by the DGPM and set in place in the fishery. Moreover, how this HCR will work is unknown, since what and when decisions will be set if the fishery gets close to this TAC, has not been established yet. The CEP confirmed during the 4SA off-site visit that they will formally recommend to include this HCR in the OFMP for the next 2020-21 fishing season, which will be drafted along October-November 2020.</p> <p>Based on the information presented above, the assessment team considers this condition to be 'BEHIND TARGET' and a remedial action was set.</p> <p>As a remedial action a new milestone has been set to be met before the certificate expires on 9th August, 2021, in order to close the condition on time. In spite of the above, the progress of the condition for this (2019) and the previous years, were on target and the work flow of this fishery had always been positive. The client and main stakeholders involved (particularly the CEP and DGPM) are confident to meet the condition before the end of the current certificate cycle. Both the CAB and client have considered that there is no need to review the original Client Action Plan to meet this new milestone.</p>
<p>Additional information</p>	<p>The action plan included in the PCR is presented below:</p> <p><i>The proposal for actions to be carried out entails the following plans:</i></p> <p><i>January – October 2016: Joint assessment by the parties involved in the OFMP of current knowledge about capture control and the determination of the variables that will be needed for finding out and recording within a given time period the number of specimens, weight, location, variability of fishing grounds, seasonal fluctuation, etc. with regard to the specific determination of the CPUE in the assessed area.</i></p> <p><i>The biological information needed to establish correlations that will enable the adaptation of management systems will be taken into account, with a basic review of the HCRs and the TAC in order to ensure the sustainability of the stock and to avoid its over-exploitation above a risk level acceptable for the population.</i></p> <p><i>A research programme with the methods and instruments needed to properly record the HCRs and any diagnostic instruments needed will be designed with the biological indices to be taken into account defined.</i></p> <p><i>The objective is to establish a harvest threshold risk level for a given period. This implicitly means proposing minimal models of resource abundance based on which a fishery control mechanism would be established, with the possibility of closing the fishery when it is deemed that the population has reached an acceptable minimum.</i></p> <p><i>These actions will be developed jointly, and will result in clear and firm cooperation commitments between the regional administration, fishermen's guilds included in the Principality of Asturias' Octopus OFMP and the CEP. Other organisations, such as the Navia-Porcía Coastal Action Group will also be collaborating.</i></p> <p><i>A document containing objectives, goals and a commitment to agreements among all the parties involved and that will ensure rigorous control of catches for sustainable self-management of stocks will be drawn up.</i></p> <p><i>October 2016 – September 2018: Application of the methodology designed in the previous phase with the recording and harvest control by the fisheries sector under the supervision of the CEP in order to determine acceptable levels of biological risk.</i></p> <p><i>Working sessions between all the parties involved to follow up the work will be held based on a pre-established schedule, and the results obtained by applying the recording and harvest control instruments proposed will be assessed. Follow-up reports will be drafted with the results obtained in the successive fishing campaigns.</i></p> <p><i>November 2016 – December 2018: Organisation of technical workshops on octopus fishery which will address the Forum's recommendations on octopus fishery in northwestern Spain,</i></p>

held in Santiago de Compostela in January 2015. The aim – among others – of these workshops will be an analysis and discussion by the scientific community of the results that are being obtained from field work, and conclusions will be drawn on measures to implement in the management plans in order to ensure the sustainability of the resources.

This action will be organised in collaboration with the Navia-Porcía Coastal Action Group and the WWF, calling on participation from the scientific community and industry not only in Asturias, but also Galicia and Portugal, or other communities related to octopus fishing.

June 2018 – November 2018: Drafting of the conclusions of the research programme, with recommendations to be considered by the administration when developing future management plans that will ensure exploitation based on the fluctuations of the species and that will ensure the non-overexploitation of resources that are below risk levels.

June 2018 – November 2018: Definition and incorporation of the conclusions and recommendations obtained in the research programme into the guidelines for the Octopus MPs in the Principality of Asturias, and addition thereof to the text published in the Official Gazette of the Principality of Asturias (BOPA), ensuring the sustainability of the stock through management tools and measures.

The objective is to incorporate exploitation control measures that complement current fisheries management strategies with regard to the octopus catch (annual quota per vessel, number of creels per vessel, minimum weight, closed season) into criteria relating to the species' biomass, considering the results per unit of fishing effort not for the whole period, but rather continuously, ensuring that a minimum of octopus fishing is not exceeded.

This way, should the results so indicate, a limitation could be placed on the current criteria for the closed season, or on the number of traps included in the current HCR, or a review – depending on the trend of the catches – carried out of the minimum authorised weights.

November 2018 – November 2019: Implementation of the OFMP for the 2018-2019 campaign, collection of information and assessment of results.

Analysis of the possibility of establishing a protocol for self-management of the fishery by each guild included in the plan, within the general framework, based on the maintenance of the fishing effort at limits acceptable for the sustainability of the species, with the possibility of the closure of the fishery when this limit is reached.

The co-responsibility for coordinating the proposed targets will be assumed by the member of the four fishermen's guilds involved in the certification process for which the Puerto de Vega guild acts as coordinator.

Achieving the objectives and goals proposed requires the necessary involvement of the politicians and technicians deemed responsible as determined by the DGPM and leveraging the already-existing formal channels of information and discussion of the octopus MP, which provides for meetings and agreements between: the other members of the fishermen's guilds included in the Octopus OFMP of the Principality of Asturias; those politically and technically responsible for the CEP; and – to a lesser extent – other agencies and bodies of local scope, such as the Navia-Porcía Zone Coastal Action Group.

3.2.2 Table 3.6. Condition 3

Performance Indicator	3.2.2 SI (d) SG80 - Information on the fishery's performance and management action is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity
Score	75

<p>Justification</p>	<p>During the consultations for the drafting of the MP each year, and during the decision-making process, information is offered on the current status and historical evolution of different fishery indicators (catches, sales, CPUE, price, octopus weight distribution, etc.). When a guild requests information, all or part of the fishery surveillance report is provided to it. However, this report – which is prepared by CEP staff – is merely descriptive and does not do a deep analysis of the data (e.g., statistical, modelling or prediction methods) nor does it give recommendations on possible measures to take. One example is the recent report from the 2013-14 campaign in which it states that "this has been the worst campaign since records have been kept", however it does not explain the possible causes or propose any actions to take.</p> <p>This information is not exhaustive nor is it distributed automatically to all stakeholders, and it does not describe how the management system responds to the new information and recommendations arising from research on and/or assessment of the fishery. There is an established decision-making process, although it does not seem to be an entirely transparent process since the information is not publicly accessible. Nevertheless, at the meetings attended by CEP technicians, these technicians advise the DGPM and the guilds on the status of the fishery and on decision-making.</p> <p>Based on the above, it can be concluded that only some information is available and given upon request, therefore this SI gets SG 60, but not all explanations are provided for any actions and there is not a formal reporting to all stakeholders; therefore this SI do not reach neither SG 80 nor SG 100.</p> <p>In conclusion, explanations shall be provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity to meet SG80d.</p>
<p>Condition</p>	<p>By the fourth surveillance audit, evidence shall demonstrate that Information on the fishery's performance and management action is available on request, and explanations for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity occurs</p>
<p>Milestones</p>	<p>The following elements can be verified during annual surveillance audit:</p> <p><u>Year 1:</u> the client shall demonstrate that the stakeholders have discussed what information should be included in the annual fishery reports coming from any source of information (research, monitoring and evaluation of the fishery, review activity, ...). The client is required to work actively to promote and support that a plan is established for collecting the information.</p> <p><u>Year 2&3:</u> all stakeholders (but mainly CEP from fisheries administration) should be working to develop a full annual fishery report that includes all the information selected in year 1. Stakeholders should be working to develop a protocol for the decision making process of the fishery that explains how actions or lack of action is taken based on the information available. A protocol to deliver this information (annual fishery reports and explanations for actions or lack of action) to any stakeholder, upon request, should also be developed. Client should provide deliverables that shows the state of the work done.</p> <p><u>Year 4:</u> the client should provide clear evidence that the Information on the fishery's performance and management action is available on request, and explanations for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity occurs.</p>
<p>Consultation on condition</p>	<p>The action plan was consulted with the CEP and therefore with the DGPM. They agreed to closely collaborate with the fleet.</p>
<p>Progress on Condition</p> <p>Year 1 -2017-</p>	<p>As explained in section 2.5, a Monitoring Commission (OFMC) was included in the 2016/17 OFMP and commenced its activity in February 2017. As described in the OFMP, the Commission should function as an advisory forum where different stakeholders can present and discuss information relevant to the fishery and, if needed, propose management measures and regulations.</p>

	<p>WWF-Spain expressed its interest in participating in the OFMC, application that has been approved in the first meeting of the OFMC (minutes showing this was handled to the assessment team during the site visit). Therefore, it is expected that this NGOs takes part in the next OFMC meeting.</p> <p>During the first meeting of the OFMC held in February 8, 2017, functions and operational protocol of the Committee were agreed. This protocol includes the commitment on behalf of the CEP of sharing in advance with all the other stakeholders the fishery annual report along with management proposals to be discussed in the meeting. The CEP representatives presented and explained the kind of information included in the fishery annual reports and also provided details of other studies or initiatives such as the implementation of tracking devices on board and the study commissioned to the OMA (see progress on Condition 1 for more details). All these issues were discussed and agreed.</p> <p>Although, so far, the CM is just an advisory body, all stakeholders interviewed trust that all decisions taken at these meetings will be later included in the MP. The problem lies in achieving consensus among fishers (mainly between those included in the certificate and the rest). Nevertheless, during the site visit everybody agreed on considering the establishment of the OFMC as a great step forward in term of exchanging information and improving decision making.</p> <p>The CEP is developing a public dissemination website specific for this fishery. This website provides to the general public information on the fishery, including latest catches, main fishing grounds, regulation, gears used, etc. The website is still under work but a test version was shown to the assessment team during the site visit. So far the information posted is very general and with the focus on the public society and it is not valid as a transparent tool of management related information in a decision making process.</p> <p>CEP representatives explained that according to their standard procedure, any modification made to the fishery management must be based on a technical justification and an internal file had to be created. However, they recognized this was not public available and sometimes it may not be sufficiently shared with those affected by the decision. They believe the protocol developed for sharing and discussing information at the MC, together with the public website they are preparing will solve this shortage.</p>
<p>Progress on Condition</p> <p>Year 2 -2018-</p>	<p>As explained in section 2.5, an Octopus Fishery Monitoring Commission (OFMC) was created in the 2016/17 OFMP and commenced its activity in February 2017. Two more meeting were celebrated in October 2017 and March 2018. The Commission should function as an advisory forum where different stakeholders can present and discuss information relevant to the fishery and propose management measures and regulations. WWF-Spain, a stakeholder which had showed interest in the Commission, was invited to participate and attended both meetings (reports discussed in the meeting were provided to WWF in advance, as to the rest of the participants).</p> <p>How decision and proposals should be taken inside the OFMC is not clear at this point to the assessment team. The OFMC is just as a consultative body, nevertheless, the UoC vessel owners consulted would like (and expect) that in the future the OFMC proposals become binding. The OFMC has worked so far as a forum for debating different proposals between stakeholders around the octopus' fishery. A protocol dated in July 2018 for information sharing and decision making in the OFMP was delivered to the assessment team. Parts of this protocol have been discussed and agreed with the stakeholders inside the OFMC, nevertheless, to our knowledge the whole protocol has not been delivered to stakeholders yet.</p> <p>This "Information sharing and Decision making" protocol established that the OFMC is the main forum for information sharing around the octopus' fishery and for debating management proposals. Nevertheless, some stakeholders included in the UoA but outside the UoC do not agreed on this and have expressed that proposals should be debated in the Federation of fishing guilds (see October 2017 OFMC meeting notes). Besides this lack of understanding the rest of the stakeholders agree on the OFMC as the right forum for debating proposals, as it is stated since the 2016-17 OFMP (see section 2.5).</p> <p>The protocol established that the OFMC will have two meetings per fishing campaign. The first meeting (February-March), in the middle of the fishing season, is intended to analyze how the fishing season is going and decide if any decision should be taken. The second meeting</p>

(October-November) before the OFMP is published, is intended to review the past fishing season (the CEP provides in advance a report on the status of the fishery) and discuss management measures for the next management plan.

This protocol also defines how and when the information will be disseminated from CEP to the rest of stakeholders: (i) the agenda will be sent by the CEP before each meeting, together with relevant reports and documents (it is expected that each stakeholder shares this information internally and have a previous debate on the topics that will be discussed in the meeting), (ii) minutes will be sent after each meeting.

Regarding decision making, the protocol leaves clear that the creation of the OFMC has not changed how final decisions are taken in the octopus' fishery:

“The final process for managing the plan [OFMP] will be the same as before: after the second meeting [October-November], and with prior knowledge of the topics discussed therein, the Chief of Fisheries Management Service [Jefe de Servicio de Ordenación Pesquera] will send a draft Resolution to all fishing guilds establishing a deadline for allegations and, after hearing all the interested, the Principality [of Asturias] will approve by Resolution the rules for the following fishing campaign”.

The assessment team could not meet during the current off-site surveillance with the Chief of Fisheries Management Service of the DGPM, therefore a clear understanding on the connection of the DGPM with the OFMC regarding the decision making is lacking. How this process for drafting a Resolution for the OFMP, the hearing of stakeholders and the approved final Resolution is decided, is not explained in the protocol. The lack of meeting notes available for the assessment team on this final stage of the decision making does not allow us to have a clear understanding of this stage.

The “Information sharing and Decision making” protocol sent to the assessment team is clearly a step forward on the transparency of the system. Nevertheless, a complete protocol for the decision making process of the fishery (focusing on how final decision are taken by the Chief of Fisheries Management Service) that explains how actions or lack of action is taken based on the information available, is still lacking.

Besides the above, the CEP has also developed a public dissemination website specific for this fishery; <http://pulpodeasturias.es>. This website provides to the general public information on the fishery, including main fishing grounds, regulation, gears used, information collected, videos, etc. So far the information posted is very general and with the focus on the public society and it is not valid as a transparent tool of management related information in a decision making process (the CEP annual reports on the state of the fishery, the OFMC meeting notes, the OMA report, the CEP-SIGMA on-board monitoring reports and the “Information sharing and Decision making” protocol are not posted on this website).

Progress on Condition

Year 3 -2019-

The Octopus Fishery Monitoring Commission (OFMC) created in the 2016/17 OFMP is functioning as an advisory forum where issues and proposals are discussed between stakeholders. Nevertheless, so far, the OFMC do not propose measures and/or changes in the regulation, which is one of its objectives. A new role has been added to the OFMC in the last Management Plan (Resolución de 4 de Diciembre de 2018); “To do a follow up of the degree of execution of the objectives of the plan”. It is expected that the OFMC will review the objectives status for the first time along the next 2019-2020 fishing season.

Fishery reports are being distributed before the meeting to all members participating in the OFMC. The fishery sector, the OMA and WWF-Spain, part of this Monitoring Committee, have received the fishery status reports (past season fishery status report -Fernández, 2018a- and in-season early indicators -Fernández, 2019a-) and the recent Decision-making protocol (DGPM, 2019a). Nevertheless, some relevant information, as the on-board monitoring reports (Fernández, 2019b) are not being distributed by the CEP.

The recent Decision-making protocol (DGPM, 2019a) has been discussed within the OFMC, stakeholders could send their comments, and after several drafts a final version is now available. This protocol is specific for the OFMP and clearly defines the steps in the decision-making process:

1- Proposals to consider: within the OFMC.

	<p>2- Collection and dissemination of information: CEP monitoring.</p> <p>3- Evaluation of the information: within the OFMC.</p> <p>4- Analysis of the different options and proposed regulations for fisheries management: outside the OFMC, under the responsibility of the Head of Fisheries Management Service - <i>Jefe de Servicio de Ordenación Pesquera</i> (from the DGPM).</p> <p>5- Allegations of the interested stakeholders: outside the OFMC, administrative process.</p> <p>6- Decision making and management application (final OFMP): outside the OFMC, under the responsibility of the Head of Fisheries Management Service and the Managing Director – <i>Director General</i> (from the DGPM).</p> <p>7- Evaluation of the effectiveness of decisions (responsible is not indicated).</p> <p>Some stakeholders have criticized (e.g WWF-Spain) that the OFMC it is only a consultative body without capacity for taking decisions, and that the DGPM persons responsible for taking those decisions (Head of Service and Managing Director of the DGPM) do not participate in the OFMC. Moreover, as the DGPM explained the CAB during the site visit, in the step 5 the allegations are not answered and explanations for any actions or lack of action are not given. Although explanations are not given the protocol establishes (step 6) that new proposed measures will be accepted if no allegations take place by the fishing sector, and in case of a conflictive measure decision will be taken by simple majority. This step also establishes that the CEP will be the institution for consulting new proposals not discussed in the OFMC.</p> <p>Besides the share of information within the OFMC, a public website, specific for this fishery (http://pulpodeasturias.es), provides information on the octopus fishery to the general public. So far the information posted is very general and with the focus on the public society and it is not valid as a transparent tool of management related information in a decision making process (the CEP annual reports on the state of the fishery, the OFMC meeting notes, the CEP-SIGMA on-board monitoring reports and the “Information sharing and Decision making” protocol are not posted on this website).</p>
<p>Progress on Condition</p> <p>Year 4 -2020-</p>	<p>In February 2020 the DGPM amended the Decision-making protocol approved in May 2019. Before being officially endorsed by the DGPM, the protocol was discussed between stakeholders in the OFMC without any disagreement (CS 2020). This new version of the Decision-making protocol contains a relevant change under which allegations to the OFMP done by any <i>cofradía</i> will be personally answered giving details of the decision taken (DGPM, 2020a). This change has been done by amending the step 6:</p> <p><i>To complete the procedure, the Director of the General Directorate of Maritime Fisheries will send to all stakeholders [i.e. cofradías] the final resolution [of the OFMP] adopted. To those who have made allegations during the corresponding period, they will also be provided with a personalized written communication of the reasons that have led to the final decision (action or lack of action) related to their particular requests. If any of the stakeholders [i.e. cofradías] request more information from DGPM, the relevant documentation it will be sent on a written document.</i></p> <p>Before this change, allegations were not answered and no other explanations were given by the DGPM in any other forum to the stakeholders’ requests.</p> <p>The final OFMP will be sent by the Managing Director of the DGPM for publishing in the BOPA, the Official Gazette of the Principality of Asturias. The fishers’ guilds still have a new opportunity to, if they so wish, bring an administrative appeal before the Board of Administrative Litigation of the Superior Court of Justice of Asturias.</p> <p>This procedure provides accountability and transparency of the management system and decision-making process. Nevertheless, some relevant information, as data on the number of traps used based on the on-board observer program reports (Fernández, 2019b, 2020b) are not being distributed by the CEP within other stakeholders at the OFMC. Other relevant information as the monthly landings of octopus below the weight limit (1 kg) from the CEP monitoring at port is not shown since the 2019-20 fishing season. The CEP confirmed the CAB during the 4SA off-site visit that, although they keep registering this information, it is deliberately omitted in the reports “for not interfering with the Surveillance and Control Unit and also for avoiding this way a potential loss of trust from the fleet in the CEP monitoring”</p>

	<p>(M^a del Pino Fernández, biologists and responsible of CEP monitoring, personal communication). This circumstance is preventing the circulation of key information on the fishery between stakeholders. Nevertheless, so far, the CAB is not aware if any stakeholder has requested this information, and if in the case of doing it, what would the reaction of the CEP be.</p>
Status	<p>Reports and information are shared and discussed within the OFMC. The CAB has also received the final Decision-making protocol (DGPM, 2020a) which has amended to answer all allegations done by the <i>cofradías</i> explaining why their allegations have been rejected or approved. Information on which these answers are based will be also send to stakeholders.</p> <p>The CAB considers that this new protocol is a clear evidence that the information on the fishery's performance and management action is available on request, and explanations for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity occurs.</p> <p>The client actions are considered appropriate with the requirements of the condition which is therefore considered to be 'ON TARGET'. PI was re-scored (see Section 3.4 Re-scoring Performance indicators) and the CONDITION CLOSED within the timescale agreed in the PCR.</p>
Additional information	<p>The client actions plan included in the PCR is presented below:</p> <p><i>The Action Plan includes measures to develop in order to relevant information for the management of the fishery is organized, completed and accessible to all stakeholders:</i></p> <p><i>Year 1: The implementation of a protocol for the diffusion of the generated information in the processes of evaluation and monitoring of the fishery will be arranged. This protocol will affect the studies and reports referred in the Action Plan of the indicator 3.2.1.</i></p> <p><i>In the protocol minimum contents of the reports will be established, which shall include at least the sources of obtaining information (researches, surveillance, etc.), established methodology and, where appropriate, recommendations and proposals about possible measurements to include in the management plan.</i></p> <p><i>In the protocol the notification system of the report will be fixed to all stakeholders, not only in the certification, but throughout the management plan (fisher, researchers and managers in the application area of the management plan). It must be a system that evidences the information has been received by stakeholders. It can contemplate an argument period to which stakeholders make contributions to the results of reports. Mass media will be also included (web, publications) in order to the information that is not considered eligible for protection may come to any stakeholder and the general public.</i></p> <p><i>The protocol will be agreed and approved for all the stakeholders in the fishery in the meetings referred to the Action Plan for the indicator 3.2.1 and it will be reflected in the corresponding proceedings, which will evidence the work done.</i></p> <p><i>Year 2 and 3: A protocol will be applied, making the reports as it shows and its effectiveness will be reviewed in the follow-up meetings of the management plan, consulting all the stakeholders about its validity and introducing relevant improvements. As a sample of the work done, reports, notifications to the parts, allegations, requests for additional information and samples of the diffusion will be included. The results of the evaluation of the protocol will be also provided</i></p>

3.2.3 Table 3.7. Condition 4A

Performance Indicator	<p>3.2.3</p> <p>SI(a) SG80 - A monitoring, control and surveillance system has been implemented in the fishery and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.</p>
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	<p>SI(b) SG80 - Sanctions to deal with non-compliance exists, are consistently applied and thought to provide effective deterrence</p> <p>SI(d) SG80 - There is no evidence of systematic non-compliance.</p>
Score	65
Justification	<p>The system has proven to be sufficient to meet most of the rules set out in the MP. However, it is known that there is a lack of robustness to enforce the rules exhaustively in relation to the total number of traps set at sea or to monitor the unloading of the catches. This seems to be caused by:</p> <ol style="list-style-type: none"> i. Shortage of operational means on behalf of the DGPMs Office of Fisheries Inspection and Surveillance Unit to enforce at sea the regulation limiting the maximum number of traps per vessel ii. The <i>guardapescas</i> perform other tasks beyond those provided for in the Decree 23/1995, limiting the effectiveness of their control and surveillance activities. iii. The volume and number of undersized individuals is not recorded (even for statistical purposes) and those illegal individuals are either released back to sea (if the octopus is alive) or given back to the vessel owner (if it is dead). <p>Evidence provided also showed that there is a systematic non-compliance with the regulation limiting the maximum number of traps per vessel. Despite the non-compliance is documented, no sanctions were issued relation to lack of compliance with this regulation.</p> <p>In conclusion, it was found that the fishery fails to meet SG80 for SI(a), SI(b) and SI(d).</p>
Condition	<p>By the fourth year, the fishery must provide evidence that: (i) the monitoring, control and surveillance system implemented in the fishery has demonstrated an ability to enforce relevant management measures, strategies and/or rules (including the regulation limiting the maximum number of traps per vessel), and (ii) that professional fishers are being inspected consistently and sanctions applied.</p>
Milestones (as in 2SA -2018-)	<p>The following elements can be verified during annual surveillance audit:</p> <p><u>Year 2:</u> All stakeholders (but mainly guilds and fisheries administration) should be working to develop a protocol that clearly details the <i>guardapescas</i>'s roles and responsibilities regarding the OFMP. Evidences must be provided that relevant stakeholders have discussed the issue of non-compliance with the maximum number of traps per vessel. Evidences that work is being done in relation to improve the enforcement capacity shall be provided.</p> <p><u>Year 3:</u> A protocol that clearly details the <i>guardapescas</i>'s roles and responsibilities is ready and multi-stakeholder discussions on how to include it in the management system has started. A set of possible solutions regarding the issue of non-compliance with the regulation limiting the maximum number of traps per vessel has been proposed for its discussion and assessment. Evidences that enforcement capacity has been improved shall be provided.</p> <p><u>Year 4:</u> The protocol that clearly details the <i>guardapescas</i>'s roles and responsibilities is included in the management system. Evidences that professional fishers are being inspected consistently and sanctions applied, and the monitoring, control and surveillance system has demonstrated an ability to enforce relevant management measures, strategies and/or rule (including the regulation limiting the maximum number of traps per vessel).</p>
Revised milestones 3SA -2019-	<p>The capacity of the fishery to fulfil this condition is now depending on two long administrative procedures that are beyond the hands of the client and even of the DGPM: 1) a large budget allocation in coordination with EU funds (vessel construction) and 2) public staff positions openings (enforcement officers). Both procedures have to be approved by higher instances in</p>

	<p>the government of Asturias, beyond the DGPM and the Regional Ministry of Rural Affairs and Fisheries.</p> <p>As a remedial action the revised milestones are proposed as follow, and the client presented a revised action plan (see Section 3.3 for more details):</p> <p>Year 4 (2020): The protocol that clearly details the <i>guardapesca</i>'s roles and responsibilities is adopted in the management system. Evidences that professional fishers are being inspected and sanctions applied should be provided and the monitoring, control and surveillance system its improving its ability to enforce relevant management measures, strategies and/or rule (including the regulation limiting the maximum number of traps per vessel). No score change is expected.</p> <p><u>Year 5 (2021):</u> Before the expiration date of the certificate, the fishery shall demonstrate that a monitoring, control and surveillance system has been implemented and has demonstrated an ability to enforce relevant management measures, strategies and/or rules. Sanctions to deal with non-compliance exists, are consistently applied and thought to provide effective deterrence. There is no evidence of systematic non-compliance. SG80 would be met.</p>
<p>Consultation on condition</p>	<p>The action plan was consulted with the CEP and therefore with the DGPM. They agreed to closely collaborate with the fleet.</p>
<p>Progress on Condition</p> <p>Year 1 -2017-</p>	<p>Since condition 4 was modified after the 1SA, progress on year 1 is no longer relevant for the new condition 4A. Refer to 1SA report for details.</p>
<p>Progress on Condition</p> <p>Year 2 -2018-</p>	<p>Regarding the protocol that clearly details the <i>guardapescas</i>' roles and responsibilities in the OFMP, several advances have been done. ARPESOS has formally presented in the bilateral CEP-ARPESOS meeting and in the October 2017 OFMC meeting, a proposal for detailing the specific roles of the <i>guardapescas</i> in the octopus' fishery. ARPESOS has also proposed that these specific roles could be included in the annual DGPM call that funds fishing guilds for hiring <i>guardapescas</i>. The proposal has been debated in both forums and in the last 2017-18 OFMP published in December 2017, the DGPM included an outline of the roles and responsibilities of the <i>guardapesca</i> figure (Sixth regulation, clause 3) (see section 2.5):</p> <p><i>"The duties of the guardapesca assigned to each fishing guild will be to check the weighing of landings, the quotas and admissible catch, when applicable, and the compliance with the minimum weight".</i></p> <p>The meeting notes of the OFMC and the CEP-ARPESOS meeting, shows that stakeholders are working on developing a final protocol on the <i>guardapescas</i>' roles and responsibilities in the OFMP. Nevertheless, in the 1SA ARPESOS in collaboration with CEP have committed to prepare and distribute a survey among the <i>guardapescas</i> asking them about their roles and functions, for include this information in the annual fishery report prepared by the CEP. The assessment team were not provided on information on this survey and in the 2016-17 CEP annual fishery report this topic is not mentioned. The 2017-18 report will be available in October 2018.</p> <p>The issue of non-compliance with the maximum number of traps per vessel has been also debated in the bilateral CEP-ARPESOS meeting and in the OFMC meetings, solutions have been proposed and some improvements have been done. This problem has been anyway drastically reduced in the last fishing season. Although the Fisheries Inspection and Surveillance Unit (unit belonging to the Resource Protection Division of the DGPM) did not provide written reports on inspections and infractions in the OFMP, the CEP (2018b) report (based on on-board observations) on the compliance of the number of traps, shows that in the 2017/18 fishing season the average number of traps per vessel with 1, 2 and 3 or more crew members was 125, 238 and 350 respectively, which is within the legal limits. A general compliance of this measure was observed in the OFMP fleet, and only in 12% of the observations the legal limits were exceeded (CEP 2018b). The Surveillance Unit informed the assessment team that no lines of traps were observed at sea without being marked. See section 2.6 for more detailed information.</p>

ARPESOS and CEP have debated the possibility that non-compliance with the maximum number of traps could result in the withdrawal of the octopus' trap fishing licence. ARPESOS agreed on this measure and CEP has committed to shift this proposal to DGPM. The assessment team has not been informed on the DGPM answer. This proposal has not been debated in the OFMC.

In order to improve the enforcement capacity, it is mandatory in the fishery to mark the line of traps since the 2016-17 OFMP. This new regulation established that the buoys should clearly indicate the vessel name, the number of the batch and the number of traps in the batch (see sections 2.5 and 2.6). For the next fishing campaign (2018-19), it will be mandatory to use a plastic mark (possibly with RFID technology) provided by the Fisheries Inspection and Surveillance Unit.

Besides all the improvements and work done, two relevant weak point are still unsolved:

- The Surveillance Unit has currently no ability to seize and remove lines of traps at sea. It is expected that a vessel with this capacity will be operational in 2-3 years (see section 2.6 for more information).
- The CEP reports shows that there is still several non-compliance with the maximum number of traps (CEP, 2018b) and with the weight limit of 1 kg at the auction markets (Fernández, 2017). (see section 2.6 for more information on the degree of non-compliance). Despite this observed non-compliance the *guardapescas* did not report any infraction to the Surveillance Unit regarding this issue and the Surveillance Unit did not observed by themselves any non-compliance.

Progress on Condition

Year 3 -2019-

Regarding the *guardapescas*, their specific roles in the octopus fishery have been included in the 2018-19 OFMP (Resolución de 4 de Diciembre de 2018); “Seventh-Control and catch weighting. 3- The duties of the *guardapescas* assigned to each fishing guild will be to check the weighing of landings, the quotas and admissible catch, when applicable, and the compliance with the minimum weight”. Moreover, in May 2019 a meeting was held by the DGPM with the CEP and all the *guardapescas* in Asturias to check their roles and difficulties for developing those tasks and to clarify doubts (DGPM, 2019d). In this last document a new role for the *guardapescas*, not included in the OFMP, is included related the future implementation of a marking system for the line of traps; the *guardapescas* will be responsible for providing the marks to the fishers taking notes on the numbers delivered to each boat. Despite the efforts to clarify the roles of the *guardapescas* a protocol that clearly details their roles and responsibilities is not yet ready, as it was requested in the year 3 milestones.

Regarding the issue of non-compliance with the maximum number of traps per vessel, the fishery has done a strong progress from the fishing season 2014-15 when a high degree of non-compliance was found (see 1SA report), since just a single excess in the number of traps was observed during the on-board observers' program in the 2017-18 fishing season (Fernández, 2018c). The report for the on-board observers' program for the 2018-19 fishing season is already available (Fernández, 2019b), but this time no information on the number of traps is shown. Nevertheless, stakeholders consulted considers that fishers' compliance regarding this measure is very high, and only in the fishing port of Luarca (part of the UoA but outside the UoC) the problem still persists.

Based on information from the Surveillance and Control Unit, in 2018 five sanctions (between 400-1250 eur) were issued (all in Luarca) due to an excess of traps. Although no sanctions have been issued in 2019, the problem apparently still persists due to a low capacity of enforcement (Valentín García, Head of the Surveillance and Control Unit, personal communication). This low capacity is linked with the fact that the Surveillance Unit still has no ability to seize and remove lines of traps at sea. During the site visit the CAB was told that it is expected that a vessel with this capacity will be operational by 2021, but no documents were provided showing the progress on this. Funds from the EU will be used for constructing this vessel.

The surveillance capacity in the octopus fishery has been reduced in the last year due to a reduction in the number of enforcement officers. From a total of 16 enforcement officers (12 full time and 4 part time) working in the 2017-18 fishing season, 5 of them got retired within 6 months. Currently a total of 11 enforcement officers are in place (10 full time and 1 part time). The staff retired could not be replaced in time due to the long administrative process.



	<p>According to the data provided by the Surveillance and Control Unit (Valentín García, Head of the Surveillance and Control Unit, personal communication), in 2018, from January to July, a total of 119 actions were done (59 on land and 60 at sea), resulting in a total of 6 sanctions applied (4 due to excess of traps and 2 due to individuals smaller than the minimum weight). One of the sanctions due to minimum weight was issued to a MSC vessel, although the procedure is still ongoing and no final resolution is available. Due to the reduction in the control and enforcement capacity, in 2019, from January to June, a total of 44 actions were done (12 on land and 32 at sea); no sanctions were applied.</p> <p>Due to the enforcement capacity reduction in the 2018-19 fishing season, the implementation of a protocol for marking the line of traps (buoys at the beginning and ending of the line of traps) has been postponed. It is expected that for the next fishing season (2019-2020) this marking regulation will be implemented using labels provided by the DGPM with a bar code (Valentín García, Head of the Surveillance and Control Unit, personal communication).</p>
<p>Progress on Condition</p> <p>Year 4 -2020-</p>	<p>The main relevant issue concerning the MCS in the past years was the weakening of the surveillance capacity in the octopus' fishery due to a reduction in the number of enforcement officers in the Surveillance and Control Unit because of retirement and medical leaves of part of the staff. For the 2019-20 fishing season this weak point was partially solved by incorporating more officers and by giving priority to this fishery in terms of surveillance and control. Of the 16 inspectors of the unit in Asturias (12 inspectors full time and 4 part time), currently 2 full time inspectors openings are still pending to be filled. Nevertheless, the octopus' fishery is a priority for the unit so the number of inspections compromised in the fishery, according to the minimum approved by the Surveillance and Control Unit (DGPM, 2017), has been fulfilled in the current fishing season 2019-20. Some of the staff retired could not be replaced in time due to the long administrative process, but would be done along next fishing season according to the head of the unit.</p> <p>The main novelty in the fishery was the implementation this fishing season 2019-20 of the procedure for marking the line of traps, which was pending to be set in place since it was approved in the 2017-18 OFMP. This measure was implemented this season in 25 of the 43 vessels licensed (all vessels from the fishers' guilds of Luarca, Figueras, Tapia and Viavélez, and one vessel from Ortiguera), representing 58% of the OFMP fleet which have now the lines of traps marked. The marking system (Fig. 2-1) is as follows: the line of traps has two buoys, one in each end, where a seal is set with a unique ID (silk-screen printing in relief) that identifies the boat name, plate number of the boat and the number of lines of traps of that boat (for cross-checking during the inspections, the DGPM has a database with the number of lines of traps of each boat and the number of traps included in each line). If both seals from a line of traps are lost, that ID is removed from the database (becoming a non-valid ID) and a new ID is issued to that line of traps (so far this has only happened once in the fishery). Before the start of the fishing season 2019-20 the CEP sent to all cofradías part of the OFMP directions for the skippers regarding this marking system, under which all boats should identify the number of lines of traps and the amount of traps in each line. Based on that, the DGPM issued the seals.</p> <p>Regarding the number of inspections in the fishery and according to the report provided by Valentín García (Head of Surveillance and Control Unit) (DGPM, 2020d), the following actions were done during the 2019-20 fishing season: 7 boats (16% of the total boats in the OFMP) were inspected while unloading the fish (mostly to control the weight-limit regulation), 34 lines of traps (10% of the total) from 12 boats were checked at sea for controlling the compliance in the new trap marking regulation recently implemented in the fishery, the weight-limit regulation and other fishery measures, moreover, 18 lines of traps in 7 of those boats inspected were being lifted on board while the enforcement officers were there, so the number of traps were counted (592 traps which correspond to 5% of the total) in order to check compliance with the maximum number of traps per boat allowed). Finally, 4 boats (9% of the fleet) were inspected at sea for checking compliance with all other management measures (license, dispatch of crewmembers, weight-limit, fish loading sanitary conditions, ...).</p> <p>Regarding the number of infractions, during the 2019-20 fishing season a 100% compliance with all management measures has been found in the boats belonging to the OFMP according to the information provided by Valentín García (Head of Surveillance and Control Unit) during the site visit and its subsequent report (DGPM, 2020d). The only infractions set for setting illegal octopus' traps has been issued to recreational fishers (35 illegal traps found in Asturias during</p>

the 2019-20 fishing season, 18 of them found in the area of the OFMP); 13 infractions were issued due to having octopuses under the weight limit and 1 infraction for using an illegal fishing gear.

The fishery has done in recent years a strong progress regarding compliance with the maximum number of traps per vessel allowed, since the fishing season 2014-15 when a high degree of non-compliance was found. A work done during the fishing season 2014-2015 in the four fishers' guilds of the UoC revealed a "high degree of non-compliance in the number of traps used" (CEP-SIGMA, 2016). This study was done by on-board biologists from the CEP and SIGMA SL for characterizing the octopus' fishery and it just had a descriptive intention, without any surveillance purposes. In the 2017-18 fishing season just a single excess in the number of traps was observed based on the on-board observers' program report (Fernández, 2018c). Nevertheless, since this report, although observers keep registering this data, the information is not any more shown on the report. M^º del Pino Fernández (CEP biologists in charge on the on-board observers program) confirmed us during the 4SA site visit that they decided not to report the number of traps data for not interfering with the Surveillance and Control Unit, avoiding this way a potential loss of trust from the fleet in the monitoring work done from CEP. Nevertheless, stakeholders consulted during the site visit, as in previous years, considers that fishers' compliance regarding this measure is very high, and only in the fishing port of Luarca (part of the UoA but outside the UoC) the problem still persists.

The above circumstance was confirmed by the Surveillance and Control Unit. Based on their report (DGPM, 2020d), in the 2017-18 fishing season, 4 sanctions (fines between 400-1,250 eur) were issued due to excess of traps (all in the port of Luarca) and 2 sanctions were issued due to individuals smaller than the minimum weight (one of the sanctions was issued to a boat part of the MSC UoC) to boats from the OFMP. In the 2018-19 only one sanction was issued due to fishing during the closure period, and in the 2019-20 no sanctions were issued since no infractions were found. During the 4SA site visits we asked to Valentín García (Head of Surveillance and Control Unit) about the resolution of these sanctions, but the final result of them were unknown.

Another source of information regarding the fishers comply with the minimum weight comes from the CEP monitoring at port. In the 2018-19 fishing season, the percentage of individuals below the weight limit (1 kg) was kept all the season below 5% of the landings (Fernández, 2018a), showing a slight decrease from last season (4-8%) (see 2SA report). Nevertheless, during June and July, percentages goes up to 15% (Fernández, 2018a). In the last fishery monitoring report available (fishing season 2018-19) (Fernández, 2019c) monthly information on octopus below the weight limit (1 kg) is not shown anymore, although it is still being registered. M^º del Pino Fernández (CEP biologists in charge of the monitoring) confirmed us during the 4SA site visit that they decided not to report this information anymore, for not interfering with the Surveillance and Control Unit, avoiding this way a potential loss of trust from the fleet in the monitoring work done from CEP. The only information shown about this is a general statement; in the 2018-19 and 2019-20 fishing seasons the proportion of individuals below 1kg was the lowest of all the historic time series, being <1%, and moreover, no individuals were found below 900 g (Fernández, 2019b, 2019c, 2020b).

So far the DGPM still has no ability to seize and remove lines of traps at sea because of the lack of a vessel large enough to do it. In June 2020 the Asturias Government release a press note announcing the tender of a vessel for the DGPM (21 m length, 1,500 horse power) with a multiannual budget (2020-22) of 1.7 million € (GPA, 2020). Moreover, in May 2020 the Maritime Service of the Civil Guard (Ministry of the Interior, Spanish Government) in Asturias received a new vessel (20.5 m length, 2,400 horse power) designed for surveillance and control activities of coastal fisheries, rescue and drug traffic in the maritime Asturias waters. The Surveillance and Control Unit from the DGPM collaborates with the Civil Guard in the surveillance of the coastal marine waters in Asturias.

Regarding the roles and duties of the *guardapescas* in Asturias, a Protocol of *Guardapescas* Action in the OFMP (DGPM, 2020b) was delivered in February 2020. The protocol details the roles the *guardapescas* should take regarding the monitoring of the landings and the control and surveillance of the professional octopus' fishery as well as the recreational fishing occurring in their areas. Regarding the landings monitoring the protocol establishes that the *guardapescas* shall control and follow up the daily activity of all vessels in their fishers' guild, register and weight the landings, check for individuals below the 1kg weight limit and send all this information to the CEP, as well as collaborating with them in their monitoring of the fishery.

	<p>Regarding the control and surveillance, the <i>guardapescas</i> shall check for compliance on weight limit, control que quotas (daily, weekly and annually) if established in the OFMP, collaborate with the DGPM Surveillance and Control Unit on the control of the maximum number of fishing traps and with the implementation and development of the marking system for the line of traps, and check for compliance in any other measure of the fishery, including the closed periods. The protocol also establishes the possibility that the <i>guardapescas</i> can take action on control and surveillance at sea, although the reality is that they do not have the resources for doing it (i.e. a vessel). Moreover, the <i>guardapescas</i> shall also control the recreational fishing in their areas. The <i>guardapescas</i> does not carry out inspections or monitoring of catches at sea and have never imposed any sanctions for any violation on any vessels/fishers included in the OFMP. They have, however, imposed sanctions on recreational fishers, for which they often request assistance from the Civil Guard (SEPRONA) because of their proximity and rapid response.</p> <p>Regarding the compliance with other measures like the fishing time (vessels must be at port before 17:00 h), and after analysing 1,380 fishing days from 40 different vessels based on the GPS tracking system (see Section 2.2.6), it has been observed that compliance with this measure is practically absolute, with just very rare cases of non-compliance (Fernández, 2019a).</p> <p>Lastly, the DGPM has released on September 2020 an update of the minimum number of inspections (on land and at sea) compromised in the fishery to be applied in the coming 2020-21 fishing season (DGPM, 2020c). According to the new program for the MCS system the minimum number of actions to be done by the Surveillance and Control Unit in the OFMP each fishing season are: 1) On land actions: minimum of 15% of the boats randomly selected will be checked while landing (but if any infringement is detected in a boat, its landings will be checked at least once a month during the current and next fishing season), 2) At sea actions: minimum of 5% of the lines of traps will be inspected for checking its correct marking according to the directions issued by the DGPM, minimum of 5% of the total number of traps will be seized for checking compliance with the maximum number of traps per boat allowed and with the line of traps marking system, a minimum of 5% of the boats will be inspected to check compliance with other management measures (license, dispatch of crewmembers, weight-limit, fish loading sanitary conditions, ...).</p>
<p>Status</p>	<p>Several relevant improvements in the fishery MCS system have occurred in the last fishing season 2019-20; the surveillance capacity of the Surveillance and Control Unit has increased by incorporating more officers to the unit, a procedure for marking the line of traps has been implemented 58% of the OFMP fleet, and finally a protocol detailing the roles and duties of the <i>guardapescas</i> was delivered. The Surveillance and Control Unit has presented evidences that professional fishers are being inspected and sanctions applied and that the MCS system its improving its ability to enforce relevant management measures, strategies and/or rule (including the regulation limiting the maximum number of traps per vessel). All this have resulted in a substantial improvement but since not all SGs 80 were meet the condition is still open.</p> <p>Based on the information presented above, the assessment team considers this condition to be 'ON TARGET'.</p> <p>Nevertheless, it is not clear for this CAB that sanctions to deal with non-compliance are consistently applied and thought to provide effective deterrence due to a lack of accountability and transparency in the MCS system (no record of final penalties for violations and deliberate omission of information from the CEP on-board observers monitoring) prevents closing Condition 4A.</p>
<p>Additional information</p>	<p>Below is presented the revised client action plan from the 3SA report for this condition, which was found to be "behind target" in the 3SA. The client action plan was at that moment modified by the DGPM (CEP and Surveillance and Control Unit) in close consultation with the client. The CAB is well aware of the DGPM involvement with the actions described below:</p>

MEASURE 1: GUARDAPESCAS PROTOCOL

Year 2020: The General Directorate of Maritime Fisheries will develop a protocol to be sent to all the Fishermen's Guilds included in the Octopus Fishery Management Plan. This protocol will detail the roles and responsibilities of the Guardapescas in relation to controlling and monitoring the octopus fishery.

MEASURE 2: HUMAN RESOURCES

Year 2020 The Administration of the Principality of Asturias has four working teams dedicated to fisheries inspection and surveillance. One of them works within the scope of the octopus management plan. Each one of these teams has three people who work full time and another person working part time. In the event that the octopus team, for some exceptional reason, needs support to ensure the effectiveness of surveillance in the fishery management plan, since this is a priority for the General Directorate of Maritime Fisheries, human resources would be detracted from the others three teams.

Year 2021 The situation of the year 2020 will be maintained.

MEASURE 3: IDENTIFICATION OF FISHING GEARS

Year 2020 This year, at least 50% of the fleet will experimentally test seals for marking each batch of traps. This will make easier to identify the presence of illegal batches and verify that the number of traps per batch corresponds to the previous declaration presented by the fishermen.

Year 2021 The obligation to seal batches will be extended to 100% of vessels operating in the octopus management plan.

MEASURE 4: QUANTITATIVE INDICATORS

Given that low level of non-compliance have been detected in recent years in this fishery, the inspections scheduled for the next years will be kept random. However, in case the new breaches detected might indicate the need to focus on some vessels (based on the size of the vessels, port of origin or landing, volume of landings, etc.) targeted controls would be established after identifying the risk factors and estimating the percentage of targeted and randomized controls to be performed.

Year 2020: During the 2019/2020 octopus fishing campaign, the DGPM will conduct inspections on shore (landings) and at sea (fishing gear and vessel inspections).

Controls on shore:

A minimum of 15% of the total landings from authorized vessels will be monitored (at least once) during each fishing campaign. Those vessels that present irregularities will be subject to targeted inspections, at least once a month during the remaining fishing season and also during the following fishing season.

Random checks will be carried out in all authorized fish auctions.

Controls at sea:

They are divided into: (i) Identification of batches of traps, (ii) Control of the number of traps per batch and (iii) vessel inspections (minimum sizes, documentation, etc.)

	<ul style="list-style-type: none"> (i) Identification of batches of traps. The correct marking of the batches of traps will be checked. At least 5% of the maximum number of batches of traps present will be inspected. (ii) Control of the number of traps per batch. This check will be done when the traps are being hauled. At least 5% of the maximum number of traps present will be inspected. (iii) Vessel inspections while fishing. They will be made in a minimum of 5% of vessels authorized for octopus fishing, at least once during the fishing season. Those vessels that present irregularities will be inspected at least once a month during the remaining fishing season and also during the following fishing season. <p>Once the 2019/2020 fishing campaign is finished, a report will be made indicating the number of actions carried out and their results, in order to check the level of compliance with the objectives detailed before</p>
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3.2.4 Table 3.8. Recommendation 1

Performance Indicator	PI 2.1.2 & PI 2.1.3
Score	80 (PI 2.1.2) & 80 (PI 2.1.3)
Justification	<p>The CEP-SIGMA (2016) report characterizing the trap octopus fishery in Asturias, provides new and/or updated information on the way for baiting the traps. Although this study confirmed that most of the vessels are using artificial bait as assessed in the PCR, it also detected that some vessels are using pelagic species as bait (mackerel, horse mackerel and sardine). This information was later confirmed and expanded by the client. Although some information is available, the assessment team considers that the quality and publicity of the information could be improved. So far, some of this information (the one directly provided by the client) is not of public access and the CEP-SIGMA (2016) report is only based on the UoC. The assessment team has been told that several changes in the on board sampling program will happen in the coming fishing seasons, but we do not have the details. Therefore, we are not sure if the amount of bait used, and not only the type, will be collected in the future along the UoA. In line with this, we do not know if information regarding the origin of the fish bait used will also be collected.</p> <p>Furthermore, although factors such as availability and price are commercial considerations for bait sourcing, the sustainability of the resource should also be a criterion. The CoC, on a separate bait management strategy, should clearly outline the criteria and protocols which will be employed to source bait fish from well managed resources, or at least resources that can be demonstrated as not being over fished.</p>
Recommendation	(ISSUED DURING 1SA) The assessment team recommends the client to make the necessary changes in the strategy to manage primary species for establishing a monitoring system that allows improving the estimations of volumes as well as origin (stock/s) of bait species used in the UoA. We also recommend the client not to use species for baiting the octopus traps that do not come from sustainable stocks
Progress on Condition Year 2 -2018-	No improvements were identified regarding this issue during the 2SA
Progress on Condition Year 3 -2019-	No improvements were identified regarding this issue during the 3SA
Progress on Condition Year 4 -2020-	No improvements were identified regarding this issue during the 4SA

3.3 Client action plan

As a result of current surveillance audit, no new conditions were set and no action plans were revised.

3.4 Re-scoring Performance Indicators

The following tables used for re-scoring were taken from the PCR (assessment tree version 2.0). The original rationales are presented in black font and crossed out (if needed), while modifications made for re-scoring at the light of the information collected in the fourth surveillance audit are in blue font.

3.4.1 PI 3.2.2 – Decision-making processes

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery		
Scoring Issue		SG 60	SG 80	SG 100
a	Decision-making processes			
	Guide post	There are some decision-making processes in place that result in measures and strategies to achieve the fishery-specific objectives.	There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.	
	Met?	Yes	Yes	
Rationale				

The decision making process in the fishery is a co-management system, both for the design of the OFMP as for everyday decision-making.

The DGPM has just approved on February 2020 a *Protocol for the Decision-Making Process in the Octopus Fishery Management Plan of the Principado de Asturias* (DGPM, 2020a). This protocol has gone through several versions and was extensively discussed within the consultative OFMC where all stakeholders of the fishery are actively participating. The DGPM has approved the protocol that came from the OFMC. Nevertheless, as some stakeholders have criticized (e.g. WWF-Spain) the OFMC it is only a consultative body without capacity for taking decisions, and that the DGPM persons responsible for taking those decisions (Head of Service and Managing Director of the DGPM) do not participate in the OFMC. Although WWF raised this issue, the decision-making process protocol does not include the participation of the final decision takers in the OFMC, but only in the following steps of the decision making; 1) when drafting the OFMP after the discussion within the OFMC, and also posteriorly, 2) when receiving and answering the formal allegations, if any, to the draft OFMP before being formally approved by its publication in the BOPA, the Official Gazette of the Principality of Asturias.

The decision-making process incorporates both the scientific and technical knowledge of scientists and technicians from the DGPM (especially the CEP and the Surveillance and Control Unit), from the IEO and the OMA-Universidad de Oviedo, ARPESOS (Association of the vessel owners included in the UoC), WWF (conservation NGO), SIGMA s.l. (private consulting in charge of carrying out the on-board observers' program, the GPS tracking of vessels and in situ octopus tagging experiences in closed collaboration with CEP) as well as the local knowledge of fishers. The guilds, as institutions representing the productive sector, are actively involved in taking decisions through face-to-face meetings and formal communications.

From the standpoint of scientific research, the CEP contributes to the management objectives by improving and integrating scientific knowledge into the fishery. Although the CEP is a small centre with limited staff, there is a strong commitment to get all the information possible in order to reduce the uncertainties surrounding the biology/ecology of the octopus and to collect all the data, both dependent and independent of the fishery, that may help it to be better monitored.

Communication between the parties (*cofradías* and DGPM) is direct and easy, allowing high flexibility in the decision-making process. Part of the decision-making process is an administrative procedure (regulated by Act 30/1992 of 26 November on the Legal Regime of Public Administrations and the Common Administrative Procedure) (Ley 30/1992) that has been formally incorporated to the whole Protocol for the Decision-Making Process of the OFMP. The first part of the decision making process (steps 1, 2 and 3) takes places within the OFMC where all stakeholders are actively represented, and the second part (steps 4, 5 and 6) takes places outside the OFMC and is under the responsibility of the Head of Fisheries Management Service - Jefe de Servicio de Ordenación Pesquera (from the DGPM), who after considering the meeting notes from the OFMC will make a proposal for the next OFMP (DGPM, 2019a). The final Decision-making protocol specific for the OFMP has the following steps (DGPM, 2020a):

1- Proposals to consider (within the OFMC): any participant within the OFMC can raise and propose and issue to discuss, that has to be explained and motivated. The proposal has to be send to the CEP which will disseminate the proposal and get heir opinion. If a OFMC meeting will happen soon, the proposal will be included in the OFMC agenda, and if not an extraordinary meeting can be set up if the majority of the OFMC participants considers so.

2- Collection and dissemination of information (within the OFMC): the CEP is the body in charge of compiling all relevant information and monitoring the fishery which will disseminate with the OFMC participants before the meetings takes place. The CEP is also in charge of convene the OFMC meetings.

3- Evaluation of the information (within the OFMC): within the OFMC the CEP will show and explain the information related the fishery monitoring. The information will be analysed in common and different management options will be debated. The CEP is in charge of writing down the meeting minutes and pass it afterwards to all participants with all the topics discussed and agreements, if any.

4- Analysis of the different options and proposed regulations for fisheries management (outside the OFMC): this phase occurs outside the OFMC and is under the responsibility of the Head of Fisheries Management Service - Jefe de Servicio de Ordenación Pesquera (from the DGPM), who after considering the meeting minutes from the OFMC will make a proposal for the next OFMP (DGPM, 2019a), or could also propose a change in the current fishing season. Its decision will be communicated to all fishers' guilds and onther concerned entities. The DGPM can ask for advice to the CEP before taking any decision.

5- Allegations of the interested stakeholders (outside the OFMC): under this administrative process outside the OFMC the stakeholders have the opportunity to present formal written allegations to the draft OFMP of the changes in the current fishing season.

6- Decision making and management application (final OFMP) (outside the OFMC): the Head of Fisheries Management Service and the Managing Director – Director General (from the DGPM) will review and answer all the allegations and will approve a final measure, either for the current fishing season or the next OFMP. The DGPM can ask for advice to the CEP before taking any decision. The final OFMP will be sent by the Managing Director for publishing in the BOPA, the Official Gazette of the Principality of Asturias.

7- Evaluation of the effectiveness of decisions: the new management measures and changes in the regulation will be assessed in order to inform the next decisions to be taken in the OFMP. It is not clear yet who will be the responsible at this stage and how this assessment will be made.

After the OFMP has been published in the BOPA the fishers' guilds still have a new opportunity to, if they so wish, bring an administrative appeal before the Board of Administrative Litigation of the Superior Court of Justice of Asturias. Nevertheless, the good environment and understanding between the parties has facilitated that things have never came to that point.

The first part of the decision making process (steps 1, 2 and 3) takes places within the OFMC where all stakeholders are actively represented. The roles of the OFMC are:

a) Exchange of information and knowledge between stakeholders. This is the main purpose of the committee and this role has been so far extremely well achieved, with all stakeholders regularly participating in the two fishing season meetings, sharing results and discussing the information showed as well as new proposals for managing the fishery.

b) Inform or propose changes in the management measures. Until the 2019-20 fishing season the OFMC was only discussing regarding possible changes in the management measures but no proposal for the DGPM was coming out from this committee since no consensus was achieved. In February 2020, for the first time, the OFMC achieved unanimously three relevant agreements: 1) establish a 2019-20 fishing season TAC of 189 tonnes (a sustainable level coming out from the stock assessment depletion model), 2) introduce a change in the decision-making protocol for all allegations to be answered in a written format explaining why decisions were taken, and 3) ask the DGPM for increasing the control and surveillance in the fishery (CS, 2020).

c) Promote and facilitate scientific studies and technical monitoring. Gaps of information and future projects to address it has been effectively discussed in the OFMC and results from those studies has been shared (e.g. octopus marking experience, studies on possible HCR associated to CPUE, stock assessment model, identification of special recruit-juvenile habitats, ...). The implication of the fishing sector along with the CEP, SIGMA and the OMA (Universidad de Oviedo) has been material for successfully developing this role.

d) To do a follow up of the degree of execution of the objectives of the plan. This last role was added in the OFMP 2018-19 and it was done for the first time in the OFMC meeting in October 2019 (CS 2019). The individual objectives of the management plan have been assessed and difficulties or weak points identified.

All this results in measures and strategies to achieve the objectives of the fishery, based on a clear and established decision-making process; therefore, this SI reaches SG 80.

Responsiveness of decision-making processes				
b	Guide post	Decision-making processes respond to serious issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take some account of the wider implications of decisions.	Decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.	Decision-making processes respond to all issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.
	Met?	Yes	Yes	No
Rationale				

The active participation of the CEP and the fishermen **all stakeholders** allows the decision-making process to respond to serious and important issues relevant in terms of research, fishery surveillance and consultation (e.g., the establishment of an onboard monitoring plan, GPS satellite tracking of vessels, databases of catches, CPUE, etc.). This process works on a regular basis and is able to respond quickly to any event that affects the fishery due to the harmony between managers and fishers.

However, not all topics are addressed (e.g., the influence of climatic factors on the octopus population) and there is also a lack of **clear target reference points linked to** fishery status indicators that could guide solid, day-to-day decision-making.

Nevertheless, the implications of the decisions taken around the more serious and important issues (~~but not all issues~~) on fisheries management (e.g. **comprehensive fishery monitoring, stock status, reproductive closure, minimum size, other fisheries impact on octopus, traps bycatch and its survivorship, bycatch of ETPs, impact on habitats and ecosystem, tracking system for the fleet and for the line of traps for reducing poaching, etc.**) are considered, therefore this SI gets a SG of 80. However, the SG100 is not met

Use of precautionary approach			
C	Guide post		Decision-making processes use the precautionary approach and are based on best available information.
	Met?		Yes
Rationale			

Ley 2/1993 on Fisheries of the Principality Asturias has a precautionary approach because it establishes that the improvement of the fisheries sector shall be promoted taking into account "the need to adapt the fishing effort to the situation of the resources".

The precautionary approach is inherent in the decision-making process and is applied. The decision-making process is based on the best information available and, in addition, the DGPM in general – and the CEP in particular – make a great effort to get the best information available; if there is no relevant information, it responds quickly by designing a study to cover these gaps. A clear example of this is the project commissioned to the consultancy firm SIGMA s.l. to carry out during the 2014-15 campaign sampling on board the boats (features of the fishing gear, fishing zones, retained catch, discards, ETP species, etc.), install GPS/GPRS devices in ten boats and proceed to the marketing/release/recapture of octopus.

Currently the OFMC mets in the middle of the fishing season (February-March), and it is intended to analyze how the fishing season is going (CPUE at the beginning of the fishing season during the months of December and January is analyzed) and decide whether any effort restriction should be taken (the measures to reduce effort would be an early daily closure of the fishery at 16h (instead of at 17h) and a maximum daily quota of 60, 120 or 180kg for 1, 2 or >2 crew members respectively).

~~Although the DGPM does not suggest fishery closures when indicators like the CPUE fall,~~ The Fisheries Act 2/1993 of the Principality of Asturias provides that octopus fishing boats also have licences for other coastal fishing gear, and thus, in practice, the fishers themselves can immediately move to other fisheries under a precautionary approach if anything wrong happens with the octopus.

The entire system uses a precautionary approach based on the best scientific and technical information available, so the SI gets a SG of 80.

Accountability and transparency of management system and decision-making process				
d	Guide post	Some information on the fishery's performance and management action is generally available on request to stakeholders.	Information on the fishery's performance and management action is available on request , and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.	Formal reporting to all interested stakeholders provides comprehensive information on the fishery's performance and management actions and describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.
	Met?	Yes	No-Yes	No
Rationale				

During the consultations for the drafting of the OFMP each year, and during the decision-making process, information is offered on the current status and historical evolution of different fishery indicators (catches, sales, CPUE, price, octopus weight distribution, etc.) [to all stakeholders](#).

~~When a guild requests information, all or part of the fishery surveillance report is provided to it. However, this report – which is prepared by CEP staff – is merely descriptive and does not do a deep analysis of the data (e.g., statistical, modelling or prediction methods) nor does it give recommendations on possible measures to take. One example is the recent report from the 2013-14 campaign in which it states that "this has been the worst campaign since records have been kept", however it does not explain the possible causes or propose any actions to take. This information is not exhaustive nor is it distributed automatically to all stakeholders, and it does not describe how the management system responds to the new information and recommendations arising from research on and/or assessment of the fishery. There is an established decision-making process, although it does not seem to be an entirely transparent process since the information is not publicly accessible. Nevertheless, at the meetings attended by CEP technicians, these technicians advise the DGPM and the guilds on the status of the fishery and on decisionmaking. Based on the above, it can be concluded that only some information is available and given upon request, therefore this SI gets SG 60, but not all explanations are provided for any actions and there is not a formal reporting to all stakeholders; therefore this SI do not reach neither SG 80 nor SG 100.~~

In the *Protocol for the Decision Making Process in the Octopus Fishery Management Plan of the Principado de Asturias* (DGPM, 2020a) explained in SIa, a detailed procedure, step by step, on how decision are taken is described.

The first part of the decision making process (steps 1, 2 and 3) takes places within the OFMC where all stakeholders are actively represented. The OFMS meets at least twice in each fishing season; 1) the first meeting (October-November) is done before the OFMP is published (usually December), and it is intended to review the past fishing season and discuss management measures for the next management plan, and 2) the second meeting takes place in the middle of the fishing season (February-March), and it is intended to analyze how the fishing season is going and decide wether any effort restriction should be taken. Moreover, before each meeting the CEP is in charge of delivering in advance to all stakeholders monitoring reports on the status of the fishery. After the meeting, the CEP also delivers meeting minutes to all participants, that are endorsed by all stakeholders in the next OFMC meeting.

The second part of the decision making process (steps 4, 5 and 6) takes places outside the OFMC and is under the responsibility of the Head of Fisheries Management Service - Jefe de Servicio de Ordenación Pesquera (from the DGPM), who after considering the meeting notes from the OFMC will make a proposal for the next OFMP (DGPM, 2019a). This proposal is a written document sent to all fishers´ guilds who can make formal allegations that will be answered back by the DGPM on a written document. After this, the final OFMP will be sent by the Managing Director for publishing in the BOPA, the Official Gazette of the Principality of Asturias. The fishers´ guilds still have a new opportunity to, if they so wish, bring an administrative appeal before the Board of Administrative Litigation of the Superior Court of Justice of Asturias.

This procedure provides accountability and transparency of the management system and decision-making process. Nevertheless, some relevant information, as data on the number of traps used based on the on-board observer program reports (Fernández, 2019b, 2020b) are not being distributed by the CEP within other stakeholders at the OFMC. Other relevant information as the monthly landings of octopus below the weight limit (1 kg) from the CEP monitoring at port is not shown since the 2019-20 fishing season. The CEP confirmed the CAB during the 4SA site visit that, although they keep registering this information, it is deliberately omitted in the reports “for not interfering with the Surveillance and Control Unit and also for avoiding this way a potential loss of trust from the fleet in the CEP monitoring” (M^a del Pino Fernández, biologist and responsible of CEP monitoring, personal communication). This circumstance is preventing the circulation of key information on the fishery between stakeholders. So far the CAB is not aware if any stakeholder has requested this information.

Moreover, although the protocol establishes that the new management measures and changes in the regulation will be assessed in order to inform the next decisions to be taken in the OFMP, this has still not been implemented in place, and it is not clear yet who will be the responsible at this stage and how this assessment will be made.

Based on the above, it can be concluded that information on the fishery’s performance and management action is available to stakeholders, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity, therefore, **this SI reach SG 80**. SG 100 is not reached since the formal reporting does not provide

key information on the fishery to all stakeholders, and, moreover, so far, the effectiveness of management measures and decisions has not been reviewed.

Approach to disputes				
e	Guide post	Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery.	The management system or fishery is attempting to comply in a timely fashion with judicial decisions arising from any legal challenges.	The management system or fishery acts proactively to avoid legal disputes or rapidly implements judicial decisions arising from legal challenges.
	Met?	Yes	Yes	Yes
Rationale				

In Title IX of the 2/1993 Fisheries Act of the Principality of Asturias (Ley 2/1993) there is a section related to offences and sanctions that states in great detail all the kinds of offences (classified as minor, serious and very serious) and the concomitant sanctions, which range from administrative fines to the revocation of licences and disqualification from activity for up to three years.

We have not observed any legal disputes within the scope of this fishery. In any event, should there be any, the legislative framework makes it clear how they must be resolved.

The resolution of conflicts between fishers and the Administration is done through dialogue and direct negotiations. Otherwise, it is done with statements from the involved parties to the administration and appeals, both administratively and – if rejected – via the appropriate judicial processes to the authorities necessary for the resolution of disputes between the parties (Superior Court of Justice of Asturias).

Conflict resolution with other fisheries (trawl platform and recreational) has cooperation/dialogue frameworks established. The DGPM consults the fishers' guilds regarding the regulations concerning the recreational fishing of octopus in Asturias. The conflict with the trawlers (state-jurisdiction fishery) dates from many years ago (creel boats claim that the industrial trawling fleet occasionally operates in waters shallower than 100 m and that they do have to respect the octopus closed period) and there have not been, to our knowledge, meetings and/or contacts to resolve it. However, Act 3/2001 of 26 March, on State Marine Fisheries sets out in its first additional provision the creation of two bodies for coordination and consultation between the Spanish state, autonomous regions and the fisheries sector when the issues are topics of common interest. The *Consejo Nacional Pesquero* (National Fisheries Council) is the coordinating body between the MAPA and the autonomous regions, and on it are represented the SGP, the Directors General of the General Secretariat of Maritime Fisheries and a representative from each of the autonomous regions. The other body is the *Comité Consultivo del Sector Pesquero* (Consultative Committee of the Fisheries Sector), which has advisory and consultation functions, and which has representatives from the most important associations or organisations in the fisheries sector, including the *Federación Nacional de Cofradías de Pescadores* (National Federation of Fishers' Guilds).

Based on the above, it can be concluded that the management system acts proactively to avoid legal disputes, so this SI gets a SG of 100.

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Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	75 85
Condition number (if relevant)	NA

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5 Appendices

5.1 Evaluation processes and techniques

5.1.1 Site visit

The remote audit was organized through conferences on the 21st July 2020. Both the lead auditor (Macarena García) and the assessor (Gonzalo Macho) participated remotely.

The agenda of the remote audit, including institutions and people interviewed main topics discussed are presented in **table 5.1 and table 5.2**. During the remote audit the team concentrated in checking for any relevant modification affecting the fishery and assessing progress on the conditions established in the PCR. Information collected on relevant modifications affecting the fishery is summarized in **Section 2.2** of the current report, while the assessment made on the progress towards closing the conditions is presented in tables in **Section 3.2**.

Table 5.1. Details of the remote meetings held during the site visit for the 4SA for the western Asturias octopus trap fishery

Day	Time	Place	Attendees and role	Institution
21 st July 2020	09:00	Remote	M ^o del Pino Fernández (Biologist, CEP)	Dirección General Pesca Marítima, Gob. Asturias (DGPM) -CEP-
			Rubén Roa Ph. D. Consultant in Statistical Modeling, Marine Ecology and Fisheries	Independent consultant
	10:30	Remote	Valentín García (Head of the Unit of Inspection and Control)	Dirección General Pesca Marítima, Gob. Asturias (DGPM) -Unidad de Inspección y Control-
	12:00	Remote	Beatriz Nieto	WWF- España
17:00	Remote	Julio Blanco Álvarez (ARPESOS President and vessel owner Cof. Ortiguera), José Manuel García Alonso (ARPESOS Vicepresident and vessel owner Cof. Viavélez), Ramón Istiartti (ARPESOS Secretariat), Carlos Bedia (Guardapesca Cof. Viavélez and Secretariat).	ARPESOS members	

5.1.2 Stakeholder participation

The off-site visit for the surveillance audit was announced at the MSC website on the May 7, 2020. In addition, 50 different stakeholders were contacted via e-mail (including Asturian and Galician fishers and manager representatives, research centres –IEO, ICES, Universidad de Oviedo, - and NGOs –WWF, Oceana, Greenpeace, Seo-Birdlife, Ecologistas en Acción-).

Furthermore, the team with the assistance of the client elaborated a list of key stakeholders to be interviewed and were contacted via email and telephone in order to ensure their participation during the off-site visit and arrange the meetings. The list of institutions and people finally interviewed is detailed in **table 5.1**.

5.2 Stakeholder input

The stakeholder input was restricted to the information collected during the meetings held at the off-site visit and the documents sent by the stakeholders as a result of the requests made by the team during those meetings. No other stakeholder inputs were received by email using the template provided by MSC

Table 5.2 presents the main topics discussed with the different stakeholders during the different meetings. All relevant information collected on updates or modifications affecting the fishery is summarized in **section 2.2** of the current report. All documents used for the assessment are listed in **Section 4** (References).

Table 5.2. Details of the main topics discussed during the off-site visit for the Western Asturias octopus trap fishery

Stakeholder	Topics discussed
CEP & DGPM	<ul style="list-style-type: none"> - Detailed account of the progress made on conditions 1, 3 & 4A. - Voluntary self-sampling - Observer sampling - OFM evaluation - Regulations
ARPESOS	<ul style="list-style-type: none"> - Octopus catches during 2019/20 fishing season - Internal regime rules - Decision-making process and transparency - Auction functioning - Tasks assigned to the guarda-pescas - N of inspections, sanctions and other compliance issues
WWF-Spain	<ul style="list-style-type: none"> - OFMC: participatory and decision-making mechanisms, transparency... - Redepesca initiative
Independent consultant	<ul style="list-style-type: none"> - Trials with depletion model and communication of the results - Discussion on existing candidate HCRs - Future research on related topics
Control Unit (DGPM)	<ul style="list-style-type: none"> - Compliance of the certified fleet - MCS activities developed during 2019/20 - Means at the Control Unit: manpower, vessels, trial with drones... - Implementation of the new labels for the lines of traps - Performance on condition 3

5.3 Revised surveillance program

Current surveillance audit was the last one within the first certification cycle. The fishery is already facing the re-certification process.

5.4 Harmonised fishery assessments

There are no overlapping fisheries. Not applicable