GULF OF CALIFORNIA MEXICAN SARDINE

2nd YEAR MSC Surveillance Audit Report

Certificate Number: SCS-MF-0026

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General Information

Date of Issue		
Prepared by	SCS	Sian Morgan, PhD Carlos Alvarez Flores, PhD
Certification Date		21 July 2011
Certification Expiration Date		21 July 2016
Surveillance Team	SCS Oceanides	Sian Morgan, PhD (Lead) Carlos Alvarez Flores, PhD
Surveillance Stage	2nd Annual Surveillance	
Methodologies	MSC Certification Requirements Version 1.3, January 2013	

Contents

Preface

All facts in this report were provided to SCS by Camara Nacional de la Industria Pesquera, Delegacion Sonora represented by Mr. Leon Tissot Plant. However, the interpretation, opinions, and assertions made in this report as to the compliance of the fishery with MSC requirements are the sole responsibility of Scientific Certification Systems, Inc.

Executive Summary

The Gulf of California Mexican Sardine Fishery was certified on 21 July 2011 by Scientific Certification Systems, Inc. This report represents the findings of the second annual surveillance audit. SCS finds that the Fishery is still in general compliance with the MSC standard and recommends the continued use of the MSC certificate.

Significant progress on two conditions has been made (2.2.3, 2.3.1), putting the fishery on back on track for these PIs: both of these Year 2 conditions were modified for Year 3 to more closely meet the intent of the requirements: these elements will need to be met at the PISG 80 level in order for these conditions to be closed out. One outstanding condition was closed (3.2.1).

The Fishery was found behind target for a second year on one condition (3.2.4) related to information transparency and public access. Based on CR 27.22.9 whereby progress has been inadequate, SCS issued a Major Non-Conformance with the potential for certificate suspension (Table 1). Under CR 7.4.3.4. the fishery has 90 days (Sept 1st, 2013) to respect commitments in the original action plan, to update their publicly accessible webpage to facilitate access to information. The website shall house information from the fishery (including current catch data, effort data, analysis, and minutes from meetings of the technical bodies) with all relevant updates issued since the time of full certification (2011). In consultation with stakeholders, it has been agreed that the website will henceforth be housed by Comunidad Y Biodiversidad A.C. in order in order to assure the client access and the ability to assure timely updates.

Table 1: Summary of Performance Indicators with conditions

Indicator	Status of Condition/Non-Conformance	Conditions outstanding, due in Year X
1.2.4	On Target	2,4
2.1.1	On Target	3
2.1.2	On Target	3
2.2.2	On Target	3
2.2.3	(Back) On Target	2 met, and modified for Year 3
2.3.1	(Back) On Target	2 met, and modified for Year 3
2.5.2	On Target	3
3.2.1	Closed	2
3.2.4	Behind Target– Major Non-conformance (90 days)	1, and new deadline of Sept 1st 2013 set, certificate pending suspension.

Surveillance Audit timing and Frequency

Surveillance audits including this audit were determined to take place annually with an onsite visit each year (normal surveillance cycle). After closing out Condition 1 and 2 and rescoring the PI,

the surveillance level was re-determined following Table C3 and C4 of the certification requirements v 1.3. The fishery remains with a normal annual surveillance cycle that requires an onsite visit. This was communicated to the client at the closing meeting.

Stakeholder announcements and submissions

According to CR 27.22.4.3 stakeholders were informed about the time, place and scope of the surveillance audit, the surveillance team as well as the surveillance level for this fishery. Stakeholder submissions were received and read at the meeting, and stakeholders also attended the meeting (see Table 2).

MSC Certification and Conditions for Continued Compliance

An MSC certificate is valid for a period of 5-years. During the initial certification, five conditions were identified (see final report on MSC website1). Conditions must be closed-out before the end of the certification period in March 2017.

Each of the conditions to certification was addressed with the client action plan. The action plan includes the actions to be undertaken, responsible parties and timeframe for meeting milestone goals. During this and each surveillance audit, the audit team will check progress against these milestones. The surveillance team will also "spot check" other performance indicators (PIs) from the original assessment to verify that the fishery is still in compliance with the MSC requirements. Results from the audit are published in the form of a report to the MSC website 30 days after the onsite visit. The client group has an opportunity to review the report and respond before publication.

The audit team evaluates progress toward closing conditions as "ahead of target", "on target," or "behind target." This is based on whether there is enough evidence that sufficient progress is being made relative to the client action plan timeframe for milestones. If a "spot check" of PIs reveals that a PI no longer meets all scoring elements of the Scoring Guidepost 80 (SG80), an additional "condition" will be raised that must be addressed within the life of the certificate. In this surveillance audit, no deficiencies were evident and no new conditions are raised.

Consequences for Non-Compliance

Where a fishery is determined to be "behind target" for a condition, the surveillance team will work with the client representatives to determine a new timeframe for closing of the condition within the original certification period and will include interim milestones for completion. The client must provide evidence that the fishery is working toward compliance and identify the reason that the condition timelines are not met.

[1] Available at: http://www.msc.org/track-a-fishery/

Depending on the severity of the non-compliance identified, a "minor" or "major" non-compliance may be raised. If a minor non-compliance is raised and then not addressed by the new timeframe, it will be elevated to a "major." A major non-compliance must be addressed immediately.

SCS reserves the right to enact 7.4. of the MSC Certification Requirements where a fishery certificate may be revoked or suspended if a condition is not back "on target" within 12 months of falling "behind target" following the MSC certification requirements 27.22.9.

Assessment Overview

Methodology

The surveillance audit was carried out in accordance with the Marine Stewardship Council (MSC) Certification Requirements Version 1.3, January 2013. Should a fishery fail the surveillance audit, and cannot address identified deficiencies in a reasonable period of time, then the use of the certificate and the MSC logo can be revoked by the certifier.

The issues for the certifier are whether the fishery has sufficiently acted on the required conditions set forth in the original certification report, is moving at an appropriate pace toward future conditions and whether a random check on the performance of the fishery verifies continued compliance with the MSC standards.

The annual surveillance audit process is comprised of four 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. In addition, the surveillance team requires that the client provide evidence that the fishery management system has taken the necessary actions to meet all conditions placed on the fishery during the initial certification assessment or any previous surveillance audits.

2. The surveillance/assessment team meets with the client fishery to allow the client to present the information gathered in answer to the questions asked by the surveillance team The surveillance team can then ask questions about the information provided to ensure its full understanding of how well the fishery management system is functioning and if the fishery management system is continuing to meet the MSC standards.

3. The surveillance team presents its findings to the client fishery at the end of the site visit. 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. Where indicated, the surveillance team may provide the client fishery with additional time to supplement the information provided if the surveillance team finds that there are still issues requiring clarification.

4. Where appropriate, the client fishery submits final information to the surveillance/assessment team for consideration in the surveillance findings and report. The surveillance team then reviews the final information and submits a final report to the client fishery and 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.

Surveillance Team

Two assessment team members were involved in the 2nd annual surveillance audit. As outlined below and to fulfill the requirements of the Fisheries Certification Methodology (section 6.3) team members are experienced and both have been part of the assessment team.

Dr. Siân Morgan Dr. Morgan has ten years of experience in the fields of marine ecology and fisheries science with particular expertise in markets-based fisheries reform, certification and quantitative methods for decision analysis. Dr. Morgan has worked in non-governmental, academic and consulting settings and brings to the team a strong background in multi-stakeholder consultation. Her doctoral research at the Fisheries Center, University of British Columbia/McGill examined the ecology, population dynamics and management of a small-scale, multi-species fishery in Asia. Sian participated in MSC's low trophic level workshops, which drafted the emerging standards for forage fisheries and has also drafted standards within the Aquaculture Dialogue standards related to responsible sourcing of forage fisheries and ecological consideration associated with habitat disturbance. Past projects managed by Siân include developing SeaChoice, a national seafood program for Canada, conceiving pragmatic trade tools for CITES and researching species responses to area-based management for WWF. Sian is accredited to certify to the MSC standard, the ASC standard and SA 8000.

Dr. Carlos M. Alvarez Flores - President of the Okeanos-Oceanides Consortium
Carlos Alvarez Flores gained a PhD in Fisheries from the University of Washington. He has devoted his professional career working in marine mammal and fish stock assessment and ecosystem impacts of fisheries. Some of his investigations involved the bycatch of dolphins in

the pelagic purse seine tuna fisheries of the Eastern Tropical Pacific, the hunt of beluga whales in West Greenland, the hunt of bowhead whales in Canada, the bycatch of albatrosses in pelagic fisheries of the central Pacific and the modeling of factors that could further affect the fate of the albatross populations. More recently, Carlos has been involved with investigations examining the status and potential of fisheries for green crab in the Gulf of California and spiny lobster in the southern Mexican Caribbean. These assessments were done in the context of their work towards certification by the Marine Stewardship Council.

Surveillance Meeting

The surveillance audit for 2013 comprised:

1. An Audit Plan was provided to the client, fisheries management and scientists before the meeting. The opening with the client included an exchange of information relevant to the surveillance audit.

2. A meeting took place on the May 21st 2013 with Leon Tissot Plant representing the Camara Nacional de la Industria Pesquera, Delegación Sonora (see Table 2). The discussions focused on the ongoing activities associated with the Conditions placed on the fishery and any changes that occurred since the fishery was first certified.

3. Necessary documents were presented by the client to SCS prior and during. Follow up emails were send to request additional information after the meeting. The surveillance audit report was sent to MSC on June 16th and finalized after further revisions on July 19th 2013.

Table 2: Second Annual Assessment Meeting Attendees and Organizations

Name	Role	Affiliation
Dr Sian Morgan	Assessment Team Leader	SCS
Dr Carlos Alvarez	Assessment Team member	Assessment Team Member
Leon Tissot Plant	Client Representative	Camara Nacional de la Industria Pesquera, Delegación Sonora
Dr. Manuel O. Nevárez Martínez	Stock status/ harvest strategy	CRIP, INAPESCA -Sonora
Mr. J. Pablo Santos Molina	Management	CRIP, INAPESCA - Sonora
Javier H. Vivian Jimenez.	Management	Sub Secretaria de Pesca y Acualtura de Sonora
Lic. Arnulfo Navarro Carrillo.	Management /policy	Jefe de la oficina de Pesca de Guaymas
Ocean Enrique Flores	Industry stakeholder	Selecta de Guaymas SA CV
Rogelio Sanchez De La Vega	Industry stakeholder	Pescaharina de Guaymas
Bernardo Peña	Indusry stakeholder	Maz Sardina
Ing. Guillermo Morales B.	Industry stakeholder	Sardinas de Sonora
Anayeli Cabrera M.	ENGO stakeholder	Comunidid Y Biodiversidad A.C
Maria Jose Espinosa R.	ENGO stakeholder	Comunidid Y Biodiversidad A.C
Dr. Carlos Robinson	Academic stakeholder	UNAM
Juan Pedro Vela		Alianza de Ribereños y Armadores
C.P. Rosalío Lizárraga Sánchez	Industry stakeholder	Groupo Guaymex
Ma. Anereles Martidez Zanda	Management	CRIP, INAPESCA - Sonora
Dana Rodriguez	Management	CRIP, INAPESCA - Sonora
Violeta Gonzalez	Management	CRIP, INAPESCA - Sonora
Dr. Exequiel Ezcurra	Academic stakeholder	UC Davis, MEXUS
Dr. Enriqueta Velarde	Academic stakeholder	Ecología de Aves Marinas Universidad Veracruzana

Results

General discussion

This is the 2nd Annual Surveillance Report prepared by SCS to meet the requirements of the MSC for annual audits of certified fisheries.

The section below provides the general information about the status of the stock, the ecosystem impacts from fishing, and management arrangements for this reporting period.

According to the terms of the Action Plan, the client has provided the following information on the work undertaken since Certification in 2011:

Principle 1 - Stock Status and Harvest Strategy

The total catch of small pelagics for the 2011/2012 season was 461,058 t, where the Pacific sardine represented almost 19% of the catch (86, 470 t) which represent a notable relative decrease in the Monterrey sardine catch relative to the 2010/2011 fishing season. The overall catch of small pelagics was just over 50 t greater than in the 2010/2011 season. The assessment team will follow the trend of the catch proportion during future surveillance audits.

Table 3: Total landings (MT) of small pelagic species over the last 3 fishing seasons (data received by email, June 2013 from Leon Tissot).

Year	Small pelagics	Monterey Sardine	Thread Herring spp.	Mack-erel	Japanese Sardine	Ancho-veta	Bocona Sardine	Pi–a	Revoltura
1999/2000	178,902	65,593	38,510	34,240	5,006	4,493	25,229	4,741	1,091
2000/2001	333,370	190,862	15,834	13,003	345		112,954	277	75
2001/2002	353,903	220,360	46,666	4,493	270	2,853	78,261	890	110
2002/2003	318,379	198,757	94,956	6,992	4,889	1,100	7,682	3,309	693
2003/2004	271,638	102,034	59,685	25,507	8,858	5,717	63,253	5,494	1,090
2004/2005	260,859	94,559	76,183	32,943	4,683	7,354	38,031	4,233	2,874
2005/2006	365,164	133,567	60,560	13,191	7,178	41,820	106,062	945	1,841
2006/2007	297,867	178,205	87,172	6,616	3,088	1,271	16,491	2,530	2,495
2007/2008	538,669	488,639	25,726	3,988	698	5,885	12,303	238	1,190
2008/2009	564,298	528,094	21,564	963	422	2,620	9,537	212	885
2009/2010	360,952	256,409	85,116	3,527	5,545	481	8,315	520	1,039
2010/2011	407,114	138,068	73,507	38,762	3,040	76,849	74,067	2,382	441
2011/2012	461,058	86,470	51,780	47,600	2,560	73,124	197,354	666	1,503

Table 4: Percentage of total catch of small pelagic species by weight over the last 3 fishing seasons (data received by email, June 2013 from Leon Tissot).

Year	Small pelagics	Monterey Sardine	Thread Herring spp.	Mack-erel	Japanese Sardine	Ancho-veta	Bocona Sardine	Pi–a	Revoltura
1999/2000	178,902	37	22	19	3	3	14	3	1

2000/2001	333,370	57	5	4	0	0	34	0	0
2001/2002	353,903	62	13	1	0	1	22	0	0
2002/2003	318,379	62	30	2	2	0	2	1	0
2003/2004	271,638	38	22	9	3	2	23	2	0
2004/2005	260,859	36	29	13	2	3	15	2	1
2005/2006	365,164	37	17	4	2	11	29	0	1
2006/2007	297,867	60	29	2	1	0	6	1	1
2007/2008	538,669	91	5	1	0	1	2	0	0
2008/2009	564,298	94	4	0	0	0	2	0	0
2009/2010	360,952	71	24	1	2	0	2	0	0
2010/2011	407,114	34	18	10	1	19	18	1	0
2011/2012	461,058	19	11	10	1	16	43	0	0

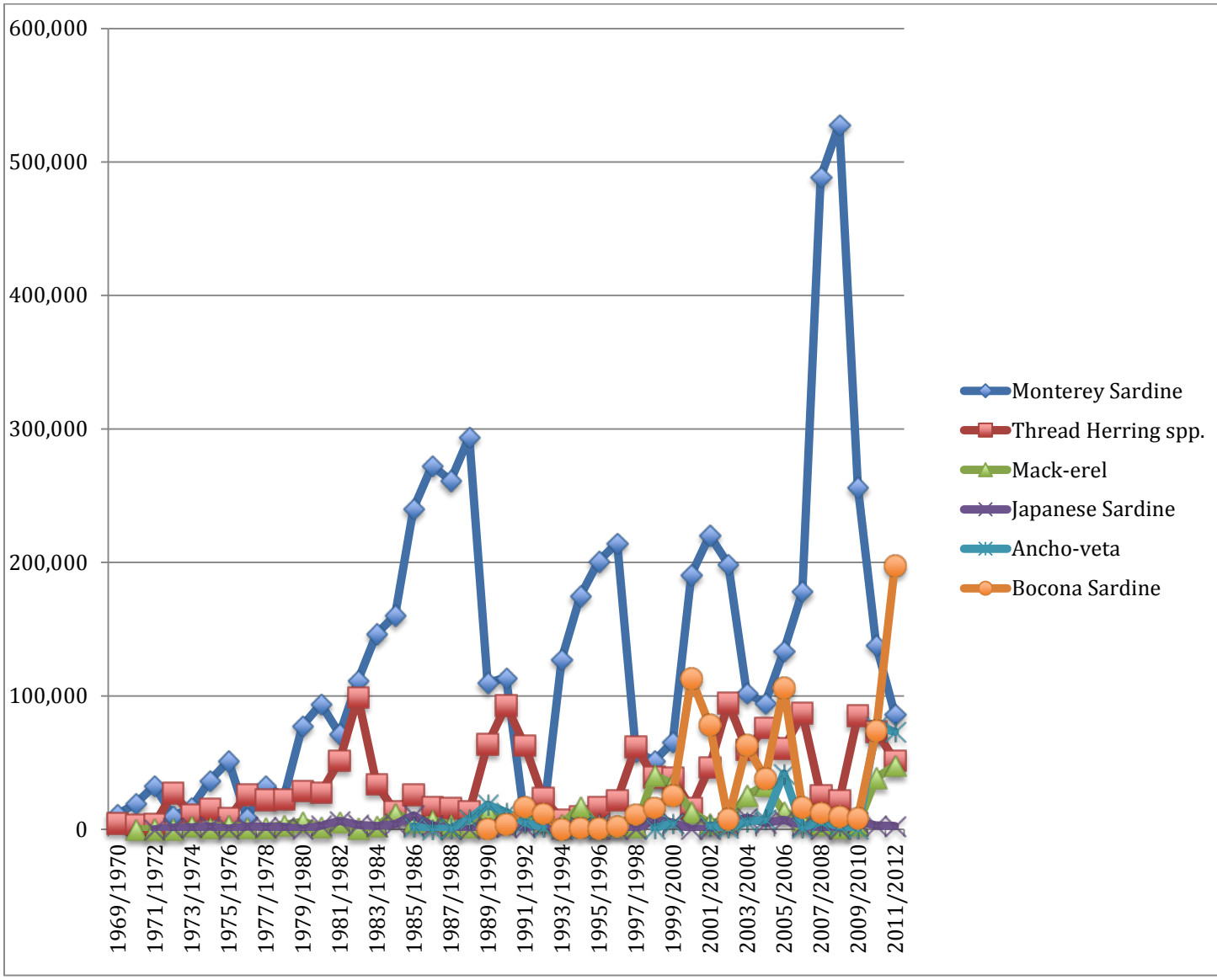

Figure 1. Landings in tonnes by fishing season since 1970. In 2012 overall landings were similar to 2010/2011, but Monterrey Sardine has continued to decline in the catch since the 2008-2009 season, and Bocona is a significant portion of the catch for the most recent season, as well as the period from 2000 onwards.

A new draft version of the Small Pelagics Management Plan was published in July 2011 (Nevarez-Martinez *et al*. 2011) , and the final version was passed into law in November of 2012. A relevant insertion in the Plan is the definition of guidance to establish reference points. The language doesn't identify "limit" or "target" reference points, but the equivalent are as follows. A *Biologically Acceptable Catch* (BAC) (equivalent to a LRP) is computed as a fraction of the estimated MSY. The rationale behind this approach comes from results of a simulation study finding that, for the Pacific sardine, a fishing mortality rate that is 90% of the F_{msy} "would not only produce higher economic returns and be safer biologically, but will reduce intrinsic population oscillations" (Nevarez-Martinez *et al*. 1999). Under this principle, the Plan states that

the BAC is a "prudent level of catch" that can vary between 5 and 25% of the estimated biomass. To support the assumption that the BAC is equivalent to the LRP, an additional definition in the Plan states that overfishing "occurs when fishing takes place at a rate that is high enough to risk the stock's ability to continuously produce MSY on the long term". The Plan further adds, operationally, "in the fishery of small pelagics, overfishing occurs if the catch exceeds the BAC". This condition is "approximated" (i.e. met) if the predictive model projections indicate that the fishing mortality or the harvest rate will exceed the BAC over a period of two years.

In the language of the Plan, the equivalent of the Target Reference Point is called *Optimum Yield* (OY) and is defined as a "catch level that is equal or less than the BAC", but that in practice, "it *must* be smaller than the BAC as much as needed to avoid overfishing".

These reference points are required to be consistent with the MSY because the strategy is expected to be able to provide biomass levels, at least as high as the F_{msy} approach while the catch is "relatively high and consistent".

If overfishing occurs, the Plan defines "emergent actions" that are implemented "if pertinent and possible". These actions include: a) temporal or area closures applied to one or more species; b) change in the size limits o definition of new limits for one or more species in a single area or more; c) definition or change of allowable catch; d) restrictions on fishing effort.

The new FMP describes that some species are to be actively managed, while others will be passively managed. The purpose of these two categories of management is to use institutional resources as efficiently and effectively as possible to meet management goals. Species in each group are given in Table 5.

Table 5. Small pelagic species categorized for two main forms of management in the November 2012 Fisheries Management Plan for Small Pelagics in the Gulf of California Mexico.

Actively Managed	**Passively managed.**
Pacific sardine: *Sardinops sagax*	Japanese sardine: *Etrumeus teres*
Blue thread herring: *Opisthonema bulleri*	Bocona sardine: *Cetengraulis mysticetus*
Machelete thread herring: *Opisthonema medirastre*	Anchovy: *Engraulis mordax*
Thread herring: *Opisthonema libertate*	Charrito: *Trachurus symmetricus*
Mackerel: *Scomber japonicas*	Pineapple sardine: *Oligoplites*. spp.

For species that are "actively managed" the Plan has added an MSY-based control rule that, based on the application of a harvest rate, forces the catch to be reduced if the biomass declines. Additionally, the control rule has inserted a biomass safety minimum such that if reached, the fishery would stop operating.

The general formula is as follows:

C = (B-Bmin) * FRACTION

Where: C is the target catch level, Bmin is the lowest level of estimated biomass at which the directed harvest is allowed and FRACTION is the proportion of biomass above Bmin that can be captured by the fishery. B is generally estimated biomass of fish age 1 and older. The purpose of Bmin is to protect the stock when the biomass is low. The purpose of FRACTION is to specify how much of the stock available to the fishery when B exceeds Bmin.

The Plan indicates that to obtain Bmin, different sources of information can be used, including catch and fishery data (catch and effort, sizes, ages and weights) as well as fishery independent data (census of eggs and largae, hydroacoustic data etc.). *However, no specific values have been provided for any small pelagic species.*

The new FMP also notes that supplemental measures have been proposed, and will be supported via official recognition of the Technical Committee for the Study of Pelagic Juveniles (CTIPM) and working Sub-committees. This involves giving legal recognition to CTIPM and the Sub-committees. Subcommittees shall have as one of their functions to develop and propose to the competent authority an *ad hoc* scheme for each stock, which must be incorporated into the Management Plan. This must include decision tables based on benchmarks chosen by consensus.

Stock Status Considerations.

Hydroacoustic surveys: Fisheries independent data is being collected via hydroacoustic surveys which began in 2008: findings were summarized for the period between 2008 and 2012 (Nevarez Martinez *et al.,* 2012). The work included five acoustic surveys carried out in the Gulf of California during the month of May for the years of 2008-2012 aboard the research vessel "BIP XI". The survey itinerary was the same in all years where on the coasts of Sonora (Bahia de Puerto Obos Agiobamp) perpendicular transects were made up to the 200m isobath and every 10 nm (mn). In the western Gulf, zigzag transects were done from Isla Angel de la Guarda to Loreto, BCS. Results indicate that there is high variability in the biomass of Pacific (Monterrey) Sardine, but also that biomass estimates differed depending on how the target strenth (TS) of the signal was interpreted: interpretation and selection of appropriate target strength models is known to be a sensitivity that needs attention in hydroacoustic surveys (Demer, 2004). Findings indicate that in a relative sense there was a general biomass decrease from 2008 to 2010 and a slight increase in the last two years.

INAPESCA has identified that it will be necessary to continue working on ground-truthing methods to assign the overall acoustic energy to the different species in order to generate more reliable estimates of abundance. The following are specific priorities for improving fisheries independent surveys of small pelagics:

i) Individual measurements of TS on each haul made *in situ* with double-beam echo sounders
ii) Measurements of TS *in situ* and experimental effects on concentrations of sardines (and other small pelgaics) across a range of sizes frequencies, as well as physiological conditions of the resource.

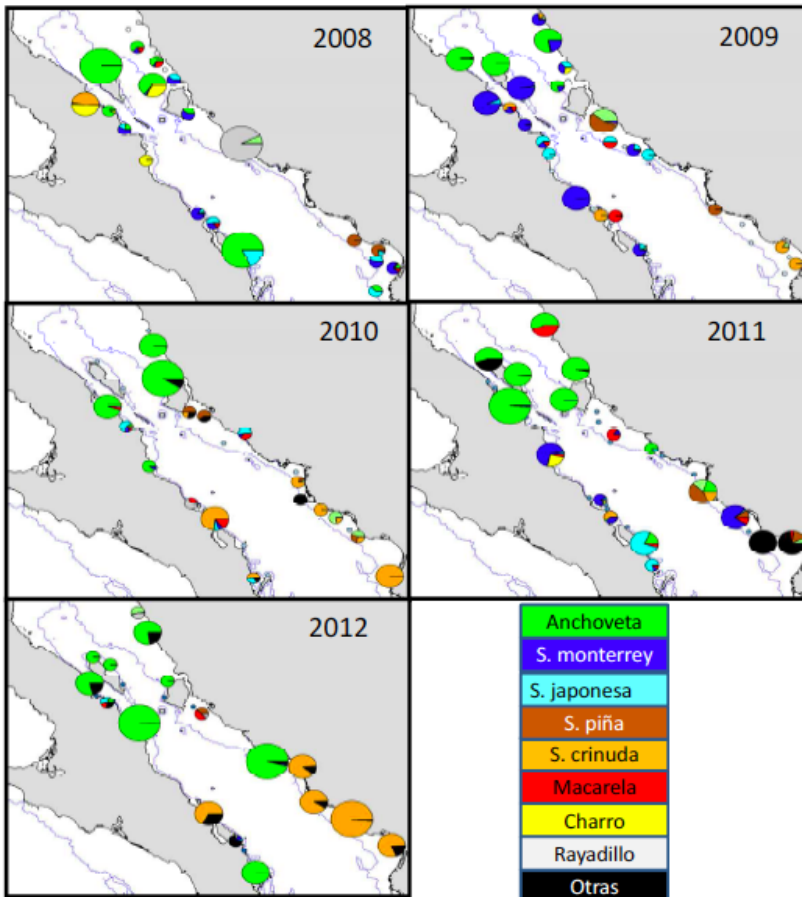

Figure 2. Distribution of small pelagic species determined using hydroacoustic surveys, from different locations around the Gulf of California, Mexico, by year.

Potential for Re-Scoring Performance Indicator 1.1.1 in Relation to Stock Status

A key expectation in the MSC process is that the assessment team evaluate at each surveillance audit, how new information bears not only conditions, but also on existing scores. If there is evidence that outcome related performance indicators that previously scored SG >80, have fallen below this mark, this is considered a "major change" and cause for re-scoring. The relevant wording of the Certification Requirements V1.3 states:

27.22.17.1 The CAB becomes aware of major changes in relation to the circumstances of the fishery.

a. A 'major change' is one that is likely to have a material difference on the certification status. A PI score falling below 60 or outcome PI score falling below 80, or a change that could bring about a Principle Level aggregate score to drop below 80 shall be considered material differences to certification status.

The assessment team engaged in lengthy discussion following the 2nd annual surveillance audit as to whether action (re-scoring) was required based on ongoing declines in the catch of Monterey sardine over the last three fishing seasons.

Data in Table 3 shows that starting in fishing season 2009/2010, there was a decline in the recorded catch of Monterey sardine, apparently similar to the behaviour of landings during the occurrence of past El Niño events. During presentations on May 21st, it was shown that there is not evidence of a recent El Niño, that might have been expected in the context of declining Monterey Sardine catch. Dr. Carlos Robinson (UNAM) presented data supporting the hypothesis that the change in oceanographic conditions causing the decline in the sardine catch was not related to El Niño. His analysis pointed to a change in wind patterns at a localized scale in key areas of the Gulf causing chlorophyll-a anomalies that match the trend in the catch. The hypothesis and data treatment to support this model was questioned by Dr. Enriqueta Velarde based mainly on methodological discrepancies.

The decline in the catch led to two points of discussion. First: Is the decline in catch caused by a decline in biomass (whatever the cause)? Second: Has there been a shift in the behaviour of the fishery that resulted in intentional targeting of non-Monterrey sardine species, and is there evidence to demonstrate any such change? Data in Table 3 shows that if species other than Monterey sardine are pooled, there is a clear increase in the volume of the catch almost matching the decline in the catch of Monterey sardine.

In order to resolve this issue, the team feels that at least two additional pieces of information are necessary: effort data and estimates of biomass abundance independent of the fishery (e.g. based on acoustic methods). No effort data are currently available, but INAPESCA staff committed to provide a report including trends in effort within the next month. The initial synthesis on hydroacoustics indicates that methods are not currently sufficient to use this information to reliably estimate Monterrey sardine abundance (see Hydroacoustic survey summary on p.11). However, this work is resourced and in progress and the team feels that there is clear evidence that both INAPESCA and the industry are committed to its success.

It is worth noting that stakeholders indicated in their comments to the presentation by Dr. Robinson (Drs. Velarde, Ezcurra, Santamaria del Angel and Anderson) that "other ecosystem components, such as several seabird species, have had excellent breeding success and colony productivity during 2011 and 2012, in accordance with the lack of chlorophyll-a reduction for these last years.". The assessment teams understands that stakeholders are interested on preserving an important fraction of the sardine biomass because it is assumed that an important decline in sardine abundance could disrupt the energy flow in the ecosystem and that this process would be reflected in low survival and/or fecundity in species such as sea birds. The relationship is assumed to be so strong that a model was developed allowing prediction of the sardine catch based on the proportion of this fish in the diet of elegant terns, the reproductive success of Hermann's gulls and springtime SST (Velarde *et al.* 2004). The immediate conclusion would be that if researchers report "excellent breeding success and colony productivity", then there must be excellent conditions in the stock of sardines, at least in the area where the birds are feeding and the data are being collected.

There is evidence that there is an unexpected ecological process taking place in the Gulf of California. The advent of such events should be taken as normal components of the natural uncertainty of biological processes. It also raises the question as to whether the event is rare, or, whether previous observation systems have been insufficient to detect fluctuations? It is also possible that research results that may be used to understand fluctuations are sufficiently disaggregated at present, that the necessary research capacity has not yet been aggregated for the coherence necessary to understand large scale ecosystem dynamics.

The assessment team has elected not to invoke re-scoring of PI 1.1.1 at this time, but are clear that should declines continue, re-scoring of PI 1.1.1 will occur in 2014. This requirement will invoke re-assessment of reference points relevant to 1.2.1 requiring definition of Bmin, as well as potential aspects of 1.2.3. This in turn could affect the overall score for Principle 1 which must stay above 80 in order to maintain certification status.

For these reasons, we are **recommending** that the Client convene interested parties to a workshop specifically aimed at improving the monitoring system of the fishery, consolidating existing information relevant to population dynamics, and identifying key gaps in this knowledge. Results of the workshop should be presented at the third annual audit surveillance in 2014 and include realistic recommendations to improve the collection of fisheries data, to better synthesize information needed to understand ecosystem-wide parameters controlling Monterrey sardine dynamics, as well as mechanisms to incorporate results into the management system.

Principle 2 – Ecosystem impacts from fishing

Fishing vessels capture large aggregations of small pelagic species that shoal in mid-water by surrounding these concentrations with a curtain of netting which is supported by surface floats. Sardines in the Gulf of California are fished with purse seine nets. Compared to other fishing methods purse seine gear is relatively selective, since it is done in the open water column and directed at schools of targeted species.

Retained species: Other small pelagic species (*Opisthonema* spp. and *Cetengraulis mysticetus*) are retained and form a large proportion of the catch in some years. There are currently three species that, in addition to Monterey Sardine and Thread Herring - which are being fully assessed under the MSC standard as two units from this multi-species fishery - that represent >5% of the catch. During full assessment, these could be classified as main retained species. During a surveillance cycle there is no obligation to re-score performance indicators relative to these fluctuating proportions of the catch. The Client should be aware that this could be required in full re-assessment. Species comprising >5% of the catch in the last fishing season were Bocona sardine (43%), Anchoveta: *Engraulis mordax* (16%), Thread Herring: *Opisthonema* spp. (11%) and Mackerel: *Scomber japonicus* (10%).

During the onsite visit for Monterrey Sardines, Scientific Certification systems held an associated one day meeting focused on Principle 1 for Thread Herring, as both its own unit in full certification, and as a main retained species under performance indicator 2.1.1 in the sardine-targeting purse

seine fishery. This unit entered into full assessment in 2012[2], and catch landings since 1970 indicate that it has generally been the second main species captured by volume. In the 2011/2012 fishing season there were notable absolute and relative increases in the catch of Bocona sardine which more than doubled in landings (Figure 1). Since 2000, Bocona sardine have exceeded *Opisthonema* species in 50% of years. This did not occur in the period between 1990/1991-2000/2001: records appear to indicate that collection of landings data for Bocona started in the 1990/1991 fishing season.

Young sardine, anchovy and mackerel, are also harvested for use as bait in sport fishing, and for tunas (Rodriguez-Sanvhez 2002) .These removals should be accounted for via stock assessment processes relevant to stock status in Principle 1.

Bycatch, ETP Species and Observer Program: In the recent Fisheries Management Plan, the following species are cites as comprising bycatch and/or discards) (SAGARPA 2012):
Rayadillo (*Orthopristis* spp.)
Sierra (*Scomberomorus* spp.)
Yellowtail (*Seriola* spp.)
Skipjack (*Katsuwonus pelamis*)
Giant squid (*Dosidicus gigas*)
Cochito (*Balistes polylepis*)

In the last year and a half, funding was secured from Fundación Productor and the Walton Family Foundation to develop a collaborative, multi-sectoral observer program for the fishery. In November of 2012, training began for the nine observers. Trainings included courses on identification of marine birds, marine mammals, fish and turtles. Data collected by the observer program includes fishing areas, size structure, reproductive index data, abundance and mortalities. Preliminary results, collected from January to April of 2013 were presented during the 2nd Surveillance Audit by both COBI and INAPESCA: both organizations analyzed the raw data independently and results were consistent between both groups. Results were also presented to the public at the annual Small Pelagic Technical meeting in Guaymas, held June 5-7th 2013.

A total of 5828 birds, comprising 16 species were captured in the subset of hauls attended by observers. The majority of animals were released unharmed and 184 were captured dead. The only two species of marine mammals shown to interact with fleet were sea lions and common dolphins. No sea lion mortalities occurred, but there were reports of 22 dolphin mortalities.

The species identification for the cetaceans is being confirmed and may be relevant to ETP scoring because bottlenost dolphins are subject to special protection under Mexican regulations ("*Sujetas a proteccion especial (Pr*))". The other interactions that pertain to ETP scoring and where mortality occurred included two types of turtles, both species at risk of extinction (*Especie en peligro de extinction (P)*), three types of large pelagic teleosts allocated to sport fishing (swordfish, sailfish, marlin), and one type of threated fish, ("*Amenazada*") seahorses. Three non fatal interactions with whale sharks were also observed.

[2] Recent modifications of MSC policy now allow SCS to use an Expedited P1 process (CR V1.3, Annex CL, P278) to assess Thread Herring.

It remains to be determined how long the observer program will continue, as it currently has a shortterm funding strategy in place. Discussions during the 2nd annual surveillance audit indicated that it is possible that the program may run for one year (Nov 2012-Nov 2013). Based on the sufficiency of information, it will then be decided whether it is necessary to continue the program in subsequent years (see comments related to capacity to detect future risks for the system in conditions below). It also remains to be determined whether the existing program with approximately 18% coverage is sufficient to generate a comprehensive understand of the fleet's interactions and their impacts. If this is not the case, more intense, or longer-term observer program monitoring may be required. The rationale and background design of the current scheme were not presented to auditors at the 2nd annual surveillance audit: auditors did receive a thorough package of the materials used by observers and evidence of observer training. The potential for onboard electronic monitoring systems is currently being explored by COBI A.C.

Principle 3 – Management and Regulation

A new draft version of the Small Pelagics Management Plan was published in July 2011, and passed into law in November 2012. For further details, refer to Principle 1 Background, p. 9-11.

The surveillance team observed ongoing delay in updating the fishery information in the specific webpage for the proper dissemination of the information to all interested parties: this was identified in the first annual surveillance in May 2012. At that time, the client had agreed to update all information before the end of July 2012: not further action resulted.

In 2011 it was identified that a new version of the Carta Nacional Pesquera including small pelagics was in the process of evaluation by the Federal Government for publication: the estimated release date of this overarching legislation for all fisheries in Mexico is 2014.

A new version of the NOM-0003-PESC-1993 for the national small pelagic fishery is under revision at the COFEMER (Federal Commission for the Regulations Improvement), as indicated in the 1st annual surveillance report. The Client update at the 2nd annual surveillance indicated that release dates are not determined. In the 2012 Management Plan, it is noted that content as follows has been proposed for the updated NOM:

• capture of pilchard, anchovy or thread herring below the minimum catch size does not exceed 30% of the number of organisms per fishing season by region.
• there will be no further authorization for the entry of more vessels, except for replacement of existing vessel and that existing vessels have good cooling systems and that existing vessels do not increase the current carrying capacity.
• that INAPESCA, based on scientific research carried out with a view to ensuring optimal resource utilization and conservation, undertake monthly reviews of the cumulative percentage of bycatch to determine when it has reached the allowable percentage (bycatch), at which point there will be the requirement to notify notify the National Commission of Aquaculture and Fisheries.

A new draft version of the Small Pelagics Management Plan was published in July 2011, and passed into law in November 2012. For further details, refer to Principle 1 Background, p. 9-11.

The annual Technical Research Committee for small pelagic fisheries was scheduled and held on June 5-7 2013. The surveillance team has seen evidence that invitations, including the workshop program, were sent to the stakeholder group. Members of the original objector group, including Anayeli Cabrera (COBI) and Enriqueta Verlarde (Universidad Veracruzana, Jalapa), attended and presented talks at the workshop.

SCS has received an updated vessel list, as part of the requirements of the standard, which can be found in Appendix 2.

In early June, Leon Tissot also held an educational outreach session with fishing vessel operators (vessel managers) to discuss the value of certification, the importance of good fishing practices and measures to limit the effects of the fleet on particular bycatch species. Evidence of attendance, presentation materials and diplomas issued to participants was received by SCS.

Conclusions and Recommendations

It is SCS's view that the Fishery continues to meet the standards of the MSC and to comply with the 'Requirements for Continued Certification'. SCS recommends the continued use of the MSC certificate through to the 3rd surveillance audit with three additional/modified corrective action requests other than those still outstanding from the original assessment.

Three performance indicators were found behind target and progress will need to be demonstrated throughout the next year and as part of the next surveillance audit. The Client should note that any conditions that are behind target will results in certificate suspension or withdrawal if the conditions are not met by the specified timelines (90 days for majors, next surveillance audit for minors).

Status of previously raised conditions

1.2.4		
There is an adequate assessment of the stock status.		
SG 60	**SG 80**	**SG 100**
The assessment estimates stock status relative to reference points. The major sources of uncertainty are identified.	The assessment is appropriate for the stock and for the harvest control rule, and is evaluating stock status relative to reference points. The assessment takes uncertainty into account.	The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery. The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.

	The stock assessment is subject to peer review.	The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored. The assessment has been internally and externally peer reviewed.

Score: 75

Condition 1.2.4: By the second surveillance the client should provide evidence that fishery – independent data has been collected. In addition, the client should provide some proof by the fourth surveillance audit, that this data has been incorporated into the stock assessment of the sardine fishery in addition to fishery-dependent data.

Action Plan	By Who	Due
Fishery-independent data of stock size, using hydro-acoustic measurements, has already been collected during the last three research cruises. The plan is to continue collecting fishery-independent data twice annually. These data will be used for fisheries management because it will be used for tuning the stock assessment analysis, which today use fishery-dependent data. Preliminary results for the biomass of sardine, obtained by hydroacoustic methods for the last three years were very similar to estimates obtained from virtual population analysis. In addition, the evaluation model will also include environmental indices. At the second surveillance audit this data will be presented to the CB.	Technical Research Committee for Small Pelagic Fish, that will incorporate all stakeholders interested in the certification of the fishery, that will be chaired by a member of academia elected by the participants and its technical secretary will be a representative from INAPESCA Sardine fishery scientist (Manuel Nevárez, INAPESCA)	At the second surveillance audit in 2012, this data will be presented to the CB. By the fourth surveillance audit in 2015, proof will be provided that this data has been incorporated into the stock assessment. This data will be used to establish harvesting rules.

Progress on Condition: SCS received a copy of the main report from INAPESCA summarizing the development of hydroacoustic methods and preliminary results based on work from 2008-2012. There remains work to be done to ground-truth the target strength signal in order to understand how it relates to the abundance and resolution of different species in the catch. However, the assessment team is satisfied that this work is underway, and results were presently in a timely manner, to close out the year two portion of the Client Action Plan.

This condition,,as it relates at the SG 80 level to whether: a) the assessment is appropriate for the stock and for the harvest control rule, b) is evaluating stock status relative to reference points, c) takes uncertainty into account and d) is subject to peer review, will be assessed in year 4.

Status of Condition 1.2.4: Open – on target

2.1.1		
The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species.		
SG 60	**SG 80**	**SG 100**
Main retained species are likely to be within biologically based limits or if outside the limits there are measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding of the depleted species. If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the retained species to be outside biologically based limits or hindering recovery.	Main retained species are highly likely to be within biologically based limits, or if outside the limits there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding.	There is a high degree of certainty that retained species are within biologically based limits. Target reference points are defined and retained species are at or fluctuating around their target reference points.

Score: 75

***Condition* 2.1.1:**
By the third annual surveillance provide evidence to the CB that the main retained species (*Opisthonema* spp. and *Cetengraulis mysticetus*) are highly likely to be within biologically based limits, or if outside the limits there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding.

Action Plan	**By Who**	**Due**
Annual Projects at INAPESCA have the objective, amongst others, to determine the effect of the fisheries on small pelagic populations, for which systematic biological sampling is conducted, and gathering of catch and fishing effort data. This information will make the stock assessment individually for the main small pelagic species. This will provide the fishing mortality estimates specific to each size (Fsize), average fishing mortality (Fa) and abundance of size (Nsize). In addition, changes in future fish yields (Y) and average biomass of populations for the main small pelagic species that are retained as part of this fishery, will be explored individually with a predictive model, which will allow us to estimate the maximum sustainable yield (MSY), and mortality associated with that fishery yield (F_{MSY}). These results will be presented in an annual research report.	Instituto Nacional de Pesca, Manuel Nevárez.	By the third surveillance audit, we will provide evidence to the CB (in an annual research report) that the main retained species are highly likely to be within biologically based limits, or if are outside the limits there are a partial strategy of demonstrably effective management measures in place, such that the fishery does not hinder recovery and rebuilding.

The Fisheries Management Plan (FMP) for small pelagic fish, which is currently being developed, defined control rules for all species included in the FMP, including *Opisthonema* spp. and *Cetengraulis mysticetus*. It also includes emerging management actions, which are the management actions we can take, if one or more reference points are reached or exceeded. Any management option that we consider will aim to maintain (or return) the fishery resource and non-critical (sustainable).		

Progress on Condition: Work is currently scheduled to develop predictive models to obtain estimates of the maximum sustainable yield (MSY) for all main retained species and will include data collected with fishery independent (hydroacustic) methods. Implementation of the hydro-acoustic detection technique is in an advanced stage; French researchers are collaborating with the staff at INAPESCA to train them and assist them with methodological refinements and troubleshooting. A formal report, describing the methods was produced in 2012, but does not indicate that hydroacoustic methods are sufficiently developed yet to provide robust species-based estimates of abundance.

In order to meet this condition, the client will have to assure that *Opisthonema* species are being actively managed using the harvest control rules specified in the updated fisheries management plan: this is not currently occurring. The Management Plan has listed thread herring as actively managed and an MSY-based harvest strategy is associated with this condition. However, the implementation of the strategy is missing the parameterization of the control rule to determine the actual value of the required *Optimum Yield* and *Biologically Acceptable Catch*, which are assumed to be valid equivalents to the *Target* and *Limit Reference Point* respectively. In short, the tools to apply the required active management strategy are in place and available and only the final implementation is needed.

In addition, if Bocona sardine continues to be managed passively as per the current designation in the Fisheries Management Plan, the Client will need to develop evidence to demonstrate that these methods provide a high likelihood of maintaining the population within biologically based limits.

Note that the focus of this performance indicator is on the stock status (outcome) of the retained species.

Status of Condition 2.1.1: Open – on target

By the third surveillance audit, the Client will provide evidence to the CB evidence that *Opisthonema* spp. and *C. mysticetus* are highly likely to be within biologically based limits (or if are outside the limits there are a partial strategy of demonstrably effective management measures in place, such that the fishery does not hinder recovery and rebuilding).

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.		
SG 60	**SG 80**	**SG 100**
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. The measures are considered likely to work, based on plausible argument (eg, general experience, theory or comparison with similar fisheries/species).	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 some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved. There is some evidence that the partial strategy is being implemented successfully.	There is a strategy in place for managing retained species. The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports high confidence that the strategy will work. There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring. There is some evidence that the strategy is achieving its overall objective.

Score: 70

Condition 2.1.2:
By the 3rd annual surveillance audit provide basis for confidence to the CB that the partial strategy will work. In order to do so the client shall consider setting harvest rates and assessments for individual species and incorporate these into the management plan.

Action Plan	**By Who**	**Due**
The Fisheries Management Plan (FMP) for small pelagic fish, which is currently being developed, defined control rules for all species included in the FMP, including *Opisthonema* spp. and *Cetengraulis mysticetus*. It also includes emerging management actions, if one or more reference points reached or exceeded.	Instituto Nacional de Pesca, Manuel Nevárez.	By the 3rd annual surveillance audit provide basis for confidence to the CB that the partial strategy will work.

Progress on Condition: There is a new Fisheries Management Plan for Small Pelagics that was formalized into law in November of 2012 that includes a stronger harvest strategy and precautionary reference points compared to the earlier collective form of management for small pelagic species.

The current fisheries management plan does not include *Cetengraulis mysticetus* as an actively managed species, despite the fact that it comprises a significant proportion of catch and has become increasingly abundant in catches since 2000.

In order to meet this condition, the client will have to assure that *Opisthonema* species are being actively managed using the harvest control rules specified in the updated fisheries management plan: this is not currently occurring. See note above regarding the implementation of the harvest strategy.

In addition, if Bocona sardine continues to be managed passively, the Client will need to develop evidence to demonstrate that there is a partial strategy in place, if necessary that is expected to maintain the species at levels that are highly likely to be within biologically based limits. There will need to be some objective basis for confidence that the partial strategy works, based on some information directly about the fishery and/or species involved. Finally there will need to be some evidence that the partial strategy is being implemented successfully.

Status of Condition 2.1.2: Open – on target

The Client will need to assure that by the third surveillance audit there is evidence that Thread Herring species are under functional active management as defined by the current FMP (2012) and that management for Bocona sardines, if passive, has an implemented, defensible strategy with evidence to show that the partial strategy has the ability to keep the species within biologically based limits. Methods that could be used to make this case include simulation modeling, or other forms of prediction.

2.2.2		
There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations.		
SG 60	**SG 80**	**SG 100**
There are measures in place, if necessary, which are expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery. The measures are considered likely to work, based on plausible argument (e.g general experience,	There is a partial strategy in place, if necessary, for managing bycatch that is expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery. There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or the species involved.	There is a strategy in place for managing and minimising bycatch. The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports high confidence that the strategy will work. There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring. There is some

theory or comparison with similar fisheries/species).	There is some evidence that the partial strategy is being implemented successfully.	evidence that the strategy is achieving its objective.

Score: 70

Condition 2.2.2:
By the 3rd annual surveillance audit, provide some evidence, if necessary, that the main bycatch species are highly likely to be within biologically based limits, or if outside such limits develop a partial strategy of demonstrably effective mitigation measures and provide some evidence to the CB that the strategy has been implemented successfully.

Action Plan	By Who	Due
The study mentioned in 2.2.3 will provide baseline data on bycatch species of the Gulf of California Sardine Fishery. Once the compositon and biomass of bycatch species are known (by the second surveillance audit) we will have a very good idea as to the steps taken as to determine if they are within biological limit or if not to take the necessary mitigation measures. In others words, there should be sufficient information as to take the necessary steps to mitigate the effect of the fishery on other species, or if necessary to do more research to satisfy the CB and achieve the required score for this indicator.	Technical Research Committee for Small Pelagic Fish (as detailed under cond. 1.2.4)	By the third surveillance audit, will be provided some evidence, to the CB, that main bycatch species are highly likely to be within biologically based limits, or if outside such limits develop a partial strategy of demonstrably effective mitigation measures will be presented to the CB.

Progress on Condition: There has been strong progress on developing a scientifically defensible and comprehensive monitoring and reporting system for bycatch species since the first annual surveillance audit. There is evidence that the Client and collaborators have met the obligation of last year's condition to provide evidence that the observer program has been implemented successfully. Funding from Fundación Productor and the Walton Family Foundation were used to develop and implement a functional observer program for the fishery, with 9 new observers. Funding is administered by Community and Biodiversity, AC (COBI). In November 2012 a series of workshops were held to train observers in seabird, marine mammal and teleost identification, as well as vessel safety and protocols. The observer program has already generated verifiable quantitative and qualitative information collected January-April 2013, documenting interactions with bycatch species.

Status of Condition 2.2.2: Open – on target

As per the Client Action plan, that by the third surveillance audit the Client will need to be able to provided evidence to the CB, that main bycatch species are highly likely to be within biologically based limits, or if outside such limits, there will be a partial strategy developed that is demonstrably effective in mitigating impacts. This may be challenging given that first information on interactions began in January 2013 and also requires knowledge of the how bycatch will/won't impact these populations.

2.2.3		
Information on the nature and amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch.		
SG 60	**SG 80**	**SG 100**
Qualitative information is available on the amount of main bycatch species affected by the fishery. Information is adequate to broadly understand outcome status with respect to biologically based limits. Information is adequate to support measures to manage bycatch.	Qualitative information and some quantitative information are available on the amount of main bycatch species affected by the fishery. Information is sufficient to estimate outcome status with respect to biologically based limits. Information is adequate to support a partial strategy to manage main bycatch species. Sufficient data continue to be collected to detect any increase in risk to main bycatch species (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).	Accurate and verifiable information is available on the amount of all bycatch and the consequences for the status of affected populations. Information is sufficient to quantitatively estimate outcome status with respect to biologically based limits with a high degree of certainty. Information is adequate to support a comprehensive strategy to manage bycatch, and evaluate with a high degree of certainty whether a strategy is achieving its objective. Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species.

Score: 70

Condition 2.2.3:
By the third surveillance audit, assure that information is sufficient to estimate outcomes status with respect to biologically based limits and that sufficient data continue to be collected to detect any increase in risk to main bycatch species (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).

Action Plan	**By Who**	**Due**

We have planned two programs: 1) the first one a study that will be conducted by the post graduate student Sergio Macias, at CIBNOR La Paz Mexico, and will provide a base line and estimates on composition and biomass of bycatch species caught in the sardine fishery. According to the work plan raised the fishing trips will be performed three times during the fishing season (July, November/December, February/March), and the trips will last from one to one and a half weeks. The bycatch species will be collected, photographed and identified. (Removed 2nd surveillance audit, student no longer working on project) 2) The second is an observer program that will be implemented from October of 2010, for one year, and will be done by three technical staff working full time. These technicians will be working onboard of the sardine fishery vessels, and at fishing landing sites. During these activities data of bycatch species will be obtained and interactions between the fishery and endangered, threatened and protected (ETP) species will be monitored and recorded. The work will continue if more information is required. This program will be important part of INAPESCA effort to gather sufficient information about the bycatch species and of the interaction with the ETP species, to further understand, identify and develop management measures oriented to mitigate potential issues of the bycatch and about the ecosystem issues. The results will be presented to the CB on the second surveillance.	Technical Research Committee for Small Pelagic Fish (as detailed under cond. 1.2.4) Industry, Cámara Nacional de la Industria Pesquera Instituto Nacional de Pesca. Supervised by Manuel Nevarez, INAPESCA	At the second surveillance audit, this data will be presented to the CB. There will be sufficient information to take the necessary steps to treat in an informed way the bycatch situation.

Progress on condition: There has been strong progress on developing a scientifically defensible and comprehensive monitoring and reporting system for bycatch species since the first annual surveillance audit. Funding from Fundación Productor and the Walton Family Foundation were used to develop and implement a functional observer program for the fishery, with 9 new observers. Funding is administered by Community and Biodiversity, AC (COBI). In November 2012 a series of workshops were held to train observers in seabird, marine mammal and teleost identification, as well as vessel safety and protocols. The observer program has already generated verifiable quantitative and qualitative information of bycatch species as well as interactions with ETP species collected January-April 2013.

Evidence presented by both COBI A.C. and INAPESCA indicate that there is four months of qualitative information and quantitative information available on the amount of main bycatch species affected by the fishery. It is questionable whether information presented at the second surveillance audit is sufficient to estimate outcome status with respect to biologically based limits, but it is likely that a full year of information will be sufficient to estimate outcome status

relative to biological limits. Information presented at the May 21st meeting is adequate that it could be used to support a partial strategy to manage main bycatch species.

Status of Condition 2.2.3: Open – on target

The fishery is back on target, having established a scientifically defensible and comprehensive monitoring and reporting system for bycatch in the Gulf of California Sardine fishery as per the conditions previously set. The condition has been revised, with updated obligations for the third annual surveillance that more closely match the intent of the requirements than the original condition.

Before the 3rd annual surveillance, provide evidence to the CB that the observer program has been implemented successfully and is sufficient to estimate outcomes status with respect to biologically based limits. This reflects the commitment in the Client Action Plan to have sufficient information to take the necessary steps to treat bycatch in an informed manner. Note that to close the condition at the SG 80 level, the client needs to assure that sufficient data **continue** to be collected to detect **any increase in risk** to main bycatch species. This should be given consideration if there is the intent to terminate the program after a year of monitoring.

2.3.1

The fishery meets national and international requirements for protection of ETP species.

The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species.

SG 60	SG 80	SG 100
Known effects of the fishery are likely to be within limits of national and international requirements for protection of ETP species. Known direct effects are unlikely to create unacceptable impacts to ETP species.	The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species. Direct effects are highly unlikely to create unacceptable impacts to ETP species. Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.	There is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species. There is a high degree of confidence that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species.

Score: 75

Revised Condition 2.3.1:
By the third annual surveillance audit provide information to demonstrate that the effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species. There is evidence that both direct and impacts are

Action Plan	By Who	Due
The study mentioned in 2.2.3 will provide baseline data on the impact of the Gulf of California Sardine Fishery on ETP species. As was mentioned in 2.2.3., during these activities data of bycatch species will be obtained and interactions between the fishery and endangered, threatened and protected (ETP) species will be monitored and recorded. The work will continue if more information is required. This program will be important part of INAPESCA effort to gather sufficient information about the bycatch species and of the interaction with the ETP species, to further understand, identify and develop management measures oriented to mitigate potential issues of the bycatch and about the ecosystem issues.	Technical Research Committee for Small Pelagic Fish (as detailed under cond. 1.2.4) Industry, Cámara Nacional de la Industria Pesquera Instituto Nacional de Pesca. Supervised by Manuel Nevarez, INAPESCA	At the second surveillance audit, this data will be presented to the CB. There will be sufficient information to take the necessary steps to treat in an informed way about the interaction between the fishery and the ETP species.

highly unlikely to create unacceptable (serious or irreversible) impacts on populations of affected ETP species. The client will also need to specify definitions that they are following for ETP species under national law.

Progress on Condition: There has been strong progress on developing a scientifically defensible and comprehensive monitoring and reporting system for bycatch species since the first annual surveillance audit. Funding from Fundación Productor and the Walton Family Foundation were used to develop and implement a functional observer program for the fishery, with 9 new observers. Funding is administered by Community and Biodiversity, AC (COBI). In November a series of workshops were held to train observers in seabird, marine mammal and teleost identification, as well as vessel safety and protocols. The observer program has already generated verifiable quantitative and qualitative information of bycatch species as well as interactions with ETP species collected January-April 2013.

Status of Condition 2.3.1: Open – on target

The fishery is back on target, having been able to provide a scientifically defensible monitoring and reporting system for ETP species in the Gulf of California Sardine fishery as per the condition previously set for this performance indicator. The condition has been revised, with updated obligations for the third annual surveillance that more closely match the intent of the requirements than the original condition. One component of last year's condition "the response to this condition shall include evidence that the reported interactions are within limits of national and international law", will be appropriately addressed (and can only be credibly addressed) in an iterative fashion in Year 3, following development of the monitoring and reporting system (that has occurred in Year 2) and analysis of subsequent data records between the second and third surveillance audits.

Before the 3rd annual surveillance provide evidence to the CB that the observer program has been implemented successfully, has been used to generate an accurate understanding of direct and

indirect impacts of the fishery on ETP species, and as per the Client Action plan, necessary measures have been identified by INAPESCA in management procedures.

2.5.2		
There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function.		
SG 60	**SG 80**	**SG 100**
There are measures in place, if necessary, that take into account potential impacts of the fishery on key elements of the ecosystem. The measures are considered likely to work, based on plausible argument (eg, general experience, theory or comparison with similar fisheries/ ecosystems).	There is a partial strategy in place, if necessary, that takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance. The partial strategy is considered likely to work, based on plausible argument (eg, general experience, theory or comparison with similar fisheries/ ecosystems). There is some evidence that the measures comprising the partial strategy are being implemented successfully	There is a strategy that consists of a plan, containing measures to address all main impacts of the fishery on the ecosystem, and at least some of these measures are in place. The plan and measures are based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem. This plan provides for development of a full strategy that restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm. The measures are considered likely to work based on prior experience, plausible argument or information directly from the fishery/ecosystems involved. There is evidence that the measures are being implemented successfully.

Score: 75

Condition 2.5.2:
By the third annual surveillance audit, develop a strategy to restrain impacts of the Sardine fishery on the Gulf of California ecosystem and provide evidence to the CB that the strategy has been implemented successfully.

Action Plan	**By Who**	**Due**
Because the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function, no strategy has been in place to restrain impacts of the fishery on the ecosystem. However, in the Fishery Management Plan (FMP), that is currently being developed, proper and formal consideration of the role of the resource on the maintenance of the ecosystem, particularly as food for other species shall be included.	Technical Research Committee for Small Pelagic Fish (as detailed under cond. 1.2.4)	By the third surveillance audit, we will provide some evidence, to the CB, that the strategy has been implemented successfully.

It also includes research requirements for determining ecosystem interactions with the aim of reducing fishery impacts. So from the FMP be developed and implemented the strategy for reducing the impacts of fishing on the ecosystem. We know that the INAPESCA in conjunction with other academic institutions have plans to develop ecosystem models for fisheries management, but we have no information about their status.	Instituto Nacional de Pesca, Manuel Nevárez.	

Progress on Condition: A new final version of the Small Pelagics Management Plan was published in November 2012. It includes considerations of the resource on the maintenance of the ecosystem and specifies research priorities that will help to inform ecosystem-based management. The management plan highlights the need to develop models taking into consideration the ecosystem approach. One of the bases for this approach will be the information produced by an on-board observer program for the observation of by catch during the fishing operations. Another approach may be the further development of existing ecosystem models. During the second annual surveillance audit there was discussion about the role that COBI may choose to play in facilitating the development of ecosystem models either directly, or indirectly.

In order to fulfil scoring requirements at the SG 60 andSG 80 levels, it will be necessary to demonstrate to the assessment team in the third surveillance audit that existing knowledge has the ability to identify "key elements" of the ecosystem, has a partial strategy in place that takes into account available information and is expected to restrain impacts of the fishery on the ecosystem, and some evidence that this partial strategy has been implemented.

This will represent a significant amount of work over the next year, and we caution that this work should begin immediately in order to have the time to understand the key elements of the system and then implement any necessary strategy by the 3rd surveillance audit.

Status of Condition 2.5.2: Open – On target

3.2.1		
The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2.		
SG 60	**SG 80**	**SG 100**
Objectives, which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are implicit within the fishery management system.	Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery management system.	Well defined and measurable short and long term objectives, which are demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery management system.

Score: 75

Condition 3.2.1:
By the 2nd annual surveillance audit evidence should be provided, that the short and long term objectives are explicit within the fishery`s management system and consistent with achieving the outcomes expressed by MSC`s Principles 1 and 2. Therefore the specific Management Plan for the fishery shall be completed and shall include proper and formal consideration of the role of the resource on the maintenance of the ecosystem and these considerations shall be incorporated into the harvest control rules.

Action Plan	By Who	Due
A comprehensive Fishery Management Plan (FMP) is in its final draft stages as of June 2010 and shall be adopted by the second annual surveillance. The FMP is designed to cover most of the requirements stated in the specific conditions. There are two additional regulatory instruments used to control guidelines and management decisions about fisheries in Mexico. These are 1) the Carta Nacional Pesquera which by law is to be updated every two years, and 2) NOM-003-PESC-1993, currently under revision. These instruments will collectively determine fishing methods, gear types, open/closed fishing areas, TAC´s, size, ecosystem provisions etc. The comision Federal de Mejora Regulatoria (COFEMER) is a goverment body engaged in advisory oversight and advocacy functions on regulatory reform maters with the objective to promote transparency in the design and implementation of regulations. The FMP will be put on COFEMER website for ample consultation by any interested party. The Instituto Nacional de Pesca (INAPESCA) whose decisions on fishery management are final holds yearly workshops for cordination of research by the various institutions involved in fishery research.	Technical Research Committee for Small Pelagic Fish (as detailed under cond. 1.2.4) Instituto Nacional de Pesca.& Comisión Nacional de Acuacultura y Pesca (CONAPESCA) They are responsible for its publication	We expect this to be published by 2012 - 2013.

Progress on Condition: The new version of the Small Pelagics Fishery Management Plan includes a Research Plan for small pelagics and was published in November 2012 and was open for public comments through several meeting at the different ports where this fishery is carried out (Guaymas March 16-18; Guaymas April 26-29; Ensenada May 26-27; and Guaymas June 21-24). The management plan invokes two main categories of management, a new harvest control with a Bmin terms to reserve biomass for ecosystem function, and lists details on specific lines of research that include Populations Dynamics, Stock Assessments, Ecosystem Approach, Predicting Models, Habitat, Socio-economics, and Exploratory Fishing. There is evidence that the 2012 Fisheries Management Plan for Small Pelagics short and longterm objectives associated with the research plan and also contains proper and formal consideration of the role of the resource on the maintenance of the ecosystem and evidence that these considerations have been incorporated into the harvest control rules.

The latest meeting for the Technical Research Committee for small pelagic Fisheries was scheduled for June 5-7th 2013. The surveillance team has seen evidence that invitations were sent to the stakeholder group and that members of the public sector and objector group attended and participated openly in the meeting.

The assessment team notes that the core commitment in the Client Action plan has been fulfilled, but would appreciate receiving the updated 1) the Carta Nacional Pesquera 2) NOM-003-PESC-1993 upon availability.

Status of Condition 3.2.1: Closed

3.2.4		
The fishery has a research plan that addresses the information needs of management.		
SG 60	**SG 80**	**SG 100**
Research is undertaken, as required, to achieve the objectives consistent with MSC's Principles 1 and 2. Research results are available to interested parties.	A research plan provides the management system with a strategic approach to research and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2. Research results are disseminated to all interested parties in a timely fashion.	A comprehensive research plan provides the management system with a coherent and strategic approach to research across P1, P2 and P3, and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2. Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.

Score: 70

Condition 3.2.4:
By the first annual surveillance audit, evidence shall be provided to the CB that information from the fishery (including data, analysis and minutes from the technical bodies) have been disseminated in a timely fashion to all interested parties. In addition, a research plan shall be made available to the public that includes a strategic approach to research and reliable information that is sufficient to achieve the objectives consistent with MSC's Principles 1 and 2.

Action Plan	**By Who**	**Due**
By the first surveillance audit evidence will be provided that the specific INAPESCA webpage, that was set up to facilitate access to all of the information regarding the fishery and its management, will be updated on a regular basis (http://www.inapesca.gob.mx/index.php?option=com_content&task=view&id=306&Itemid=306) This will include a draft master research plan for all the pelagic fisheries that will also be made available for consultation by interested parties prior to the 1st annual surveillance. In addition, minutes of quarterly meetings between fisheries	Instituto Nacional de Pesca.& Comisión Nacional de Acuacultura y Pesca	To be updated on regular basis.

administrators and industry with updated information on effort by researchers from INAPESCA will be made available on the website. These meetings are used to inform decisions on the maintenance and status of fisheries. In May of this year INAPESCA instituted a new organization, Red Nacional de Information e Investigacion en Pesca y Acuaclutura (RNIIPA), that will be responsible for centralizing information on and research in fisheries and aquaculture in Mexico in order to make it more readily available to all interested parties. RNIIPA will also facilitate procurement of research funding and establish research priorities with the objective of sustainability of marine resources.	(CONAPESCA) They are responsible for its updating	

Progress on Condition: There is evidence that a research plan has been made available to the public that includes a strategic approach to research and reliable information via the research plan section of the Fisheries Management Plan. This item was behind target in the first annual surveillance, but is now on target.

The Client is responsible for keeping an up to date list of vessels that are included in the unit of certification. This item was behind target in the first annual surveillance, but is now on target. During 2012 the Client submitted an updated vessel list that addressed this request and which can be found in Appendix 2.

However, there is evidence that information from the fishery has not been disseminated in a timely fashion to all interested parties. The industry website has not been updated since November 2011. In the second surveillance audit, the client had agreed that the information would be updated before July 2012. While this responsibility is ultimately the Client's, ability to fulfill this commitment was hampered by management of the website by CONAPESCA and lack of government resources for staffing. COBI has now offered to host the relevant website and associated documents.

This site should be functional, accessible to the public and contain a full suite of associated documents within 3 months (Sept 1st, 2013). INAPESCA should also note their obligations in the Client Action Plan to provide quarterly updates for uploading: in this case providing these documents to COBI.

Please note that this condition has been upgraded to a Major, and carries with it the weight of potential certificate suspension or withdrawal if the condition has not been met within 90 days (see Section 7.4.3.4 in the Certification Requirements V1.3, p. 33).

Status of Condition 3.2.4: Open – Behind Target

Major Non-Conformance 3.2.4:
Before the 3nd annual surveillance and by Sept 1st 2013, evidence shall be provided to the CB that in keeping with the original client action plan, information from the fishery (including current catch data, effort data, analysis, and minutes from meetings of the technical bodies) is mounted on a functional, publicly available website. In consultation with stakeholders, it has been agreed that the website will henceforth be housed by Comunidad Y Biodiversidad A.C. in order to assure the client access and the ability to assure timely updates.

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Appendix 1: Stakeholder submission and team response

UNIVERSITY OF CALIFORNIA

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May 9, 2013

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Dear Dr. Morgan,

We want to thank the MSC for inviting us to the Second Annual Surveillance Audit for the Gulf of California Mexican Sardine Fishery. Unfortunately, we are either swamped by university course commitments during the Spring term (EE), or in the field (EV) and won't be able to attend. Taking into consideration the fact that none of us has two will be able to attend, we want to highlight some opinions about the progress of this fishery.

Last year one of us (EE) sent a letter to Dr. Saubine Daume with concerns at that time about this fishery. We do hope those criticism was taken at that time into consideration. We will not re-write at this point all those points, which were clearly stated in the letter sent by EE to Dr. Daume, but let us at this point state that those apprehensions are still valid.

The actions agreed upon during the certification process (Conditions 1.2.4, 2.2.2, 2.2.3, 2.5.2, 3.2.1, and 3.2.4) hinged primarily around the creation of a Technical Research Committee for Small Pelagics, which would in turn work collaboratively with the objecting parties to strengthen and consolidate the sustainability of the fishery and the monitoring and adequate management of the stock. Some progress has taken place since the first review: The objecting scientists and NGOs have now been invited into the Technical Research Committee for Small Pelagics, and we are grateful for that.

However, the joint work that was promised has not taken place in some topics, or has progressed at an extremely sluggish pace in others. This joint work included (a) the

participation of the NGOs and scientists in the design and external peer review evaluation of the hydro-acoustics study for stock evaluation, (b) the participation of the NGOs and scientists in the design and external evaluation of the program for observers on board to generate information on all by-catch species, fishing areas, impacts on the environment and on other fisheries, (c) the participation of the NGOs and scientists in the development of the strategy to lower environmental impacts of this fishery in the Gulf of California ecosystem and functions, as well as in the studies and projects geared towards the design of this strategy, (d) the participation of NGOs and scientists in the revision of the Management Plan of the fishery, to allow the inclusion of objectives of Principles 1 and 2 of the MSC standard, and, finally (e) the participation of the NGOs and scientists in the communication to all interested parties, of the information generated, and in the development of the research plan to fulfill the requirements of the MSC.

To the best of our knowledge, the scientists and NGOs that objected the certification have only started an exercise with the fisheries parties aimed at the stock modeling that was promised; and have not received any information about the hydro-acoustic studies for the sardine stock assessments. In short, the Technical Research Committee for Small Pelagics that was agreed as part of the certification process has not been delivering the results it promised for the considered time frame.

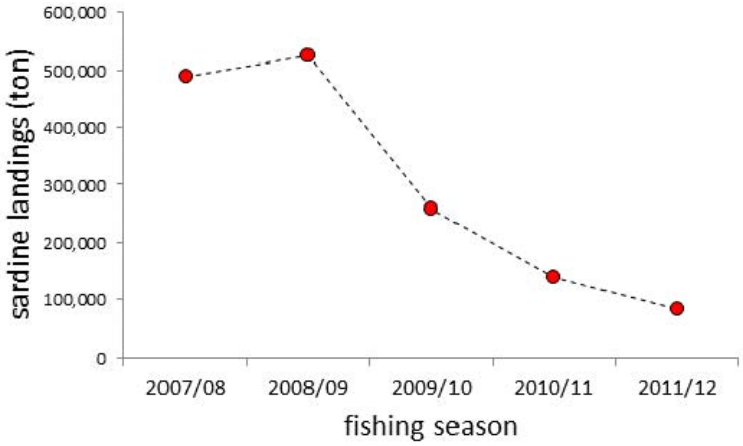
Additionally, there was an agreement for all parties to work together in the implementation of an observer-on-board program focusing on bycatch, spatial distribution, and environmental impact of the fishery. Again, to our knowledge, this observer program has been implemented very slowly and it is still, two years after the certification was granted, in a preliminary phase. In this case, we do not know how the observers are assigned to board ships and to go to certain areas, for example: are they assigned randomly or is there some bias in the assignment of the observers? In our opinion there should be a randomized assignment of boats and fishing areas to which the observers are sent. Alternatively, they should be rotated to board all boats possible and to cover all fishing areas each month. Is this done so? To our knowledge it is not, since we know observers have been assigned to single boats for months at a time. This bias will obviously have a strong effect on the results of the observers program. Also, observers should be gathering information most of the time, instead of just a few days (6-10) of each month, which is a waste of the Observers´ Program resources.

Finally, Condition 3.2.4 dealt with transparency and openness in information access. In this case, it was agreed that the client and INAPESCA would give all support to communicate the information generated to all interested parties in the sardine MSC certification process. As a result of this agreement, INAPESCA opened a webpage where information about landings and CPUE of small pelagic fisheries in the Gulf of California are to be uploaded. However, this webpage has remained static ever since, and the data series ends with the 2008-2009 fishing season. This is regrettable, as field researchers have observed important changes in the availability of sardines for wildlife in the Gulf's Midriff. Some information on the fishery after 2009 has now been added into the First Year MSC Surveillance Audit Report, but the table included has no information on number of boats or fishing effort, two critical variables to evaluate and monitor the progress of the fishery. In the spirit of trying to understand the

dynamics of this fishery, the last 2 years of data are really the most important aspect of information transparency. Sadly, this goal has only been partially met.

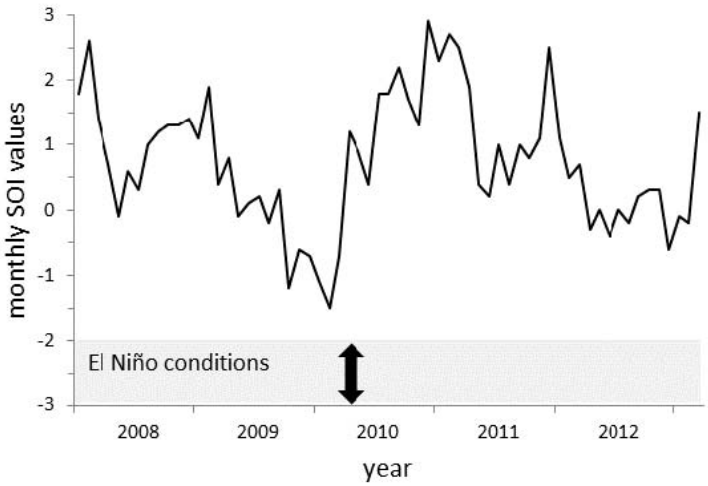
We want to stress with this letter the original contention when this certification process started: In an open society, a certification should play the role of informing the public that the certified product has achieved a certain level of quality in its production, coupled with rigorous and verifiable standards. The public should be able to check at any time the sources of information that support the certification. The client and INAPESCA made a series of firm commitments with regards to the fishery and its transparency that have not been fully and adequately met.

Furthermore, there are reasons for concern about the way this fishery is being managed. Sardine landings in the Gulf of California have been rapidly declining since year 2009, when the fishery surpassed half a million tons, to its current level of only ca. 83 thousand. The decline in landings has been of more than 80%, a true collapse in productivity that has forced the fleet to switch to thread herrings as an alternate target species, and to start directing its efforts in a southward direction.



In previous decades, strong declines such as the one observed between 2009 and 2012 have been attributed by the fishery scientists to the emergence of El Niño conditions. This time, however, it is difficult to ascribe the collapse to such conditions. According the Southern Oscillation Index (SOI) estimates, the index never hit monthly values lower than -2, when it is generally accepted that El Niño conditions start and the warm-phase anomaly hits the sardine populations.

Interestingly, between 2009 and 2012, the SOI index showed significant cold-phase anomalies at least three times, when it rose above 2 (La Niña conditions), but the variation towards negative values (El Niño) never reached the critical threshold. That is, during the period in which the decline occurred, oceanographic conditions were on average good to excellent, and there is little indication that an external environmental/oceanographic force could have been acting in detriment of the sardine stock:



So, what is happening with this decline? If we had the fishery-independent estimation of the stock, as promised during the certification process, perhaps we could test a number of alternative hypotheses. At this stage, however, the only thing we can say is that many of the fears we expressed during the certification process seem to be justified: The sardine fishery does not seem to be doing well, and the impacts on other ecosystem components are quite perceptible, as we have discussed in detail in a recent paper published in *Nature* magazine's open-access journal *Scientific Reports*: (Velarde et al. 2013, Seabird diets provide early warning of sardine fishery declines in the Gulf of California. *Scientific Reports* **3**, doi:10.1038/srep01332; http://www.nature.com/srep/2013/130225/srep01332/full/srep01332.html).

The three general principles that should govern third-party certifiers in determining whether a fishery is sustainable under MSC standards are (a) that the target fish stock must be sustainable, (b) that the operations must have low impacts on the ecosystem, and (c) that the fishery must be transparently and effectively managed. Two years after the certification, we only see a declining fishery, seabirds moving rapidly to other food items or, worse still, to other nesting grounds, high catch of seabirds and marine mammals observed by independent observers, and a management system that is slow to deliver and respond. The pledges made by the client and INAPESCA on June 28, 2011, in the minutes of the Guaymas meeting, need to be satisfactorily met.

We thank the Marine Stewardship Council and Scientific Certification Systems for their attention to these issues, and hope once again that you may appreciate our concerns about the process.

Yours truly,

Exequiel Ezcurra & Enriqueta Velarde

Appendix 1: Team response

Dear Drs Ezcurra & Velarde,

At the May 22nd 2013 meeting your letter was shared verbally with the attending Client, INAPESCA staff and other stakeholders (both ENGO and academics) by the lead auditor, Dr. Sian Morgan.

The first main item of concern related to declines of landings in the absence of ENSO conditions and had been discussed in some detail during meetings on May 21st, also based on a presentation by Dr. Carlos Robinson. You will see that this concern is addressed in some detail in this report, in the terminal section of Background to Principle 1 with regards to rescoring performance indicator 1.1.1. We take this issue seriously, as does the Client and the management agency.

For these reasons, we are **recommending** that the Client convene interested parties to a workshop specifically aimed at improving the monitoring system of the fishery, consolidating existing information relevant to population dynamics, and identifying key gaps in this knowledge. Results of the workshop should be presented at the third annual audit surveillance in 2014 and include realistic recommendations to improve the collection of fisheries data, better synthesize information needed to understand ecosystem-wide parameters controlling Monterrey sardine dynamics, as well as mechanisms to incorporate results into the management system.

If we have understood correctly, the remainder of the points raised have in common the fact that you feel that there has either been insufficient inclusion in design or planning processes related condition-related initiatives specified in the 2011 agreement, or, that these actions have not proceeded at the agreed pace. In particular, you specify the hydroacoustic survey work, the observer program, assessment of ecosystem impacts, revision of the fisheries management plan and creation and communication of a research plan to address MSC conditions.

The assessment team has asked COBI to take responsibility for convening a meeting to address these concerns in a constructive manner, focused on creating greater precision around the original terms of reference and the expectations of all parties relevant to these terms. The team stipulates that participants make specific requests related to the form of participation in various activities that they request, and substantiate the relevance of this participation. This will help to level expectations and clarify any potential for misunderstanding based on the broad terms of reference in the 2011 agreement.

While the MSC process supports inclusion, it also respects the governance processes of nation states relevant to management of sovereign resources. Revisions of Fisheries Management Plans for example, falls within the mandate of staff at INAPESCA/CONAPESCA, and the process includes a comment period for public participation that was respected in the revision process. The assessment team received evidence of invitations and meetings that occurred at different ports where this fishery is carried out in 2011 (Guaymas March 16-18; Guaymas April 26-29; Ensenada May 26-27; and Guaymas June 21-24).

With regard to timelines, please be assured that these are closely monitored via the surveillance audit process.

The assessment team has been pleased with the progress made by the collaborative efforts between the Client, INAPESCA and the objectors, particularly related to the observer program given the original resourcing challenges that underpinned timelines. We hope you will agree that the parties involved (yourselves included) should be congratulated for the significant progress over the past year and the fact that conditions related to P2 for 2013 were met on time. In the future you are of course at liberty to provide input on whether you feel conclusions from this work can be substantiated based on sample size, observer coverage etc.

Sincerely,

Dr. S. Morgan
Dr. C. Alvarez Flores

Appendix 2: Updated vessel list

Cámara Nacional de la Industria Pesquera

Canainpesca DELEGACION SONORA

GUAYMAS, SONORA. 12 JULY, 2012.

SABINE DAUME
SCIENTIFIC CERTIFICATION SYSTEMS INC.

LIST OF VESSELS BELONGIN TO PESQUERA COSTA ROCA UNDER THE UNIT OF CERTIFICATION, THERE HAS BEEN A SUSTITUTION: B/M PROPEMEX DP-1S FOR B/M ONTAGOTA WITH THE SAME PERMIT NUMBER, THE PROPEMEX DP-1S HAS BEEN RETIRED.

THE NEW LIST IS AS FOLLOWS:

PESQUERA COSTA ROCA SA. DE CV

UNIT	*PERMIT NUMBER*
PESCADOR II	12604779358
NENE CONDE	12604779363
LAZARO CARDENAS III	12604779322
SANDOKAN	12604779314
SALGARI	10203079320
DELTA YAQUI	12604779337
BAKATETE	12604779360
ONTAGOTA	10203004520

PROPEMEX DP-IS is no longer in the fishery.

LEON TISSOT PLANT.
PRESIDENT
canainpesca DELEGACION SONOR.

AVE. SERDAN #75, EDIFICIO LUEBBERT, INT. 2 ALTOS, COL. CENTRO.
TEL. Y FAX 222 05 22 Y 222 18 09, GUAYMAS, SONORA.