SMALL PELAGICS FISHERY IN SONORA, GULF OF CALIFORNIA

First Surveillance Audit Report

Certification Code: F-SCS-0107

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Glossary

ASI	Accreditation Services International
BAC	Biologically Acceptable Catch
B_0	unfished biomass
B_{MSY}	biomass at maximum sustainable yield
CAB	Certification Assessment Body
CCNN	*Comités Consultivos Nacionales de Normalización* (National Consulting Normalization Committees)
CEPA	*Consejos Estatales de Pesca y Acuacultura* (State Councils for Fisheries and Aquaculture)
CICESE	*Centro de Investigación Científica y de Educación Superior de Ensenada, Baja California*
CICIMAR	*Centro Interdisciplinario de Ciencias Marinas*
CITES	Convention on International Trade in Endangered Species
cm	Centimeter
CNPA	*Consejo Nacional de Pesca y Acuacultura* (National Council for Fisheries and Aquaculture)
COBI	*Comunidad y Biodiversidad*
CNP	*Carta Nacional Pesquera* (National Fisheries Chart)
COI/IOCARIBE	*Comisión Oceanográfica Intergubernamental/la Zona Costera de la región del Caribe* (Intergovernmental Oceanographic Commission/the Caribbean Shoreline Zone)
COFEMER	Comisión Federal de Mejora Regulatoria
CONAPESCA	*Comisión Nacional de Acuacultura y Pesca* (National Commission of Fisheries and Agriculture)
CPUE	Catch Per Unit Effort
CRIP	*Centro Regional de Investigación Pesquera* (Regional Center for Fisheries Research)
DAT	Default Assessment Tree
ETP	Environmentally Threatened or Protected
ERA	Ecological Risk Assessment
ESD	Ecologically Sustainable Development
F	Fishing mortality rate

F_{LIM}	Fishing mortality rate at which recruitment will be impaired.
F_{MSY}	Fishing mortality rate at which the biomass produces the maximum sustainable yield.
g	Gram (0.001 kg)
HCR	Harvest control rule
INAPESCA	*Instituto Nacional de la Pesca* (National Fisheries Institute)
IPI	Inseparable or practicably inseparable
LGPAS	*Ley General de Pesca y Acuacultura Sustentables* (General Law for Sustainable Fishing and Aquaculture)
LTL	Low Trophic Level stocks
LRP	Limit reference point
mm	Millimeter
MSC	Marine Stewardship Council
MSY	Maximum Sustainable Yield
MT	Metric Ton
NGO	Non-Governmental Organization
nm	Nautical mile (1nm = 1.852 km)
OY	Optimum yield
SAGARPA	*Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación* (Secretariat of Agriculture, Livestock, Fisheries and Food)
SCS	Scientific Certification Systems
SG	Scoring guidepost
SL	Standard Length (from tip of closed mouth to end of fleshy body)
SPMP	Small Pelagics Management Plan
SSB and R	Spawning Stock Biomass and Recruitment
TAC	Total Allowable Catch
TL	Total length
TRP	Target reference point
VPA	Virtual Population Analysis

1 General Information

Fishery name	Small Pelagics Fishery in Sonora, Gulf of California.		
Unit(s) of assessment	The small pelagics fishery in the Gulf of California targets the Northern/Central Gulf of California Pacific sardine (*Sardinops sagax*) and the Northern/Central Gulf of California thread herring complex (*Opisthonema* spp.), made up of three subspecies (*O. libertate, O. medirastre* and *O. bulleri*), or *sardina crinuda* and *arenque de hebra* in Spanish. The UoA covers permit holder, purse seiner vessels subject to Mexican National Standard Number NOM-003-SAG-PESC-2018[1], which operate in the Mexican territorial waters of the central-northern Gulf of California in NW Mexico. The certified fleet is composed of 46 purse seine vessel members associated to the CANINPES. However, in 2018 only 42 vessels were engaged in fishing operations. There are approximately eight additional vessels licensed to capture the target species, currently, these are partially evaluated (i.e. Principle 1 and 2 scores consider the impacts of these vessels) but not fully. Therefore, these vessels cannot be considered eligible to join the certificate, unless the client group was to request an extension of scope to evaluate additional P2 and P2 components.		
Date certified	22 Jan 2018	**Date of expiry**	21 Jan 2023
Surveillance level and type	*Surveillance level 6*		
Date of surveillance audit	March 13th and 14th, 2019		
Justification	*NA*		
Surveillance stage (tick one)	1st Surveillance	X	
	2nd Surveillance		
	3rd Surveillance		
	4th Surveillance		
	Other (expedited etc)		
Surveillance team	Lead assessor: Carlos Alvarez Assessor(s): Luis Ambrosio		
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[1] This NOM substitutes a previous version present in the Public Certification Report as NOM-003-PESC-1993

2 Executive Summary & Conclusion

This report summarizes the findings from the 2019 first surveillance audit of the Gulf of California Small Pelagics Fishery in Sonora, Gulf of California. The fishery was re-assessed and renewed its certificate to the MSC requirements in January 2018 using the default assessment tree MSC Certification Requirements v1.3

In this year's first annual surveillance report, the assessment team evaluated expected outcomes of open conditions against the first year milestones, reviewed any changes in the management system, regulations, the scientific base of information and any changes affecting traceability. An onsite meeting was conducted on March 13th and 14th 2019 in Mazatlán, Sinaloa, Mexico, during which the assessment team met with the clients and stakeholders to review the progress of the fishery on open conditions and review new information (See Assessment Consultations).

The fishery originally received sixteen conditions in the 2016 full assessment; seven conditions in Principle 1, three on the Pacific sardine UoA and four on the thread herring UoA; four conditions were placed in Principle 2 and five in Principle 3 (See Table 3).

As a result of this first surveillance audit the fishery presented most Conditions 'on-target' except for Condition 1-6 (PI 1.2.3), Condition 3-1 and 3-2 (PI 3.2.2). Condition 2-1 (PI 2.1.2) was re-scored and closed, as the team determined that a partial strategy is not necessary for main retained species given that these species are "highly likely to be within biological based limits, meeting SG80" (See Appendix 1)

Progress on conditions related to Principle 1 was deemed acceptable. The conditions in this Principle are related to the design and implementation of a harvest strategy, including the reference points and the control rule. The scientific branch of the government presented reports and minutes indicating relevant progress along the path stated in the action plan towards meeting the requirements in the CR. The scientists started in the first-year discussions and communicated to other interested parties options to define reference points that are appropriate for the fishery, particularly with regards of the Pacific sardine and its role in the ecosystem. The fishery modified the control rule in the Fisheries Management Plan as required at the full assessment and the new form was applied to compute the BAC for the 2018 fishing season.

The revised official norm regulating the operations of this fishery has been published in the Official Gazette. This represents a major improvement because it includes language that allows the formal implementation and application of the harvest control rule. NOM-003-SAG-PESC-2018 also includes proposed modifications to the regulations related to size limits, related to Conditions on Principle 3.

It is SCS's view that the Gulf of California Small Pelagics Fishery in Sonora, Gulf of California continues to meet the standards of the MSC and complies with the 'Requirements for Continued Certification.' SCS recommends the continued use of the MSC certificate through to the end of this certificate cycle when conditions are expected to close. The continuation of this positive determination is dependent on efforts of the fishery towards getting back on track to meet milestones marked as "behind target".

Table 1. TAC[2] and Catch Data of Monterrey sardine in the northern-central Gulf of California.

	Species	Year	Catch (mt)	Effort (days fishing)	N. of vessels	Source
TAC	*S. sagax*	2018/19	292,600			Nevarez-Martinez et al. (2019a)
UoA share of TAC	*S. sagax*	2018/19	-[3]			
UoC share of TAC	*S. sagax*	2018/19	-[4]			
Total green weight catch by UoC[5]	*S. sagax*	2017/18	177,929	3,294[6]	46	Martinez-Zavala et al. (2019)
	S. sagax	2016/17	110,414	2,606[7]	46	Martinez-Zavala et al. (2019)

[2] The small pelagics fisheries in Mexico can be managed actively by computing a BAC which in practice operates as a TAC because is a limit that if exceeded, overfishing occurs. Values in the table are BAC.
[3] There are 8 vessels that do not belong to the UoA and could have access to the TAC, but there is no allocation of the catch to UoA and non-UoA vessels.
[4] Id.
[5] Data correspond for total catch in the northern-central Gulf of California. Data for UoC only not available.
[6] Nominal effort in fishing trips. Trips are not separated by species.
[7] Id.

Table 2 A. TAC[8] and Catch Data of thread herring in the northern-central Gulf of California.

	Species	Year	Catch (mt)	Effort (days fishing)	N. of vessels	Source
TAC	Opisthonema Complex	2018/19	382,000			Nevarez-Martinez et al. (2019a)
UoA share of TAC	Opisthonema Complex	2018/19	-[9]			
UoC share of TAC	Opisthonema Complex	2018/19	-[10]			
Total green weight catch by UoC[11]	*Opisthonema* Complex	2017/18	63,380	3,294[12]	46	Martinez-Zavala et al. (2019)
	Opisthonema Complex	2016/17	58,445	2,606[13]	46	Martinez-Zavala et al. (2019)

[8] The small pelagics fisheries in Mexico can be managed actively by computing a BAC which in practice operates as a TAC because is a limit that if exceeded, overfishing occurs. Values in the table are BAC.
[9] There are 8 vessels that do not belong to the UoA and could have access to the TAC, but there is no allocation of the catch to UoA and non-UoA vessels.
[10] Id.
[11] Data correspond for total catch in the northern-central Gulf of California. Data for UoC only not available.
[12] Nominal effort in fishing trips. Trips are not separated by species, it applies to all small pelagics.
[13] Id.

Table 3. Summary of Assessment Conditions

	Condition number	Performance indicator (PI)	Status	PI original score	PI revised score
1	1-1	1.1.2	On Target	75	Score not revised
2	1-2	1.2.1	On Target	70	Score not revised
3	1-3	1.2.2	On Target	75	Score not revised
4	1-4	1.2.1	On Target	70	Score not revised
5	1-5	1.2.2	On Target	75	Score not revised
6	1-6	1.2.3	Behind Target	75	Score not revised
7	1-7	1.2.4	On Target	75	Score not revised
8	2-1	2.1.2	Closed	80	Score not revised
9	2-2	2.3.2	On Target	70	Score not revised
10	2-3	2.3.3	On Target	65	Score not revised
11	2-4	2.5.2	On Target	75	Score not revised
12	3-1	3.2.2	Behind Target	75	Score not revised
13	3-2	3.2.2	Behind Target	75	Score not revised
14	3-3	3.2.2	On Target	75	Score not revised
15	3-4	3.2.3	On Target	75	Score not revised
16	3-5	3.2.5	On Target	70	Score not revised

3 Background

3.1 Stock Status Update

Monterrey sardine

The INAPESCA conducted an acoustic survey on June 2018 as described in Nevarez-Martinez et al. 2019a and using the estimation procedures described in previous reports (e.g. Gonzalez-Maynez et al. 2016). Abundance was estimated in 870,000 and 1,200,000 t, depending on the assumption about the reflectivity parameter. The report warns that although these estimates are 38% to 40% lower than estimates in 2017, the area covered in the survey was also reduced by 35%, therefore, the estimated abundance from the 2018 survey is not comparable directly to the abundance in 2017. No other report was provided that indicated that correction factors were added to use the 2018 estimate in the stock assessment. Nevertheless, abundance is underestimated in 2018 and lower than that in 2017, it is twice the abundance estimated in 2015 and 2016 for an area comparable to 2017.

The stock assessment (Nevarez-Martinez *et al*. 2019b) estimated the biomass of exploitable sardines to be 1,500,000 t. The stock assessment estimated in SSB is well above the level producing MSY and that similarly, last year's fishing mortality rate was far below the level producing MSY (Figure 1). The Kobe plot indicates that the stock is not over-exploited, and no overfishing is taking place.

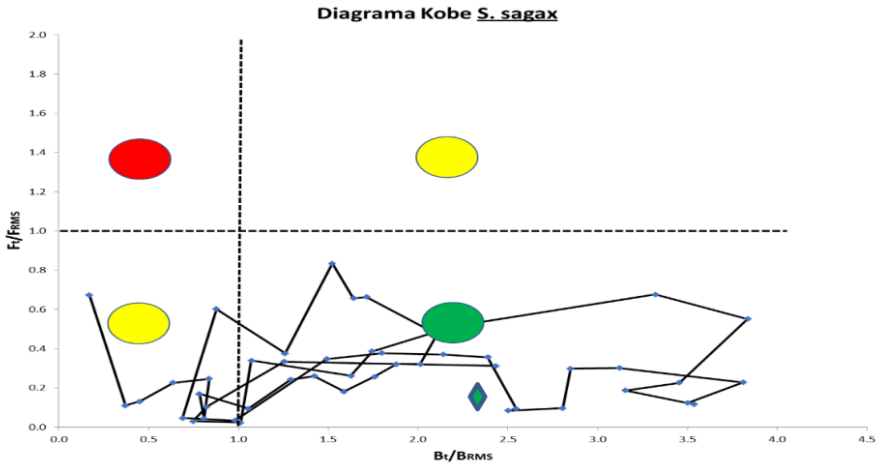


Figure 1. Kobe plot of biomass and fishing mortality rate relative to their respective levels producing MSY for the Monterrey sardine in the central/northern Gulf of California. Biomass is SSB. Reproduced from Nevarez-Martinez *et al*. (2019b).

Thread Herring

Acoustic based estimates of thread herring abundance were obtained for years 2016 (near 500,000 t) and 2017 (900,000 t). No estimate was presented for 2018 even though a survey was conducted. The stock assessment (Nevarez-Martinez *et al*. 2019c) estimated that in 2017/18 the SSB was near 1,300,000 t while the exploitable biomass was estimated to be about 900,000 t. The SSB producing the MSY was estimated

to be 460,000 t. The Kobe plot indicates that the stock is not over-exploited, and no overfishing is taking place.

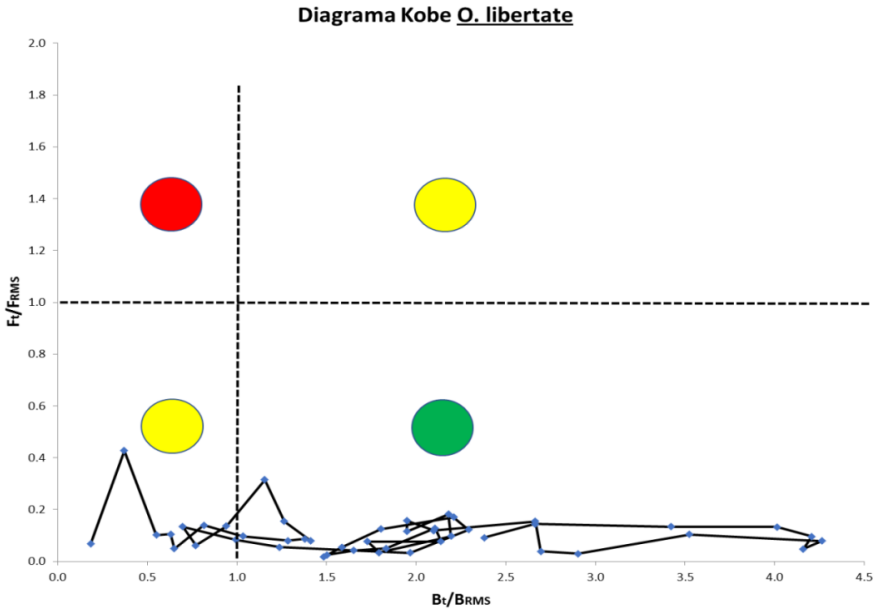


Figure 2. Kobe plot of biomass and fishing mortality rate relative to their respective levels producing MSY for the thread herring in the central/northern Gulf of California. Biomass is SSB. Reproduced from Nevarez-Martinez *et al*. (2019c).

3.1 Updates on Information on Principle 1

Stock assessment

Monterrey Sardine

The ASAP model continues being used to evaluate stock status and to estimate management parameters. In the sardine fishery of the GoC, the method fits an age structured model (ASAP) to different types of data, including fishery independent indices of abundance including biomass estimated from data collected in acoustic surveys. The outputs of the model include total biomass, recruits and exploitable biomass. The latter is used to calculate the BAC as defined in the management plan. Both acoustic data base estimates of abundance and CPUE from tows during the acoustic surveys show a clear increasing trend in the sardine abundance from 2016 to 2018 (Figure 3).

Model-based estimated a total abundance of near 2,800,000 t in 2018 while exploitable biomass used in the calculation of the BAC was estimated in 1,540,000 t. Figure 4 show a clear recovery from the low levels estimated from 2012 to 2016, probably now around the historic average.

Measures of fishing intensity, either as F, C/B or 1-exp(-F) increased to be around 0.1. Estimated F_{actual} was 0.086 while FMSY was estimated at 0.321. It is worth mentioning that the model output provided also with an estimate of F that produce an SPR of 30% at 0.632 and of 40% at 0.430. The SPR values are interesting because they indicate that the current level of fishing mortality would cause a reduction of spawning potential to a level likely above 50% and possibly around 75%.

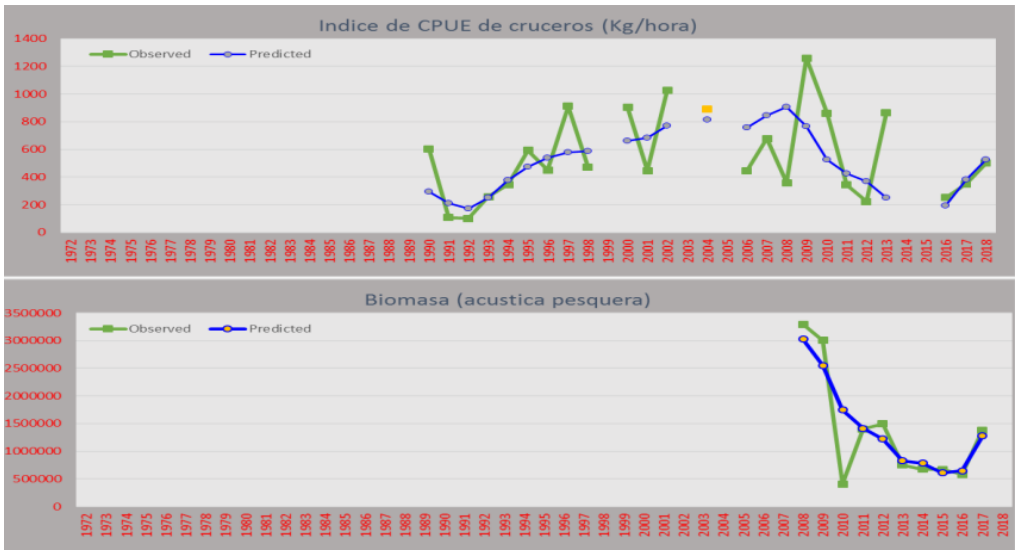


Figure 3. Predicted model-based abundance fit to fishery independent indices of abundance of Monterrey sardine in the Gulf of California. Both indices are obtained from data collected in dedicated acoustic surveys, upper panel CPUE from tows, bottom panel biomass from acoustic analysis. Reproduced from Nevarez-Martinez et al. (2019b).

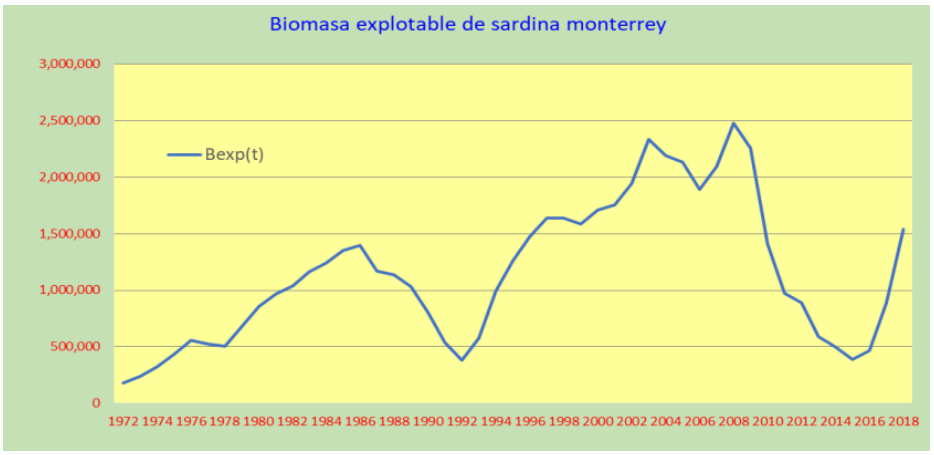


Figure 4. Time series of estimated exploitable biomass of Monterrey sardine in the Gulf of California. Reproduced from Nevarez-Martinez et al. (2019).

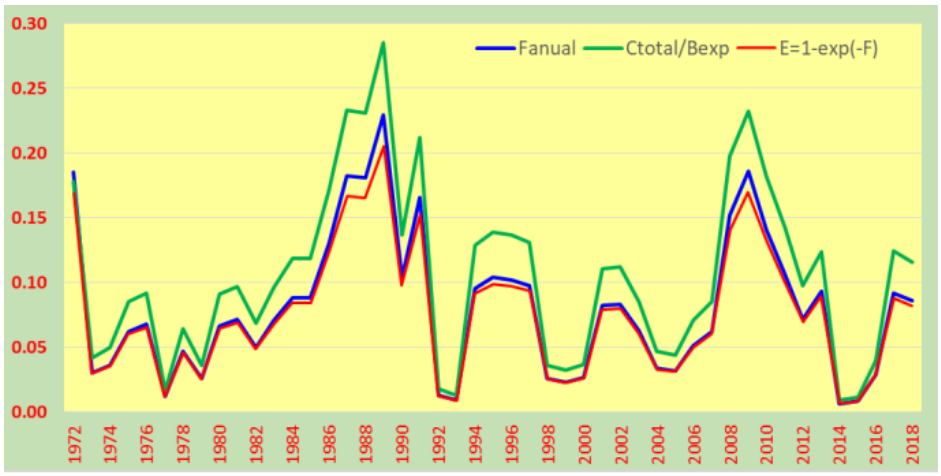


Figure 5. Rates of fishing mortality (F in blue), and exploitation (C/B in green and 1-exp(-F) in red) obtained as outputs of the ASAP model fit to Monterrey sardine data from the Gulf of California. Reproduced from Nevarez-Martinez et al. (2019c).

Thread Herring

The ASAP model was also used to reconstruct the history of the biomass of thread herring and estimated the population dynamics and management parameters. An index of eggs and larvae, CPUE and acoustic based abundance were the three different types of information independent to the fishery that were used to fit the age structured model. Measures of fishing intensity, either as F, C/B or 1-exp(-F) have been under 0.09. Estimated F_{actual} was 0.059 while FMSY was estimated at 0.6.

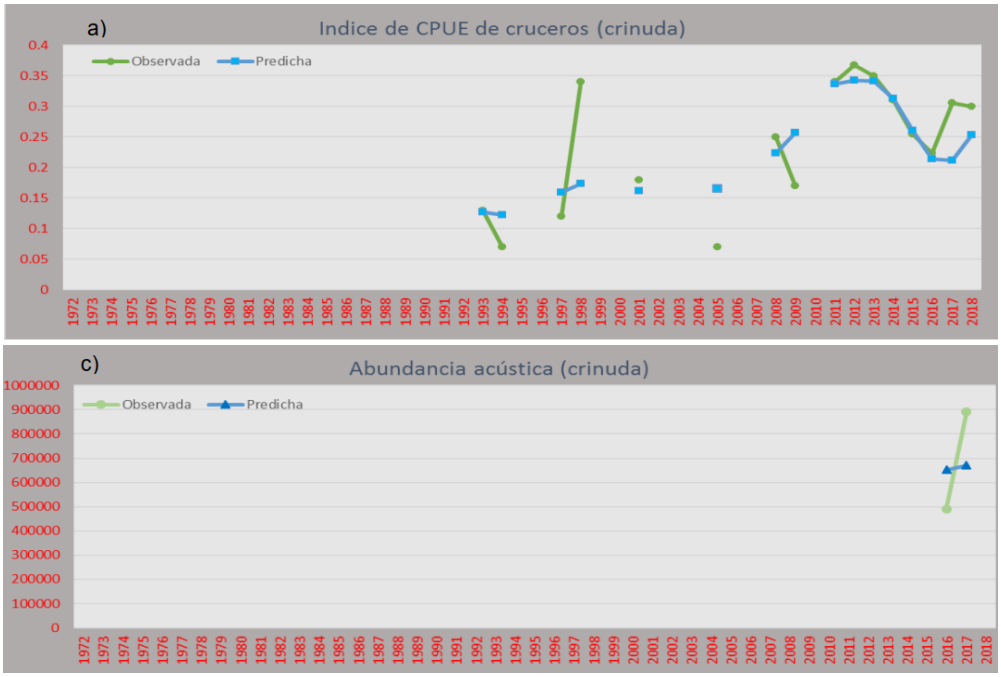


Figure 6. Predicted model-based abundance fit to fishery independent indices of abundance of thread herring in the Gulf of California. Both indices are obtained from data collected in dedicated

acoustic surveys, upper panel CPUE from tows, bottom panel biomass from acoustic analysis. Reproduced from Nevarez-Martinez et al. (2019c).

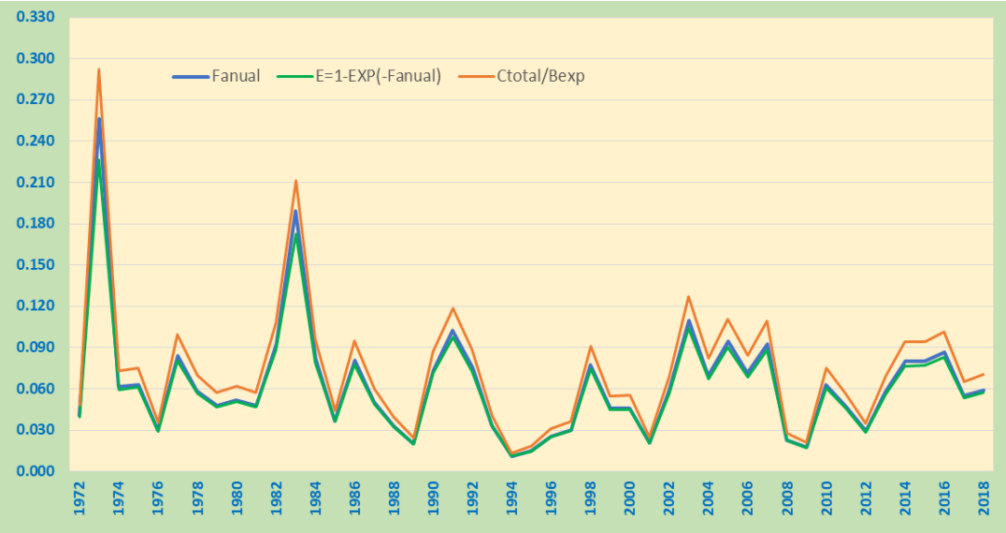


Figure 7. Rates of fishing mortality (F in blue), and exploitation (C/B in green and 1-exp(-F) in red) obtained as outputs of the ASAP model fit to thread herring data from the Gulf of California. Reproduced from Nevarez-Martinez et al. (2019c).

The Biologically Acceptable Catch for Monterrey sardine and thread herring

The fishery management uses the control rule as described in the management plan to compute the Biologically Acceptable Catch as $BAC = (B - B_{min}) * Fraction$, where Fraction is defined as the proportion of biomass, above B_{min}, that can be removed by the fishery. Also, at re-assessment, Fraction was being used as a known constant fishing mortality rate from a previous investigation that presented desirable properties for management of the fishery. After some discussion during the onsite visit, it was agreed that Fraction should be better used if it was a true harvest rate. At that meeting, such harvest rate was proposed to be computed as HR = 1-exp(-F_{msy}). In the latest stock assessment reports conducted by INAPESCA for both Monterrey sardine and the thread herring (Nevarez-Martinez et al., 2019b and Nevarez-Martinez et al., 2019c), the BAC was computed using the pre-agreed harvest rate as described above.

The INAPESCA computed computing the BAC of Monterrey sardine for season 2017/18 in about 390,000 t (no exact value provided) while the catch of the season was 177,929 t. For season 2018/2019 the BAC was 292,600 which was computed using an additional factor in the rule to account for ecosystem services. Considering that Monterrey sardine is a key low trophic level species, the B_{min} variable was increased from a base value of 55,000 t in 65,000 t based on an estimate of fish consumption by sea birds (Nevarez-Martinez *et al*., 2019).

For thread herring B_{min} as 52,700 and using the estimate of F_{MSY} of 0.6, the BAC for the period 2018/2019 was 382,000 t.

Implementation of the Harvest Control Rule.

At re-assessment, the fishery was assigned a condition to present evidence that the harvest control rule was effectively in place and that this served the purpose to have a strategy that is responsive to the state of the stock. The control rule for the small pelagic fish in Mexico is well defined in the management plan but lacked the mechanism to convey the scientific advice in form of a BAC to the management and the fishers. Because of this the resulting BAC was not a binding management mechanism and was not considered in place, affecting PI 1.2.1 SIa and PI 1.2.2 SIa, rising one condition for each PI. The fishery proposed to insert a modification in the review of NOM-003-PESC-1993 that was happening at the time of re-assessment to open the possibility to communicate and implement the scientific advice provided by the INAPESCA derived from the stock assessment. The revised NOM now named NOM-003-SAG-PESC-2018 was published in the Official Gazette on March 12th, 2019. Section 4.6 of the NOM states: "The Secretariat may establish periods and closed areas for the capture of smaller pelagics in order to apply dynamic management of the fishery, avoid interaction with other fisheries, as well as contribute to the conservation of other biological resources and the ecosystem. Such periods and closure zones will be announced through Regulatory Agreements that will be published in the Official Gazette of the Federation, based on the technical opinion issued by INAPESCA for such purpose, prior to the socialization of the measure". In other words, the INAPESCA conducts the stock assessment and computes the BAC based on the status of the stock. The results are informed to other stakeholders including the fishers and the management branch of the government (CONAPESCA) and procedures can be agreed to start operations on the base of the limit in the BAC. In practice, this fits the need of a mechanism to transform a definition in the Management Plan, which is the technical guidance, into an actual management regulatory action.

At the time of the first surveillance audit, there was no Regulatory Agreement to present the proposed BAC and how it can be applied because the NOM had not yet been published. Nevertheless, the fishery presented evidence of the computation of the BAC based on results of a stock assessment. There is also evidence of meetings where the INAPESCA presented information on the size distribution of the fish to the industry and other authorities, signing an agreement to stop the fishery for three months from August to October 2018 "to protect the stocks".

3.1 Updates on the Management System and Regulations

An important development was discussed in the management system review which included a proposal to modify the control rule as is currently defined in the management plan. The new form of the rule substitutes the quantity FRACTION by an actual harvest rate specified as $HR = 1 - \exp(-F_{RMS})$. In this expression, F_{RMS} is the fishing mortality rate producing the maximum sustainable yield. When this harvest rate is inserted in the control rule, the result is an allowable catch that is lower than would normally be because the rule subtracts to the SSB, the biomass threshold that would make the fishery stop if reached or fell under. This catch is called the Biologically Acceptable Catch and was interpreted as the limit reference point, computed as $C_t = (B_t - B_{min}) * HR$. The target reference point in the management plan is a quantity named Optimal Yield (OY) which is defined as equal as or smaller than the BAC but there's still no guidance about how to compute it.

On March 12th, 2019 a revision of the Norm regulating the small pelagics fishery in Mexico was published in the Official Gazette as NOM 003-SAG-PESC-2018. Section 4.6 of the NOM states: "The Secretariat may establish periods and closed areas for the capture of smaller pelagics to apply dynamic management of the fishery, avoid interaction with other fisheries, as well as contribute to the conservation of other biological resources and the ecosystem. Such periods and closure zones will be announced through Regulatory Agreements that will be published in the Official Gazette of the Federation, based on the technical opinion issued by INAPESCA for such purpose, prior to the socialization of the measure". In other words, the INAPESCA conducts the stock assessment and computes the BAC based on the status of the stock. The results are informed to other stakeholders including the fishers and the management branch of the government (CONAPESCA) and procedures can be agreed to start operations on the base of the limit in the BAC. In practice, this fits the need of a mechanism to transform a definition in the Management Plan, which is the technical guidance, into an actual management regulatory action.

This standard replaces the Official Mexican Standard 003-PESC-1993 and has been the legal basis of this fishery until now. Important changes have been introduced related to the management model, the number of vessels per fishing zone, the minimum sizes and the percentages of capture of individuals below the minimum size in force and closure periods.

In relation to the regionalization of fisheries, the new norm establishes 3 regions for the exploitation of the resources of small pelagic and denominated A (Litoral of the Peninsula of Baja California); B (Gulf of California and coast of Sinaloa-Nayarit and North of Jalisco) and C (from North of Jalisco to Chiapas)

For each of these Regions, a maximum number of operational vessels has been established. This is a measure of fishing effort regulation. In zone B, the number of authorized vessels is 60. INAPESCA may, depending on technical criteria, modify the temporary effort by Region.

The number of vessels will not be able to grow and only the incorporation of new vessels will be authorized, or the capacity of the vessel holds will be modified above 50 tons if they are replaced by others that have already been active in the fishery and have warehouses equivalent to the replaced ones.

Lastly, the new Norm establishes a volume of capture below the minimum size, determined in the same standard for the species Monterrey sardine (*Sardinops sagax*), Western herrings (*Opisthonema spp*.), and Northern anchovy (*Engraulis mordax*) corresponding to 20% of the volume total annual nominal catch. Percentages allowed below this size will be modified according to the technical opinion of INAPESCA, which will be announced through regulatory agreements published in the Official Gazette of the Federation. This possibility was already included in the revision of the CNP (Carta Nacional Pesquera) of 2018 (going down from 30% to 20%) and has finally been reflected in NOM-003-SAG / PESC-2018.

In relation to the closure periods, SAGARPA may establish periods and zones for the capture of small pelagic species to improve the fishery management tools, the conservation of the resource and the interaction with other fisheries. These periods and zones will be taken according to the technical criteria of INAPESCA after discussion with the industry and that, through regulatory agreements, will be published in the Official Gazette.

3.2 Updates on Information and Management on Principle 2

Since the Full Assessment initiated in 2017 the fishery has implemented a number of measures to strengthen data collection systems and mitigate the impact of the fishery on Principle 2 elements. The progress on these areas are detailed in the sections below:

3.2.1 On-board observer program: Coverage & Sampling

Until 2017, INAPESCA was responsible for the operational aspects of the observer program for the small pelagic fisheries in California gulf. The Technical Observer Program on Board of the largest sardine fleet in the Pacific Ocean and the Gulf of California is executed by Global Group, A.C., in coordination with CONAPESCA and the Technical Assistance of INAPESCA improving its coverage. The assignment includes all small pelagic fleets of California Gulf.

During the 2017-18 season, a total of 1.408 sets were made with observers. 59.87% in Guaymas and 40.13% in Yavaros. There is a total of 14 observers on board within the program. All certified by CONAPESCA. A total of 20 vessels participated in the observer program.

Monitoring in the larger pelagic fleet was carried out following a specific sampling protocol (Jacob et al., 2018), by which the target catch was quantified and the accompanying fauna and species that interact with the operations were identified and quantified. In each fishing set, the total target catch was recorded, and a sample of approximately 12 kg was taken in the first sampled sample for further analysis in order to determine the specific composition of the target catch, weight, size, otoliths and maturity. Specific composition and weight per species was determined from the bycatch. All the technical information, biological fishing and fishing operations, are recorded in physical logs and then the data is stored in electronic logs.

Observers have different logs in which they take information on the results of each set by species and size, climatic data and data related to by-catches. The latter includes information on fish and sharks, crustaceans, birds, marine mammals and turtles

The Observer Program documents that incidental catches in fishing operations are not high. The information of the observers has allowed to establish that during fishing operations, the mortality of birds and marine mammals is very low and in some seasons null and there is no impact on the abundance of their populations. The absolute registered mortality of species within some category established in NOM-059-SEMARNAT are not affected by the capture of smaller pelagic species in the three fishing regions covered by the observer program of Global GRUPO A.C. not exceeding 2% of the total recorded catch. This

percentage is formed, to a greater extent, by the group of bone fish that in most cases represents up to 1.02% of the total catch, the rest of the species had a small catch with a lower percentage.

The sightings made it possible to show that organisms in special protection status (birds, marine mammals and turtles) are not being affected. In addition, despite the few records, the implementation of mitigation measures by the crew is increasing, which is favourable for these species.

3.2.2 Training and information processing

Global Grupo A.C. has been also responsible for training the new observers on board once they have taken over the observer program from 2017-2018 season.

Global Grupo A.C. has developed a continuous training program for its observers. At present Global Grupo has 30 people in charge of the program of which 24 are observers.

The observers, in addition to having a related university career, pass a series of technical courses and controls including a psychometric test and a 15-day performance improvement training per year.

The technical training is given with the participation of experts from the institutions involved in the management and research of small pelagics in the area (INPESCA, CONAPESCA, SEMARNAT, among others)

The information registered by the observers on board the vessels, has a quality control in its first phase, analysed by the zone coordinators. Later, it goes through a quality control in the second phase and where the digital information of each observer is integrated into a single base "Integral Base". Subsequently this information is verified by the Operations Director and is incorporated, in a definitive way, into the database: Integral Base_GGG_ "Operation Zone"

They have an operation manual (Jacob-Cervantes M.L. et al 2018) with all the tools and protocols to follow to carry out their work. The information coming from the shipments has three quality controls before being used.

3.2.3 Port Observer Program

Despite the development and implementation of the observer program on board vessels, there is no evidence that there are observers on the ground in the landing ports of the fleet.

3.2.4 Best Practices Training

Workshops of good practices was held for fishermen in 2018 following with those held in in previous years.

In 2018 INAPESCA carried out the 6th Course on Good Practices of Fishing of Minor Pelagic Fish on October 15 and 16.

Among the objectives of this workshop were the results of the observers of the last campaign, as well as a review of the MSC standard, the regulations in force, the use of logbooks and impact mitigation measures with ETP species among others. In this last part the systems were analyzed to treat the different individuals, in case of being hoisted on board, to cause them the least possible damage and their release in the shortest time. This workshop was attended by 23 people.

In addition to training, there is specific documentation for fishermen and boats in the form of triptychs or posters so they can consult the procedures more quickly and effectively.

The Manual for Mitigation Measures and Best Practices was published in 2015, and it includes guidelines in manipulation of rays, sharks and sea turtles.

3.3 Outcomes on Fishery Impact P2

The information collected by the observers, has allowed to establish that during fishing operations the mortality of birds and marine mammals is very low and, in some seasons, null and there is no impact on the abundance of their populations. Likewise, the treatment of the data indicates that incidental catches in fishing operations are not high. The information comes from the observer report for the 2017-2018 season prepared by Global GRUPO A.C. (Global Grupo A.C. 2018)

For Yavaros, a total of 86 species-groups of species were recorded divided into five main groups: smaller pelagics, fish, elasmobranchs, crustaceans, mollusks and echinoderms. In the group of smaller pelagic species nine species were recorded: anchoveta (Engraulis mordax), charrito (Trachurus symmetricus), mackerel (Scomber japonicus), paperillo fish (Selene peruviana), bocona sardine (Cetengraulis mysticetus), sardine crinuda (Opisthonema spp.) , Japanese sardine (Etrumeus teres), sardine monterrey (Sardinops sagax caerulea), and piña sardine (Oligoplites spp.). An increase of 28.5% in the number of registered species with respect to the previous season.

In terms of biomass, a total of 35,186.5t of small pelagic species was captured and represents 99.08% of the total catch. That is, the incidental catch represents only 0.91% of the total catch.

The second most abundant group in the catch, in terms of biomass, was that of bony fish with 322.92 t and representing 0.907% of the total catch.

The group of elasmobranchs represented only 8,227 E-03% of the total catch. None of the captured elasmobranch species is listed in NOM-059-SEMARNAT-2010 (DOF, 2010).

Regarding seabirds, no incidental catch was recorded during the whole season.

For Guaymas area, a total of 104 species-groups of species were recorded divided into five main groups: smaller pelagics, fish, elasmobranchs, crustaceans, mollusks and echinoderms. In the group of smaller pelagic species, seven species were recorded: anchoveta (Engraulix mordax), mackerel (Scomber japonicus), bocona sardine (Cetengraulis mysticetus), sardine crinuda (Opisthonema spp.), Japanese

sardine (Etrumeus teres), sardine Monterrey (Sardinops sagax) caerulea), and piña sardine (Oligoplites spp.). The group more abundant in terms of number of species was the group of fish with 60 species.

The elasmobranchs accounted for 7,696 E-04% of the total catch. None of the captured elasmobranch species is listed in NOM-059-SEMARNAT-2010 (DOF, 2010). The most abundant catch corresponded to the world ray (Urotrygon munda) with 0.31 t and 481 individuals.

With respect to seabirds, in the Guaymas area, 123,185 specimens were recorded during the 2017-2018 harvest season, corresponding to 20 species sighted. The most abundant species were: Gaviota ploma, Larus heermanni (41.5%), Brown Pelican, Pelecanus occidentalis (38.3%) and Gaviota reidora, Leucophaeu satricilla (9.2%).

Other bird species did not surpass 2% of sighting. 99% of seabirds were unharmed during fishing operations.

Regarding the total mortality of seabirds during the fishing maneuver, in Guaymas there were 212 deaths in a total of 1,848 sets that were made and the sighting of 123,185 marine birds. The total mortality for the season analyzed was 0.11 birds per set. Of these 212, 123 were due to bycatch.

Regarding ETP bird species, the plumage gull, Larus heermanni and the brown pelican, Pelecanus occidentalis, are within a category of protection under NOM-059-SEMARNAT-2010. Regarding mortality by species, the gull plumage was the species that presented the highest number of dead specimens (132 individuals) which is equivalent to a mortality of 0.071 individuals per fishing set. Regarding the brown pelican, this species represented a mortality of 0.041 organisms per set.

In relation to turtles, 13 interactions were recorded in five fishing zones for four species, the most abundant being the Pacific brown turtle Chelonia agassizii with a record of eight individuals.

Table 4 shows the volume in tonnes and percentage of species retained and discarded in the fishery. The 2018 data correspond to the scheme of the observer program executed by Global Group A.C.

Table 4. Volume of retained and discarded species

	Guaymas		Yavaros	
Groups of Species	**Total catches (t)**	**% of catches**	**Total catches (t)**	**% of catches**
Small pelagic	76,246.8 t	99.03%	35,186.5	99.08%
Bone fish	744.1	0.967 %	321.92	0.907 %
Elasmobranch	0.593	0.0%	2.92	0.008%
Crustaceans	1.1	0.0%	0.53	0.0%
Mollusc	0.011	0.0%	0.010	0.0%
Echinoderms	0.064	0.0%	0.040	0.0%
Sea turtles	0.00	0.0%	0.0	0.0%
Sea mammals	0.00	0.0%	0.0	0.0%
Seabirds	0.00	0.0%	0.0	0.0%

In relation to mitigation measures, the most widely used are the range of water and the device (fixed) in block. This is carried out during the collection of the net and prevents the birds from being captured and the second of them is installed in the block and prevents birds from being caught during fishing maneuvers.

The results of the On-Board Observer Program of the largest sardine fleet with fishing operations in the Gulf of California, Boca del Golfo de California and the Baja California Peninsula, indicate that the incidental catches in the three operation zones do not exceed 2% of the total recorded catch. This percentage is integrated to a greater extent by the group of bone fish that in most cases represents up to 1.02% of the total catch, the rest of the species had a small catch with a lower percentage. Likewise, it does not exceed the threshold of 15% of the total catch required by the MSC to continue with the certification.

3.4 Updates on the Management System and Regulations

Two main changes in the management system have occurred in the small pelagics fisheries of Mexico. A new version of the Carta Nacional Pesquera (CNP) was published in 2018 in which a relevant change includes the reduction in the allowable proportion of the catch under the size limit from 30 to 20%. The other important change is that NOM-003-PESC-1993 has been revised and is substituted by NOM-003-SAG-PESC-2018 as it was published in the Official Gazette on March 12th 2019.

This standard replaces the Official Mexican Standard 003-PESC-1993 and has been the legal basis of this fishery until now. Important changes have been introduced related to the management model, the number of vessels per fishing zone, the minimum sizes and the percentages of capture of individuals below the minimum size in force and closure periods.

In relation to the minimum sizes, the new Standard maintains the same values per species as the previous Standard. However, SAGARPA may modify these values in each season. For this purpose, it will take INAPESCA's technical opinion into account and its decisions will be published in the Official Gazette.

In relation to the regionalization of fisheries, the new norm establishes 3 regions for the exploitation of the resources of small pelagic and denominated A (Litoral of the Peninsula of Baja California); B (Gulf of California and coast of Sinaloa-Nayarit and North of Jalisco) and C (from North of Jalisco to Chiapas)

For each of these Regions, a maximum number of operational vessels has been established. This is a measure of fishing effort regulation. In zone B, the number of authorized vessels is 60. INAPESCA may, depending on technical criteria, modify the temporary effort by Region.

The number of vessels will not be able to grow and only the incorporation of new vessels will be authorized or the capacity of the vessel holds will be modified above 50 tons if they are replaced by others that have already been active in the fishery and have warehouses equivalent to the replaced ones.

By last, the new Norma establishes a volume of capture below the minimum size determined in the same standard for the species sardine Monterrey (Sardinops sagax), sardine crinuda (Opisthonema spp.) And anchoveta (Engraulis mordax) corresponding to 20% of the volume total annual nominal catch. Percentages allowed below this size will be modified according to the technical opinion of INAPESCA, which will be announced through regulatory agreements published in the Official Gazette of the Federation. This possibility was already included in the revision of the CNP (Carta Nacional Pesquera) of 2018 (going down from 30% to 20%) and has finally been reflected in NOM-003-SAG / PESC-2018.

In relation to the closure periods, SAGARPA may establish periods and zones for the capture of small pelagic species in order to improve the fishery management tools, the conservation of the resource and the interaction with other fisheries. These periods and zones will be taken according to the technical criteria of INAPESCA after discussion with the industry and that, through regulatory agreements, will be published in the Official Gazette.

3.5 Updates on Personnel Involved in Science, Management or Industry

CONAPESCA is funding (since season 2017-2018) an observer program that has been consolidated and is operational for the entirety of the small pelagics fishery in northwest Mexico, including the two certified fisheries. This program is executed by the entity Global Grupo A.C.

Global Grupo A.C. it is a civil association that promotes management and research for the sustainable use and conservation of aquatic resources and ecosystems, through research in science, economy, technology and citizen participation and participates in different research projects and operational activities in Mexican fisheries.

4 Assessment Process

4.1 Assessment Methodologies

Table 5. Scheme Documents

MSC Scheme Document	Issue Date
MSC Certification Requirements CR v1.3	2013
MSC FSR and Guidance v2.0	October 1, 2014
General Certification Requirements v.2.1	February 20, 2015
Surveillance Reporting Template v1.0	October 8, 2014

Table 6. Schedule of surveillance audits

Surveillance Level	Year 1	Year 2	Year 3	Year 4
Level 6	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & re-certification site visit

The surveillance audit was carried out in accordance with the default assessment tree of the MSC Fisheries Certification Requirements V1.3 under which the fishery was originally certified. Following the MSC guidelines for implementation timeframes, the surveillance was conducted in accordance with the new process requirements in FCR v2.0.

The issues for the certifier, in addition to checking progress against conditions to close out, is to determine whether a random check on the performance of the fishery verifies continued compliance with the MSC standards and to document the most recent research, landings, and survey trends relating to the fishery.

The annual surveillance audit process is comprised of five general parts:

1. The certification body provides questions around areas of inquiry to determine if the fishery is maintaining the level of management observed during the original certification.
2. The certification body informs stakeholders that they can contribute to the surveillance audit by participating in a face-to-face interview process or by submitting comments in writing. The certification body must inform stakeholders of the opportunity to provide comment at least 30 days before the onsite meeting.
3. The surveillance assessment team meets with the fishery client in an opening meeting to allow the client to present the information gathered and to answer questions asked by the surveillance team. The surveillance team can then ask questions about the information provided to ensure full understanding of how well the fishery management system is functioning and if the fishery management system is continuing to meet the MSC standards. Additional interviews are conducted of fishery management and science personnel as well as stakeholders.

4. The surveillance team determines if any PIs should be re-scored and presents its findings to the client fishery at the end of the site visit in a closing meeting. The results outline the assessment team's understanding of the information presented and its conclusion regarding the fishery management system's continued compliance with MSC standards.
5. The surveillance team submits a draft report to the fishery client and a subsequent final report to the MSC for posting on the MSC website. If there are continued compliance concerns, these are presented as non-conformances that require further action and audits as specified in the surveillance report.

4.2 Consultations

SCS identified relevant stakeholders for this fishery through professional networks of SCS and the audit team and know-how of the organizations working in the area. A list of over 25 individuals from 14 different organizations was compiled including representatives from the government, private sector and non-profit sectors working at regional and national levels. . The main form of communication to stakeholders has been via email to personal or organizational email addresses. Stakeholders on the list received an email with the surveillance announcement, the MSC stakeholder template to provide input and an invitation to participate at the onsite.
An announcement of the surveillance audit onsite meeting to take place in Mazatlán, Sinaloa on March 13 and 14, 2019 was published to the MSC website. Stakeholders were informed of the announcements through the MSC website and through email. An audit plan was provided to the client, management, scientists, and interested stakeholders by SCS before the meeting.

Stakeholder input received is detailed in Appendix 2.

At the onsite the assessment team met with representatives from management agencies, research institutions and the client group, for details see Table 7.

Table 7. Audit Plan: Key Meetings held in Mazatlán, Sinaloa, Mexico at the offices of MazIndustrial

Wednesday 13-Mar - Mazatlan	Participants
Session 1: Opening Meeting (SINALOA and SONORA)	Maz Sardina CANAINPES
Session 2: Exploitation Strategy and Control Rules (SINALOA and SONORA) 09: 30-10: 50- Meeting with Conapesca and INAPESCA to review: • Advances of the NOM. • Advances in the regulatory framework in the development of mechanisms to control fishing effort (implementation of the control rule) for the two fisheries. Related conditions: Sinaloa 1-3, 1-4, 3-1, 3-2; Sonora Related Conditions: 1-2, 1-3, 1-4, 1-5, 1-6,2-1 • • Progress in relation to minimum size guidelines. Related conditions: Sinaloa: 3-2, 3-3, 3-4; Sonora: 3-3	Maz Sardina CANAINPES INAPESCA CONAPESCA CIBNOR

Session 3: Stock Status Evaluation, Advances in Harvest Control Rules 11:00 -1: 00pm - Meeting with INAPESCA - CRIAP Mazatlán - Mercedes Jacob, progress in: • Evaluation of the state of the thread herring stock in Nayarit and Sinaloa, progress in acoustic evaluations, progress in estimation of reference points. Related conditions: 1-1, 1-2, 1-5, 1-6, 1-7 • Presentation of the technical report of the internal review of the fishery issued by INAPESCA. Related conditions: 3-6	Maz Sardina CANAINPES INAPESCA CONAPESCA CIBNOR
1:00-2:00- Almuerzo	
Session 4: Stock Status Evaluation, Advances Definition Benchmarks, Control Rules (SONORA) 2: 00-5: 00pm - Meeting with INAPESCA - Manuel Nevárez, to review progress in: • Stock status evaluation for Monterrey, Mackerel, Japanese, Anchoveta and Bocona sardines. • Estimation of Monterrey sardine reference points include ecological considerations. Related conditions: 1-1, 1-6, 1-7. Presentation of the results of INAPESCA's annual evaluation of the performance of the fishery reviewed by the Small Pelagic Technical Committee. Condition 3-4.	Maz Sardina CANAINPES INAPESCA CONAPESCA CIBNOR

Thursday 14-Mar - Mazatlan	**Participants**
Session 5: P2 Impacts (Sinaloa-Nayarit) 8:30 am-10:25: Advances in observer program, and bycatch Related conditions: 2-1 to 2-7	Maz Sardina CANAINPES INAPESCA CONAPESCA GLOBAL GRUPO CIBNOR
Session 6: P2 Impacts (Sonora) 10:35 am-12:30: Advances in observer program, seabird mitigation measures and decision making mechanisms regarding ETP species Related conditions: 2-1, 2-2-, 2-3, 2-4, 3-1, 3-2	Maz Sardina CANAINPES INAPESCA CONAPESCA GLOBAL GRUPO CIBNOR
Session 7: Regulatory Framework Species ETP (Sonora) 12: 35-1: 30am - Meeting with CONAPESCA and PROFEPA - to review progress in: • Decision making related to the application of specific measures for the protection of ETP species. Related conditions: 3-1, 3-2 (Sonora) •Design of the observer program for Sonora and Sinaloa	Maz Sardina CANAINPES INAPESCA CONAPESCA GLOBAL GRUPO CIBNOR
1:30-2:30- Almuerzo	
Session 8: Space with Interested Parties 3: 00-5: 00 - Open session (Meetings with stakeholders / team scoring, to be defined)	
Sesión 9: Closing Meeting	Maz Sardina CANAINPES

4.3 Harmonization Considerations

Efforts for harmonization with the Southern Gulf of California Thread Herring Fishery, Sinaloa & Nayarit, Mexico took place at the concurring onsite visit

4.4 Assessment Team

The surveillance team consisted of Dr. Carlos Alvarez as lead, P1 and P3 team member and Luis Ambrioso responsible for Principle 2. Assessment team experience and qualification summaries were provided in the assessment announcement and here:

Dr. Carlos M. Alvarez-Flores – Oceanides Conservación y Desarrollo Marino
Lead, Principle 1 and Principle 3

Dr. Carlos Alvarez-Flores was born in Mexico City in 1961 and obtained Bachelor of Science and Master of Science degrees at the National University of Mexico. He later moved to Seattle, USA to obtain a Doctor of Philosophy degree at the School of Fisheries of the University of Washington. His research interests are focused on the management and conservation of wildlife and fisheries. This includes abundance estimation; assessment of population status; estimation of population parameters; the effect of human intervention; direct harvest; bycatch and associated environmental effects; projections based on biological potential; population viability; risk assessment; design of alternative management strategies. His background comes from work dealing with large, pelagic, data rich fisheries, but his current assignments are related to small-scale, coastal, data poor fisheries. Therefore, his present challenge is to combine ideas, techniques, knowledge and experience to improve the performance of these problematic activities in developing countries. Most of his experience has been focused on practical investigations applied to population and fishery assessment and management as a consultant for governments, NGOs and the private sector of different countries. To the present, he has worked for SCS for over two years in MSC pre-assessments, assessments and surveillance audits of different types of fisheries in different countries.

Luis Ambrioso —
Lead, Principle 2

Mr. Luis Ambrosio has decades of experience working as an expert in fisheries science and policy. He holds an MSc in Biology, Marine and Environment Sciences from Alicante University, Alicante, Spain and an MSc in Fishing and Aquaculture sciences from the Spanish Maritime Institute (ICADE), Spain.
Since 1989 Luis has worked as a consultant on issues related to fisheries, aquaculture and marine biosphere; collaborating with a variety of public administrations, private companies, and NGOs. Mr. Ambrosio's main areas of knowledge are: assessment of international fisheries, marine protected areas, marine biodiversity and biotechnology, fisheries policies, commercialization and quality of fisheries products, labelling and certification, environmental interactions of fishing and socio-economic impact of fishing activities. He's experience includes work from industrial fisheries to small scale fisheries, across the EU, Africa and Latin America. As a technical consultant he's worked conducting analysis of fishing

agreements for tuna vessels signed between the EU and African countries and has also done extensive work evaluating the competitiveness of the Spanish fishing fleets. He's worked for the United Nations Development Programme evaluating development of rules for marine protected areas and held roles as external advisor to numerous organizations including for the Directorate of Aquaculture of the Institute of Artisanal Fisheries and Aquaculture of Angola. In collaboration with the WWF he's performed as an adviser for the EU reform of common fisheries policy. Luis also has extensive experience in the MSC standard, having conducted several pre-assessment and full assessment as a Principle 3 expert in a wide range of fisheries from large industrial tuna fisheries in the Western Pacific to bottom trawl fisheries in the EU and artisanal fisheries in Latin America and Spain.

Dr. Alvarez was a member of the initial full assessment team, together the team meets the competency criteria (FCR7.23.11.1-7.23.11.3) and affirm they have no conflict of interest.

5 Results

5.1 Condition 1-1 (Pacific Sardine)

Performance Indicator(s) & Score(s)	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
	1.1.2	**SId**	**75**
Condition	By the fourth annual surveillance audit, the client shall provide evidence that the target reference point for Pacific sardines considers the ecological role of the stock.		
Milestones	**Surveillance 1 (2019)** By this stage, the fishery shall have demonstrated **some progress** toward the closure of this condition. No improvements expected. **Expected Outcome:** The client, together with INAPESCA and other technical groups (for example, CICIMAR), will initiate meetings with the purpose of proposing the most appropriate mechanisms to define a formal target reference point that considers the ecological role of Pacific sardine. At least one meeting's minutes agreements reached and signed by the participant will be presented. **Expected score:** No anticipate changes in score at this stage. **Surveillance 2 (2020)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed three years. **Expected Outcome:** The client will provide a technical report showing the progress in determining the target reference point that considers the ecological role of the Pacific sardine; also, a summary of the agreements reached, and the revisions made in the meetings. **Expected score:** No changes in score are anticipated at this stage. **Surveillance 3 (2021)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Outcome:** The target reference point (TRP) for Pacific sardine will be determined. The client, in coordination with INAPESCA, will have a meeting with academics and CONAPESCA to discuss the incorporation of the TRP in the normative documents, including the Management Plan, before being published in the Official Federal Gazette (DOF). The client will provide a technical report showing the progress in determining the TRP; Also, a summary of the agreements reached, and the revisions made at the meetings. **Expected score:** No changes in score are anticipated at this stage. **Surveillance 4 (2022)** Condition expected to be fully met.		

	Expected Outcome: The client will provide a final report on the Target Reference Point that considers the ecological role of Pacific sardine; This Target Reference Point will be included in the Management Plan (and other regulatory mechanisms) which will be formally published in the Official Gazette of the Federation (DOF). **Expected score:** 80
Client action plan	The client will present evidence that the target reference point for Pacific sardine considers the ecological role of the stock. The client will actively collaborate with INAPESCA and other technical groups in the necessary investigations to determine the target reference point for this species. This reference point will be included in the Small Pelagics Management Plan (and other regulatory mechanisms) which will be formally published in the Official Gazette of the Federation (DOF). The activities and results will be reflected in working minutes and in Technical Reports and will be made public via a technical meeting to the fishing industry and CONAPESCA (Administrative Body) for its systematic and effective application.
Progress on Condition [Year 1]	The client presented a document with minutes of a meeting held in January 2019 which was held to "address observations to the fisheries of small pelagics: Fisheries of the Gulf of California, Sinaloa and Nayarit" within the context of the work of the Small Pelagics Technical Committee. The meeting was convened with the intention to follow up on the Action Plan committed under the MSC Certification process. With regards of Condition 1-1, the group agreed that Drs Pablo del Monte and Manuel Zetina and Francisco Arreguin will draft the rational for a proposed "Limit reference point" that includes the ecological role of the Monterrey sardine to be included in the Management Plan. The Surveillance Audit Team acknowledges that there must have been a description and discussion of the problem with the group of scientists that are now responsible to directly address the unmet requirement in this PI. Achieving an understanding of the nature of the problem and of the expectations in terms of the MSC certification requirements and appointing a group of qualified scientists to work on the development of a solution is considered enough progress for year 1. The fishery has provided evidence of these achievements in the minutes submitted to the team. Progress at surveillance audit 2 however, will be expected to be represented at least by a draft or proposal that is being discussed by other parties.
Status of condition	**On target**

5.2 Condition 1-2 (Pacific Sardine)

Performance Indicator(s) & Score(s)	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
	1.2.1	SIa	70
Condition	By the fourth annual surveillance audit, the fishery shall provide evidence that the harvest strategy for Pacific sardines is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.		
Milestones	**Surveillance 1 (2017)**. By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected. **Expected Outcome:** The client, in coordination with INAPESCA and the Small Pelagics Technical Committee, will initiate meetings to propose and discuss the formal mechanisms for stopping fishing activities, when approaching BAC. At least one minute of the meetings signed by the participants will be presented with all the agreements reached. Expected score: No changes in score are anticipated at this stage. **Surveillance 2 (2018)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Outcome:** The client will provide a technical report showing progress in determining the formal mechanisms for stopping fishing activities when close to the BAC; Also, a summary of the agreements reached, and the revisions made at the meetings. **Expected score:** No changes in score are anticipated at this stage. **Surveillance 3 (2021)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Outcome:** The formal mechanisms for stopping fishing activities will be determined when approaching BAC. The client, in coordination with INAPESCA and the Small Pelagics Technical Committee, will have a meeting with CONAPESCA to discuss these mechanisms, as well as their incorporation in the normative documents, including the Management Plan, before their publication in the Official Gazette of the Federation (DOF). The client will provide a technical report showing progress in determining formal mechanisms; Also, a summary of the agreements reached, and the revisions made at the meetings. The report will also include evidence that the proposed mechanisms have been "tested" to meet the requirements for the 80 level in SI1.2.1b to indicate that there is some logical argument and analysis that supports the choice of strategy. **Expected score:** No changes in score are anticipated at this stage. **Surveillance 4 (2022)** Condition expected to be fully met.		

	Expected Outcome: The client will provide a final report on the formal mechanisms for stopping fishing activities, when close to the BAC; These formal mechanisms will be included in the Management Plan (and other regulatory mechanisms) which will be formally published in the Official Gazette of the Federation (DOF).
Client action plan	The client will actively collaborate with INAPESCA and the Small Pelagics Technical Committee to review and implement the necessary changes in the Fisheries Management Plan that will allow the formal mechanisms to stop fishing activities, when close to the Biological Allowable Catch (BAC), So that they work together to achieve the management objectives. The activities and results will be reflected in working minutes and at least one Technical Report and will be made known through technical meetings to the fishing industry and to CONAPESCA (Administrative Body) for its systematic and effective implementation. These changes to the Management Plan, will be documented with its publication in the Official Gazette of the Federation (DOF).
Progress on Condition [Year 1]	The fishery proposed to insert a modification in the review of NOM-003-PESC-1993 that was happening at the time of re-assessment to open the possibility to communicate and implement the scientific advice provided by the INAPESCA derived from the stock assessment. The revised NOM now named NOM-003-SAG-PESC-2018 was published in the Official Gazette on March 12th, 2019. Section 4.6 of the NOM states: "The Secretariat may establish periods and closed areas for the capture of smaller pelagics to apply dynamic management of the fishery, avoid interaction with other fisheries, as well as contribute to the conservation of other biological resources and the ecosystem. Such periods and closure zones will be announced through Regulatory Agreements that will be published in the Official Gazette of the Federation, based on the technical opinion issued by INAPESCA for such purpose, prior to the socialization of the measure". In other words, the INAPESCA conducts the stock assessment and computes the BAC based on the status of the stock; the results are communicated to other stakeholders including the fishers and the management branch of the government (CONAPESCA) and procedures can be agreed to start operations on the base of the limit established with the BAC. The change in the NOM fits the requirement of a mechanism to transform a definition in the Management Plan, which is the technical guidance, into an actual management regulatory action. At the time of the first surveillance audit however, no Regulatory Agreement to present the proposed BAC and how to apply it had been produced because the NOM had not been published yet. Nevertheless, the fishery presented evidence of the computation of the BAC based on results of a stock assessment. There is also evidence of meetings

	where the INAPESCA presented information on the size distribution of the fish to the industry and other authorities, signing an agreement to stop the fishery for three months from August to October 2018 “to protect the stocks”. The progress represented in insertions into the revised NOM to provide for the mechanisms to implement management guidance, is considered significant towards closure of this Condition. In particular, the mechanisms outlined in the revised NOM allow for the elements of the harvest strategy to work together monitoring the status of the stock and react if the PRI (or the ecosystem-based reference point) is approached. For future Surveillance Audits, it is expected that the fishery could provide evidence of meetings early in the season where the INAPESCA communicates the proposed BAC derived from the stock assessment, and that all parties, having received the pertinent information, discussed and agreed on closing the fishery when the cumulative catch is approaching the BAC. As the fishing season progresses, it is also expected that periodic formal communications exist to inform the fishers the status of the cumulative catch relative to the BAC and the expectation for the following weeks, so the fleet can plan a course of action based on the advice from the INAPESCA.
Status of condition	**On target**

5.3 Condition 1-3 (Pacific Sardine)

Performance Indicator(s) & Score(s)	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
	1.2.2	**SIa**	**75**
Condition	By the fourth annual surveillance audit, the fishery shall present evidence that for Pacific sardines defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.		
Milestones	**Surveillance 1 (2017):** By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected. **Expected Output:** The client, in coordination with INAPESCA and the Small Pelagics Technical Committee, will initiate meetings to propose the most appropriate mechanisms to limit, reduce or stop fishing when approaching BAC. The minutes of the meetings signed by the participants will be presented with all the agreements reached, as well as the main agreed mechanisms. Expected score: No anticipate changes in score at this stage. **Surveillance 2 (2018)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Output:** Proposed mechanisms to limit, reduce or cease fishing will be announced when the permissible biological catch (BAC) for that year is reached. A meeting will be held where INAPESCA and the client will discuss how to initiate, in a preliminary way, the tests to evaluate the mechanisms of limitation, reduction and cessation. Some test analyses of the chosen mechanisms will be carried out to determine their feasibility when the BAC is approaching. The minutes of the meeting (or meetings), signed by the participants, will be provided with the agreements reached; A report of the selected mechanism will be submitted; And a progress report will be provided after testing the mechanisms. Expected score: No changes in score are anticipated at this stage. **Surveillance 3 (2019)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Outcome:** At this stage, the client, INAPESCA and CONAPESCA will review and discuss the mechanisms proposed and the results of the tests carried out to evaluate them and propose the official document to be published, which in principle is the Management Plan, but could also be the National Fisheries Charter (CNP), or normative agreement, etc. The minutes of the meeting, signed by the participants, will be provided for discussion and review of the mechanisms. Expected score: No changes in score are anticipated at this stage. **Surveillance 4 (2020)** Condition expected to be fully met.		

	Expected Outcome: The mechanisms will be established, the Management Plan updated and published in the Official Journal of the Federation (DOF). The mechanisms to limit, reduce or cease fishing when approaching the permissible biological catch of the year will be explicitly, systematically and effectively implemented. In addition, these mechanisms will be included in the Management Plan or other regulatory document and published in the Official Gazette of the Federation (DOF). Expected score: 80
Client action plan	Explicit mechanisms to limit, reduce or cease fishing as it approaches the annual BAC, will be defined in the Management Plan, which must be published in the Official Federal Gazette (DOF) (as noted in Condition 1-2). The client will actively collaborate with INAPESCA and the Small Pelagics Committee to update the Management Plan, as well as to implement a systematic monitoring of catch levels to determine when the annual BAC is being reached. INAPESCA will announce, until the Small Pelagics Management Plan is published in the DOF, these results through technical reports that will be the basis for management decision making (limit, reduce or cease fishing as it approaches the annual BAC), ensuring that the fishery does not represent a risk for the Pacific sardine population. These mechanisms will be defined in the Management Plan. For the formal implementation of these mechanisms, the technical reports will be disseminated through technical meetings between industry, INAPESCA and CONAPESCA for their implementation, after the effective publication of the Management Plan in the Official Federal Official Gazette (DOF).
Progress on Condition [Year 1]	The fishery proposed to insert a modification in the review of NOM-003-PESC-1993 that was happening at the time of re-assessment to open the possibility to communicate and implement the scientific advice provided by the INAPESCA derived from the stock assessment. The revised NOM now named NOM-003-SAG-PESC-2018 was published in the Official Gazette on March 12th, 2019. Section 4.6 of the NOM states: “The Secretariat may establish periods and closed areas for the capture of smaller pelagics to apply dynamic management of the fishery, avoid interaction with other fisheries, as well as contribute to the conservation of other biological resources and the ecosystem. Such periods and closure zones will be announced through Regulatory Agreements that will be published in the Official Gazette of the Federation, based on the technical opinion issued by INAPESCA for such purpose, prior to the socialization of the measure”. In other words, the INAPESCA conducts the stock assessment and computes the BAC based on the status of the stock; the results are communicated to other stakeholders including the fishers and the management branch of the

	government (CONAPESCA) and procedures can be agreed to start operations on the base of the limit established with the BAC. The change in the NOM fits the requirement of a mechanism to transform a definition in the Management Plan, which is the technical guidance, into an actual management regulatory action. At the time of the first surveillance audit however, no Regulatory Agreement to present the proposed BAC and how to apply it had been produced because the NOM had not been published yet. Nevertheless, the fishery presented evidence of the computation of the BAC based on results of a stock assessment. There is also evidence of meetings where the INAPESCA presented information on the size distribution of the fish to the industry and other authorities, signing an agreement to stop the fishery for three months from August to October 2018 “to protect the stocks”. The progress represented in insertions into the revised NOM to provide for the mechanisms to implement management guidance, is considered significant towards closure of this Condition. For future Surveillance Audits, it is expected that the fishery could provide evidence of meetings early in the season where the INAPESCA communicates the proposed BAC derived from the stock assessment, and that all parties, having received the pertinent information, discussed and agreed on closing the fishery when the cumulative catch is approaching the BAC. As the fishing season progresses, it is also expected that periodic formal communications exist to inform the fishers the status of the cumulative catch relative to the BAC and the expectation for the following weeks, so the fleet can plan a course of action based on the advice from the INAPESCA.
Status of condition	**On target**

5.4 Condition 1-4 (Thread Herring)

Performance Indicator(s) & Score(s)	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
	1.2.1	SIa	70
Condition	By the fourth annual surveillance audit, the fishery shall provide evidence that the harvest strategy for thread herring is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.		
Milestones	**Surveillance 1 (2017)**. By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected. **Expected Outcome:** The client, in coordination with INAPESCA and the Small Pelagics Technical Committee, will initiate meetings to propose and discuss the formal mechanisms for stopping fishing activities, when close to the BAC. At least one minute of the meetings signed by the participants will be presented with all the agreements reached. Expected score: No changes in score are anticipated at this stage. **Surveillance 2 (2018)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Outcome:** The client will provide a technical report showing progress in determining the formal mechanisms for stopping fishing activities when close to the BAC; Also, a summary of the agreements reached, and the revisions made at the meetings. **Expected score:** No changes in score are anticipated at this stage. **Surveillance 3 (2021)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Outcome:** The formal mechanisms for stopping fishing activities will be determined when approaching BAC. The client, in coordination with INAPESCA and the Small Pelagics Technical Committee, will have a meeting with CONAPESCA to discuss these mechanisms, as well as their incorporation in the normative documents, including the Management Plan, before their publication in the Official Gazette of the Federation (DOF). The client will provide a technical report showing progress in determining formal mechanisms; Also, a summary of the agreements reached and the revisions made at the meetings. The report will also include evidence that the proposed mechanisms have been "tested" to meet the requirements for the 80 level in SI1.2.1b to indicate that there is some logical argument and analysis that supports the choice of strategy. **Expected score:** No changes in score are anticipated at this stage. **Surveillance 4 (2022)** Condition expected to be fully met.		

	Expected Outcome: The client will provide a final report on the formal mechanisms for stopping fishing activities, when close to the BAC; These formal mechanisms will be included in the Management Plan (and other regulatory mechanisms) which will be formally published in the Official Gazette of the Federation (DOF).
Client action plan	The client will actively collaborate with INAPESCA and the Pelagic Minor Technical Committee to review and implement the necessary changes in the Fisheries Management Plan that will allow the formal mechanisms to stop fishing activities, when close to the Biological Allowable Catch (BAC), So that they work together to achieve the management objectives. The activities and results will be reflected in working minutes and at least one Technical Report and will be made known through technical meetings to the fishing industry and to CONAPESCA (Administrative Body) for its systematic and effective implementation. These changes to the Management Plan, will be documented with its publication in the Official Gazette of the Federation (DOF).
Progress on Condition [Year 1]	The fishery proposed to insert a modification in the review of NOM-003-PESC-1993 that was happening at the time of re-assessment to open the possibility to communicate and implement the scientific advice provided by the INAPESCA derived from the stock assessment. The revised NOM now named NOM-003-SAG-PESC-2018 was published in the Official Gazette on March 12th, 2019. Section 4.6 of the NOM states: "The Secretariat may establish periods and closed areas for the capture of smaller pelagics to apply dynamic management of the fishery, avoid interaction with other fisheries, as well as contribute to the conservation of other biological resources and the ecosystem. Such periods and closure zones will be announced through Regulatory Agreements that will be published in the Official Gazette of the Federation, based on the technical opinion issued by INAPESCA for such purpose, prior to the socialization of the measure". In other words, the INAPESCA conducts the stock assessment and computes the BAC based on the status of the stock; the results are communicated to other stakeholders including the fishers and the management branch of the government (CONAPESCA) and procedures can be agreed to start operations on the base of the limit established with the BAC. The change in the NOM fits the requirement of a mechanism to transform a definition in the Management Plan, which is the technical guidance, into an actual management regulatory action. At the time of the first surveillance audit however, no Regulatory Agreement to present the proposed BAC and how to apply it had been produced because the NOM had not been published yet. Nevertheless, the fishery presented evidence of the computation of the BAC based on results of a stock assessment. There is also evidence of meetings

	where the INAPESCA presented information on the size distribution of the fish to the industry and other authorities, signing an agreement to stop the fishery for three months from August to October 2018 “to protect the stocks”. The progress represented in insertions into the revised NOM to provide for the mechanisms to implement management guidance, is considered significant towards closure of this Condition. In particular, the mechanisms outlined in the revised NOM allow for the elements of the harvest strategy to work together monitoring the status of the stock and react if the PRI (or the ecosystem-based reference point) is approached. For future Surveillance Audits, it is expected that the fishery could provide evidence of meetings early in the season where the INAPESCA communicates the proposed BAC derived from the stock assessment, and that all parties, having received the pertinent information, discussed and agreed on closing the fishery when the cumulative catch is approaching the BAC. As the fishing season progresses, it is also expected that periodic formal communications exist to inform the fishers the status of the cumulative catch relative to the BAC and the expectation for the following weeks, so the fleet can plan a course of action based on the advice from the INAPESCA.
Status of condition	**On target**

5.5 Condition 1-5 (Thread Herring)

Performance Indicator(s) & Score(s)	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
	1.2.2	**SIa**	**75**
Condition	By the fourth annual surveillance audit, the fishery shall present evidence that for thread herring defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.		
Milestones	**Surveillance 1 (2017):** By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected. **Expected Output:** The client, in coordination with INAPESCA and the Small Pelagics Technical Committee, will initiate meetings to propose the most appropriate mechanisms to limit, reduce or stop fishing when approaching BAC. The minutes of the meetings signed by the participants will be presented with all the agreements reached, as well as the main agreed mechanisms. Expected score: No anticipate changes in score at this stage. **Surveillance 2 (2018)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Output:** Proposed mechanisms to limit, reduce or cease fishing will be announced when the permissible biological catch (BAC) for that year is reached. A meeting will be held where INAPESCA and the client will discuss how to initiate, in a preliminary way, the tests to evaluate the mechanisms of limitation, reduction and cessation. Some test analyses of the chosen mechanisms will be carried out to determine their feasibility when the BAC is approaching. The minutes of the meeting (or meetings), signed by the participants, will be provided with the agreements reached; A report of the selected mechanism will be submitted; And a progress report will be provided after testing the mechanisms. Expected score: No changes in score are anticipated at this stage. **Surveillance 3 (2019)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Outcome:** At this stage, the client, INAPESCA and CONAPESCA will review and discuss the mechanisms proposed and the results of the tests carried out to evaluate them and propose the official document to be published, which in principle is the Management Plan, but could also be the National Fisheries Charter (CNP), or normative agreement, etc. The minutes of the meeting, signed by the participants, will be provided for discussion and review of the mechanisms. Expected score: No changes in score are anticipated at this stage. **Surveillance 4 (2020)** Condition expected to be fully met.		

	Expected Outcome: The mechanisms will be established, the Management Plan updated and published in the Official Journal of the Federation (DOF). The mechanisms to limit, reduce or cease fishing when approaching the permissible biological catch of the year will be explicitly, systematically and effectively implemented. In addition, these mechanisms will be included in the Management Plan or other regulatory document and published in the Official Gazette of the Federation (DOF). Expected score: 80
Client action plan	Explicit mechanisms to limit, reduce or cease fishing as it approaches the annual BAC, will be defined in the Management Plan, which must be published in the Official Federal Gazette (DOF) (as noted in Condition 1-2). The client will actively collaborate with INAPESCA and the Small Pelagics Committee to update the Management Plan, as well as to implement a systematic monitoring of catch levels to determine when the annual BAC is being reached. INAPESCA will announce, until the Small Pelagics Management Plan is published in the DOF, these results through technical reports that will be the basis for management decision making (limit, reduce or cease fishing as it approaches the annual BAC), ensuring that the fishery does not represent a risk for the Pacific sardine population. These mechanisms will be defined in the Management Plan. For the formal implementation of these mechanisms, the technical reports will be disseminated through technical meetings between industry, INAPESCA and CONAPESCA for their implementation, after the effective publication of the Management Plan in the Official Federal Official Gazette (DOF).
Progress on Condition [Year 1]	The fishery proposed to insert a modification in the review of NOM-003-PESC-1993 that was happening at the time of re-assessment to open the possibility to communicate and implement the scientific advice provided by the INAPESCA derived from the stock assessment. The revised NOM now named NOM-003-SAG-PESC-2018 was published in the Official Gazette on March 12th, 2019. Section 4.6 of the NOM states: “The Secretariat may establish periods and closed areas for the capture of smaller pelagics to apply dynamic management of the fishery, avoid interaction with other fisheries, as well as contribute to the conservation of other biological resources and the ecosystem. Such periods and closure zones will be announced through Regulatory Agreements that will be published in the Official Gazette of the Federation, based on the technical opinion issued by INAPESCA for such purpose, prior to the socialization of the measure”. In other words, the INAPESCA conducts the stock assessment and computes the BAC based on the status of the stock; the results are communicated to other stakeholders including the fishers and the management branch of the

	government (CONAPESCA) and procedures can be agreed to start operations on the base of the limit established with the BAC. The change in the NOM fits the requirement of a mechanism to transform a definition in the Management Plan, which is the technical guidance, into an actual management regulatory action. At the time of the first surveillance audit however, no Regulatory Agreement to present the proposed BAC and how to apply it had been produced because the NOM had not been published yet. Nevertheless, the fishery presented evidence of the computation of the BAC based on results of a stock assessment. There is also evidence of meetings where the INAPESCA presented information on the size distribution of the fish to the industry and other authorities, signing an agreement to stop the fishery for three months from August to October 2018 “to protect the stocks”. The progress represented in insertions into the revised NOM to provide for the mechanisms to implement management guidance, is considered significant towards closure of this Condition. For future Surveillance Audits, it is expected that the fishery could provide evidence of meetings early in the season where the INAPESCA communicates the proposed BAC derived from the stock assessment, and that all parties, having received the pertinent information, discussed and agreed on closing the fishery when the cumulative catch is approaching the BAC. As the fishing season progresses, it is also expected that periodic formal communications exist to inform the fishers the status of the cumulative catch relative to the BAC and the expectation for the following weeks, so the fleet can plan a course of action based on the advice from the INAPESCA.
Status of condition	**On target**

5.6 Condition 1-6 (Thread Herring)

Performance Indicator(s) & Score(s)	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
	1.2.3	**SIb**	**75**
Condition	By the third surveillance the fishery shall provide evidence that the stock abundance of thread herring is be regularly monitored at a level of accuracy and coverage consistent with the harvest control rule.		
Milestones	**Surveillance 1 (2017):** By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected. **Expected Output:** The client, together with INAPESCA, will start meetings with the aim of advancing the determination of thread herring sardine biomass by hydroacoustic methods. The client will present at least a record of the meetings signed by the participants with all the agreements reached. Expected score: No changes in score are anticipated at this stage. **Surveillance 2 (2018)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Outcome:** The analysis is continued for the evaluation of thread herring sardine by hydroacoustic methods. In addition, work will be carried out to determine the target strength of thread herring so that it can be applied more strongly in t. herring evaluations. The results will be documented through reports that will be presented at the technical meetings that will be attended by interested parties. The client will present technical progress reports with the main results of the specific evaluation of the thread herring. Expected score: No changes in score are anticipated at this stage. **Surveillance 3 (2019)** Condition expected to be fully met. Expected Outcome: Systematic acoustic investigations and the specific evaluation of the thread herring stock will continue. Also, a technical meeting will be held between the interested parties for the analysis and discussion of the results obtained. The client will provide the minutes of the meetings signed by all the participants, which will include the discussion, analysis and agreements related to systematic acoustic research and the specific evaluation of the thread herring stock under the control rule. Also, a final technical report will be provided with the results of the evaluation of thread herring, which will include estimates of biomass with hydroacoustic. Expected score: 80.		
Client action plan	The client will actively collaborate with INAPESCA to conduct research aimed at evaluating biomass through acoustic methods. This research will be regular and focused on the analysis and consolidation of these methods so that the parameters of "target strength" used can be applied more reliably to thread		

	herring. This will allow systematic and reliable indices of abundance independent of the fishery to be included in the catch strategy. The results obtained in this research will be announced through a technical meeting to the interested parties for its effective and systematic application in the Control Rule.
Progress on Condition [Year 1]	The fishery presented minutes of a meeting indicating that the INAPESCA staff in Guaymas will meet an expert at the CICIMAR research center to review acoustic methods to estimate thread herring abundance using acoustic techniques. The minutes indicate that this meeting will take place within a year (the meeting took place in February 2019). As mentioned in the background section, an estimate of abundance for thread herring was obtained for 2017 but no estimate was provided for 2018. No improvements, proposed changes, or preliminary discussions were reported. Work towards closing this condition needs to be conducted according to the Action Plan. This year the fishery did not provide evidence of progress as referred in the milestone for year 1.
Status of condition	**Behind target,** remedial action is already in place (The participants in the February 2019 Workshop have agreed to meet within a year to discuss the technical issues related acoustic techniques)

5.7 Condition 1-7

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	1.2.4	**SIe**	**65**
Condition	By the third surveillance the assessment of stock status of thread herring has been subject to peer review.		
Milestones	**Surveillance 1 (2017)** By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected. **Expected Outcome**: Progress can be measured in terms of the assessment presentation at the Workshop of Small Pelagic Forum. The Workshop of Small Pelagic proceedings will be providing. Expected score: No changes to score anticipated at this stage. **Surveillance 2 (2018)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed three years. **Expected Outcome:** Progress can be measured in terms of the assessment presentation at the Workshop of Small Pelagic Forum. The Workshop of Small Pelagic proceedings will be providing. The client will present a technical report of the fishery internal review issued by Technical Committee of Small Pelagic. Expected score: No changes in score are anticipated at this stage. **Surveillance 3 (2019)** Condition expected to be fully met.		

	Expected Outcome: At this stage, the progress may be measured by a manuscript submitted to a scientific journal for a peer reviewing. Expected score: 80
Client action plan	The client will collaborate with INAPESCA for that the assessments be subject to peer review. The condition and milestones will be assessed as outlined and addressed within the stated timeframe
Progress on Condition [Year 1]	Evidence was submitted indicating that a report on stock assessment of thread herring was presented at the XXVI workshop on small pelagics in Ensenada, Baja California on June 2018. This activity is aligned with the proposed work to meet the milestone for year 1 on this Condition.
Status of condition	**On target**

5.8 Condition 2-1

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	2.1.2	**SI c**	**75**
Condition	By the fourth annual surveillance the client shall present some evidence that the partial strategy for management of bocona sardine and chub mackerel is being implemented successfully		
Milestones	**Surveillance 1 (2018)** By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected **Expected Output:** The client, in coordination with INAPESCA and the Small Pelagics Technical Committee, will initiate meetings with the purpose of proposing the most adequate mechanisms to limit, reduce or cease fishing (bocona and chub mackerel) when approaching BAC. The minutes of the meetings signed by the participants will be presented with all the agreements reached, as well as the main agreed mechanisms. **Expected score:** No changes to score anticipated at this stage. **Surveillance 2 (2019)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years **Expected Output:** Proposed mechanisms to limit, reduce or cease fishing (bocona and chub mackerel) will be announced when the permissible biological catch (BAC) of the year is achieved. A meeting will be held where INAPESCA and the client will discuss how to initiate, in a preliminary way, the tests to evaluate the mechanisms of limitation, reduction and cessation. Some test analyzes of the chosen mechanisms will be carried out to determine their feasibility when the BAC is approaching.		

	The minutes of the meeting (or meetings), signed by the participants, will be provided with the agreements reached; A report of the selected mechanism will be submitted; And a progress report will be provided after testing the mechanisms. **Expected score:** No changes to score anticipated at this stage **Surveillance 3 (2020)** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years **Expected Output:** At this stage, the client, INAPESCA and CONAPESCA will review and discuss the mechanisms proposed and the results of the examinations carried out to evaluate them and start the procedures aimed at the publication of the Small Pelagics Management Plan in the Official Federal Official Gazette (DOF). Monitoring of catches will continue to determine when the BAC of the year is being reached. The minutes of the meeting, signed by the participants, will be provided with the agreements reached; A report will be provided of the systematic monitoring of catch levels aimed at determining when the BAC of the corresponding year is being reached; And a Small Pelagics Management Plan, document that is in the process of publication in the DOF will be presented. **Expected score:** No changes to score anticipated at this stage **Surveillance 4 (2021)** Condition expected to be fully met **Expected Output:** The mechanisms will be established, the Management Plan updated and published in the Official Federal Official Gazette (DOF). The mechanisms to limit, reduce or cease fishing (*bocona* and chub mackerel) will be applied explicitly, systematically and effectively when approaching the permissible biological catch of the year. On the other hand, and in case the Small Pelagics Management Plan is not yet published by this date, INAPESCA will notify CONAPESCA and the Client, in case the BAC of the corresponding year has been reached, through a Technical Opinion that Management actions should be taken to limit, reduce or cease fishing for *bocona* and/or chub mackerel, thus ensuring that the fishery does not pose a risk to the population of these two species. **Expected score**: 80
Client action plan	Explicit mechanisms to limit, reduce or cease fishing (bocona and chub mackerel) as it approaches the allowable biological catch (BAC) of the year, will be defined in the Management Plan, which must be published in the Official Gazette of the Federation (DOF) (As noted in condition 1-2). The client will actively collaborate with INAPESCA and the Small Pelagic Technical Committee to update the Management Plan, as well as to implement a systematic monitoring of catch levels to determine when the BAC of the year is being reached. INAPESCA will announce, until the Small Pelagics Management Plan is published in the DOF, these results through technical reports that will be the basis for management decision making (limit, reduce or

	cease fishing as it approaches the BAC of the year), ensuring that the fishery does not pose a risk to the population of sardine bocona and mackerel. These mechanisms will be defined in the Management Plan. For the formal implementation of these mechanisms, the technical reports will be disseminated through technical meetings between industry, INAPESCA and CONAPESCA for their implementation, after the effective publication of the Management Plan in the Official Federal Official Gazette (DOF).
Progress on Condition [Year 1]	The assessment team scored this PI and presented a rationale as if a partial strategy was necessary. However, the language in SIa at SG80 requires that "There is a partial strategy in place, if necessary, that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding". The CR adds in CB3.6.1 that "Teams shall score this PI even if the fishery has no impact on this component". For the assessment team, the two principal questions are, is it necessary to observe the existence of a partial strategy? And, if it isn't necessary, how does this SI has to be scored? The CR v1.3 indicates in CB3.3.1 that teams should interpret the term "if necessary", "to be applicable to those fisheries that have no impact on the relevant component and where no management strategy is required". In this case, it was established in the Outcome PI for main retained species 2.1.1, that these species are "highly likely to be within biological based limits, meeting SG80", therefore, it follows that, no partial strategy is necessary. For this reason, the fishery can obtain a score of 80 (see scoring table below for full rationale for final score) and no Condition has to be associated to this PI. **The Condition is therefore closed**.
Status of condition	**Closed**

5.9 Condition 2-2

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	2.3.2	**a & c**	**70**
Condition	By the fourth annual surveillance the client shall present some evidence that there is a partial strategy **in place** that is expected to ensure the fishery does not hinder the recovery of brown pelicans and blue-footed boobies. The client shall also present evidence that the partial strategy for managing brown pelicans/ blue-footed boobies and fish and shark species is being implemented **successfully.**		
Milestones	**Surveillance 1 (2018)**: By this stage, the fishery shall present a proposed partial strategy. The proposed partial strategy shall clearly indicate: (1) how the measures to protect seabirds will work as part of a cohesive arrangement; (2) how the effectiveness of the measures will be monitored and assessed.		

	Expected Output: There will be evidence of the continuity of the observer program on board the purse-seine fleet of the Gulf of California, from which information and evidence of the implementation of the mitigation measures will be generated (water curtains to avoid seabirds from entering the net), which will contribute to reduce potential impacts (if any) of the fishery on brown pelicans and blue footed boobies. **Expected scoring**: No changes to score anticipated at this stage **Surveillance 2 (2019):** By this stage, the fishery shall present evidence that some elements of the partial strategy are being implemented. **Expected Output:** An analysis of the information generated from the observer program on board the purse-seine fleet of the Gulf of California will be carried out, from which a report will be generated, in which it will be documented the successful implementation of the mitigation measure for managing the impacts on seabirds (brown pelican and blue footed boobies) associated with the small pelagics fishing activities with purse seiners in the Gulf of California. **Expected scoring**: No changes to score anticipated at this stage **Surveillance 3(2020):** By the stage the fishery shall present evidence that: (1) the partial strategy is being implemented and (2) the performance of the partial strategy is being monitored. **Expected Output**: The client will present report on the results of the observer program on board the smaller pelagic fleet. The report will include a quantitative analysis on mortality and impacts of the entire fleet on ETP seabird species. **Expected scoring**: 75 **Surveillance 4 (2021):** The fishery shall provide evidence that the measures have been effective in mitigating impacts of the fishery on seabirds, or if not successful that these have been assessed and modified as necessary. (Related to Milestone Surveillance 4 for Condition 2-3) **Expected Output**: Output related to Milestone Surveillance 4 for Condition 2-3 The client will present a report on associated impacts of the small pelagics fishery in the Gulf of California and a quantitative evaluation of the performance of the performance of the mitigation measures and how these contributed to minimize the potential mortality of birds. **Expected scoring**: 80
Client action plan	The client, in coordination with INAPESCA, will collect information (within the framework of a program of observers on board the purse seine fleet) on the different species of birds associated with the fishing work, as well as evidence of the implementation of the mitigation measure (water curtains to avoid seabirds from entering into the net). This program has been carried out by the entity Global Grupo A.C. The results of these actions, i.e. the implementation and monitoring of the mitigation measure, will be disseminated through technical meetings between the industry, INAPESCA and CONAPESCA, as well as technical reports; These evidences will be delivered to the certification body.

Progress on Condition [Year 1]	A strategy proposal has been presented to mitigate the mortality by incidental capture of seabirds and ETP species in the small pelagic fishery in the Gulf of California developed by Global GRUPO This proposal complies with the objectives indicated in the client's action plan: 1) how the measures to protect seabirds will work as part of a cohesive arrangement; 2) how the effectiveness of the measures will be monitored and assessed. A Technical Report on incidental catches and presence of species in the ETP category was presented in the small pelagic fishery in the Gulf of California for 2018 under the program: Technical observers aboard the largest sardine fleet in the Pacific Ocean and Gulf of California. This strategy includes the incidences with seabirds and the mitigation measures applied.
Status of condition	**On target**

5.10 Condition 2-3

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	2.3.3		**65**
Condition	By the fourth annual surveillance the client shall provide evidence that there is sufficient valid information available to: 1) quantitatively estimate all fishery related mortality and the impact of the fishery for ETP seabird species and 2) measure trends and support a full strategy to manage impacts on ETP seabird species.		
Milestones	**Surveillance 1(2018):** By this stage, the fishery shall present a proposed monitoring program. The proposed monitoring program shall include: (1) Description of the proposed monitoring protocol to quantitatively estimate all fishery related mortality for ETP seabirds (2) Identification of the information that will be required to monitor the effectiveness of the measures proposed for Condition 2-2 **Expected Output**: The client, in coordination with INAPESCA and CONAPESCA, will support the activities of the observer program on board the small pelagics fleet (coverage of 10%). To ensure relevant information is collected to: (a) assess the effectiveness of the management strategy and (b) provide quantitative estimates of mortality and impacts of the fishery on seabird species for the entire fleet. It will also maintain training for fishing fleet personnel. The client will present evidence in the form of technical reports and minutes (and other evidence of: 1. The information collected by the observer program 2. A comprehensive description of the coverage, duration, objectives, and design of the data collection protocols of observer programs. The protocol will include a clear description of how the observer program design will address issues of sea bird mortality count.		

	3. Requirements of observer training program and evaluation of observers. And evidence of how the observer program is trained to identify ETP species in the geographic area with which the fishery could have potential interactions. 4. Description of mechanisms to verify data collected by observer program. **Expected scoring**: No changes to score anticipated at this stage **Surveillance 2 (2019)**: By this stage, the fishery shall some present evidence that information is being collected to quantitative estimates all fishery related mortality for ETP seabirds. **Expected Output**: The client will continue to support the activities of the observer program on board the purse-seine fleet; The client will also show evidence (minutes and other evidence) that the fleet staff training program is maintained. A preliminary analysis of the work associated with the mitigation measure and its operation will be carried out; The client will provide a preliminary technical report on: 1. Operations of the mitigation measure on bird species (brown pelican and blue footed boobies) associated with the small pelagics fishery 2. Quantitative estimates of mortality and impacts of the fishery on seabird species for the entire fleet, including considerations for potential unobserved mortality 3. Evidence of verification of information collected by observer program Additionally, the client will continue the support research in ecosystem models detailed in condition 2-5, to continue to assess potential indirect impacts of the fishery on sea birds. **Expected scoring**: No changes to score anticipated at this stage **Surveillance 3 (2020)**: By this stage, the fishery shall present quantitative estimates all fishery related mortality for ETP seabirds **Expected Output**: The client will present report on the results of the observer program on board the smaller pelagic fleet. The report will include a quantitative analysis on mortality and impacts of the entire fleet on ETP seabird species. **Expected scoring**: 75 **Surveillance 4 (2021)**: By this stage, the fishery shall present information that measures trends of impact on ETP seabird species over time with adoption of management measures (Related to Milestone 4 of Condition 2-2). **Expected Output**: The client will present a report on associated impacts of the small pelagics fishery in the Gulf of California and a quantitative evaluation of the performance of the performance of the mitigation measures and how these contributed to minimize the potential mortality of birds **Expected scoring**: 80 – Condition Closed
Client action plan	The client, together with INAPESCA and CONAPESCA, will maintain the on-board observer program, as well as training the fishing fleet crew on how to carry out the proposed mitigation measure (water curtains to avoid seabirds from entering into the net) and to address information validity issues regarding interpretation of mortality numbers and species identification.

	The client will provide evidence that the on-board observer program of the small pelagics fleet remains in effect; That information will be collected on the species of birds (brown pelican and blue footed booby) interacting during the fishing season and evidence of the application and operation of the mitigation measure, including training, will be collected. In addition, a technical report will be presented, based on information obtained from the observer program, on the impact of the entire fleet on the mortality of brown pelican and blue footed boobies.
Progress on Condition [Year 1]	In relation to milestones for the first year of surveillance, the client has presented information for each of the relevant points: 1. The information collected by the observer program Detailed information on the information gathered in the observer program is presented through the final report of 2018 and the observer bulletins on board. In them, the results of the work of the observers carried out during 2018 are synthesized. 2. A comprehensive description of the coverage, duration, objectives, and design of the data collection protocols of observer programs. The protocol will include a clear description of how the observer program design will address issues of sea bird mortality count. The observer program includes the description of coverage, duration, objectives, and design of the data collection protocols. The Observer Program in Sonora has 14 OTBs. The dynamics of the Fishing Dispatches obliges to include an OTB for all trips of a month. By the coverage of the Program, the randomness in the registration of the information is ensured, which leads to the interaction of the OTB with personnel on board the vessels, and this allows the results to present a uniform variation. The observer program has been designed and implemented by Global GRUPO. Global GRUPO is responsible for training observers in both technical and security aspects. In addition, it designs and improves the data collection forms. The set of forms is the following: • Vessels information • Capture of minor pelagics • Bycatch fish • Bycatch of elasmobranchs (sharks and rays) • Incidental catch crustaceans • Seabird sighting • Seabird Mitigation • Marine Mammals sighting • Incidental catch Sea Turtles • Interaction with smaller vessels • Biological Sampling (information per individual of the associated fauna species and under protection) SEABIRDS • Biological Logbook (biological samplings target species) • Climatic logbook (climatic events) • Massive log (count of species by size interval)

	3. Requirements of observer training program and evaluation of observers. And evidence of how the observer program is trained to identify ETP species in the geographic area with which the fishery could have potential interactions. Global GRUPO conducts continuous training for its observers. These formations have as objective that the observers can, among other skills, identify the ETP species in the area where the fishery can have interactions with these species. Evidences are presented of the training programs and courses carried out by the observers. On the other hand, the client has provided a copy of the interaction parts of the vessels with ETP species during the 2018 fishing season. 4. The monitoring program is reviewed by Global GRUPO to improve information collection techniques and estimation methods. The main objectives of this revision are the following: • Evaluate the On-Board Observer Program to identify data gaps and to improve the program and implement changes appropriately. • Review the data and analysis of INAPAESCA and GRUPO Global to ensure that the information contained in them is in accordance with the policies of incidental mortality reduction and its trends. • Review and update methodologies to estimate the incidental mortality of birds and ETP species to ensure that the best available scientific information is used. • Improve estimates of incidental mortality by improving the data collection of ETP species • Implementation of requirements to standardize the methodology of reporting incidental mortality. • Improve the collection of data and comply with the notification requirements of the same to the fishing authorities In addition, there is a constant training of Observers, which improves the efficiency of the data collection on board. This information is in accordance with milestone 1 of the first year of surveillance
Status of condition	**On target**

5.11 Condition 2-4

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	2.5.2		**75**
Condition	By the fourth annual surveillance the client shall present some evidence that the measures comprising the partial strategy for ecosystem management are being implemented successfully.		
Milestones	**Surveillance 1 (2018)**: By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected. **Expected Output**: The client together with INAPESCA and other technical groups (for example, CICIMAR), will continue to support data collection		

	programs and ecosystem modelling that consider the impact of removal of the target stocks on ecosystem functioning. Also see “Milestone Surveillance 1” for Condition 1-1 and 1-4. **Expected scoring**: No changes to score anticipated at this stage **Surveillance 2 (2019):** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Output**: The client will continue to support the activities of the observer program on board the sardine fleet and provide a preliminary report of the different taxonomic groups, including seabird species, which interact during the sardine fishing activities in the Gulf of California. The client together with INAPESCA and other technical groups (for example, CICIMAR), will continue to support data collection programs and ecosystem modelling that consider the impact of removal of the target stocks on ecosystem functioning. Also see “Milestone Surveillance 2” for Condition 21-1 and 1-4. **Expected scoring**: No changes to score anticipated at this stage. **Surveillance 3 (2020)**: By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Output:** See “Milestone Surveillance 2” for Condition 21-1 and 1-4. **Expected scoring:** No changes to score anticipated at this stage **Surveillance 4 (2021):** Condition expected to be fully met **Expected Output:** The client will provide a final report on the Target Reference Point that considers the ecological role of Pacific sardine; This Target Reference Point will be included in the Management Plan (and other regulatory mechanisms) which will be formally published in the Official Gazette of the Federation (DOF). Also provide evidence that the harvest strategy for the thread herring is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points. The client will provide a report on the different taxonomic groups and / or associated species during the sardine fishery in the Gulf of California, including seabird species. The client will also present advances on ecosystem modelling that show the management measure is successfully implemented, and that fishing activities do not alter or modify the ecosystem in which this activity is carried out. The ecosystem model will include functional groups of major predator groups (including seabirds), if possible important predators will be specified individually rather than being combined into broader functional groups. **Expected scoring**: 80
Client action plan	The client will show evidence that small pelagics fishery in the Gulf of California does not affect the structure and function of the ecosystem, this management aspect will be defined according to what is stated in Condition 1-1 (Pacific sardine) and Condition 1-4 (Thread herring).

	The client, in coordination with INAPESCA, will continue working on models with an ecosystem management approach, aspects that will be discussed within the framework of the meetings noted in condition 1-1 and 1-4. Finally, this will be reflected in the revised Fisheries Management Plan, which should be formally published in the DOF.
Progress on Condition [Year 1]	The proposal of a mitigation strategy for the mortality by incidental capture of seabirds and ETP species in the smaller pelagic fishery in the Gulf of California takes into account the effects on the marine ecosystem. Global Grupo monitors and estimates the incidental mortality of birds and threatened species in fisheries to understand the effects of such mortality on the fishery and the ecosystem. CONAPESCA, INAPESCA and Global Grupo carry out and support research to improve assessments of incidental mortality in the population and ecosystem dynamics. A working meeting was held in La Paz, BCS, on January 29 and 30, during which different aspects of the conditions and the way in which the different research groups could intervene in each of them were discussed. As a result of these meetings, a minute of the agreements was prepared and the list of participants in the workshop was included. In this regard, in the workshop held in La Paz, BCS, , the following was agreed: Condition: 2-4. The revision of this topic will be carried out among INAPESCA personnel with CICIMAR personnel to continue with studies of the impact of sardine fishing on the ecosystem. This document is currently being prepared. For the Monterrey sardine, a document is being prepared by INAPESCA, which is more advanced.
Status of condition	**On target**

5.12 Condition 3-1 and 3-2

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	3.2.2		**75**
Condition	3-1. By the fourth surveillance, the client should present evidence that there are decision-making processes that result in measures and strategies to achieve the fishery-specific objectives for the protection of ETP species. 3-2. By the fourth surveillance the client shall present evidence that, with regards of impacts on ETPs, the 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		
Milestones	**Surveillance 1 (2018):** By this stage, the fishery shall present a diagnostics or gap analysis to determine the origin of deficiencies in the decision-making		

	process as related to the application of specific management measures to protect ETP species. **Expected Output**: Minutes of meetings signed by the participants will be presented with all the agreements reached. A draft that details the proposed decision-making processes to implement the use of the HCRs and a report of the analysis of deficiencies in the decision-making process as related to the application of specific management measures to protect ETP species. **Expected scoring**: No changes to score anticipated at this stage **Surveillance 2 (2019)**: By this stage, the fishery shall agree on a proposal for an established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives for the protection of ETP species. **Expected Output**: The client will provide a report with the proposed guide to the decision making process to respond to important issues affecting ETPs. Summary of agreements reached and the revisions made at the meetings should be included. **Expected scoring**: No changes to score anticipated at this stage **Surveillance 3 (2020)**: By this stage, the fishery shall formally adopt an established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives for the protection of ETP species. **Expected Output**: The proposed guidelines to the decision making process to respond to important issues affecting ETPs have been defined and discussed with all relevant parties. A draft document is produced and is ready for publication. The client will provide a technical report showing progress in determining formal mechanisms; Also a summary of the agreements reached and the revisions made at the meetings. **Expected scoring**: No changes to score anticipated at this stage. **Surveillance 4 (2021):** By this stage, the fishery shall present evidence to indicate that: (1) management decision-making processes to achieve the fishery-specific objectives for the protection of ETP species have been adopted and are routinely employed (2) the decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation **Expected Output**: A formal document has been produced describing the decision-making process as related to the application of specific management measures to protect ETP species. **Expected scoring**: 80
Client action plan	The client will actively collaborate with CONAPESCA to review and implement the necessary changes in the corresponding regulatory instruments to produce a pathway to respond to serious and important issues that arise as a consequence of fishery operations to assure that basic provisions in applicable Laws are applied. The client proposes that a handbook of procedures can be produced such that fishers, authorities and everyone involved in incidents is acquainted with the

	steps to be taken to meet the requirements of the Law. Utilization of the document could be referred to in the CNP or the NOM.
Progress on Condition [Year 1]	During the first year of certification, no concrete actions have been taken in relation to conditions 3-1 and 3-2. A letter from CANAINPESCA has been presented in which reference is made to the steps that will be taken by the client to resolve these two conditions. Thus, as a first step, it is intended to sign a memorandum of understanding and collaboration between CONAPESCA and SEMARNAT, with the aim of amending the law in relation to the bycatch of protected species and the obligation to return it to the living or dead sea. On the other hand, establish measures to mitigate the impact of fishing on seabirds through a protocol that sets, in the management plan, the specific objectives of protecting species ETP and so that they can be implemented throughout the fishery. In addition, this protocol should be part of the decision-making process and actions of the authorities. Although there is progress, it is not considered that both conditions have advanced in accordance with the provisions of Milestone Surveillance 1 (2018). Minutes of meetings or agreements reached have not been provided. Neither has it been provided by the client, a draft that details the proposed decision-making processes to implement the use of the HCRs and a report of the analysis of deficiencies in the decision-making process as related to the application of specific management measures to protect ETP species
Status of condition	**Behind Target**

5.13 Condition 3-3

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	3.2.2		**75**
Condition	By the fourth surveillance the client shall present evidence that, with regards of implementation of the control rule, the 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.		
Milestones	**Surveillance 1 (2018):** By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected **Expected Output**: The client, in coordination with INAPESCA and the Small Pelagics Technical Committee, will initiate meetings to propose and discuss the formal mechanisms for stopping fishing activities, when close to the BAC. At least one minute of the meetings signed by the participants will be presented with all the agreements reached. **Expected scoring**: No changes to score anticipated at this stage		

	Surveillance 2 (2019): By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Output**: The client will provide a technical report showing progress in determining the formal mechanisms for stopping fishing activities when close to the BAC; Also a summary of the agreements reached and the revisions made at the meetings. **Expected scoring**: No changes to score anticipated at this stage **Surveillance 3 (2020):** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Output**: The formal mechanisms for stopping fishing activities will be determined when close to the BAC. The client, in coordination with INAPESCA and the Small Pelagics Technical Committee, will have a meeting with CONAPESCA to discuss these mechanisms, as well as their incorporation in the normative documents, including the Management Plan, before their publication in the Official Gazette of the Federation (DOF). The client will provide a technical report showing progress in determining formal mechanisms; Also a summary of the agreements reached and the revisions made at the meetings. **Expected scoring**: No changes to score anticipated at this stage **Surveillance 4**: Condition expected to be fully met **Expected Output**: The client will provide a final report on the formal mechanisms for stopping fishing activities, when close to the BAC; These formal mechanisms will be included in the Management Plan (and other regulatory mechanisms) which will be formally published in the Official Gazette of the Federation (DOF). **Expected scoring**: 80
Client action plan	The client will actively collaborate with INAPESCA and the Small Pelagics Technical Committee to review and implement the necessary changes in the Fisheries Management Plan that will allow the formal mechanisms to stop fishing activities, when close to the BAC, So that they work together to achieve the management objectives. The activities and results will be reflected in working minutes and at least one Technical Report and, will be made known through technical meetings to the fishing industry and to CONAPESCA (Administrative Body) for its systematic and effective implementation. These changes to the Management Plan, will be documented with the publication of this in the Official Gazette of the Federation (DOF).
Progress on Condition [Year 1]	The purpose of this Condition is to provide evidence that the decision-making process in the management of the sardine fishery is efficiently utilizing the HCR as information is being produced about stock status. This Condition is also a complement of Conditions 1-2 and 1-3 that are aimed to have a responsive

	harvest strategy and to have a HCR that is effectively in place with clear procedures to stop the fishery as the BAC is being approached. The fishery presented evidence that the new NOM-003-SAG-PESC-2018 regulating small pelagics fishing in Mexico has been published in the Official Gazette. The NOM states: "The Secretariat may establish periods and closed areas for the capture of smaller pelagics to apply dynamic management of the fishery, avoid interaction with other fisheries, as well as contribute to the conservation of other biological resources and the ecosystem. Such periods and closure zones will be announced through Regulatory Agreements that will be published in the Official Gazette of the Federation, based on the technical opinion issued by INAPESCA for such purpose, prior to the socialization of the measure". In other words, the INAPESCA conducts the stock assessment and following the guidance of the Management Plan, computes the BAC based on the estimated status of the stock; the results are communicated to other stakeholders including the fishers and the management branch of the government (CONAPESCA) and procedures can be agreed to start operations on the base of the limit established with the BAC. With this, the formal mechanism to make the HCR effectively in place has been established. Because the procedure is new, the fishery has had no opportunity to follow the steps established in the NOM, however, the team received evidence that the same members of the management system, including INAPESCA and CONAPESCA, met with fishers of another small pelagics fishery further south to follow the steps to produce a BAC, meet with fishers, agreed to stop fishing as the BAC was approached, the fishers were timely informed at 70% the BAC and actually stopped at 90% the BAC. The expectation is that the system will operate in the central/northern Gulf of California in the same way as in the south and the Surveillance Audit Team will request similar evidence. The fishery is on target towards closing this Condition in the established timeline.
Status of condition	**On target**

5.14 Condition 3-4

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	3.2.3		**75**
Condition	By the fourth annual surveillance the client shall provide evidence that there is no systematic non-compliance with current regulations.		
Milestones	**Surveillance 1 (2018)**: By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected. **Expected Output**: See "Client Action Plan" for Condition 3-1. **Expected scoring**: No changes to score anticipated at this stage.		

	Surveillance 2 (2019): By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Output**: See “Client Action Plan” for Condition 3-1. **Expected scoring**: No changes to score anticipated at this stage. **Surveillance 3 (2020):** By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed four years. **Expected Output**: See “Client Action Plan” for Condition 3-1. **Expected scoring**: No changes to score anticipated at this stage. **Surveillance 4 (2012):** Condition expected to be fully met **Expected Output**: See “Client Action Plan” for Condition 3-1. **Expected scoring**: 80
Client action plan	See "Client Action Plan" for Condition 3-1. The review of necessary changes in the Fishery Management Plan and NOM-003-PESC-1993 discussed under Condition 3-1, will include revisions of the minimum size regulations. In addition, the client will actively collaborate with CONAPESCA and INAPESCA, so that the NOM-003-PESC-1993 will be published in the shortest possible time in the DOF and that its implementation will be effective. The fishery will abide by the regulations showing that there is no evidence of systematic non-compliance, for which it will present the minutes of the meetings in which it shows its participation and the inspection reports of the fishery will be presented
Progress on Condition [Year 1]	As a result of the re-assessment, it was determined that the catch continuously shows a proportion of the total catch of Pacific sardines that is larger than permitted in regulations to be under the size limit. Therefore, this condition requires the fishery to present evidence that there is no systematic non-compliance with current regulations. The review of the progress of condition 3-1, is linked to this condition (3-4) and in accordance with the client's Action Plan. The section of the Action Plan for Condition 3-1 pertaining to Condition 3-4 proposed ”to review and implement the necessary changes in the corresponding regulatory instruments to produce a pathway to respond to serious and important issues”. More specifically, it aimed to complete the process of revision of the Official Norm regulating the small pelagics fishery in Mexico. The revised NOM includes a base minimum size of 150 mm for the Pacific sardine and a limit of 20% of the catch under this size limit. However, the text of the NOM adds “percentages allowed under this size can be modified based on technical opinion produced by the INAPESCA, and will be made public through Regulatory Agreements published in the Official Gazette”. Also, the NOM indicates that the “Secretariat will establish and, if necessary, will modify for each season or period, the minimum size for the catch of the species of small pelagics, including the percentages allowed under such size, for the exploitation of small pelagics, considering the differences by regions (ecosystems) and the population dynamics, based on

	the technical opinion of the INAPESCA, which will be made public through Regulatory Agreements published in the Official Gazette". Such changes in the regulatory framework satisfy the intention of the Condition in its initial steps so that the progress can be considered to be on target. To close the Condition, it remains necessary that the Client provides evidence that this changes effectively facilitate the fishery to comply with the limits established ***before*** the next fishing season begins. The evidence that the surveillance audit team will be looking for include minutes of meetings informing the fishery of the limits for the season and signed by the fishery to acknowledge and commit to compliance. At the end of the fishing season, it is expected that the report of the fishery performance does not present a proportion in the catch of fish under the size limit that is larger than allowed at the beginning of the season. This will be observed through the entirety of the Certification Cycle.
Status of condition	**On Target**

5.15 Condition 3-5

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	3.2.5		**70**
Condition	By the third annual surveillance the client shall provide evidence that the fishery-specific management system is subject to regular internal and occasional external review.		
Milestones	**Surveillance 1 (2018)**: By this stage, the fishery shall have demonstrated some progress toward the closure of this condition. No improvements expected. **Expected Output**: The client will collaborate actively with INAPESCA for the annual monitoring and evaluation of the small pelagics fishery performance in meeting the objectives laid out in the Fisheries Management Plan and corresponding Nom(s). The results of INAPESCA's annual evaluation of the performance of the fishery will be reviewed by the Technical Committee of Small Pelagic. The client will present a technical report of the fishery internal review issued by Technical Committee of Small Pelagic. **Expected scoring**: No changes to score anticipated at this stage. **Surveillance 2 (2019)**: By this stage, the fishery shall have demonstrated further progress toward the closure of the condition, consistent with the achievement of the condition within the allowed three years. **Expected Output**: INAPESCA will continue to conduct an annual monitoring and evaluation of the small pelagics fishery performance in meeting the objectives laid out in the Fisheries Management Plan and corresponding		

	Nom(s). The results of INAPESCA's annual evaluation of the performance of the fishery will be reviewed by the Technical Committee of Small Pelagic. The client will present a technical report of the fishery internal review issued by Technical Committee of Small Pelagic. **Expected scoring**: No changes to score anticipated at this stage. **Surveillance 3 (2020):** Condition expected to be fully met **Expected Output**: The Client will actively solicit and support the external reviews of the results made by INAPESCA; Present the minutes or reports of the meetings held for this purpose. **Expected scoring**: 80
Client action plan	The client will actively support the systematic internal reviews of the monitoring, evaluation and overall management proposals of the small pelagics fishery conducted by INAPESCA. Will present the minutes or reports of the meetings held for this purpose; In addition, it will also actively solicit and support external review by Technical Committee of Small Pelagic for the results made by INAPESCA; Present the minutes or reports of the meetings held for this purpose.
Progress on Condition [Year 1]	A review of the evaluation carried out for the sardines Monterrey and crinuda, was carried out and the opinion on these reports was delivered to the chairman of the technical committee and to Canainpesca. In March 2019, the new version of the Standard that regulates the fishery for small pelagic was published. A new version of the National Fisheries Charter (Carta Nacional Pesquera) was also published in 2018.
Status of condition	**On target**

6 References

Gonzalez-Maynez V., M.O. Nevarez-Martinez, H. Villalobos, A. Valdez-Pelayo, E. Alvarez-Trasviña y P. Santos-Molina. 2016. Evaluación acústica de sardina monterrey en el Golfo de California durante la primavera del 2015 y 2016. Informe técnico. Instituto Nacional de Pesca y Acuacultura. CRIP Guaymas. 15 pp.

Global Grupo de Gestión e Investigación en Ciencias y Tecnologías Marinas, Ambiente, Desarrollo Social y Alimentación, A.C. Observadores técnicos a bordo de la flota mayor de sardina, en el Océano Pacífico y Golfo de California Informe Técnico sobre capturas incidentales y presencia de especies en categoría ETP en la pesquería de pelágicos menores en el Golfo de California. Mazatlán, Sinaloa, febrero de 2019

Global Grupo de Gestión e Investigación en Ciencias y Tecnologías Marinas, Ambiente, Desarrollo Social y Alimentación, A.C. Propuesta de estrategia para mitigar la mortalidad por captura incidental de aves marinas y especies ETP en la pesquería de pelágicos menores en el Golfo de California. 2018

Nevarez-Martinez M.O., M. A Martinez-Zavala, A.E. Lopez-Lagunas, P. Santos-Molina, S.I.. Navarro-Bojorquez, J.E. Alvarez-Trasviña, A. Valdez-Pelayo, V. Gonzalez-Maynez, D.I. Arizmendi-Rodriguez, J.J. Aviles-Hernandez, H. Villalobos-Ortiz. 2019. La pesquería de peces pelágicos menores, su variabilidad y su relación con la variabilidad ambiental y la pesca. Informe final de investigación 2018. Instituto Nacional de Pesca y Acuacultura. CRIP Guaymas. 63 pp.

Norma oficial mexicana nom-003-sag/pesc-2018, para regular el aprovechamiento de las especies de peces pelágicos menores con embarcaciones de cerco, en aguas de jurisdicción federal del océano pacífico, incluyendo el golfo de california. DOF: 12/03/2019

ACUERDO por el que se da a conocer la actualización de la Carta Nacional Pesquera. (Continúa en la Tercera Sección). DOF: 11/06/2018...

7 Appendices

7.1 Appendix 1. Re-scoring evaluation tables

New text added during the Year 1 surveillance is marked in blue

PI 2.1.2		There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary, that are expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a partial strategy in place, if necessary, that is expected to maintain the **main** retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a strategy in place for managing retained species.
	Met?	Y	Y	N
	Justification	**The assessment team scored this PI and presented a rationale as if *a partial strategy* was necessary. However, the language in SIa at SG80 requires that "There is a partial strategy in place, if necessary, that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding". The CR adds in CB3.6.1 that "Teams shall score this PI even if the fishery has no impact on this component". For the assessment team, the two principal questions are, *is it necessary* to observe the existence of a partial strategy? And, if it isn't necessary, how does this SI has to be scored?** **The CR v1.3 indicates in CB3.3.1 that teams should interpret the term "if necessary", "to be applicable to those fisheries that have no impact on the relevant component and where no management strategy is required". In this case, it was established in the Outcome PI for main retained species 2.1.1, that these species are "highly likely to be within biological based limits, meeting SG80", therefore, it follows that, *no partial strategy is necessary*.** **The next question is how to score this PI. In SIa, at SG60 and SG80 the requirement is only if the measures or partial strategy were necessary for main retained species, if not, then they are considered to meet SG80. In contrast, SG100 requires that *all* retained species have "a strategy in place", that is, regardless if necessary or not, and is not only a "partial strategy" but a full strategy. Therefore this SI meets SG80 but not SG100.** **Because the rationale provided at reassessment is useful to justify the score, only a minor correction is made at the end of the text but otherwise it remains intact.** As part of the small pelagics fishery in the Gulf of California *bocona* sardine and chub mackerel are managed by NOM-003-PESC-1993 and the Small Pelagics Fisheries Management Plan (SPFMP). Under this management framework there is in place a sampling		

		program to collect landing data and surveys to gather size data and stock assessments have been conducted for both species. Chub mackerel has been included in acoustic surveys, but these results have not been included in stock assessments for this species. Under the SPFMP chub mackerel is classified as an "active" management species, and *bocona* sardine as a "passive" management species. There are two MSY-based control rules in the SPFMP, for passively managed species, the control rule determines that the Biological Acceptable Catch (BAC) is 25% of the most recent estimate of the SSB. This represents the use of a fixed harvest rate (0.25) for all 'passively' managed species at all times. For species that are actively managed the control rule uses a harvest rate that can vary among species at different times but is constrained between 5 and 25% of the estimated SSB, over a cutoff of minimum biomass. There are also limits to fleet capacity and gear regulations in place. The existing measures have been designed specifically to manage the status of the small pelagic species under NOM-003-PESC-1993, expected to work cohesively ensure the stock of these species remain at levels which are highly likely to be within biologically based limits. ~~, meeting SG80.~~ However, as discussed in PI 1.2.1 SIa, there is no evidence of a cohesive arrangement in which management actions are responsive to the status of small pelagic species, thus SG100 is not met. The type of gear used in this fishery (purse-seine nets) results in relatively low catch levels of the species designated as 'minor' retained, and thus its considered a measure expected to ensure the fishery does not hinder their recovery and rebuilding of any of these species. The observer program serves to support information on catch levels and is considered a supporting measure. These measures are not explicitly designed to manage species designated as 'minor' retained, thus are not considered a complete strategy and SG100 is not met. **Because no partial strategy is necessary for the main retained species the fishery meets SG80, however, because there is no evidence that the strategy in the SPFMP is in place, the fishery cannot meet SG100.** ~~*Bocona* sardines does not meets SG80 for SI(a)~~ ~~Chub mackerel does not meets SG80 for SI(a)~~ ~~Minor retained species don't meet SG100 for SI (a)~~		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or species involved.
	Met?	Y	Y	N
	Justification	**Considering the argumentation provided above in SIa, at SG80 there is no requirement for a partial strategy (assumed to be applied for main retained species only, e.g. following the definitions in SIa, no partial strategy is required for other species in this PI), but a strategy is required at SG100 for all retained species. This SI is to be scored in the way described for SIa.** Several of the management measures for the small pelagic fishery are already in place. Systematic monitoring of landing has been conducted since the 1970s, and several evaluations of biological reference points for both *bocona* sardine and chub mackerel have		

		been conducted. The assessment team considers this information collected for the UoA provides and objective basis for confidence that the partial strategy will work, meeting SG80. There is also systematic monitoring in place (landing monitoring, dynamic models, size sampling), which provide a high degree of confidence that the partial strategy will work once limitations identified in SIa and c for this PI are solved, thus SG100 is met for *bocona* sardines and chub mackerel. Information collected from the observer program provides some objective basis for confidence of the likelihood that the current operations of the fleet will work to manage impacts of the fishery on minor retained species, meeting SG80. There is no systematic monitoring thus SG100 is not met. **Because no partial strategy is necessary for the main retained species the fishery meets SG80, however, because there is no evidence that the strategy in the SPFMP is in place, the fishery cannot meet SG100.** ~~*Bocona* sardines meets SG100 for SI(b)~~ ~~Chub mackerel meets SG100 for SI(b)~~ ~~Minor retained species meet SG80 for SI (b)~~		
c	Guidepost		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		~~N~~ **Y**	N
	Justification	**Considering the argumentation provided above in SIa, at SG80 there is no requirement for a partial strategy (assumed to be applied for main retained species only, e.g. following the definitions in SIa, no partial strategy is required for other species in this PI), but a strategy is required at SG100 for all retained species. This SI is to be scored in the same way described for SIa.** There is some evidence that measures in the partial strategy are implemented (landing monitoring, dynamic models, size sampling), however, at present the harvest control rule for small pelagics is not considered to be 'in place' (See PI 1.2.1 and corresponding condition). The absence of evidence of monitoring and enforcement to implement the harvest strategy and stop the fishery operation as BAC is approached, preclude the partial strategy from being considered as 'successfully' implemented, thus SG80 is not met. **Because no partial strategy is necessary for the main retained species the fishery meets SG80, however, because there is no evidence that the strategy in the SPFMP is in place, the fishery cannot meet SG100.** ~~*Bocona* sardines does not meet SG80 for SI(c)~~ ~~Chub mackerel does not meet SG80 for SI(c)~~ ~~Minor retained does not meet SG100 for SI(c)~~		

d	Guidepost			There is some evidence that the strategy is achieving its overall objective.
	Met?			N
	Justification	There is no evidence that management measures for *bocona* sardine, chub mackerel or minor retained species are responsive to the state of the stocks of these species, thus SG100 is not met. *Bocona* sardines does not meet SG100 for SI(d) Chub mackerel does not meet SG100 for SI(d) Minor retained does not meet SG100 for SI(d)		
e	Guidepost	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	Y	Y	N
	Justification	The assessment team identified five shark species that were designated as 'minor retained', catch volumes for these species are very low <0.01% of the catch of the UoA. Information from the observer data indicates that these species are retained for consumption by the crew or are stored in the holds along with the small pelagics catch. There is no indication that shark fins are cut on board. Mexican regulations under NOM-029-PESC-2006 require the landing of all sharks with fins and prohibits the use of fins. The assessment team concluded that since sharks are retained numbers are very low it is likely that shark finning is not taking place, meeting SG80. Due to lack of good external validation that document the destination of all shark bodies there is no high degree of certainty that shark finning is not taking place.		
References		Nevárez-Martínez, et al. 2015; 2016; NOM-003-PESC-1993; Carta Nacional Pesquera (CNP)		
OVERALL PERFORMANCE INDICATOR SCORE:				~~75~~ **80**
~~CONDITION NUMBER (if relevant):~~ ~~**2 1.** By the third annual surveillance the client shall present some evidence that the partial strategy for management of *bocona* sardine and chub mackerel is being implemented successfully~~				

7.2 Appendix 2. Stakeholder Comments

7.2.1 Comments Received by UNION DE PESCADORES LIBRES DEL ESTADO DE SONORA

UNION DE PESCADORES LIBRES DEL ESTADO DE SONORA (UPLES) A.C.

Calle Múgele #60 Col. Las Villas C.P. 85440 R.FC. UPL 080218 MI9
Guaymas, Sonora. México. Tel. (622) 137 91 92

Guaymas, Sonora, 31 de Marzo de 2019

Dr. Carlos M.
Álvarez Flores
Auditor líder de
SCS Global
Ensenada B.C.

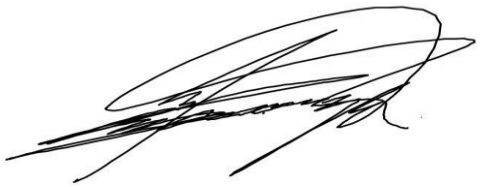
Por medio del presente me dirijo a usted, dando seguimiento a la reunión sostenida en la ciudad de Mazatlán, Sinaloa, el pasado día 14 de marzo del presente, donde se audito el seguimiento de la certificación de sustentabilidad de la pesquería de Sardina.

En atención a lo planteado en la mesa y a solicitud de ustedes se les hace llegar un informe técnico científico que constata las irregularidades que denunciamos ante ustedes en la mesa de dialogo, mismo que no documentamos en el momento, debido a la complicidad que existe entre la autoridad y los industriales de la pesca de la sardina, ya que a la fecha siguen sin proporcionar los documentos solicitados que

permitan constatar todas las irregularidades y violaciones a la nom-003 vigente al día de hoy correspondiente a pelágicos menores, mismas que ustedes han omitido dar el correcto seguimiento y por consecuencia llevando a cabo una certificación de algo que se contrapone a la ley, lo cual por consecuencia dicha certificación es ilegal y por tal motivo se les ha señalado a las organizaciones involucradas en dicha certificación como viciadas de corrupción.

Si bien viene cierto, existe una denuncia interpuesta en el órgano de control interno de CONAPESCA bajo el número de expediente 2018/CONAPESCA/DE59 donde se denuncia a la autoridad el incremento al esfuerzo pesquero, lo cual se contrapone con la norma vigente, así como al plan de manejo de la pesquería y a la carta nacional pesquera, que claramente dice “no al incremento del esfuerzo pesquero”, y aun así se otorgaron por parte de la autoridad varios permisos para la sustitución de embarcaciones, y que en el informe técnico científico solo detallamos dos cuando son muchas más de las cuales la autoridad se niega brindarnos la información que lo constata, de las cuales ustedes están certificando su operación, por tal motivo, le señalo que si el acto administrativo que ampara el ejercicio de una actividad se encuentra viciado, por consecuencia la certificación de dicha pesquería o actividad en la utilización de esas embarcaciones, son ilegales, puesto que se contraponen a la ley y ustedes están omitiendo todos esos argumentos y continúan certificando algo viciado de ilegalidad.

Sin otro en particular, anexamos dictamen técnico científico, elaborado por el Dr. Eugenio Alberto Aragón Noriega, quien cuenta con una amplia y reconocida trayectoria en la materia y biología pesquera, así mismo, quedamos en espera de su pronta respuesta y de ser posible agendar reunión para una mesa de trabajo sobre lo expuesto y denunciado ante ustedes, para que se revalore el proceso de certificación de sustentabilidad y se sancione lo correspondiente, para que NO siga llevando a cabo un proceso viciado de ilegalidad por el cual se les ha señalado de corrupción en a quienes lo están evaluando.



Lic. Gabriel Raúl Sánchez Almeida

Presidente del Comité Ejecutivo

Unión de Pescadores Libres del

En atención a la petición de la Unión de Pescadores Libres del Estado de Sonora UPLES A. C. quien solicita sustento técnico, científico y legal por el cual se sustituyeron embarcaciones "nuevas" que tienen una mayor capacidad de carga, redes de mayor tamaño y mayor poder de pesca y que consta en el expediente 2018/CONAPESCA/DE59 en el Órgano Interno de Control de la Secretaría de la Función Pública en la Comisión Nacional de Acuacultura y Pesca CONAPESCA, es que yo EUGENIO ALBERTO ARAGÓN NORIEGA en mi carácter de Investigador Científico con más de 30 años de experiencia en el tema y con licenciatura en Biología Pesquera según consta en la cédula profesional 2211395 y doctorado en Ecología Marina con cédula 3578173 que me facultan para ejercer las profesiones mencionas es que emito la siguiente opinión técnica:

Barcos de referencia, pero no limitados a ellos.

	Anterior	Actual
Nombre de la embarcación	PROPEMEX DP-1S	DON EMILIANO
Eslora	23.06	30.47
Tonelaje Bruto	139	276.45
Nombre de la embarcación	PROPEMEX LP-2S	EL CHUCHIN
Eslora	23	37.80
Tonelaje Bruto	144	208.78

La respuesta técnica que se ofreció por parte de la autoridad fue que a pesar de que la NOM-003-PESC-1993, habla de **no incrementar el esfuerzo pesquero** esta misma si da entrada a la sustitución de embarcaciones. Lo que según el funcionario que responde le permite a él autorizar la sustitución de una embarcación de pequeña dimensión por una de mayor tamaño en eslora, capacidad de bodega y redes. El funcionario entiende por sustitución cambiar un barco por otro barco y supone que con esos no se aumenta el esfuerzo pesquero. El funcionario falla al entender eso ya que el esfuerzo pesquero se incrementa al sustituir embarcaciones de mayor calado y redes más grandes. Ni la norma, ni la carta nacional pesquera, ni el plan de manejo permiten el incremento en el esfuerzo pesquero. El funcionario mal interpreta estos instrumentos normativos y de apoyo al manejo pequero. Se permite la sustitución de

embarcaciones, pero se supone que sea por una con el mismo poder de pesca y la misma capacidad (tamaño) de redes. El funcionario falla al no entender técnicamente lo que significa esfuerzo pesquero.

La NOM 003 PESC, el plan de manejo y la carta nacional pesquera refieren al esfuerzo de pesca en pelágicos menores como cantidad de embarcaciones y tamaño de las redes, pero no habla del poder de pesca. Habla de la posibilidad de sustituir embarcaciones en la zona 3 y 4 sin precisar el poder de pesca de las nuevas embarcaciones (eso es lo que se solicita sea respondido).

La LGPAS, en su artículo 33 habla de esfuerzo pesquero pero no lo hace vinculante con el poder de pesca. ¿Por qué es importante el poder de pesca? Porque el poder de pesca son obtenidos de la capacidad de bodega, tamaño de barco y dimensiones de la red. Cuando se sustituye un barco pequeño como los PROPEMEX por un barco más grande como el DON EMILIANO o el CHUCHIN, se pasa del uso de redes de 366 a redes de 640 (como se lee en la norma) con un claro incremento en el Esfuerzo de Pesca y que de acuerdo a la norma y al Plan de Manejo NO DEBE HACERSE. Cuando se incrementa la capacidad de pesca (poder de pesca) en embarcaciones se está incrementando el esfuerzo pesquero real, lo que ocasiona mayor presión y mortalidad por pesca en el recurso y en las especies no objetivo.

Los índices de abundancia para evaluar el recurso parten de los datos de captura y esfuerzo. Como los datos de esfuerzo permiten estimar la mortalidad que se genera sobre el "stock" se resalta la importancia de tener medidas precisas de esfuerzo pesquero. Existen muchos ejemplos nacionales e internacionales de incremento en el esfuerzo vía el incremento en el poder de pesca de las embarcaciones. Lo que se solicita a la autoridad pesquera es aclaración de BAJO QUE FUNDAMENTOS TÉCNICOS se han autorizado la sustitución de embarcaciones cuyo PODER DE PESCA es superior al de la embarcación que fue sustituida siendo que se ha demostrado que un barco con mayor poder de pesca genera mayor mortalidad por pesca en el recurso objetivo y mayor mortalidad en las especies capturadas como incidentales.

Eugenio Alberto Aragón Noriega

Anexos sobre como determinar el poder de pesca

Estandarización del esfuerzo de pesca

Las tasas de captura (captura por tiempo de operación) de cada unidad de pesca pueden variar debido a diferentes causas; entre ellas, las fluctuaciones de la abundancia, de la disponibilidad y de la capturabilidad del recurso, y de las condiciones climáticas y oceanográficas (Yáñez y Maritano, 1983). Por lo tanto, el poder de pesca absoluto de cada embarcación usualmente es imposible de determinar, razón por la cual se utiliza el concepto de poder de pesca relativo (PPR), definido como la razón entre la tasa de captura de cada unidad de pesca respecto de la tasa de captura de otras embarcaciones consideradas como patrón (Shimada y Shaefer, 1956; Kimura, 1981):

$$PPR_i = \frac{R_i \quad (1)}{R^*} \quad (1)$$

donde PPR_i es el poder de pesca relativo del barco i, R_i es la tasa de captura del barco i (viajes con pesca) y R^* es la tasa de captura del barco estándar.

Luego, el esfuerzo de pesca estándar (E^*) del barco i durante el período t (mes), corresponde al producto entre el esfuerzo de pesca nominal (E_{it}) y el poder de pesca relativo del barco i:

$$E^*_{i,t} = E_{it}\, PPR_i \qquad (2)$$

Análisis de las tasas de captura

Los factores que condicionan el poder de pesca son de naturaleza variada, tal como las características físicas de cada unidad de pesca, de las artes de pesca, de la tripulación, del comportamiento, disponibilidad y vulnerabilidad del stock, así como de los cambios asociados al hidroclima (Kimura, 1981; Yáñez y Maritano, 1983). Sin embargo, usualmente son las características físicas de las unidades de pesca las que mejor se relacionan con el poder de pesca (Carlson, 1975; Kimura 1981), particularmente el tamaño expresado a través de la capacidad de bodega (CB), ya que esta variable se correlaciona significativamente con otras variables geométricas y funcionales de las embarcaciones

(Shimada y Schaefer, 1956). Con el objeto de analizar la incidencia de la CB sobre las tasas de captura anuales de cada embarcación, se utiliza el siguiente modelo de regresión:

$$\ln(R_i) = \ln\left(\frac{C_i}{VCP_i}\right) = \ln(a) + b\ln(CB_i) + e \quad (3)$$

donde el subíndice i denota la i-ésima embarcación, R es la tasa de captura anual (captura por tiempo de operación), C es la captura anual, VCP son los viajes con pesca acumulados en el año, a y b son las constantes de la regresión, y e es una variable error con promedio cero y varianza constante.

SCS Response in Spanish

En relación a su comunicación del 31 de marzo del 2019, manifestando que con la referida comunicación documenta presuntas irregularidades que fueron omitidas en el proceso de certificación de la pesquería de sardina, y que además nos adjuntó un documento donde describe lo que considera es evidencia de una falta a la prohibición de incrementar el esfuerzo pesquero según definición en la NOM-003-PESC-1993, el equipo que ha llevado a cabo la primera auditoría del certificado del MSC le manifiesta lo siguiente.

Como antecedente a nuestra respuesta, le recordamos que durante nuestra reunión presencial en el puerto de Mazatlán el día 14 de marzo, el proceso de certificación y auditoría de esta pesquería se rige por los elementos contenidos en el documento del MSC denominado "Certification Requirements" en su versión 1.3 y 2.0. En este documento se detalla tanto la forma de realizar la evaluación del desempeño de la pesquería, como los tiempos y los mecanismos de comunicación con otras partes interesadas. Si tiene alguna duda relacionada con tales elementos, lo invito a que consulte el documento y en caso de tener duda nos lo haga saber para poder establecer con claridad y transparencia la forma en la que procedemos los equipos de evaluación y auditoría. Le recordamos también que la actuación de los equipos evaluadores se da en el contexto del estándar ISO 19011 que define una auditoría como "un proceso sistemático, independiente y documentado para obtener evidencia y evaluarla de manera objetiva para determinar la medida en la que se cumplen los criterios del estándar". Adicionalmente, la conformidad del trabajo de evaluación de una pesquería respecto al estándar del MSC, es auditada de manera aleatoria por la organización Accreditation Services International, para asegurar que cumplamos con los requisitos del MSC.

En relación al documento en donde incluye la información que desea presentar al equipo de evaluación, reconocemos que dicho documento se nos entrega dando seguimiento al acuerdo de hacernos llegar la evidencia que como auditores de una pesquería certificada por MSC requerimos para poder valorar sus consideraciones en el estricto marco de los Requisitos de Certificación mencionados previamente. El documento dice contener que constata "irregularidades" que denuncian en este proceso de comunicación. Más adelante en el documento indican que han denunciado ante las autoridades un "incremento al esfuerzo pesquero, lo cual se contrapone con la norma vigente, así como al plan de manejo de la pesquería y a la carta nacional pesquera, que claramente dice "no al incremento del esfuerzo pesquero", y aun así se otorgaron por parte de la autoridad varios permisos para la sustitución de embarcaciones". Aclaran en seguida que en su "informe técnico científico" solo detallan "dos cuando son muchas más". Concluye que "si el acto administrativo que ampara el ejercicio de una actividad se encuentra viciado, por consecuencia la certificación de dicha pesquería o actividad en la utilización de esas embarcaciones, son ilegales, puesto que se contraponen a la ley y ustedes están omitiendo todos esos argumentos y continúan certificando algo viciado de ilegalidad".

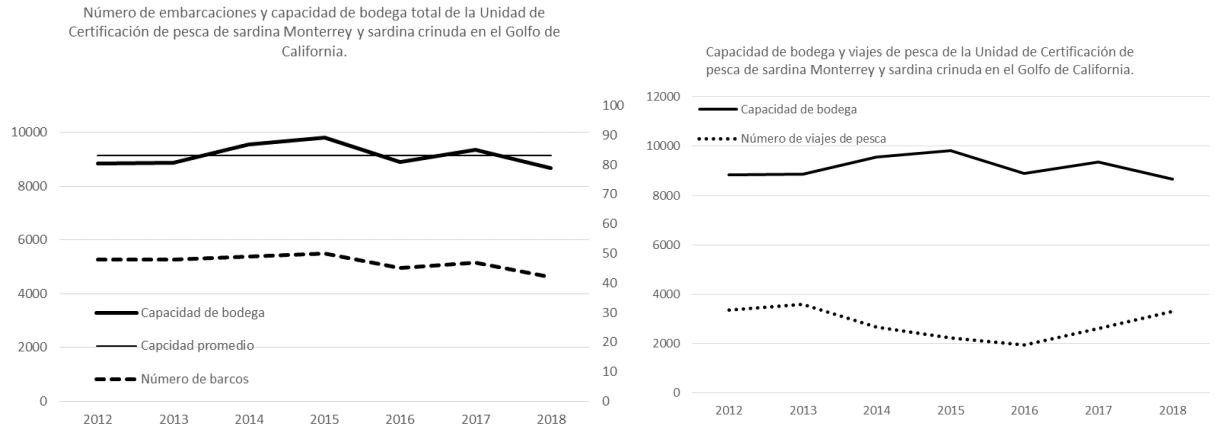
A continuación, el documento anexa una opinión técnica elaborada por el Sr. Eugenio Alberto Aragón Noriega, identificado como investigador científico especializado en biología pesquera. Esta opinión técnica, efectivamente documenta dos casos de sustitución de embarcaciones y presenta una sugerencia para el cálculo del poder de pesca. Se aclara aquí que la opinión técnica se limita exclusivamente a lo

mencionado sin haber presentado ningún análisis del poder de pesca de alguna flota completa para determinar si en su totalidad se ha incrementado el esfuerzo de acuerdo a los criterios sugeridos.

De nuestra parte, es importante declarar que no es de nuestra competencia establecer si una acción es ilegal o no. Nuestra participación se limita a observar evidencia que se nos entrega y determinar con ella si una pesquería cumple con los requisitos de certificación. De esta manera, aun cuando un criterio tiene que ver con el cumplimiento de la normatividad, no establecemos la legalidad de las operaciones de la pesquería, únicamente determinamos si la evidencia puede representar criterio suficiente para calificar de una u otra forma de acuerdo a los criterios específicos de indicadores en los requisitos del MSC.

Específicamente, a la pregunta de si el esfuerzo de pesca para la captura de pelágicos más pequeños ha crecido, la evaluación para certificación y auditoría se enfoca principalmente en aquella embarcaciones que se convierten en acreedores del certificado y que son parte de la Unidad de Evaluación. El impacto de los buques que pescan sobre el mismo stock, pero que no forman parte de la Unidad de Evaluación, se evalúa indirectamente según el Principio 1, ya que la captura de todas las flotas que pescan sobre el stock puede tener un impacto en el estado de los stocks objetivo. Sin embargo, para los Principios 2 y 3, no se consideran todas las embarcaciones que pescan sobre las poblaciones objetivo, particularmente para el Principio 3 donde se evalúa el Cumplimiento, el equipo se centra en el sistema de gestión en relación con la Unidad de Evaluación. En este caso, la Unidad de Evaluación corresponde a una flota compuesta por 46 buques de cerco en la lista de reevaluación de 2017 y de los cuales solo 42 estaban activos en 2018, que son miembros de la Cámara Nacional de Industrias de Pesca y Acuicultura (CANAINPES).

En lo que se refiere a la pesquería certificada como se definió en el párrafo anterior, la evidencia con la que contamos es el número de embarcaciones, el número de viajes de pesca y la capacidad de bodega de la flota. La tendencia de estos dos indicadores se muestra en la siguiente figura para el período comprendido entre el 2012 y el 2018 que comprenden el ciclo previo de certificación y el actual.



Comprendemos el argumento que se nos presenta en términos de que el número de embarcaciones por sí sólo no puede determinar la tendencia en el esfuerzo pesquero debido a los cambios en la conformación

de la flota relativa a su capacidad de bodega. La substitución de embarcaciones es además, un proceso del cual tenemos información pues contamos con el listado de los barcos que han operado cada año durante el ciclo de vida del certificado, además de que el INAPESCA ha facilitado reportes oficiales que presentan estas variaciones. Se observa en la figura de la derecha, que ni el número de viajes totales de la flota, ni la capacidad de bodega de las embarcaciones certificadas muestra tendencias a la alza.

Lamentamos que en la documentación que nos hicieron llegar no se haya incluido un análisis basado en el indicador que sugieren, de manera que se muestre una serie de tiempo que soporte el argumento de que el esfuerzo de pesca se ha incrementado. Esto, considerando que para su valoración dentro del proceso de auditoría en consideración de factores de 'Cumplimiento' bajo Principio 3, solamente se deberá incluir a todas aquellas embarcaciones que forman parte de la Unidad de Certificación, pero no de aquellas que aun pescando dentro del Golfo de California no forman parte de dicha Unidad, ni tampoco a las que operan fuera del Golfo. En este sentido, es importante aclarar que no nos corresponde al equipo evaluador producir evidencia sino únicamente analizar la evidencia que se nos proporciona.

Por último, es comprensible la preocupación de que una pesquería incremente su esfuerzo de pesca de manera arbitraria y sobre todo en contra de la normatividad vigente. Es comprensible también el señalamiento de que el cambio en la normatividad les preocupe como una acción que puede repercutir en el estado del recurso y el ecosistema del que forma parte. Sin embargo, el Plan de Manejo de la pesca de pelágicos menores, y en particular la pesca de sardina Monterrey y sardina crinuda está regida por una estrategia de explotación basada en límites del volumen de captura determinado mediante una regla de control cuya formulación es explícita en el Plan. La evidencia también indica que la captura de ambas especies ha estado muy por debajo de los límites establecidos mediante la regla de control. Por otra parte, los resultados de la evaluación de stock para ambas especies indican que las tasas estimadas de mortalidad por pesca son muy inferiores a puntos de referencia basados tanto en el máximo rendimiento sostenible como en el cociente de potencial reproductivo. Por ello, y dado que la tasa de mortalidad por pesca es función del esfuerzo pesquero, no contamos con ningún criterio que permita suponer que el cambio en la normatividad suponga un riesgo para la sostenibilidad de esta actividad pesquera o que represente una amenaza para el ecosistema, lo cual implicaría que no se cumplan los requerimientos del certificado del MSC en sus Principios 1 y 2.

Las observaciones que el equipo evaluador realiza en cuanto a las tendencias en el esfuerzo pesquero y posibles incumplimientos a la normatividad no son inamovibles. Estas son únicamente las conclusiones a las que se puede llegar con la evidencia que contamos. La evidencia que usted nos ha hecho llegar en cuanto a la sustitución de embarcaciones ya nos era conocida, pero en el contexto de la conformación del total de la flota certificada, no contamos con la evidencia para concluir que ello represente un incremento efectivo en el esfuerzo de pesca de dicha flota. Si en el futuro usted o su asesor científico pueden utilizar el indicador que proponen para demostrar lo contrario, lo invitamos a que en las próximas auditorías nos presente la evidencia.

SCS Response Translated to English

In relation to the letter received on March 31, 2019, stating alleged irregularities that were omitted in the certification process for the sardine fishery, and that it also attached a document describing what it considers is evidence of a failure to prohibit increasing fishing effort as defined in NOM-003-PESC-1993, the team that carried out the first audit of the MSC certificate states the following:

As a precedent to our response, we would like to note that the face-to-face meeting in the port of Mazatlán on March 14, is part of the certification and audit process of this fishery which is governed by the elements contained in the MSC document called "Certification Requirements" in its version 1.3 and 2.0. This document details both how to perform the evaluation of the fishery's performance, as well as the timing and communication mechanisms with other interested parties. If you have any questions related to such elements, we invite you to consult the document and if you have any doubts, let us know so that we can establish clearly and transparently the way in which the evaluation and audit teams proceed. We also remind you that the performance of the evaluation teams occurs in the context of the ISO 19011 standard that defines an audit as "a systematic, independent and documented process to obtain evidence and evaluate it objectively to determine the extent to which the criteria of the standard". Additionally, the conformity of the evaluation work of a fishery with respect to the MSC standard is audited by the Accreditation Services International organization, to ensure SCS meets the MSC requirements.

Regarding the document which includes the information presented to the evaluation team, we recognize that this document is delivered to us following the agreement to send us the evidence that as auditors of a fishery certified by MSC we need to be able to assess your considerations in the strict framework of the Certification Requirements mentioned previously. The document states that it finds "irregularities" that they denounce in this communication process. Later in the document indicate that they have reported to the authorities an "increase in fishing effort, which is in conflict with the current norm, as well as the management plan of the fishery and the National Fisheries Chart, which clearly says" no to the increase of the fishing effort ", and even so, several permits for the replacement of vessels were granted by the authority". They clarify at once that in their "scientific technical report" they only detail "two when there are many more". It concludes that "if the administrative act that protects the exercise of an activity is vitiated, consequently the certification of said fishery or activity in the use of those vessels, are illegal, since they contradict the law and you are omitting all those arguments and continue to certify something vitiated by illegality. "

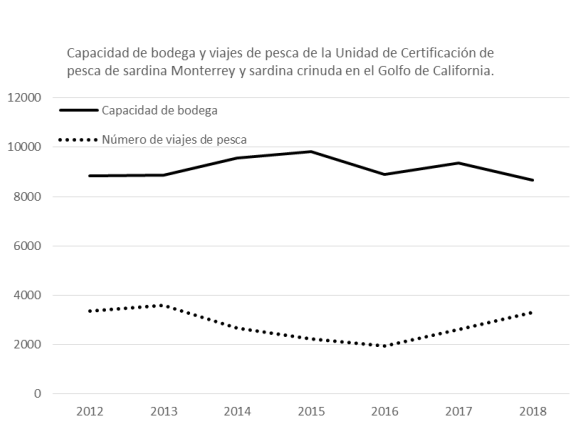
Next, the document annexes a technical opinion prepared by Mr. Eugenio Alberto Aragón Noriega, identified as a scientific researcher specialized in fishing biology. This technical opinion effectively documents two cases of vessel substitution and presents a suggestion for the calculation of fishing power. It is clarified here that the technical opinion is limited exclusively to the aforementioned without having

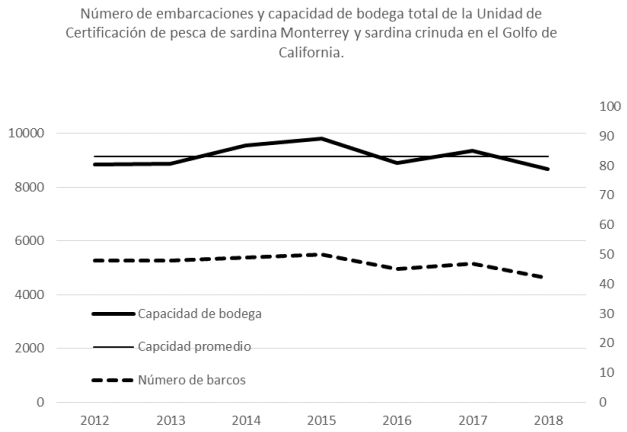
presented any analysis of the fishing power of any complete fleet to determine if in its totality the effort has been increased according to the suggested criteria.

On our part, it is important to declare that it is not within our competence to establish whether an action is illegal or not. Our participation is limited to observe evidence that is given to us and determine with it if a fishery meets the certification requirements. In this way, even when a criterion has to do with compliance with the regulations, we do not establish the legality of the operations of the fishery, we only determine if the evidence can represent sufficient criteria to qualify in one way or another according to the criteria specific indicators in the requirements of the MSC.

Specifically, to the question of whether the fishing effort for the capture of smaller pelagics has grown, the evaluation for certification and auditing focuses mainly on those vessels that become creditors of the certificate and that are part of the Unit of Assessment. The impact of the vessels that target the same stock, but are not part of the Unit of Assessment is indirectly evaluated under Principle 1, as the catch of all vessels fishing on the stock may have an impact on the status of the target stocks. However, for Principle 2 and 3, not all vessels targeting the target stocks are considered, particularly for Principle 3 where Compliance and Enforcement are evaluated, the team focuses on the management system relative to the Unit of Assessment. In this case, the Unit of Assessment corresponds to a fleet comprised of 46 purse-seine vessels in the 2017 re-evaluation list and of which only 42 were active in 2018, which are members of the National Chamber of Fisheries and Aquaculture Industries (CANAINPES).

With respect to the certified fishery as defined in the previous paragraph, the evidence we have is the number of vessels, the number of fishing trips and the capacity of the fleet. The trend of these two indicators is shown in the following figure for the period between 2012 and 2018 that includes the previous certification cycle and the current one.





We understand the argument presented to us in terms of the fact that the number of vessels alone cannot determine the trend in the fishing effort due to changes in the conformation of the fleet relative to its hold capacity. The substitution of boats is also a process of which we have information because we have the list of boats that have operated each year during the life cycle of the certificate, in addition to the fact

that INAPESCA has provided official reports that present these variations. It can be observed in the figure on the right that neither the number of total trips of the fleet nor the capacity of the certified vessels shows upward trends.

We regret that in the documentation that they did not include an analysis based on the indicator they suggest, in order to show a series of time that supports the argument that the fishing effort has increased. This, considering that for its assessment within the audit process in relation to Compliance issues under Principle 3, only those vessels that are part of the Unit of Assessment are included, but not those that still fish within the Gulf of California do not form part of said Unit, nor to those that operate outside the Gulf. In this sense, it is important to clarify that it is not up to the evaluation team to produce evidence but only analyze the evidence that is provided to us.

Finally, the concern that a fishery increase its fishing effort arbitrarily and especially against the current regulations is understandable. It is understandable also the signal that the change in the regulations concern them as an action that may affect the state of the resource and the ecosystem of which it is a part. However, the Management Plan for the fishing of small pelagic fish, and in particular the Monterrey sardine and thread herring fishery, is governed by an exploitation strategy based on limits on the volume of catch determined by a control rule whose formulation is explicit in the plan. The evidence indicates that the catch of both species has been well below the limits established by the control rule. On the other hand, the results of stock assessment for both species indicate that the estimated fishing mortality rates are much lower than reference points based on both the maximum sustainable yield and the reproductive potential quotient. For this reason, and given that the fishing mortality rate is a function of fishing effort, we do not have any criteria that allow us to assume that the change in regulations poses a risk to the sustainability of this fishing activity or that it represents a threat to the ecosystem, which would imply that the requirements of the MSC certificate in its Principles 1 and 2 are not met.

The observations that the evaluation team makes regarding the tendencies in the fishing effort and possible noncompliance with the regulations are not fixed. These are only the conclusions that can be reached with the evidence we have. The evidence that you have sent us regarding the replacement of boats was already known to us, but in the context of the conformation of the total of the certified fleet, we do not have the evidence to conclude that this represents an effective increase in the effort of that fleet. If in the future you or your scientific adviser can use the indicator the proposed indicator to prove otherwise, we invite you to present the evidence in the next audits.

7.2.2 Comments Received by Enriqueta Velarde, Universidad Veracruzana Dirección General de Investigaciones Instituto

Assessment Stage	Fishery	Date	Name of Individual/Organisation Providing Comments
☒ Surveillance[14] **Opportunity to provide information to the CAB about any changes in the fishery since certification and/or the achievements made towards conditions.**	**Small Pelagics Fishery in Sonora, Gulf of California Fishery**	**13-15 March 2019**	**Enriqueta Velarde/Instituto de Ciencias Marinas, Universidad Veracruzana**

Nature of Comment (select all that apply)		Additional Information/Detail Please attach additional pages if necessary.
e.g. ☒ ☐	**I wish to indicate that I am a stakeholder in this fishery. Please keep me informed about each stage of the assessment process.**	***Example: My company has been operating five charter boats for recreational fishing on this fish stock for 20 years, and I would like to be informed and involved as this MSC assessment progresses. In addition, we have kept detailed logs over the years of our client's' catches, including sizes, weights and fish caught per trip and would be happy to share these with the assessment team.***
☒	**I wish to suggest information or documents important for the assessment of this fishery *(you may either attach documents or provide references)*.**	I wish to indicate that I have participated as a stakeholder since before the certification of the fishery and form part of the original objection group that reached an agreement including several conditions with the fishing industry and INAPESCA (National Institute of Fisheries, Mexico) (**see attached Agreement documents both in Spanish and English**), as per the following conditions. Therefore, I am suggesting information and documents important for the assessment of this fishery.

14 MSC Fisheries Certification Requirements, v2.0 section 7.23

☐	**I wish to suggest other individuals or organisations who should be considered stakeholders in the MSC assessment of this fishery *(please provide contact information)*.**	CONDITION 1.2.4. I form part of a group of researchers from diverse institutions, both in Mexico and the USA (mainly University of California) who have worked in models to predict the catch and catch per unit effort of the Sardine (*Sardinops sagax*) and Anchovy (*Engraulis mordax*). We have published several articles in indexed scientific journals that endorse and support the validity of our predictive models. **Several of these are attached (Velarde et al. 2004, 2013, 2015a).** This information has been made available to the fishing industry and INAPESCA as an input to support the small pelagic fishery regulation. **CONDITION 2.2.2. and 2.2.3. I have participated in the design, training of personnel, and implementation of the initial observers program that was operating during some 18 months between 2013 and 2014, with a total of nine observers. Results of this observers program indicated a high impact on some seabird species, particularly the California Brown Pelican (*Pelecanus occidentalis californicus*) and the Blue-footed boobie (*Sula nebouxii*) rendering an estimated mortality due to bycatch of some 20% of the adult population for both species.** Natural mortality is normally some 5-10% of the adult population, so this high mortality due to bycatch is negatively affecting the survival of individuals of these two species, which are also under protection by the Mexican law as they are considered ETP species, which require to be managed in a specific and special way, since their populations are already under precarious condition and can not take further increased mortality. It was indicated by the industry that they would develop a mitigation program and we would like to see the development of such program, its results and if its efficiency has been evaluated what the results are. CONDITION 2.5.2. Full participation in the design of the strategy and research resulting from the observer-on-board program, to lower the impact of the fishery on the ecosystem and its function. **An impact of the fishery has been detected and reported (**see attached scientific publication Velarde et al. 2015b**)**
☐	**Other (please specify)**	

Nature of Comment **(select all that apply)**	**Justification** **Please attach additional pages if necessary.**

e.g. ☒	**I wish to alert the assessment team to important changes in the circumstances of this fishery relevant to the MSC certification.**	***Example: Since this fishery was certified 2 years ago, government scientists have been working closely with the fishery client to develop a system for monitoring stock status capable of ensuring a precautionary harvest strategy. Although not published, the progress on this work to date can be found in the following report (attached)…***
☒	**I wish to provide information relevant to fulfilment of the conditions of certification.**	Since the fishery was certified scientists have continued working on developing a system to predict the catch and catch per unit effort to inform the fishery client what the catches will be in the following season. This information and models have been published in indexed scientific journals and made available to the fishery client and INAPESCA, as part of the agreements reached in the meeting of June 28, 2011, and which established conditions for the agreement reached between the objection group, the fisheries client (industry) and the government representatives (INAPESCA). These documents (all attached) provide information relevant to the conditions of certification involving fisheries assessment and bycatch of endangered and protected species, as well as the effect of the fishery on the ecosystem. We would like to see the results regarding implementation of a program to reduce bycatch and evaluation of such program in order to see if it does help reduce bycatch and how effective it is. Attached: Minutes of Gulf of California Sardine Fishery certification settlement June 28, 2011 Minuta de reunion de acuerdos entre grupo de objeción/industria/inapesca 28 Junio 2011 Publicación 1 pronósticos pesqueros Velarde et al. 2014 Publicación 2 pronósticos pesqueros Velarde et al. 2013 Publicación 3 pronósticos pesqueros Velarde et al. 2015a Publicación 4 efecto de la pesca sobre el ecosistema Velarde et al. 2015b
☐	**Other (please specify)**	

SCS Response:

We thank you for your participation and contribution to the MSC assessment of the smaller pelagic fishery in Sonora.

As noted in your comments, the assessment team reviewed the information provided during the re-assessment, and issued several conditions related to impacts of the fishery on seabirds, both in Principle 1 and Principle 2. Several of the papers provided for this Surveillance were already reviewed and considered in the assessment of the fishery. The assessment team reviewed the material provided and did not find any new information that indicated a change in the fishery, relative to the re-assessment.

Regarding the request to see the results and evaluation of efficiently of the mitigation program for seabirds, the team notes that Condition 2-2, specifically requests "some evidence that there is a partial strategy in place that is expected to ensure the fishery does not hinder the recovery of brown pelicans and blue-footed boobies. The client shall also present evidence that the partial strategy for managing brown pelicans/ blue-footed boobies and fish and shark species is being implemented successfully." For the year 1 surveillance, the fishery is only requested to present a proposed partial strategy on the expected mitigation measures and how these will be monitored and assessed. It is not until the year 3 surveillance that a change in scoring is expected, when the client is required to present evidence that the partial strategy is being implemented and the performance is monitored. The condition will be closed in Year 4 surveillance, when the fishery provides evidence that the measures are effective in mitigating impacts of the fishery on seabirds.

For Condition 2-3 (requesting information on fishery related mortality for ETP seabird species) and Condition 2-4 (requesting evidence that the measures comprising the partial strategy for ecosystem management are being implemented successfully) there are no changes to score anticipated in the Year 1 or 2 Surveillances. The conditions will only be closed then the fishery meets the requirements for the SG80 and provides the relevant evidence.