4th Surveillance Report

Assessment against MSC Principles and Criteria for:
PATAGONIAN SCALLOP FISHERY
(*Zygochlamys patagonica*)
Certificate code: F-OIA-P-0101

26th July 2016

AUDITORS: *Dr. E. M. Morsan (Team Leader), Dr. L. B. Prenski, Eng. C. A. Medina Foucher (MSC Program Manager) and M. L. Laco (External MSC Program Manager)*

CLIENTS: *Glaciar Pesquera S.A. and Wanchese Argentina S.R.L.*

Organización Internacional Agropecuaria

FOURTH SURVEILLANCE VISIT

Assessment against MSC Principles and Criteria for

PATAGONIAN SCALLOP FISHERY
(*Zygochlamys patagonica*)

26 July 2016

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CERTIFICATION BODY:

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Contents.

1. General information.

Fishery name	Patagonian scallop fishery		
Unit(s) of assessment	Species: Patagonian scallop (*Zygochlamys patagonica*) Location: Within the Argentine continental shelf in waters 60 to 120m deep between the northern boundary with Uruguay and a line drawn between the Malvinas Islands and Tierra del Fuego in the South. Stock: The Patagonian Scallop extends from 42° S in the Pacific Ocean to 35° S in the Atlantic. It is not known whether distinctive stocks exist, but logic and geographic isolation suggest separate stocks, at least between both oceans. Fishing methods: Benthic otter trawl net Vessels: Four vessels of 45-59 m long (F/V ATLANTIC SURF III, F/V CAPESANTE, F/V ERIN BRUCE and F/V MISS TIDE) Management: Secretary of Agriculture, Livestock, Fisheries and Food (SAGPyA), Sub-secretary of Fisheries and Aquaculture (SSPyA), Consejo Federal Pesquero (CFP). Client group: Glaciar Pesquera S.A. and Wanchese Argentina S.R.L. Only these companies have catch quota for this species.		
Date certified	26 March 2012	**Date of expiry**	25 March 2017
Surveillance level and type	Surveillance level 6, on-site surveillance audit. The surveillance was delayed due the research season was initiated in the end of 2015, where data to develop the action plan milestones are obtained. First, scientific staff analyses to develop stock assessment and then evaluate it according the action plan objectives. The results of this analysis will be available in May 2016 through a preliminary report to be presented to the team members.		
Date of surveillance audit	May 26th and 27th, 2016		

Surveillance stage (tick one)	**1st Surveillance**	
	2nd Surveillance	
	3rd Surveillance	
	4th Surveillance	X
	Other (expedited etc)	
Surveillance team	Lead Assessor: Dr. Enrique Morsan Assessor(s): Dr. Leszek Bruno Prenski OIA Coordinator: Eng. Carolina Medina Foucher External MSC Program Manager: María Laura Laco	
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	Email	eduardo@glaciar-pesquera.com
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Client contact details **Wanchese Argentina S.R.L.**	**Address**	Calle 1, entre 6, 7 y 0 – Barrio Parque Industrial, (7600) Mar del Plata - Buenos Aires Prov., Argentina
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	Contact name(s)	Mr. Pedro Böhnsdalen

2. Background.

The assessment team identified the following changes in the fishery since the last surveillance report according to:

a. Management system

During the fourth surveillance, the assessment team consulted with official agencies as SSPyA and INIDEP. As well, websites of Ministerio de Agroindustria (www.agroindustria.gob.ar) (see Fig. 1); Consejo Federal Pesquero (www.cfp.gob.ar) and INIDEP (www.inidep.edu.ar) were also visited.

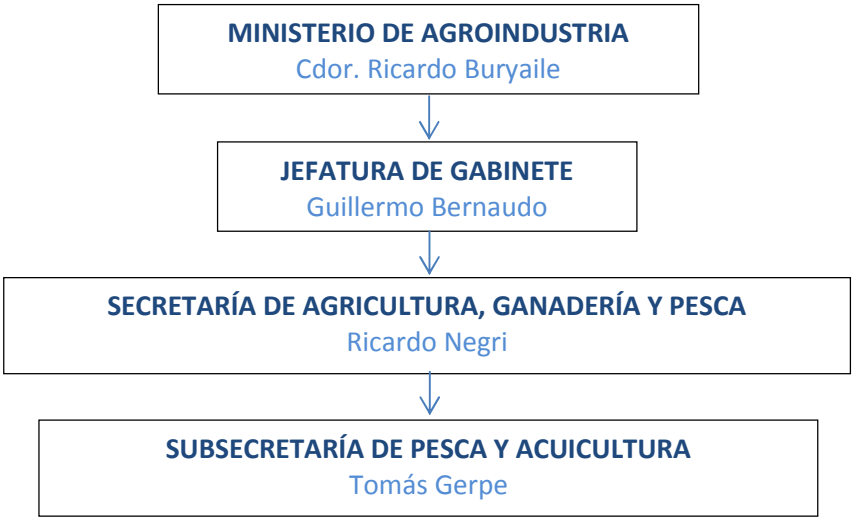

Fig. 1. Updated of organizational chart of Ministerio de Agroindustria

Since last surveillance, all the administrative and supervisory structures have remained equally, conserving the same missions, roles and responsibilities. Similarly, no structures or INIDEP have been modified.

It has not been detected that the fishery is incurring or has incurred (since certification) in any controversy to any international treaty or systematic failures to current regulations.

In consultation with stakeholders, none of them found any new information meriting changes in any aspect of the certification.

As it is mentioned in the third surveillance report, the relevant change in the management system is the inclusion of Patagonian scallop fishery in the fisheries administrated by "Cuotas Individuales Transferibles de Capturas – CITC" (Individual Transferable Quotas – ITQ).

b. Relevant regulations

The following resolutions are developed since the last surveillance audit:

- Resolution CFP N° 10/2015: establishment of TACs for MU B and closure of MU D area. Period 2015.
- Resolution CFP N° 14/2015: establishment of TACs for MU A, H, I and J. Period 2016.
- Resolution CFP N° 1/2016: establishment of TACs for MU F and G

- Resolutions CFP N° 3/2016 and N° 2/2015: modification of Resolution CFP N° 1/2016

However, same general regulations have been developed for all Argentinean fisheries:

- CFP Resolution N° 11/2015: Establishment of PAN-Marine Mammals.
- CFP Resolution N° 15/2015: Protocol of use of Mar Argentino logo.

c. Personnel involved in science, management or industry, scientific base of information, including stock assessments

Since the last surveillance audit, there are not changes in the personnel involved in science. However, in the administration of fishery management, the Secretaría de Pesca changes its status to Sub-Secretaría and Tomas Jerpe is the new responsible assigned. Ministerio de Agricultura, Ganadería y Pesca has been renamed to Ministerio de Agroindustria; Ricardo Buryaile is the new responsible assigned. Its secretariat that the Subsecretaría de Pesca is part, is in charge of Ricardo Negri.

Stock status per each management units

Management units F and G according INIDEP Technical Report N° 08/2016

In the mentioned management units, the estimation of commercial biomass, considering the 40% of average absolute biomass, was 31,699 t and 3,843 t, respectively. In the estimation considering the 40% of the lower limit of confidence interval of average absolute biomass was 24,573 t and 2,648 t for MU F and G, respectively.

However, it is observed that there are registered few sets with presence of individuals of age 0+. It highlights the failure of massive recruitment at the bottom of the cohort form 2014-2015 in these management units. This raises the need to continue implementing a highly precautionary measure regarding the management of scallops in these areas.

Management unit B according INIDEP Technical Report N° 25/2015

In the MU B, the abundance of total biomass was 360,338 t (±76,247 t) and the commercial biomass (scallop with ≥55mm) was 227,733 t (±45,182 t). As there is no evidence about significant recruitments in some areas, it is recommended the closure to fishing for two sub-areas in the MU B for a period of one year from January 1st, 2016.

The fishing area is defined by incorporation of fishing stock cohorts 2007-2008, 2008-2009 and 2009 and 2010. The estimation of commercial biomass, considering the 40% of average absolute biomass, was 35,936 t. In the abundance estimated considering the 40% of lower limit of confidence interval of average absolute biomass was 22,977 t. Projecting estimates above biomass at 1 January 2016 and considering the mortality rate, it is observed that the same amount 30,892 t in the first case or 19,753 t in the second case.

Management unit D and E according INIDEP Technical Report N° 26/2015

A survey was carried out between September and October 2015 for MUs D and E with the objective to establish the Total Allowable Catch (TAC) and to study the size composition. “Atlantic Surf III” was used as survey vessel used and was equipped with dredge. Efficiency of the gear was assumed 0.5. Analysis of Z index (proportion of commercial sized scallop in relation with total scallop) revealed prevalence of places with Z index less than 50%, and analysis of catch per haul revealed low densities of commercial sized scallop were recorded in the majority of the sampling stations. Both aspects suggest the closure of the MU D during one year stating from 1 January 2016.

Moreover, scallop beds of MU E were characterized by individuals of commercial size with densities of 10 t/km². Considering the two options to take decisions: a) 40% mean absolute biomass and; b) 40% of lower of confidence limit mean absolute biomass, the TAC suggested for the MU E was estimated in 8,436 t ("a" alternative) and 6,239 t ("b" alternative), applicable to year 2016. Low records of juveniles (scallops 0+) suggest failure of recruitment of the 2014-2015 cohorts in the MUs D and E.

Fishery records

Period 2015 according INIDEP Technical Report N°16/2016

During 2015, total scallop landings (meat) was 4,404 t and estimated catch of whole scallop was 31,455 t. Fleet worked 1,157 days (79.3 % of days at the sea) with 815 days of effective fishing, in 27 trips. Fishing effort was allocated in MUs of the shelf-break front with 75,543 sets and swept area was 1,933 km², assuming non-overlapping hauls. Both values were lesser than the previous year (84,851 sets and 2,357 km²). During 2015, the explored areas outside of MUs and other MUs were not visited during the last years.

Period 2014 according INIDEP Technical Report N° 12/2015

Patagonian scallop landings during 2014 was 4,653 t (scallop meat) and estimated catch of whole scallop was 33,220 t. Fleet worked 1,107 days (75.86 % of days at the sea) with 872 days of effective fishing, in 31 trips. Fishing effort was allocated in MUs of the shelf-break front with 84,851 sets and swept area was 2,357 km², assuming non-overlapping hauls. Both values were similar than the previous year (85,444 sets and 2,251 km²). Tracks outside of MUs and non-visited areas searching for scallop concentrations were recorded.

d. Where enhanced fisheries, any updates on fishery's position in relation to scope criteria

The Patagonian scallop fishery is not an enhanced fishery. This is not applicable.

e. Any development or changes within the fishery which impact traceability or the ability to segregate between fish from the UoC and fish from outside the UoC (non-certified fish).

Since the last surveillance, there is not any development or changes within the fishery which impact traceability or ability to segregate between fish from the UoC and fish from outside the UoC (non-certified fish). Last changes and development are detailed in the last report (2015).

Table 1. TAC and Catch Data

TAC	**Year**	2016 (TACs were estimated by CFP in the following Resolutions: N°10/2015; N°14/2015; N°01/2016; and N°03/2016)	**Amount (per management unit)**	MU A : 2,500 t MU B : 19,753 t [1*] MU C: N/D [4*] MU D: 0 [2*] MU E: 6,239 t [1*] MU F: 7,624 t [3*] MU G: 1,715 t [3*] MU H: 2,500 t MU I: 1,000 t MU J: 1,000 t **TOTAL: 42,331 t**
UoA share of TAC	**Year**	2015	**Amount**	**31,626.63 t**
UoC share of TAC	**Year**	2015	**Amount**	**31,626.63 t**

Total green weight catch by UoC	**Year (most recent)**	2016 (to 04/07/2016)	**Amount**	**23,670.53 t**
	Year (second most recent)	2015	**Amount**	**31,626.63 t**

[1*] *but closures are suggested for certain sub-areas of the MU*
[2*] *a full closure is suggested for the whole year 2016*
[3*] *this TAC has been only defined for the period between 1-jan-2016 and 31-mar-2016*
[4*] *TAC for 2016 has not been defined for this area yet (and it was 3,000 t for 2015)*

Table 2. Scallop meat discharged (t) by UoC vessels 2014 and 2015 (INIDEP Technical Reports N° 12/2015 and N° 16/2016).

Company	Vessel	2014	2015
GLACIAR PESQUERA S.A.	(2030) ATLANTIC SURF I	1,086	0,00
	(0350) ATLANTIC SURF III	1,438	1,839
	(2929) CAPESANTE	0,00	728
WANCHESE ARGENTINA S.R.L.	(0537) ERIN BRUCE	978	654
	(2439) MISS TIDE	1,151	1,183
	TOTAL	**4,653**	**4,404**

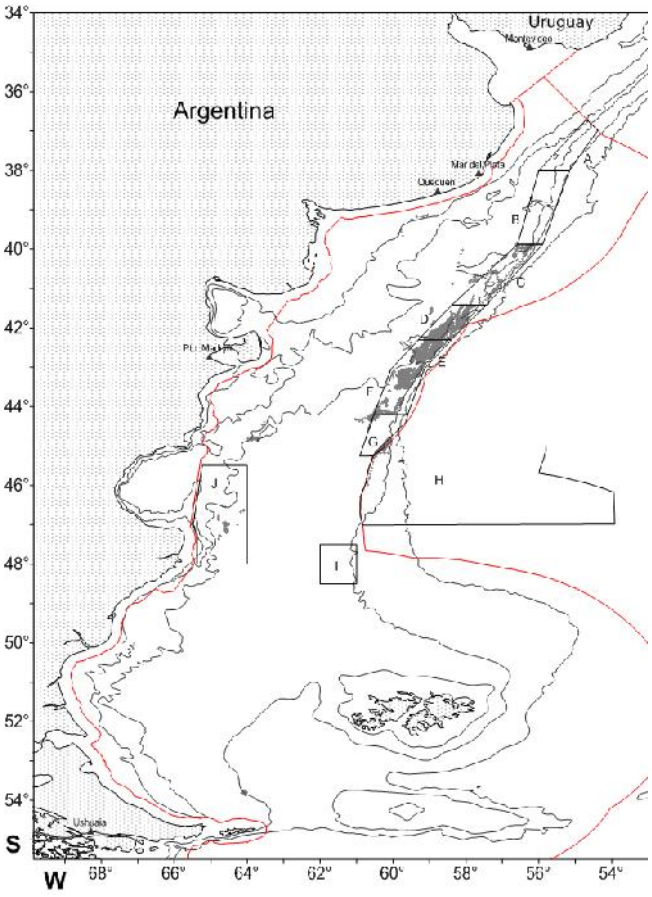

Fig. 2. Spatial distribution of total maneuvers relevant of fishing scallop fleet during 2014 (Source: INIDEP Technical Report N° 12/2015)

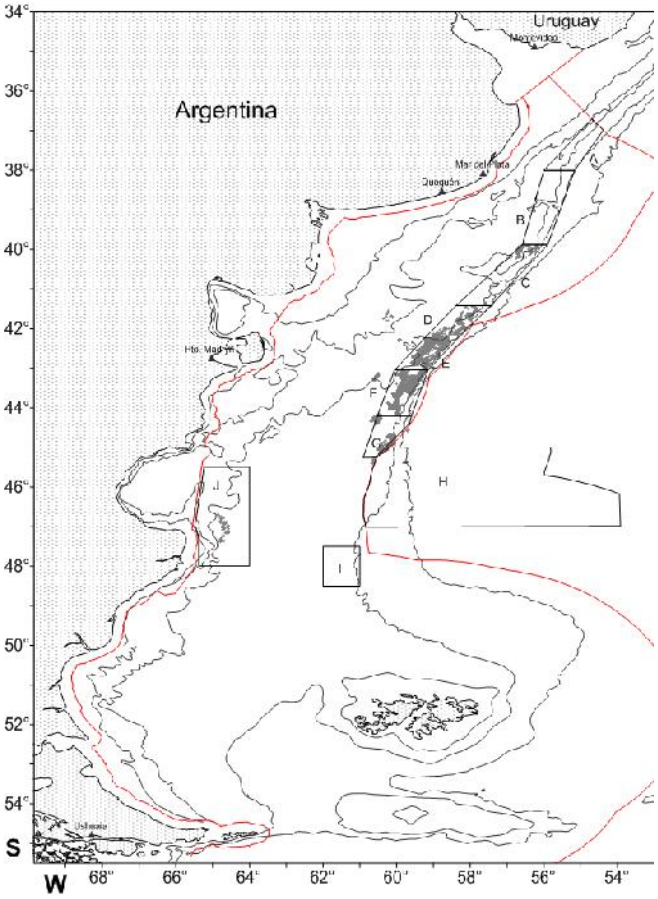

Fig. 3. Spatial distribution of total maneuvers relevant of fishing scallop fleet during 2015 (Source: INIDEP Technical Report N° 16/2016)

Table 3. Summary of Assessment Conditions

Condition number	Performance indicator (PI)	Status	PI original score	PI revised score
1	1.2.4	CLOSED	75	90
3	2.2.2	CLOSED	75	85
4	2.2.3	CLOSED	70	85
5	2.4.1	CLOSED	70	100
6	2.4.3	CLOSED	75	80
Recommendation number	**Performance indicator (PI)**	**Status**	**PI original score**	**PI revised score**
1	2.2.1	CLOSED	80	80

3. Assessment process.

3.1 Description of the audit process

The purpose of the surveillance audit was to review any changes to the fishery and its management; performance in relation to any relevant conditions of certification; any developments or changes within the fishery which impact traceability and the ability to segregate MSC from non-MSC products; and any other significant changes in the fishery since the last surveillance audit. The results of this audit are presented in the next section of the report.

This report represents the last annual surveillance, including the re-scoring of PIs related with conditions established in the full-assessment and allows determine if the fishery is candidate to enter in the second re-certification process. OIA has notified the client group and stakeholders on April 26th, 2016 where and when the on-site visit would take place. All stakeholders who had expressed interest and contributed to the full-assessment process were directly contacted by email and later by telephone. The intention to conduct the surveillance was posted on the MSC website. All interviews with stakeholders were carried out in Mar del Plata, where the fishery client is based. There was not received any stakeholder submissions about any concerns in the audit activities. All information received is related with the action plan and updating of relevant scientific-technical documents of Patagonian scallop fishery.

It was documented progress of conditions as “on target”, “ahead of target” or “behind target”, as well as its rationale. When progress against the measurable outcomes, expected results or milestones specified was judged to be “behind target”, it was specified the remedial action and any milestone revised that are required to bring process on track since the last surveillance audit to achieve the condition in the original deadline. If conditions are classified as “on target” for this surveillance audit, the assessment team closed them and re-scored the respective PIs.

When it was necessary, the assessment team reported and recorded what was changed in the information base and re-scored the PI, following scoring processes.

The Surveillance Team reviewed the fishery status, analysing whether the fishery was complied with the required conditions set forth in the original certification report and whether current scenarios compromises the performance of the fishery in regard to the MSC Standard.

The audit process was comprised of the following parts:

- **Provision of information:** The audit program and logistical information, conditions established in the certification process and its respective Action Plan elaborated by the fishery client were provided to stakeholders previously to the meetings. Also, the notification included the links of “Stakeholder Guide to the MSC” and the “Template for Stakeholder Input”.
- **Meetings:** The individual meetings started with an interview with the Client Group and then with scientists in INIDEP. In both interview, relevant information and documents regarding the fourth surveillance audit were exchanged. Consultations have taken place on May 26th and 27th, 2016. Meetings were conducted by the assessment team proposed and were focused in the on-going activities associated with the conditions established on the fishery as well as the eventual changes occurred after the last surveillance.
- **Documentation:** Relevant documents in regard to the progress of the Action Plan add related issues were provided to assessment team by Client Group and stakeholders prior and during

meetings. After these, follow up emails were sent to stakeholders to request additional information. All documents are detailed in Reference section.

The audit activities ended on May 27th, 2016. The information received allowed the Surveillance Team to assess the advances in the implementation of the Action Plan made by the client in order to comply with the conditions established for certification.

3.2 Scope and history of assessment

The Patagonian scallop fishery was certified in December 2006 for first time as sustainable against Principles and Criteria of MSC and re-certified in March 2012 by Organización Internacional Agropecuaria (OIA), therefore it is well managed and sustainable fishery.

The re-assessment was conducted following the MSC Certification Requirements v1.0 and Fisheries Certification Methodology v6.1. The re-assessment process used the Fisheries Assessment Methodology v2.1 utilizing the Default Assessment Tree without adjustments. Risk Based Framework methodology was undertaken for the Performance Indicators: 2.2.1 By-catch Outcome and 2.4.1 Habitat Outcome. Both PIs were scored using Scale Intensity Consequence Analysis (SICA) and Productivity-Susceptibility Analysis (PSA), when it is applicable.

The assessment team set out 6 conditions. The client group elaborated an Action Plan to address satisfactorily the conditions for a period of 4 years during each surveillance process. This plan was appended in to Final Report.

The MSC requires certified fisheries to be audited periodically against MSC standard to ensure that the certification is in place and the fishery is complying with the conditional requirements imposed by the assessment team in the fishery assessment process. Actions were examined as part of first and second surveillances completed in May 2013, May 2014 and July 2016, respectively.

In the first surveillance audit, progress of milestones related with PIs 2.2.1, 2.2.2, 2.2.3, 2.4.1 and 2.4.3 were identified by the assessment team as BEHIND TARGET. In the second surveillance audit, all conditions maintained its status as ON TARGET. However, in the third surveillance audit, the condition related with PI 1.2.4 was detected as BEHIND TARGET and condition related with PI 2.2.1 was re-classified as RECOMMENDATION. The rest of conditions are maintained their status as ON TARGET.

Since the third surveillance, there are not registered any changes in the client group neither in certificate status.

3.3 Outline surveillance activities

OIA give the opportunity that all stakeholders identified in the certification process could to provide information (e.g. fisheries and fishery managers, scientist, NGOs, citizens, government agencies, others). The assessment team inspected the following issues:

a) Any potential or actual changes in management systems.

b) Any changes or additions/deletions to regulations.

c) Any personnel changes in science, management and industry and their impact on the management of the fishery.

d) Any potential changes to the scientific base of information, including stock assessments.

e) Any changes affecting traceability; any developments or changes within the fishery which impact traceability and the ability to segregate MSC from non-MSC products.

f) Performance in relation to any relevant conditions of certification.

All documents received by team members during the audit activities were reviewed and detailed in Reference section.

Table 4. Outline of surveillance activities

Stakeholders notification: surveillance visit scheduled	April 26th, 2016
Surveillance year 4: visit on-site	Mar del Plata, May 26th and 27th, 2016
MEETING ATTENDEES AND ORGANIZATIONS	
Opening surveillance meeting with Client Group	
Name	**Affiliation**
Pedro Böhnsdalen	*Wanchese Argentina S.R.L.*
Pedro Ibar Böhnsdalen	*Wanchese Argentina S.R.L.*
Marcelo Bocian	*Glaciar Pesquera S.A.*
Oscar Iribarne	*CONICET*
Ezequiel Navatta	*Glaciar Pesquera S.A.*
Gabriel Suarez	*Glaciar Pesquera S.A.*
INIDEP group meeting	
Name	**Affiliation**
Dr. Marcelo Pájaro	*Responsible of "Dirección de Pesquerías Pelágicas y Ambiente Marino", INIDEP*
Lic. Silvana Campodónico	*Head of "Pesquerías de Moluscos Bentónicos" Program, INIDEP*
Lic. Ana Massa	*Head of "Pesquerías de Condrictios" Program, INIDEP*
Eng. Ricardo Roth	*Head of "Desarrollo de Artes de Pesca, Métodos de Captura y Transferencia de Tecnología" Program, INIDEP*
Lic. Mariana Escolar	*Researcher of "Pesquerías de Moluscos Bentónicos" Program, INIDEP*
Susana Herrera	*Researcher of "Pesquerías de Moluscos Bentónicos" Program, INIDEP*
Dra. Laura Schejter	*Researcher of "Pesquerías de Moluscos Bentónicos" Program, INIDEP*
Julian Bastida	*Researcher of "Pesquerías de Moluscos Bentónicos" Program, INIDEP*
Matias Schwartz	*Technical of "Pesquerías de Moluscos Bentónicos" Program, INIDEP*
Ronaldo Díaz	*Technical of "Pesquerías de Moluscos Bentónicos" Program, INIDEP*
Dr. Jorge Colonello	*Researcher of "Pesquerías de Condrictios" Program, INIDEP*
Lic. Aníbal Aubone	*Researcher of "Desarrollo de Artes de Pesca, Métodos de Captura y Transferencia de Tecnología" Program, INIDEP*
T.O. Julio García	*Technical of "Desarrollo de Artes de Pesca, Métodos de Captura y Transferencia de Tecnología" Program, INIDEP*
NGO meeting	
Name	**Affiliation**
Guillermo Cañete	*Responsible of "Programa Marino", Fundación Vida Silvestre Argentina*

3.4 Reference the MSC standards, requirements and guidance and their versions used in the surveillance assessment.

The surveillance audit was carried out following the MSC Fisheries Certification Requirement v2.0 (FCR v2.0), 1 October 2014. The re-scoring process was conducted using the Default Assessment Tree of Fisheries Assessment Methodology v2.1, including Guidance MSC Certification Requirement v1.0.

The report was produced using the MSC Surveillance Reporting Template v1.0.

The new standard requirements in addition to the RBF (if applicable) will be used in the next re-certification process.

4. Results.

Table 5. Condition 1

Performance Indicator(s) & Score(s)	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
	1.2.4	**c. The assessment of stock status is subject to peer review**	**75**
Condition	Technical reports, containing the evaluation of the stock and harvest control rules must be audited by external peer reviewers. It can be done at request of INIDEP National Director of Research or CFP.		
Any changes to conditions	The original condition text established in the re-certification process not follows the same narrative or metric form. So, OIA decided in this surveillance to reformulate it according the MSC Certification Requirements. However, this change not impairs the action plan proposed by client group. **Condition 1: For the 4th annual surveillance, the client group must provide evidence that the assessment of stock status is subject to peer review.**		
Milestones	For 1st year: Provide information that a peer review process for technical reports related to stock assessment and harvest strategy has being commenced. For 2nd to 4th year: Provide documentation that the peer review process is regular, and it functioning in order to improve decisions.		
Client action plan	For 1st year: Starting the peer review process of technical reports related to stock assessment and harvest strategy by doing a workshop to review and discuss these issues. A report of the results of this workshop will be produced. For 2nd to 4th year: Technical reports related to stock assessment and harvest strategy will be annually peer reviewed by external scientists.		
Progress on Condition [Year 4]	According to the original conditions and milestones set and the Action Plan proposed, the following information was gathered and provided: *Technical reports, containing the evaluation of the stock and harvest control rules must be audited by external peer reviewers. It can be done at request of INIDEP National Director of Research or CFP.* The stock assessment of Patagonian scallop fishery is based on survey-based direct estimation of biomass and annual establishment of a TAC for each Management Unit. During 2015, five MUs (B, D, E, F and G) were assessed following the traditional procedure. Three surveys were conducted during August - November 2015 and February 2016; and all the results were presented in three reports. Moreover, research group provided information regarding to: -a review of the swept area methodology used to biomass estimation using		

	surveys data. This has been used since the beginning of the fishery in 1996. The document is detailed in relation with quantitative aspects of the calculation and criteria to establish TAC (Campodonico & Escolar, 2016). -estimation of the catch weight using a vision-guided estimation of fulfil of the net and quantification of the entire catch by scale on board (Schwartz & Campodonico, 2016). -assessment of the error in the vision-guided estimation of the catch (Aubone *et al.,* 2016). Also, INIDEP sent to OIA a note where it is explained that the report about assessment methodology of Patagonian scallop (*Zygochlamys patagonica*) biomass from survey research data, which will be released in "Revista de Investigación y Desarrollo Pesquero", is in peer review process (see Appendix 2). According to MSC Certification Requirements narrative for each scoring issue which did not follow the MSC metric on PI 1.2.4, progress on reformulated conditions would be: *The assessment of stock status is subject to peer review.* The stock status is in peer review process as mentioned above. The peer review process is regular in order to improve decisions, but was carried out by internal mechanism. It is notified that the document containing the assessment methodology was submitted to be evaluated by anonymous referees.
Status of condition	The assessment team considered that the progress of Condition 1 is adequate and it can be CLOSED. The re-scoring of this PI is assessed in the Appendix 1.

Table 6. Condition 2, which was transformed to Recommendation 1

	Insert relevant PI number(s)	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
Performance Indicator(s) & Score(s)	**2.2.1**	**a. Main by-catch species are highly likely to be within biologically based limits** **b. If main by-catch species are outside biologically based limits there is a partial strategy of demonstrably effective mitigation measures in place such that the fishery does not hinder recovery and rebuilding**	**80**
Recommendation	-To provide documentation and scientific reports which describe in detail the sorting mechanism and scoring of damage to by-catch and to identify how this occurs, and to provide documentation and scientific reports on the measurement of the subsequent mortality obtained from experiments on board ship or on the seafood, in order to achieve enough knowledge that it is		

	highly likely (greater or equal to the 70th percentile in the distribution) that main by-catch species are within biologically based limits. -If main by-catch species are found to be outside biologically based limits; to develop mechanisms to mitigate damage and mortality, and to introduce these mitigation measures developed in a partial strategy of demonstrably effectiveness such that the fishery does not hinder recovery and rebuilding.
Any changes to recommendation	The score of PI 2.2.1 was 80 using RBF and was established a condition that not follows the MSC Certification Requirements. So, OIA decided in this surveillance to reclassify it in recommendation according the MSC Certification Requirements. However, this change not impairs the action plan proposed by client group. **Recommendation 1: For the 4th annual surveillance, the client group must provide evidence that the main by-catch species are highly likely to be within biologically based limits. If main by-catch species are outside biologically based limits, the client group must provide that there are a partial strategy of demonstrably effective mitigation measures in place such that the fishery does not hinder recovery and rebuilding.**
Milestones	For 1st year: Describe and document the sorting mechanisms on all four vessels. Define and document damage caused to main by-catch species (especially echinoids) during sorting of catch. Provide documentation to Surveillance 1. For 2nd year: Test post-sorting mortality in experiments of main by-catch species on board vessel or on the seafloor. Provide documentation and initial scientific reports to Surveillance 2. For 3rd year: Complete scientific reports describing the sorting process, damage it causes by-catch organisms and experimental tests of post-sorting mortality of main by-catch species on board vessel or on seafloor. Provide copies of scientific reports to Surveillance 3. For 4th year: Consider and document methods of sorting that mitigate damage to the by-catch and that accelerate its return to the seafloor, discuss feasibility of measures with fishing companies. Provide documentation to surveillance 4.
Client action plan	For 1st year: Production of a technical report with the sorting mechanisms on all four vessels. Characterizing and documenting in a technical report damage caused to main by-catch species (especially echinoids) during sorting of catch. For 2nd year: Performing at sea experiments testing post-sorting mortality of the main by-catch species returned to the seafloor. Reporting results in technical reports and presenting drafts of scientific papers. For 3rd year: Presenting scientific papers or their advanced drafts describing the sorting process, damage caused to by-catch organisms and results of the experimental tests of post-sorting mortality of these species. For 4th year: Presenting technical reports evaluating alternative methods of sorting that could decrease by-catch damage and accelerate its return to the seafloor. Feasibility of using these measures will be discussed between

	companies, and results presented in the technical report.
Progress on Recommendation [Year 4]	According to the original recommendation and milestones set and the Action Plan proposed, the following information was gathered and provided: *Description and details of the sorting mechanism, records of damage to by-catch and to identify how this occurs, and to provide documentation and scientific reports on the measurement of the subsequent mortality obtained from experiments on board ship or on the seafood, in order to achieve enough knowledge that it is highly likely (greater or equal to the 70th percentile in the distribution) that main by-catch species are within biologically based limits.* It was provided scientific reports describing the sorting process, damage causes by-catch organisms and experimental tests of post-sorting mortality of main by-catch species on board vessel. See conclusions below. *If main by-catch species are found to be outside biologically based limits; to develop mechanisms to mitigate damage and mortality, and to introduce these mitigation measures developed in a partial strategy of demonstrably effectiveness such that the fishery does not hinder recovery and rebuilding.* Swartz *et al.* (2014) carried out a study with the objective to estimate that survival of the benthic invertebrates by catch discarded back at the sea after trawling by commercial vessels. Individuals of the most frequent species were collected in the discarding point of the vessel, classified into different size-classes and level of damage, and conserved in aquarium for 6 days. The experience showed that the survivorship of the species is variable. Species with exoskeleton, like gastropods, are more resistant to the fishing impact. Among echinoderms, ophiuroids showed the lowest percentages of survivorship. The relationship between degree of damage and body size depends of the species. Morphology and structure are key aspects determining the survivorship. The onboard experience with the most frequent and abundant discards and their classification according to species level of damage was done. The highest values of survival were found in the gastropod *Fusitriton magellanicus* and star Diplasterias brandti (96.7 and 86.7%, respectively). A positive relationship was found between the level of damage and height in the hedgehog *Austrocidaris canaliculata* and negative one was recorded in the brittle star *Ophiacantha vivipara*. It was observed that the survival rate decreased with increasing brittleness and rigidity of the structure of the species, indicating that the effect of the selection process on the benthic community associated with the Patagonian scallop fishery varies with the species, size within species and is related to its structure and morphology (Schwartz *et al.,* 2015). Escolar *et al.* (2014) estimated the harm to invertebrates, distinguishing between damage caused by trawling and damage caused by mechanical process on board, from a research carried out during 2012. The experiment was designed to take samples at three parts of the on-board processes: immediately after the catch arrived on deck (trawling damage), after selection (damage by process) and hopper (damage by process of individuals bigger than 55 mm). In the experience, in other vessels, 3 samples were taken in the screw conveyor ("worm"). They concluded that i) the main affected species is the sea

	urchin *Sterechinus agassizii*; ii) the presence of one additional point of selection in the B/P Atlantic Surf III reduced the number of taxa present in the hopper. If this selection point would be implemented in the entire fleet the harm of individuals at moment to return of the sea, would be similar to the harm on deck; iii) on-board selection affect scallop and other component of the fauna. Some of the last are retained in the selection and pass throughout the entire processing. Survivorship of this species is assumed to be loss or null; iv) there are no trend in the harm level due to it depend of the species composition and it characteristics (size, hardness and morphology). According to MSC Certification Requirements narrative for each scoring issue which did not follow the MSC metric on PI 2.2.1, progress on reformulated recommendation would be: *The main by-catch species are highly likely to be within biologically based limits.* *If main by-catch species are outside biologically based limits, the client group must provide that there are a partial strategy of demonstrably effective mitigation measures in place such that the fishery does not hinder recovery and rebuilding.* The impact assessment on chondrichthyan species in Patagonian scallop fishery was initiated, in order to identify genera and species, size ranges and eggs present. Catches of sharks (*Schoederichthys bivius*), batoidei (*Discopyge tschudii*) and rays (Rajidae) were recorded. The most frequent incidental catches were rays (Bathyraja) and others considered “off shore” species (Colonello & Massa, 2014). In 2015, Pesquerías de Moluscos Bentónicos and Pesquerías de Condrictios programs agreed work with observers on board observers in commercial fleet, with the aim to increasing the frequency of the estimated catch of sharks and perform a preliminary experience of survival of these species using drags. Results indicate that, in general, the greater presence of rays was observed in catches in the first sets to reach the fishing area or after a change of zone. This was verified in the second fishing trip, where the catch was categorized according to whether the sets corresponding to operations or intensive fishing. In hauls exploration (few sets per area) catching rays is higher, while in sets of intensive fishing (several consecutive sets in the same area) capture is low, being able to be zero. This would relate to the effect of "disturbance" or suspension of sediments, which occurs during the drag on the bottom (Colonello & Massa, 2014). Catching was estimated from retained rays on deck when the entire catch is deposited as "bulk" before to descent in the hold. Due to this stage, it can be underestimated catching rays, as some individuals directly fall in the hold and it cannot be quantified on deck. Therefore, the results should be corrected from a retention rate calculation and the relationship between the number of individuals retained on deck and individuals reach wells or processing line. According to preliminary observations in the analyzed tides, the retention rate varies between 40 and 50%. For the second fishing trip, the separation distance in the mesh strainer where the catch falls to holds, decreased. This increased the percentage of retention

	and immediately discards the rays on deck. The species retained on deck were ruled mostly by applying "best practices", meaning that the individuals are discarded quickly, without using hooks or "gaffs" (CFP Resolution N° 4/2013). Observations indicate that survival rate was higher in specimens collected on deck. The species collected during the production process crossed the wells and washing machines where water pressure is applied. It is likely that this latter process significantly decreases the survival of them. The experiences should be continued to increase the guarantees on the survival of the rays (Villalba & Colonello, 2015).
Status of recommendation	The assessment team considered that the progress of RECOMMENDATION 1 is adequate and it can be CLOSED. As this PI was assessed using RBF, the new scoring using Default Assessment Tree and new information received will be available in the re-certification report. For the fourth surveillance audit, the PI 2.2.1 maintains its score as 80.

Table 7. Condition 3

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	2.2.2	**c. There is some evidence that the partial strategy is being implemented successfully**	**75**
Condition	-To provide documentation and scientific reports that on-board observers monitor the sorting and return of by-catch and the continuing protection of the no-fishing zones, as evidence that the partial strategy for managing by-catch species at levels which is being implemented successfully. -To test experimentally and to document development of trawl gear that reduces by-catch. -To convene and document workshop(s) of skippers of the commercial vessels, along with gear technologists, to discuss different gears and rigging of the nets that could be utilized and developed to reduce impact of the fishery on the seafloor. -When a promising gear is found, to develop at least partial strategies to minimize by-catch, and to measure the changes in by-catch in order to provide at least some evidence, from scientific papers, that these strategies are being implemented successfully.		
Any changes to conditions	The original condition text established in the re-certification process not follows the same narrative or metric form. So, OIA decided in this surveillance to reformulate it according the MSC Certification Requirements. However, this change not impairs the action plan proposed by client group. **Condition 3: For the 4th annual surveillance, the client group must provide some evidence that the partial strategy is being implemented successfully for by-catch species.**		
Milestones	For 1st year: To provide documentation and scientific reports that on board		

	observers monitor the sorting and return of by-catch and the continued protection of the no-fishing zones. To convene workshop and document results. Should promising gear be found, develop action plan and experimental design to test it. Document for Surveillance 1 and discuss the results and further action proposed with CAB. For 2nd year: Should promising gear be found carry out experimental testing and document the results. Should experimental testing be successful, scope the implications of introducing new technology on all vessels. Document for Surveillance 2. For 3rd year: Document results of all four vessels fishing with the new gear. INIDEP will need to estimate the efficiency of this new gear if it used in biomass assessments. Documentation from INIDEP Observer Program comparison of by-catch data from before and after use of gear. Provide documentation of fishing gear results and Observer by-catch analysis to Surveillance 3. For 4th year: Continued documentation from INIDEP Observer Program comparing by-catch data from before and after use of gear. Provide documentation to Surveillance 4.
Client action plan	For 1st year: To convene a workshop with skippers and gear technicians to discuss alternative gear methods that could increase efficiency and selectivity but reducing seafloor impact. Develop action plans to test at sea promising new or improved devices. Production of a technical report summarizing results and providing evidences that the partial strategy for managing by-catch has been successfully implemented. For 2nd year: Performing at sea experimental testing of alternative fishing devices. If new devices perform better analyze the implications of introducing them to the fleet. Production of a technical report summarizing results. For 3rd year: If new gears are implemented their efficiency will be evaluated for their use in the stock assessment procedures. In particular, with the help of the INIDEP Observer Program the by-catch data from before and after use of the new device will be compared. Production of a technical report summarizing results. For 4th year: Continued documentation from INIDEP Observer Program (OP) comparing by-catch data from before and after use of new gears if they are incorporated to the fleet. Production of a technical report summarizing results.
Progress on Condition [Year 4]	According to the original conditions and milestones set and the Action Plan proposed, the following information was gathered and provided: *On-board observers monitor the sorting and return of by-catch and the continuing protection of the no-fishing zones, as evidence that the partial strategy for managing by-catch species at levels which is being implemented successfully.* Protocol used by Observers On-Board (OBOs) is very complete in order to protect main by-catch species, and has been detailed in previous reports. During 2015 coverage of OBOs was 85%, with only four trips without observer (Campódonico & Herrera, 2015). No visits in reserve zone were recorded.

	Invertebrate survivorship incidentally caught in the fishery was analyzed by Schwartz *et al*. (2015) and extensively explained in the Recommendation 1. *To test experimentally and to document development of trawl gear that reduces by-catch.* See experiences detailed in the Recommendation 1. *To convene and document workshop of skippers of the commercial vessels, along with gear technologists, to discuss different gears and rigging of the nets that could be used and developed to reduce impact of the fishery on the seafloor.* Both companies have carried out experiences addressed to improve the fishing gear with two objectives: better efficiency and selectivity of undersized scallop and by-catch. All trial have been documented and discussed in a workshop in 2012. The conclusion was that there is not still improved fishing gear alternative of them used currently. The improvement in the system is the result of successive changes that have increased the efficiency and fundamentally improve selectivity. This improvement in selectivity is observed in the lower catch of scallop non-commercial size and by-catch. *When a promising gear is found, to develop at least partial strategies to minimize by-catch, and to measure the changes in by-catch in order to provide at least some evidence, from scientific papers, that these strategies are being implemented successfully.* In the workshop held in December 2012, stakeholders concluded that there is not still improved fishing gear alternative of them used currently. The improvement in the system is the result of successive changes that have increased the efficiency and fundamentally improve selectivity. This improvement in selectivity is observed in the lower catch of scallop non-commercial size and bycatch. A Report "Evolution of gear about selectivity and reduce the impact on the seafloor by Patagonian Scallop Fishery", prepared in 2014, is a detailed narrative of the fishing gear used in the fishery. Given characteristics of the Argentine continental shelf and the spatial distribution of scallop into the bottom of it, consisting primarily of sands of different grain size, is established that the main fishing gear was bottom trawls. According to MSC Certification Requirements narrative for each scoring issue which did not follow the MSC metric on PI 2.2.2, progress on reformulated conditions would be: *The partial strategy is being implemented successfully for by-catch species.* From the ecosystem point of view, Pesquerías de Moluscos Bentónicos program has a unique opportunity to study the impact of Patagonian scallop fishery (*Zygochlamys patagonica*) in the Southwest Atlantic, both the target species and throughout the benthic community associated. It has information from the previous community at the beginning of fishing operations (baseline). Since the beginning of the activity in 1996, patterns very comprehensive management including collection of all activity by the commercial fleet, campaigns annual assessment, sampling of benthic fauna by observers on

	board and establishment of areas of closures were implemented permanent (Bremec & Lasta, 2002; Lasta, 2000; CFP Resolutions N° 4/2008, N° 5/2009 and N° 15/2012). Worldwide have applied two methodologies to study the impact of fisheries on benthic communities. The first, through dimensional experimental designs in time and in certain places, which compared before and after the disturbance caused during the same experience. With this methodology, disturbance can be achieving accurate information. The second method is to compare areas subject to different levels of fishing effort from historical information. The difficulty of this methodology is that, generally, fishing effort does not have good spatial definition. Thus, the disturbance that is assigned to a sample may not be correct. Pesquerías de Moluscos Bentónicos program has detailed information of all activity of the scallop fleet and the benthic community associated with the fishery, so that the advantages of the two above-described methods were meet: there are disturbance accurate information and features fishing exclusion areas for use as a control site and the disturbance assigned to each sample represents the actual effect of the fishery on the benthic community. In the research work carried out by Escolar *et al.* (2015), the structure and composition of the benthic invertebrate community that make up the catch of Patagonian scallop fishery through a gradient of fishing effort, using a historical database is analyzed. While there are reports that involve a time series (Bremec *et al.,* 2006; Escolar *et al.,* 2009 and Schechter *et al.,* 2014), this is the first to also consider the fishing effort. While there are other factors that shape the distribution and structure of the benthic community, this work shows how the fishing effort influences biomass and distribution of many species of the community: the area subject to greater fishing effort presented the lowest values of biomass throughout the period analyzed. While the same species are recorded throughout the area and throughout the study period, these have different biomasses for effort fishing. This is also observed by Escolar *et al.* (2011a) and Schechter *et al.* (2014). Throughout the study period, it was also observed as varied distribution rates of the species. During the period 1998-2009, decreased the distribution of Patagonian scallop, *Porifera*, *Ophiacantha vivipara* and *Fusitriton magellanicus*, among the most notorious; and increased the density of polychaete, *Chaetopterus antarcticus*. First, it demonstrated the importance of spatial closures and temporary fishery for benthic community, registering a biomass recovery after implementing the successive fishery closures. The benthic community recovers more quickly in the exclusion area fishery. The importance of the exclusion area is noteworthy since the beginning of the fishery, this area control or baseline, can distinguish between natural changes those caused by trawling. This study extended the knowledge of the benthic community, and allows better understand the functioning of marine ecosystems and identify which groups of organisms is necessary to preserve fishing activity. INIDEP research

	group plans to continue developing this line of research studies similar to other management units to analyze the variation of the community Benthic regarding closures both time and space (Escolar *et al.,* 2015). The period comprised by 2005 and 2008 was identified as highest density for the fishing bed (management unit B), recording a value of 0,28 kg/m^2 registered during 2006 (Bogazzi, 2013 and 2015). During 2006 and 2008, the fishing activity carried out after survey was directed to those areas containing commercial size scallop density and areas with restriction implemented during those years. Observations in different fishing areas have several implications on the analysis of depletion. Bogazzi (2008) showed that reduction of CPUE is not proportional to the abundance at F rate, but rather reflects movements of vessel in areas of different probability in the F. The assessment of depletion trends should be made in view of the differences in the spatial pattern distribution and the pattern of visiting (frequency of visits). The extent and frequency of impacts on the seabed at small scales, the scale of F and the fishing bed have been evaluated. Additional analyzes at large spatial scales, over several fishing beds, should be integrated in order to characterize temporal trends in extension and frequency of trawling in the Patagonian scallop fishery. The results will provide useful information to elaborate criteria of 'best practices' for trawling and determine the consequences of adoption of different best practices on population and ecosystem (Bogazzi *et al.,* 2016).
Status of condition	The assessment team considered that the progress of Condition 3 is adequate and it can be CLOSED. The re-scoring of this PI is assessed in the Appendix 1.

Table 8. Condition 4

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
	2.2.3	**c. Information is adequate to support a partial strategy to manage main by-catch species**	**75**
Condition	-To analyse and document the data collected by the Observer On Board Program that has been recorded from: tow by tow data and the 10 L by-catch samples collected; and the quantitative by-catch data obtained during the annual research biomass surveys from the trawls or dredges is fished area with those obtained from trawls or dredges in non-fished zones. The analyse and documented information required above will allow getting sufficient qualitative information and at least some quantitative information on the outcome status with respect to biologically based limits, and the amount of main by-catch species affected by the fishery. -These requirements together with all information obtained by accomplishment of Condition 2.2.2, will support, if necessary, at least a partial strategy to manage main by-catch species.		
Any changes to conditions	The original condition text established in the re-certification process not		

	follows the same narrative or metric form. So, OIA decided in this surveillance to reformulate it according the MSC Certification Requirements. However, this change not impairs the action plan proposed by client group. **Condition 4: For the 4th annual surveillance, the client group must provide evidence that the information is adequate to support a partial strategy to manage main by-catch species.**
Milestones	For 1st year: 1. Document all tow records of Observer Program with annual breakdown by management unit and discussion of how long and short term trends can be analyzed. Provide documentation to Surveillance 1. 2. Document all 10L by-catch samples taken by Observer Program, status of sorting and identification and discussion of how these samples will be analyzed for testing long term changes. Provide documentation to Surveillance 1. 3. Document all by-catch samples taken on biomass surveys, status of sorting and identification and discussion of how these samples will be analyzed for testing long term changes. Provide documentation to Surveillance 1. For 2nd year: Analyze data collected in 3 projects over past year and add information to database. 1. Complete analysis of all Observer tow by tow reports of by-catch from the start of the fishery. Present analyzes showing trends in numbers and weight of main groups in different Management Units and relate short and long term changes to fishing intensity on that management unit, and on any ecosystem changes. Provide draft report to Surveillance 2. 2. Complete analysis of all Observer taken samples of by-catch from the start of the fishery. Present analyzes showing trends in numbers and weight of all taxa in different Management Units and relate short and long term changes to fishing intensity on that management unit, and on any ecosystem changes. Test changes for significance. Provide draft report to Surveillance 2. 3. Complete analysis of all by-catch samples taken on biomass surveys from the start of the fishery. Present analyses showing trends in numbers and weight of all taxa in different Management Units and relate short and long term changes to fishing intensity on that management unit, and on any ecosystem changes. Test for significance and compare and contrast results with the Observer taken by-catch samples. Provide draft report to Surveillance 2. For 3rd year: Analyze data collected in 3 projects over past year and add information to database. 1. Draft scientific papers and/or Technical reports presenting analyses of trends in numbers and weight of main groups in different Management Units recorded in Observers since the commencement of the fishery in every commercial tow, testing the significance of changes and relating short and long term changes to fishing intensity on the management unit, and on any ecosystem changes. Provide initial draft papers and/or Technical reports to Surveillance 3. 2. Draft scientific papers and/or Technical reports presenting analyses and significance of trends in changes in numbers and weight of all taxa in different Management Units in Observer taken samples of by-catch from the beginning of the fishery. Relate short and long term changes to fishing intensity on that management unit, and on any ecosystem changes. Provide initial draft papers and/or Technical reports to Surveillance 3. 3. Draft scientific papers and/or Technical reports presenting

	analyses and significance of trends in changes in numbers and weight of all taxa in different Management Units taken in biomass surveys since the commencement of the fishery. Relate short and long term changes to fishing intensity on that management unit, on any ecosystem changes. Test for significance and compare and contrast results with the Observer taken by-catch samples. Analyze significance of differences between by-catch from dredge surveys with that from trawl surveys. Provide initial draft papers and/or Technical reports to Surveillance 3. For 4th year: Analyze data collected in 3 projects over past year and add information to database. 1. Complete scientific paper(s) presenting analyses of trends in numbers and weight of main groups in different Management Units recorded in Observers since the commencement of the fishery in every commercial tow. The trends on all management units related to fishing intensity and tested for significance. Provide copies of papers submitted or technical report to Surveillance 4. 2. Complete scientific paper(s) or technical reports presenting analyses and significance of trends in changes in numbers and weight of all taxa in different Management Units in Observer taken samples of by-catch from the beginning of the fishery. Provide copies of papers submitted or technical reports to Surveillance 4. 3. Complete scientific papers or technical reports presenting analyses and significance of trends in changes in numbers and weight of all taxa in different Management Units taken in biomass surveys since the commencement of the fishery. Changes related to fishing intensity, compared with trends in observer samples and tested for significance as well as the significance of differences between by-catch from dredge surveys with that from trawl surveys. Provide copies of papers submitted or technical reports to Surveillance 4. Continue to document and analyze data collected in 3 projects over past year and add information to database. Provide documentation.
Client action plan	For 1st year: 1. Production of a Technical Report that will include a summary of historical information from the OP discriminated by MU with annual breakdown of the information of main by-catch species. There will also be a discussion of alternative to analyze long and short term trends. 2. Production of a Technical Report documenting all 10 L by-catch samples taken by OP, status of sorting and identification and discussion of how these samples will be analyzed for testing long term changes.3. Production of a Technical Report documenting all by-catch samples taken on biomass surveys, status of sorting and identification and discussion of how these samples will be analyzed for testing long term changes. For 2nd year: Production of a Technical Report that will include: 1. Analysis of all OP tow by tow reports of by-catch and biomass surveys from the start of the fishery, presenting analyses showing trends in numbers and weight of main groups in different MU and relate short and long term changes to fishing intensity on that MU. Test for significance and comparison between different data sources. 2. Complete analysis of all Observer taken samples of by-catch from the start of the fishery. Present analyses showing trends in numbers and weight of all taxa in different MU and relate short and long term changes to fishing intensity on that MU, and on any ecosystem changes. Test changes for significance. 3. Complete of all by-catch samples taken on biomass surveys

	from the start of the fishery. Present analyses showing trends in numbers and weight of all taxa in different MU and relate short and long term changes to fishing intensity on that management unit, and on any ecosystem changes. Test for significance and compare and contrast results with the Observer taken by-catch samples. For 3rd year: Production of draft scientific papers and/or Technical reports on the a analyses of trends in numbers and weight of main groups in different MU recorded in the OP and biomass surveys since the beginning of the fishery in every commercial tow, testing the significance of changes and relating short and long term changes to fishing intensity on that MU. Analyzing significance of differences between by-catch from dredge surveys with that from trawl surveys. For 4th year: Continue with the process of Year 3, but now producing well advanced draft of papers to be submitted to scientific peer reviewed journals or Technical reports. Continue to document and analyze data collected in 3 projects over past year and, as every year, add information to database.
Progress on Condition [Year 4]	According to the original conditions and milestones set and the Action Plan proposed, the following information was gathered and provided: *To analyse and document the data collected by the Observer On Board Program that has been recorded from: tow by tow data and the 10 L by-catch samples collected; and the quantitative by-catch data obtained during the annual research biomass surveys from the trawls or dredges is fished area with those obtained from trawls or dredges in non-fished zones. The analyse and documented information required above will allow getting sufficient qualitative information and at least some quantitative information on the outcome status with respect to biologically based limits, and the amount of main by-catch species affected by the fishery.* It was provided technical reports that analyze data collected in projects developed and added information to database. *These requirements together with all information obtained by accomplishment of Condition 2.2.2, will support, if necessary, at least a partial strategy to manage main by-catch species.* In order to provide information of the main by-catch species affected by the fishery, a study conducted to evaluate the effect of the trawling on the benthic community associated to Patagonian scallop, was carried out between 1998 – 2009, analysing 616 sub-samples of the surveys (Escolar *et al.,* 2015). All diversity indexes analysed presented variation between years and areas, but the between-areas observed variation is the same independently of the year considered in the analysis. Samples of the areas with high fishing effort showed low values of diversity indexes. The highest values of species richness and high diversity index (Shannon-Wieber index, SW) were those corresponding to exclusion areas and with low fishing effort. On the other hand, areas with high fishing effort showed low value of the SW index. According to MSC Certification Requirements narrative for each scoring issue which did not follow the MSC metric on PI 2.2.3, progress on reformulated

	conditions would be: *Information is adequate to support a partial strategy to manage main by-catch species.* Two reports produced during 2015 were provided. Schejter & Escolar (2015) analysed the Species Richness in the MU B in the period 1995 – 2013. The first assessment was considered as baseline to evaluate changes detected throughout the time using survey data. Assessment was done using multivariate methods of ordination. Authors explained the scope of the bias emerged from the use of different sampling gears. The differences detected could be produced by the presence of new species and not to the influence of the fishing, due to the MU B remained closed during several years. The results were consistent with those reported by Schejter (2014) and the biological association of invertebrates has been persistent over time, and the recorded differences between years were due to the variation in biomass of such taxa with dominance in the community. The second report refers to long terms effects of trawling over diversity, structure and composition of benthic communities associated to Patagonian scallop. Study area chosen was MU B and the period 1998 – 2009. Major species richness was recorded in the fishing exclusion areas. Fluctuations of abundance of trophic groups (filters and predators) were analysed in relation with the fishing effort. Patagonian scallop, asteorids and gastropods were positively correlated with the fishing effort.
Status of condition	The assessment team considered that the progress of Condition 4 is adequate and it can be CLOSED. The re-scoring of this PI is assessed in the Appendix 1.

Table 9. Condition 5

	Insert relevant PI number(s)	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
Performance Indicator(s) & Score(s)	**2.4.1**	**a. The fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm**	**70**
Condition	To systematically sample each Management Unit, with an equal number of stations in fished areas and un-fished reserve areas, using a selective benthic sampling device, to describe the benthic habitat from these samples and to compare bent hos between fished and un-fished areas and between Management Units; in order to be able to infer that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.		
Any changes to conditions	The original condition text established in the re-certification process not follows the same narrative or metric form. So, OIA decided in this surveillance to reformulate it according the MSC Certification Requirements. However, this change not impairs the action plan proposed by client group.		

	Condition 5: For the 4th annual surveillance, the client group must provide evidence that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.
Milestones	For 1st year: Complete the first survey with an equal number of stations in fished areas and un-fished reserve areas of all management units. Commence sorting, identification, and weighing and counting to lowest possible taxon of all benthos, with special emphasis on bryozoan which are likely to be an important component of the smaller benthos. Provide documentation of numbers and locations of samples and the level of sorting achieved to Surveillance 1. For 2nd year: Complete the first survey, using commercial vessels with an equal number of stations in fished and un-fished reserve areas of the 7 most fished MU and out of them. Starting the sorting, identification, and weighing and counting to lowest possible taxon of all benthos species, with special emphasis on hidrozoans. Production of a Technical report providing numbers and locations of samples and the level of sorting achieved. The used gear will be clearly defined. Based on information required for other Conditions, there will be a clear justification of why this gear is used. For 3rd year: Complete sorting identification and weighing and counting to lowest possible taxon of all benthos species. Analyse data comparing fished and un-fished areas, between MU and with those samples obtained out of the MU. Production of a Technical report addressing the question if there are evidences that fishing seriously affect the benthic habitat. Report it in a draft of scientific papers or technical reports. For 4th year: Production of a draft papers and/or technical reports to Surveillance 4 with: 1. Complete analysis of benthic habitat. 2. Complete comparison of benthos of fished and un-fished areas and between management units, with tests for significance of differences. Analysing if the evidence indicate that fishing has serious effects on benthic habitat. Production of scientific papers with these data. Complete second survey repeating what was done on Year 2 comparing fished and un-fished areas and areas out of MU. This comparison will be done at the lowest possible taxonomical level, with special emphasis on hidrozoans. Production of a Technical (and draft of scientific paper) report providing numbers and locations of samples and the level of sorting achieved.
Client action plan	For 1st year: Complete the first survey with an equal number of stations in fished and un-fished reserve areas of all MUs. Starting the sorting, identification, and weighing and counting to lowest possible taxon of all benthos species, with special emphasis on bryozoans. Production of a technical report providing numbers and locations of samples and the level of sorting achieved. The used gear will be clearly defined. Based on information required for other Conditions, there will be a clear justification of why this gear is used. For 2nd year: Complete sorting identification in fished and un-fished reserve areas of the 7 most fished MU and analyse data comparing both areas. Starting the sorting, identification, and weighing and counting to lowest possible taxon of all benthos species, with special emphasis on hidrozoans. Production of a

	Technical report providing numbers and locations of samples and the level of sorting achieved. For 3rd year: Complete sorting identification and weighing and counting to lowest possible taxon of all benthos species. Analyse data comparing fished and un-fished areas, between MU and with those samples obtained out of the MU. Production of a Technical report addressing providing evidences that fishing seriously affect the benthic habitat. For 4th year: Production of a draft papers and/or technical reports to Surveillance 4 with: 1. Complete analysis of benthic habitat. 2. Complete comparison of benthos of fished and un-fished areas and between management units, with tests for significance of differences. Analysing if the evidence indicates that fishing has serious effects on benthic habitat. Production of scientific papers with these data. Second survey repeating what was done on Year 2 comparing fished and un-fished areas. This comparison will be done at the lowest possible taxonomical level, with special emphasis on bryozoan. Production of a Technical (and draft of scientific paper) report providing numbers and locations of samples and the level of sorting achieved. Complete analysis of survey 2 and compare results with survey 1. Production of a Technical report with this analysis. If something scientifically new or different appears, a scientific paper will be produced.
Progress on Condition [Year 4]	According to the original conditions and milestones set and the Action Plan proposed, the following information was gathered and provided: *To systematically sample each Management Unit, with an equal number of stations in fished areas and un-fished reserve areas, using a selective benthic sampling device, to describe the benthic habitat from these samples and to compare bent hos between fished and un-fished areas and between Management Units; in order to be able to infer that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.* A technical report with sorting identification, weighing and counting of lowest possible taxa of all benthos species has been provided, including a comparison with fished and un-fished area (between MU and samples obtained out of the MU). A qualitative and quantitative comparative study of the benthic communities of Reserve Area and MU B were done during 2014 (Schejter *et al.,* 2014). According to MSC Certification Requirements narrative for each scoring issue which did not follow the MSC metric on PI 2.4.1, progress on reformulated conditions would be: *The fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.* During 2015, a study was addressed to gather information of the invertebrate benthic community in fishing areas and reserves zones within the MU B from data of the survey carried out in 2015; and to compare results with previous survey in 2013. No differences were detected between zones in commercial scallop, total scallop and associated fauna.

Status of condition	The assessment team considered that the progress of Condition 5 is adequate and it can be CLOSED. The re-scoring of this PI is assessed in the Appendix 1.

Table 10. Condition 6

	Insert relevant PI number(s)	**Insert relevant scoring issue/ scoring guidepost text**	**Score**
Performance Indicator(s) & Score(s)	**2.4.3**	**c. Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to change in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures)**	**75**
Condition	6.1: To perform an analysis to develop bottom classification ground and how the distribution of scallop beds relates to sediment distribution, in order to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures). 6.2: To perform annual analyses of historic records from biomass surveys, in relation to how scallop distribution has changed over the years and how the distribution of fishing has varied with it; in order to investigate whether fishing has had any impact on scallop distribution. 6.3a: To carry out, and document, analyses of spatial fishing information, evidence of rotational fishing and contour scallop populations; related to analyze and document the overlay of the fishery with distribution of fishing effort in these years. 6.3b: To produce contour maps of present scallop populations, showing the individual reserve areas, for each management. To provide a plan showing how this goal will be achieved and by when. To analyze data from the fishery records of each management unit and to demonstrate how effective the reserve areas are in excluding fishing.		
Any changes to conditions	The original condition text established in the re-certification process not follows the same narrative or metric form. So, OIA decided in this surveillance to reformulate it according the MSC Certification Requirements. However, this change not impairs the action plan proposed by client group. **Condition 6: For the 4th annual surveillance, the client group must provide information that sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to change in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).**		
Milestones	<u>For condition 6.1:</u> For 1st year: To perform an initial analysis of the swath-mapping investigation to develop bottom classification ground trusted by sediment sampling, followed by correlation analysis of sediment type, scallop abundance and biomass of accompanying fauna. Assess how the distribution of scallop beds		

	relates to sediment distribution. Provide draft report of the analysis to surveillance 1. For 2nd year: To complete the previous analysis and submit a draft scientific paper or technical report to Surveillance 2. For 3rd year: Submit scientific paper and/or report for publication and provide to Surveillance 3. For 4th year: Scope further investigation of scallop bed structure using side scan sonar and/or underwater video. Provide report to Surveillance 4. <u>For condition 6.2:</u> For 1st year: To carry out initial analyses of: - historic records from biomass surveys to map in detail, and distribution of scallops each year from the inception of the fishery in the five or six management units that have the best records. – historic records of positions fished on these beds (using precise tow by tow data where it is available) and records of catch (preferably with similar precision) or catch rates per tow. – data to show how scallop distribution has changed over the years in these units and how the distribution of fishing has varied with it; and to investigate whether fishing has had any impact on scallop distribution. Provide a report to Surveillance 1. For 2nd year: To complete the previous analyses and provide a report to Surveillance 2. For 3rd year: Complete scientific report and draft scientific paper and/or Technical reports of the analyses. Provide reports to Surveillance 3. For 4th year: Submit scientific paper and scope extending the analyses to all the management units. Provide report of the results to Surveillance 4. <u>For condition 6.3a:</u> For 1st year: To carry out initial analyses of spatial fishing information for evidence of rotational fishing in the five or six management units that have the best records and contour scallop populations from biomass surveys from each year of the fishery and overlay with distribution of fishing effort in these years. To analyze data for evidence of rotational fishing. To tabulate annual fishing effort, landings, and biomass estimates for all management units and test for broader scale rotational fishing between management units. Provide a draft report to Surveillance 1. For 2nd year: Complete analyses and provide technical report to Surveillance 2. For 3rd year: Scope extending analyses to all management units. Provide draft report to Surveillance 3. For 4th year: If feasible complete analysis of all management units. Present draft report to Surveillance 4. <u>For condition 6.3b:</u> For 1st year: To produce contour maps of present scallop populations for each management unit showing the individual reserve areas for each management unit. Where parts of the reserves were not established at the beginning of the fishery the boundaries and year of the addition should be recorded along with

	their previous fishing history. Where the area of the reserve is less than 20% of the MU and scallop beds, a plan should be provided showing how this goal will be achieved and by when. Data from the fishery records should be analyzed to demonstrate how effective the reserve areas are in excluding fishing. Analyze evidence from each management unit for the effectiveness of reserve areas, not being fished**.** Provide draft Report to Surveillance 1. For 2nd year: Update maps of reserve areas with the boundaries of additions where they were not established at the beginning of the fishery and tabulate their fishing history. Provide draft report to Surveillance 2. For 3rd year: Measure areas of reserve areas, compare with area of scallop beds, compare with area of management unit, submit plan to increase to 20% of scallop beds, analyze how effective reserve areas have been in excluding fishing. Provide draft report to Surveillance 3. For 4th year: Should data warrant, write scientific paper describing the reserve strategy and how effective it is. Report to Surveillance 4.
Client action plan	<u>For condition 6.1:</u> For 1st year: Production of a draft report of the initial analysis of the swath-mapping developing a bottom classification ground trusted by sediment sampling. This will include correlation analysis between sediment type, scallop abundance and biomass of accompanying fauna. For 2nd year: Production of a draft scientific paper completing the previous analysis. For 3rd year: Production of a scientific report and draft of scientific paper showing the previous analyses. For 4th year: Production of a report describing further investigation of scallop bed structure using sides can sonar and/or underwater video. <u>For condition 6.2:</u> For 1st year: Production of a report carrying out initial analyses of: - Detailed map of historic biomass survey records, and distribution of scallops each year from the inception of the fishery in the MU with best records. - Historic records of positions fished on these beds (using precise tow by tow data if available) and records of catch (with similar precision if available) or catch rates per tow. - Data showing changed in scallop distribution over the years in these MUs together with distribution of fishing effort. Analyze if there are evidences that fishing has had any impact on scallop distribution. For 2nd year: Production of a scientific report or technical reports completing the previous analyses. For 3rd year: Production of a scientific report and draft of scientific paper showing the previous analysis. For 4th year: Production of a report and/or submission of scientific paper to peer review journals. Production of report showing extension of the analysis

	to most MUs. For condition 6.3a: For 1st year: Production of a scientific report with initial analyses of spatial fishing information for evidence of rotational fishing in the 5 or 6 MU with the best records and delineation of scallop beds obtained from biomass surveys from each fishing year overlaying their distribution of fishing effort. Tabulation of annual fishing effort, landings, and biomass estimates for all MU and testing the efficiency of broader scale rotational fishing between MUs. For 2nd year: Production of a scientific report completing the analyses of year 1. For 3rd year: Production of a draft scientific report extending the analysis to all MUs. For 4th year: If feasible complete analysis of all MUs and present a draft report. For condition 6.3b: For 1st year: Production of a draft scientific report showing contour maps of present scallop populations for each MU showing the individual reserve areas for each of them. Where parts of the reserves were not established at the beginning of the fishery the boundaries and the starting year should be recorded along with their fishing history. If the reserve area is less than 20% of the MU and scallop beds, a plan will be provided showing how and when this goal will be achieved. Data from the fishery records will be analyzed to demonstrate how effective the reserve areas are in excluding fishing. Analyze evidence from each MU for the effectiveness of reserve areas, not being fished. For 2nd year: Action plan: Production of a draft report updating maps of reserve areas. This will have the description of new areas where they were not established at the beginning of the fishery tabulating their fishing history. For 3rd year: Production of a draft technical report providing measures of reserve areas, comparing with: area of scallop beds and area of management unit. The technical report will include a plan to increase the reserve area to 20% of scallop beds, and an analysis of how effective reserve areas have been in excluding fishing. For 4th year: Should data warrant, we will provide a draft of a scientific paper describing the reserve strategy and their effectiveness.
Progress on Condition [Year 4]	According to the original conditions and milestones set and the Action Plan proposed, the following information was gathered and provided: *To perform an analysis to develop bottom classification ground and how the distribution of scallop beds relates to sediment distribution, in order to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).* During the first Surveillance, Bremec *et al.* (2013) described the available information on sediment types and how it will be analyzed to study the distribution of the main species and their relation with sediments. This proposal would replace, at least partially, the analysis agreed in the action

	plan. Taken into account that the survey realization depends of the Research Authority (INIDEP), this issue could be advised during the next Surveillance. *To perform annual analyses of historic records from biomass surveys, in relation to how scallop distribution has changed over the years and how the distribution of fishing has varied with it; in order to investigate whether fishing has had any impact on scallop distribution.* Scientific reports analyzing first evidences were provided. During the first surveillance, Bremec *et al.* (2013) described, using the available information, the sediment types and methodology to study the distribution of the main species and their relation with sediments. In the second surveillance audit, a preliminary version of a new database that containing information about regulations, data from surveys, a complete spatial structure, CPUE and density from the beginning of the fishery were presented. The last version of the database system (2015) includes the three main sources of information available for the Patagonian scallop fishery, and commonly used in fishery sciences. The data comprise biological data from surveys and fishing data from on board observers and captain's logbooks, as well as data of landings provided by companies from January 1995 to December 2011. It can be applied on any type of spatial units of interest and can generate basic statistics from any data table. Mapping and summary of fishing effort by year and by spatial unit is another tool in the current system that works as a trigger for reports. *To carry out, and document, analyses of spatial fishing information, evidence of rotational fishing and contour scallop populations; related to analyze and document the overlay of the fishery with distribution of fishing effort in these years.* During 2016, the client group provided information related with the effect of trawling on the benthic community in scallop fishing grounds (Escolar *et al.,* 2015). The study was done on the MU B considering a temporal series 1998 – 2009, and the fishing effort in the MU. The authors describe that those areas closed to fishing recover the biomass of invertebrates more quickly that others that remained opened. *To produce contour maps of present scallop populations, showing the individual reserve areas, for each management. To provide a plan showing how this goal will be achieved and by when. To analyze data from the fishery records of each management unit and to demonstrate how effective the reserve areas are in excluding fishing.* Throughout the history of the fishery and information obtained from research surveys aimed to estimating biomass of the resource and/or commercial fleet itself to detect areas with high concentrations of species of non-commercial size (under 55 mm), have been implemented closures of areas within each management unit to protect this vulnerable fishery fraction of exploitation. It was applied two measures of closure: permanent closures, named as Reproductive Reserves (RR) and temporal closures, that are usually for an

	annual period, although there have been other more limited in time. Campodónico & Mauna (2014) analyzed the historic variation of these areas in the period 1996 – 2013. The RRs were varied in number (from 5 to 8 in 2009) and extension (146% in relation with the total original size in 1996). Daleo (2015) analyzed the actual scientific knowledge about the RR areas of Patagonian scallop fishery and the implication of size and spatial distribution of them. There is consensus that a rotational area closure as well as small sized RR intentionally placed in zones with high adult densities can generate more benefits than larger reserves placed at random. According to MSC Certification Requirements narrative for each scoring issue which did not follow the MSC metric on PI 2.4.3, progress on reformulated conditions would be: *Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to change in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures)* The extended and detailed report by Bogazzi, Mauna & Lasta (2013) explored it in order to analyse changes in scallop distribution of fishing effort over the years in MU 2 (now MU B). During the workshop on "Stock Assessment Procedures and criteria to establish a harvest strategy" conducted in February 2013, there was consensus about the database is old and unable to use for the analogous analysis in the other MU in a versatile way.
Status of condition	The assessment team considered that the progress of Condition 6 is adequate and it can be CLOSED. The re-scoring of this PI is assessed in the Appendix 1.

5. Conclusion.

There were 6 conditions set on the fishery in 2011 full-assessment, but in the third year, conditions are reformulated according MSC metric and the condition 2 was categorized as recommendation. No non-conformities were found. In the present surveillance all Principles were re-scored due to major changes and also, there are scores of PIs that were revised to comply with MSC Certification Requirements and modified accordingly (see Appendix 1). The assessment team reviewed all information and documentation provided by client group and stakeholders to assess milestones and their progress.

The progresses of all conditions established in the certification process are sufficient to comply with the action plan proposed. As consequence, the assessment team classified these progresses as adequate and it was concluded that all conditions are closed.

The Patagonian scallop fishery continues to meet the standards of the MSC and complies with the requirements for continued certification. Therefore, it is recommended that certificate holders maintain the certification to the MSC standard. Therefore, the fishery may apply for a re-certification process again.

6. References.

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Appendices.

Appendix 1. Re-scoring evaluation tables

The PIs 1.1.1, 1.2.1, 1.2.2, 2.2.3, 2.5.1, 3.2.2, 3.2.3 and 3.2.4 were re-scoring according MSC Certification Requirements and including new information identified in green colour. The rationales of others performance indicators were reviewed and re-formulated explaining which aspects of the scoring issue are met and following the same metric and narrative form of requirements.

All references cited in rationale texts are presented in the re-certification report of Patagonian scallop fishery. Only new information is cited in the present report.

Summarize of scores.

Principle	Component	Performance Indicator (PI)	Score give in the certification process	New score (if apply)	New score (closure of condition)
1	Outcome	1.1.1 Stock status	85	80	
		1.1.2 Reference points	90		
		1.1.3 Stock rebuilding	N/A		
	Management	1.2.1 Harvest strategy	90	95	
		1.2.2 Harvest control rules & tools	90	85	
		1.2.3 Information & monitoring	90		
		1.2.4 Assessment of stock status	75		90
2	Retained species	2.1.1 Outcome	100		
		2.1.2 Management	100		
		2.1.3 Information	100		
	By-catch species	2.2.1 Outcome	80		
		2.2.2 Management	75		85
		2.2.3 Information	70	75	85
	ETP species	2.3.1 Outcome	100		
		2.3.2 Management	100		
		2.3.3 Information	100		
	Habitat	2.4.1 Outcome	70		100
		2.4.2 Management	80		
		2.4.3 Information	75		80
	Ecosystem	2.5.1 Outcome	85	100	
		2.5.2 Management	85		
		2.5.3 Information	90		
3	Governance and policy	3.1.1 Legal & customary framework	100		
		3.1.2 Consultation, roles & responsibilities	100		
		3.1.3 Long term objectives	100		
		3.1.4 Incentives for sustainable fishing	90		
	Fishery specific management system	3.2.1 Fishery specific objectives	90		
		3.2.2 Decision making processes	100	95	
		3.2.3 Compliance & enforcement	90	95	
		3.2.4 Research plan	85	80	
		3.2.5 Management performance evaluation	90		
Overall weighted Principle – level scores			**Score**	**New Score**	**New Score**

Principle 1 – Target species	86.9	85.6	87.5
Principle 2 – Ecosystem	87.3	88.7	92.3
Principle 3 – Management	94.3	93.8	93.8

Principle 1:

Evaluation Table for PI 1.1.1

PI 1.1.1		**The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	It is **likely** that the stock is above the point where recruitment would be impaired.	It is **highly likely** that the stock is above the point where recruitment would be impaired.	There is a **high degree of certainty** that the stock is above the point where recruitment would be impaired.
	Met?	YES	YES	NO
	Justification	Recent stock assessment of Patagonian scallop (Campodónico *et al.,* 2014a, b, c) indicates that *it is highly likely that the stock is above the point where recruitment would be impaired.* Annual fishery-independent assessments of beds of each management unit have been carried out to estimate the biomass by INIDEP (Campodónico *et al.,* 2014d). The lack of change in total biomass over all the history of the fishery shows that recruitment has not been impaired. The TAC is set annually at 40% of lowest confidence interval of the estimated commercial biomass. The reference fishing mortality F_{max} has been estimated as 0.54 year^{-1} by a simulation study that incorporates all the relevant ecological characteristics on the Patagonian scallop. Real fishing mortality rate estimated for 6 MUs varied between 0.05 to 0.4 year^{-1}, and in all cases it was less than natural mortality rate. Thus, the area actually fished is only a small proportion of the total ground. The database shows fishing covers 13.5% of the total area of beds with commercial density, and 1.4% of the total area of the Management Units. The Patagonian scallop fishery is strongly dependent on recruitment. Apart from the size of the reproductive stock of scallops recruitment depends of several factors including oceanographic conditions, faunal composition of the benthos (adequate hydroids for settlement), and adequate substrata. *The complexity of the recruitment processes makes it impossible to be sure that there is a high degree of certainty that the stock is above the point where recruitment would be impaired*. However, the stability of scallop biomass throughout the history of the fishery, points to recruitment not having been effected so far. *In conclusion, there is no strong evidence to support that the information available can provide a high degree of certainty required meeting the SG100 requirement; and so the fishery meets the SG80 level of performance for this SI.*		
B	**Guidepost**		The stock is at or fluctuating around its target reference point.	There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.
	Met?		YES	NO
	ti fi c a	*The stock is at or fluctuating around its target reference point.* The scallop stock is spatially		

		structured as a meta-population. In this spatially structured population each component (bed) can fluctuate in abundance, but the whole stock can remain stable. When biomass decreases in a particular bed, TAC in that bed is set low. The fleet fishes until the TAC is reached. Then it moves to another bed. This scheme has been followed for the 15 years of the fishery. The fixed harvest rate, 0.4 $B_{commercial}$, acts like a reference point. Considering the commercial estimated biomass and total landings by year, the harvest rate fluctuated between 0.09 – 0.38 for the period of elapsing the last ten years. A simulation model using a large database containing the complete historical development of the *Z. Patagonica* fishery was performed by Kittlein & Lasta (2010). A ten-year projection of biomass dynamics suggest that no serious reduction in biomass values are expected if fishing intensities remain constant at their historical average value. The surrogate reference points applied in this fishery (detailed below) has been met since the beginning of the fishery (15 years). Recruitment has not depended only of the reproductive stock and *there is no evidence that there is a high degree of certainty that the stock has been fluctuating around its target reference point or has been above its target reference point, over recent years*. *Therefore, while there is enough evidence to support that the stock is at or fluctuating around its target reference point or above its target reference points over recent years, we consider that the information available does not provide the high degree of certainty required to meet the SG100 requirements and so the fishery meets the SG80 level of performance for this SI.*
References		Lasta *et al.* (2001b); Kittlein (2007); Milessi (2010); Kittlein & Lasta (2010), Campodónico *et al.* (2015a, b, c, d)

Stock Status relative to Reference Points			
	Type of reference point	**Value of reference point**	**Current stock status relative to reference point**
Target reference point	Direct biomass estimation Z = $n_{commercial}$ / n_{total} must to be over 0.5 to open fish in an area within a bed.	It depends on the result of direct biomass estimation	Recruitment remains unaffected, as biomass has remained stable.
Limit reference point	B_{lim} TAC is defined as 40% of minimum confidence limit for the commercial scallop stock biomass estimation. F_{max}	Harvest rate of commercial scallop: 0.4 It depends of the results of direct biomass estimation (should there be no annual estimation, the bed will remain closed) F_{max} = 0.54	Harvest rate of commercial scallop 0.09 – 0.38 for the period of elapsing the last ten years. The biomass of the fishery has remained stable, i.e. the fishery is sustainable, under this regime. Values of F was estimated between 0.05 – 0.4 in 6 MUs.
OVERALL PERFORMANCE INDICATOR SCORE:			**80**
CONDITION NUMBER (if relevant):			-

Evaluation Table for PI 1.1.2

PI 1.1.2		**Limit and target reference points are appropriate for the stock**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	Generic limit and target reference points are based on justifiable and reasonable practice	Reference points are appropriate for the stock and can be estimated.	The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive

		appropriate for the species category.		capacity following consideration of **precautionary issues**.
	Met?	YES	YES	YES
	Justification	*There are generic limit and target reference points based on justifiable and reasonable practice appropriate for the species category, consistent with MBSY; and these reference points are appropriate for the stock and can be estimated*. Total allowable catch is established for the commercial fraction of the population (more than 55 mm shell height). The Management Unit is opened if the commercial scallop exceeds 50% of the scallop stock in that unit. Regionalized index Z = n commercial / n total. Scallop biomass is tracked in annual surveys and the harvest regime sets TAC at 0.4 $B_{commercial}$ so total biomass remains above 60%. *The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of precautionary issues.* The recruitment is only partially dependent on the size of the reproductive stock and the precautionary fishing strategy followed leaves large portions of the scallop population un-fished. The team believes that reproductive capacity is not impaired, and target reference points are similar in intent or outcome to maintaining the stock at BMSY or above. This is confirmed in the stability of scallop biomass throughout the history of the fishery, and by the model-based projection for ten years developed that use the average recruitment since the beginning of the fishery. *The fishery therefore meets the SG100 level of performance for this SI.*		
b	**Guidepost**		The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.	The target reference point is such that the stock is maintained at a level consistent with B or some measure or surrogate with similar intent or outcome, or a **higher level**, and takes into account relevant precautionary issues such as the ecological role of the stock with a **high degree of certainty.**
	Met?		YES	NO
	Justification	With more than 60% of the commercial sized scallops remaining as *limit reference point, there is not an appreciable risk that the reproductive capacity of the population is impaired*. Tracking the total biomass in annual surveys shows no decline in the population pointing to the success of this management regime. The reference points for harvest, requirement of each bed to have over 50% commercial sized scallops protects high concentrations of juvenile scallops and setting the harvest rate at 0.4 $B_{commercial}$ maintain a large reproductive stock. The direct tracking of biomass in the annual surveys and the delay difference model applied by Kittlein & Lasta (2010) shows this harvest strategy would maintain the population at a stable sustainable level, equivalent to BMSY. The area opened to fishing is, on average, less than 2% of the total area of the MU. However, *the available information in relation with the ecological role of the stock not provides a high degree of certainty to fully met SG100 requirements*.		
c	**Guidepost**		The target reference point is such that the stock is	

			maintained at a level consistent with BMSY or some measure or surrogate with similar intent or outcome.	
	Met?		YES	
	Justification	*The target reference point is such that the stock is maintained at a level consistent with BMSY*. The appropriateness of whole stock fishing mortalities as target or limit reference points for fisheries of sedentary stocks including rotational fishing or area closures (such as occurs in this fishery) has been seriously questioned (Hart, 2003). The TAC is established annually for each bed within all management units, taking into account commercial biomass and minimum legal size. The TAC is 40% of the lower confidence limit of commercial biomass. Areas where juveniles exceed 50% of the population are closed to fishing in order to protect recruitment. Harvest rate (0.4) is based on information collected by regular surveys (when a MU cannot be assessed, it remain closed). The fishing strategy of individual fishers leads to the development of a loose rotational fishing pattern. The combination of the harvest rate and the rate juvenile/adult is being applied since the beginning of the fishery (1996). All records of individual tows conducted by survey and fishery vessels from 1995 to 2009 were integrated into a large database by Kittlein & Lasta (2010). Estimates of biomass densities and commercial scallop catches were assembled for each scallop bed in the form of time-series that were modeled using a delay difference model (Deriso's Model). A ten year projection of biomass dynamics was undertaken for the three scallop beds simulating annual catches at different intensities. If catches of commercial scallop in the following ten years remain at their average level since the start of the fishery, the delay-difference model projections suggest that biomass levels will decrease to 85% of current estimated commercial biomass (provided that recruitment occurs at similar levels as those recorded along the history of the fishery). The direct tracking of biomass in the annual surveys shows the population is maintained at a stable sustainable level equivalent to BMSY. *The fishery fully meets the SG80 level.*		
d	**Guidepost**		Key low trophic level species, the target reference point takes into account the ecological role of the stock.	
	Met?		NOT APPLICABLE	
	Justification	The scallop *is not considered to be a key low trophic level species*, as it does not meet the criteria set out in the MSC Certification Requirements.		
References		Hart (2003); Resolution CFP N° 4/2005; Kittlein & Lasta (2010).		
OVERALL PERFORMANCE INDICATOR SCORE:				**90**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 1.1.3

The stock is not depleted and so this PI is not scored.

Evaluation Table for PI 1.2.1

PI 1.2.1	**There is a robust and precautionary harvest strategy in place**

Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The harvest strategy is **expected** to achieve stock management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy **work together** towards achieving management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and is **designed** to achieve stock management objectives reflected in the target and limit reference points.
	Met?	YES	YES	YES
	Justification	The harvest strategy for the Patagonian scallop fishery has been being applied since 1996 (with adjustments introduced through the years), and it is based on monitoring, stock assessment, harvest control rules and management actions. According to the progress observed on the state of the stock, *it is evident that the harvest strategy is not only expected but designed to achieve stock management objectives reflected in the target and limit reference points* (such to protect the stock maximizing the economic yield), *but it is also responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.* *The harvest strategy for the Patagonian scallop fishery is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points*. It is based on: 1. Monitoring (*in place and determines if the harvest strategy is working*): a. on-board observers, b. port and on-board inspectors, for control and surveillance, c. technical sub-commission, d. mandatory allocation of research effort, and e. satellite monitoring system. 2. Stock assessment: a. Regular surveys for stock biomass estimation within any MU. b. Determination a polygon within the MU where the relation adults/total is up to 0.5 c. Biomass estimation of commercial stock whiting the polygon, and estimation of the limit of confidence 3. Harvest control rules: a. size (>55mm shell length), b. fishing gear (only otter trawl device), c. proportion of adult/total up to 0.5 in catches (all juveniles will be returned at sea) d. fixed number of vessels: 4 (strong limited entry regime) e. Non fishing areas 4. Management actions: a. Define a TAC in any MU independently with application of fixed harvest rate (0.4) on the lower limit of confidence of the biomass estimation of commercial scallop in those areas where relation adults/total is up to 0.5 b. open only the assessed MUs; c. closure of a zone or sub-zone, depending of the monitoring d. penalizations. This harvest strategy has been applied since 1996, although modifications have been introduced. It is responsive to status stock, because when the estimated biomass in a MU is lower than the previous years, the resulting TAC will be less and, occasionally, promote the closure of the MU. In the same way, an MU could be closed if the presence of juveniles, detected by on-board observers (1a) modifies the relation adult/total (2b).		

		The objectives of this fishery is common with other fisheries in Argentina: to foment the practice of maritime fishing in order to accomplish a maximum development compatible with the rational exploitation of living marine resources, to promote the effective protection of national interests related to fishing and to promote the sustainability of the fishing activity, the long-term conservation of the resources, the development of industrial processes environmentally appropriate to reach the maximum added value and the maximum argentine employment (Federal Fishery Law N° 24.922). The described harvest strategy has been designed to achieve the objectives of management such to protect the stock maximizing the economic yield. *Therefore, the Patagonian scallop complies with SG60, SG80 and SG100 levels for this scoring issue.*		
b	**Guidepost**	The harvest strategy is **likely** to work based on prior experience or plausible argument.	The harvest strategy may not have been fully tested but monitoring is in place and evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been **fully evaluated** and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	YES	YES	NO
	Justification	*While the harvest strategy of Patagonian scallop fishery may not have been fully tested, there is evidence that the harvest strategy is not only likely to work based on prior experience or plausible argument (such as the delay difference model applied by Kittlein & Lasta, 2010), but monitoring is in place and evidence exists that it is achieving its objectives*. From this model it was also evidenced that the harvest strategy is achieving its objectives. All scallop stocks are spatially structured as subpopulations of sedentary individuals are connected with each other through the dispersal of pelagic larvae. When fishing follows a rotational harvest strategy that can be monitored and fully controlled, and when several areas remain un-fished, the consequences of stock removal are difficult to test. The population is assessed annually in each management unit so the effectiveness of the management strategy is also directly evaluated each year. These assessments show the management regime is achieving its objectives at the scale of the management unit, which is suggested by the results of the delay difference model applied by Kittlein & Lasta (2010). However, as well as other sedentary stocks, the Patagonian scallop stock is strongly dependent of recruitment. Apart from the size of the reproductive stock of scallops, recruitment depends of several factors including oceanographic conditions, faunal composition of the benthos, and adequate substrata. The complexity of the recruitment processes makes very difficult to be sure that trawling does not affect recruitment in some beds. We consider that, despite the harvest strategy is precautionary, it have been tested by model, and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels, *the harvest strategy is cannot be considered fully evaluated in relation to the scale and intensity of the fishery*. *Therefore, the Patagonian scallop not fully complies with the SG100 level for this scoring issue, and so it meets a SG80 level for this SI.*		
c	**Guidepost**	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	YES		

	Justification	*Monitoring is in place that is expected to determine whether the harvest strategy is working (see rationale issue a)).* *The fishery complies with SG60 for this scoring issue.*		
d	**Guidepost**			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			YES
	Justification	Since the beginning of the fishery *the harvest strategy has been and is periodically reviewed and modified in order to improve the original division of the fishery*, from two management zones (Northern sector (N) and Southern sector (S)) to 14 Management Units. The TAC is established for each unit. Each unit can be opened and closed following rotational criteria. Information derived from fleet operations define the area to be surveyed by the research vessels, under a Bayesian criterion. *Evidence presented demonstrates that fishery meets this scoring issue for SG100.*		
References		References are provided in the background of Principle 1 in the re-certification report of Patagonian scallop fishery.		
OVERALL PERFORMANCE INDICATOR SCORE:				**95**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 1.2.2

PI 1.2.2		**There are well defined and effective harvest control rules in place**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	**Generally understood** harvest rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.	**Well defined** harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.	**Well defined** harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.
	Met?	YES	YES	YES
	Justification	*Harvest control rules are not only generally understood but well defined and established prior to open fishing* (MU can be opened independently, where there are clearly defined polygon for fishing within a MU, and areas of un-fishing, fixed number of vessels (4) operating with otter net only) and other applied during fishing season (commercial size; proportion of adult/total must be up to 0.5 in catches, undersized scallop must be returned at sea). *They are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points*. These rules are monitored by on board observers. The described set of pre-agreed rules is used for determining the management action in response to changes in indicators of stock status with respect to the TAC. The law requires daily fishing returns provided daily by email and collectively at the end of each fishing trip. Fishing returns are the responsibility of the captain. They detail number of hauls, position, scallop muscle production (total catch is estimated by the management authority using a Conversion Factor - CF). CFP convert the catch weight (muscle only) to scallop biomass and keep running tallies of		

		scallops landed in each management unit. The TAC is designed to prevent overfishing and the quota is a percentage of it, then the amount of scallops caught is closely monitored by INIDEP, SSPyA and the fishing companies. The closure for the company who reach the quota is mandatory and can be implemented by CFP within 1-3 days of the fleet reaching the TAC. These actions are consistent with harvest strategy and guarantee that the exploitation rate is not exceeded and it is reduced as limit reference points are approached. Satellite monitoring and Observer records show the positions of each vessel in real time. Once the TAC is reached, the MU is closed. The satellite monitoring and observer records confirm no further fishing occurs there. No TAC overruns occur. *Therefore, the fishery complies with SG100 level for this issue.*		
b	**Guidepost**		The **selection** of the harvest control rules takes into account the **main** uncertainties.	The **design** of the harvest control rules (HCR) takes into account a **wide range** of uncertainties.
	Met?		YES	NO
	Justification	*The selection of the harvest control rules (HCR) takes into account the main sources of uncertainty*: i) estimation of biomass of scallop harvested within a MU is done using the muscle production and the use of Conversion Factor (CF). The variation of CF has been studied; ii) previously non-detected patches with prevalence of juveniles (Z index below 0.5, and an uncertainty about the small scale spatial distribution) are detected by on-board observers and can produce changes in effort allocation; iii) positioning of the fleet is solved by satellite monitoring. The HCR allow an administrative rapid-response and viable management of the resource. The use of CF proposed by INIDEP has varied from 7.14 to 12.16 depending of the scallop size, bed, and seasonal variability of scallop condition. However, CFP always used a single value because of the extreme difficulty to have a different one for every bed, every year modify it considering all sources of variability. Now this CF is fixed at 7.14. The use of the one conversion value to estimate biomass landed, is pragmatic but using the lowest mean value encountered, is conservative and likely to result in fishers catching less biomass than the TAC. So, while *the selection and design of the harvest control rules takes into account the main uncertainties, there is no evidence that the design of HCR takes into account a wide range of uncertainties.* *The Patagonian scallop fishery meets with this issue in SG80 level.*		
c	**Guidepost**	There is **some evidence** that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.
	Met?	YES	YES	NO
	Justification	*There is more than some evidence that tools used to implement harvest control rules are appropriate and effective in controlling exploitation, and available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules*. However, since all the satellite monitoring and observer reporting show that all the HCR are being observed by fishers, and the estimates from the annual surveys of biomass show that the exploitation level achieved by the rules is sustainable, it cannot be assured that		

		evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules. *Therefore, the fishery meets with the SG80 for this SI.*
References		References are provided in the background of Principle 1 in the re-certification report of Patagonian scallop fishery.
OVERALL PERFORMANCE INDICATOR SCORE:		**85**
CONDITION NUMBER (if relevant):		**-**

Evaluation Table for PI 1.2.3

PI 1.2.3		**Relevant information is collected to support the harvest strategy**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	**Some** relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	**Sufficient** relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.	A **comprehensive range** of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy, is available.
	Met?	YES	YES	YES
	Justification	*There is not only some relevant and sufficient information (both qualitative and quantitative), but a comprehensive range of information available related to on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy which is required to implement the harvest strategy.* The spatial structure has been mapped in fine detail by the analysis of grid pattern dredge surveys (Lasta *et al.,* 2001; Bogazzi, 2015). The distribution of the beds is closely related to the distribution of the oceanographic fronts along the edge and within the Continental Shelf (Bogazzi *et al.,* 2005). The dispersion of larvae by the South-North currents along the Continental Shelf has been modeled to investigate the linkages between the beds (Bogazzi *et al.,* 2003). Reproductive cycle was described by Campodónico *et al*. (2007). Spatial variation in growth rate was estimated by Lomowasky *et al.* (2007, 2008) in several beds. Studies on larval spatial movements within the zones have been studied by Franco (2010). Connectivity between beds has been explored by genetic studies (Ruzzante, 2010). Kittlein (2007), Milessi (2010) and Milessi *et al.* (2010) modeled fishing mortality rate for sectors and management units. Stock abundance is estimated yearly in each MU, to establish TAC, and stock removal is estimated daily from fishing returns for each vessel and from OBO data. The position of every tow by the scallop trawlers is recorded from satellite position by Prefectura Naval Argentina. *Therefore, the fishery fully complies with SG100 of this scoring issue.*	
b	**Guide post**	Stock abundance and fishery removals are monitored and at least one indicator is	Stock abundance and fishery removals are **regularly monitored at a level of**	**All information** required by the harvest control rule is monitored with high

		available and monitored with sufficient frequency to support the harvest control rule.	**accuracy and coverage consistent with the harvest control rule**, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.	frequency and a high degree of certainty, and there is a good understanding of inherent **uncertainties** in the information [data] and the robustness of assessment and management to this uncertainty.
	Met?	YES	YES	NO
	Justification	*Stock abundance and fishery removals regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.* They are evaluated yearly for each management unit with high precision. The decision rules for this fishery are well documented in Federal Fishing Law, its complementary Decree, resolutions and minutes of CFP. The measures are adjusted to reality and are consistent with the limitations of the data. The decision rules are evaluated once or twice a year. All information required by the harvest control rule is collected and monitored with high frequency by INIDEP and Universidad Nacional de Mar del Plata. Stock abundance in each management unit is estimated annually in biomass surveys. Harvest levels in each management unit are reported and monitored daily. Positions of harvesting are monitored in real time by satellite position tracking. Further verification of vessel catches and position of all tows comes from daily observer records. *However, it cannot be assured that there is a high degree of certainty, since there is no evidence that all inherent uncertainties in the information are well understood, and also the robustness of assessment and management to this uncertainty.* The main uncertainty in catch data is from estimation of catch biomass using a standard muscle landing biomass conversion factor (CF). As the lowest of a range of conversion factor is used to estimate biomass of the catch, this estimate will be conservative. The muscle yield varies annually, seasonally, by area, by scallop size, and even by processing plant. A linear model fitted the relation between muscle weight and covariates (year, semester, scallop bed, scallop size, and two interaction terms) and explained 42% of the variability (Bogazzi, 2009). CFP does not apply measures to correct conversion coefficient because of the complexity of the variation in CF and the practical difficulty in collecting precise information particularly at the scale of the fishery. *Even when some uncertainties about the estimation of catch are understood (Bogazzi, 2009) and the practicality in the application unable the application of other CF is logical, we consider that this is not enough to support that "all information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and that there is a good understanding of inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty", and so this issue is not fully met for SG100.* Therefore, the fishery meets with SG80 for this SI.		
c	**Guidepost**		There is good information on all other fishery removals from the stock.	
	Met?		YES	

	Justification	*There is good information on all other fishery removals from the stock, since there are no other vessels outside or not covered by the UoC; and no other fishery takes place in the area* where scallops beds occur so scallops are not harvested as by-catch in any fishery. *It is considered that the fishery meets with SG80 for this scoring issue.*
References		References are provided in the background of Principle 1 in the re-certification report of Patagonian scallop fishery. Bogazzi, 2015 (Section II).
OVERALL PERFORMANCE INDICATOR SCORE:		**90**
CONDITION NUMBER (if relevant):		**-**

Evaluation Table for PI 1.2.4

PI 1.2.4		**There is an adequate assessment of the stock status**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**		The assessment is appropriate for the stock and for the harvest control rule.	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.
	Met?		YES	YES
	Justification	*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 is based on kriging analysis which is appropriate the widespread contagious distribution of a sedentary stock of molluscs. It gives precise estimates of biomass to determine harvest rates on an annual basis and allows precise monitoring of the success of the harvest strategy and sustainability of the population. *Therefore, we consider that fishery meets with SG100 for this scoring issue.*		
b	**Guidepost**	The assessment estimates stock status relative to reference points.	The assessment **takes uncertainty into account**.	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a **probabilistic** way.
	Met?	YES	YES	YES
	Justification	*The assessment takes into account uncertainty and estimates (and evaluates) stock status relative to reference points in a probabilistic way.* The fishery is managed using a fixed harvest rate estimated annually based on survey information. Recruitment is the main source of uncertainty in this fishery. Both fleet information and surveys monitor the spatial spread and timing of recruitment. Areas of heavy recruitment are closed to fishing in order to protect the new recruits. *Therefore, the fishery meets with SG100 for this scoring issue.*		
c	**Guidepost**	The assessment **identifies major sources** of uncertainty.	The assessment of stock status is subject to peer review.	The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?	YES	YES	NO
	Justification	*While the assessment identifies major sources of uncertainty through the INIDEP reports that are audited and approved by the National Director of Research, identify, there is*		

		formal system in which the assessment of stock status is subject to peer review. At the moment, there is no evidence that supports that the assessment has been tested and shown to be robust, nor alternative hypotheses and assessment approaches have been rigorously explored. Even when the direct estimation of biomass by annual surveys, and the delay difference model applied by Kittlein & Lasta (2010) shows these harvest strategy would maintain the population at a stable sustainable level, equivalent to BMSY, we consider that the model needs to be explored more rigorously. Since the last surveillance audit, INIDEP sent to OIA a note were explain that the report about assessment methodology of Patagonian scallop (*Zygochlamys patagonica*) biomass from survey research data, that will be published in "Revista de Investigación y Desarrollo Pesquero", is in peer review process. Even the assessment of stock status is subject of peer review, it has not been tested and shown to be robust. There are not evidences that alternative hypotheses and assessment approaches have been rigorously explored. So, *the fishery meets with SG80 for this scoring issue.*		
d	**Guidepost**			The assessment has been **internally and externally** peer reviewed.
	Met?			NO
	Justification	At the moment of the last surveillance a document with detailed methodology of the assessment, which consists in direct evaluation of the biomass, has been accepted to be published in a peer reviewed scientific journal. While all INIDEP reports are audited and approved by the National Director of Research, the assessment has been audited by independent peer reviewers for scientific journal of INIDEP. *However, there is no evidence that the assessment has been externally peer reviewed. Therefore, this issue is not complied by the fishery.*		
References		Kittlein & Lasta (2010); Annual INIDEP technical reports.		
OVERALL PERFORMANCE INDICATOR SCORE:				**90**
CONDITION NUMBER (if relevant):				**CLOSED**

Principle 2:

Evaluation Table for PI 2.1.1

PI 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**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	Main retained species are **likely** to be within biologically based limits (if not, go to scoring issue c below).	Main retained species are **highly likely** to be within biologically based limits (if not, go to scoring issue c below).	There is a **high degree of certainty** that retained species are within biologically based limits **and** fluctuating around their target reference points.
	Met?	YES	YES	YES

	Justification	*No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future.* The fishery is pursued in a habitat and depth range in which demersal fish are not common. The gear is rigged with doors attached by bridles directly to the net and with the net having a low headline height and being towed slowly, it neither herds fish nor captures any above the seafloor. Observer records show that no species other than the target are retained in this fishery. Observers continue monitoring this situation. If any species other than scallops began to be retained during the period of certification, then this PI would have to be reassessed. At the present time, though, there are considered to be no retained species in the Patagonian Scallop Fishery, and so*, the fishery meets with SG100 level of performance for this SI.*		
b	**Guidepost**			Target reference points are defined for retained species.
	Met?			YES
	Justification	*No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future. Therefore, the fishery meets with the SG100 level for this SI.*		
c	**Guidepost**	If main retained species are 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 main retained species are 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.	
	Met?	YES	YES	
	Justification	No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future. *So no measures and partial strategy are required in place that the fishery does not hinder recovery and rebuilding depleted stocks. Therefore, the fishery meets with SG80 for this SI.*		
d	**Guidepost**	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.		
	Met?	YES		
	Justification	No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future. So the fishery meets with SG60 level of performance for this SI.		

References	Interviews with Gabriel Blanco and OBOs reports. Previous surveillance reports and the original certification report of this fishery.
OVERALL PERFORMANCE INDICATOR SCORE:	**100**
CONDITION NUMBER (if relevant):	**-**

Evaluation Table for PI 2.1.2

PI 2.1.2		**There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	There are **measures** in place, if necessary, that are expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a **partial strategy** in place, if necessary that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a **strategy** in place for managing retained species.
	Met?	YES	YES	YES
	Justification	*No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future.* *As there are not retained species in the Patagonian scallop fishery, is not necessary at the moment, to implement a directly strategy in place for managing retained species.* Trawl gear is rigged and operated in such a way that no demersal fish are caught so their populations remain unaffected by the scallop fishery. The gear is rigged with doors attached by bridles directly to the net and with the net having a low headline height it neither herds fish nor captures any off the bottom. The management strategy is: to not to capture any vertebrates and to return all invertebrate by-catch alive to the seafloor. *The fishery meets with the SG100 level of performance for this SI.*		
b	**Guidepost**	The measures are considered **likely** to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	There is some **objective basis for confidence** that the partial strategy will work, based on some information directly about the fishery and/or species involved.	**Testing** supports **high confidence** that the strategy will work, based on information directly about the fishery and/or species involved.
	Met?	YES	YES	YES
	Justification	*No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future.* *Observer coverage of the entire fishery records and supports high confidence that the strategy will work, based on information directly about the fishery and/or species involved.* *There are no retained species in the Patagonian Scallop Fishery, and so the fishery meets with the SG100 level performance for this SI.*		

c	**Guidepost**		There is **some evidence** that the partial strategy is being **implemented successfully.**	There is **clear evidence** that the strategy is being **implemented successfully.**
	Met?		YES	YES
	Justification	*No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future.* *The 100% observer coverage is clear evidence that the strategy is being implemented successfully*. Observer records show all fish are returned to sea immediately and then the commercial-sized scallops are mechanically sorted from the trawl contents and the by-catch and under-sized scallops returned to the sea within 30 minutes of landing. Observer coverage of 100% of the fishery continues to monitor the successful outcome. *There are no retained species in the Patagonian Scallop Fishery, and so the fishery meets the SG100 level of performance for this SI.*		
d	**Guidepost**			There is some evidence that the strategy is achieving its overall objective.
	Met?			YES
	Justification	*No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future.* Moreover, Technical reports prepared by INIDEP using Observer data and records are evidences that the strategy is achieving its overall objective. *There are no retained species in the Patagonian Scallop Fishery, and so the fishery meets the SG100 level of performance for this SI.*		
References		Interviews with Gabriel Blanco and OBOs report. Previous surveillance reports and the original certification report of this fishery. INIDEP Research Reports N° 4/2011 and N° 51/2010.		
OVERALL PERFORMANCE INDICATOR SCORE:				**100**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 2.1.3

PI 2.1.3		**Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	**Qualitative information** is available on the amount of main retained species taken by the fishery.	**Qualitative information** and **some quantitative information** are available on the amount of main retained species taken by the fishery.	Accurate and verifiable information is available on the catch of all retained species and the consequences for the status of affected populations.
	Met?	YES	YES	YES
	Justification	*No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact*		

		occurs in the future. Trawl gear is rigged and operated in such a way that demersal fish are not caught. The 100% observer coverage shows that no such species are caught or retained and provides quantitative information showing that no such species are caught or retained meeting both qualitative and quantitative conditions. Should any commercial species (other than the target species) be retained, the Observer's coverage would ensure the accurate and verifiable information is available to assess any effect on such populations. *There are no retained species in the Patagonian scallop fishery, and so the fishery meets the SG100 level of performance for this SI.*		
b	**Guidepost**	Information is **adequate to qualitatively** assess outcome status with respect to biologically based limits.	Information is **sufficient to estimate** outcome status with respect to biologically based limits.	Information is **sufficient to quantitatively** estimate outcome status with **a high degree of certainty.**
	Met?	YES	YES	YES
	Justification	*No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future.* *So the fishery meets with the SG100 level of performance for this SI.*		
c	**Guidepost**	Information is adequate to support **measures** to manage **main** retained species.	Information is adequate to support a **partial strategy** to manage **main** retained species.	Information is adequate to support a **comprehensive strategy** to manage retained species, and evaluate with a **high degree of certainty** whether the strategy is achieving its objective.
	Met?	YES	YES	YES
	Justification	*No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future.* *So the fishery meets with the SG100 level of performance for this SI.*		
d	**Guidepost**		Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator score or the operation of the fishery or the effectiveness of the strategy)	Monitoring of retained species is conducted in sufficient detail to assess ongoing mortalities to all retained species.
	Met?		YES	YES
	Justification	*No species other than the target species are retained in the Patagonian scallop fishery, and it is intended to continuing like this, with ongoing monitoring to ensure that no impact occurs in the future.* The 100% observer coverage shows that no such species are caught or retained and provides quantitative information showing that no such species are caught or retained meeting both qualitative and quantitative conditions. Should any commercial species (other than the target species) be retained, the Observer's		

		coverage would ensure the accurate and verifiable information is available to assess any effect on such populations. *There are no retained species in the Patagonian scallop fishery, and so the fishery meets with the SG100 level of performance for this SI.*
References		Interviews with Gabriel Blanco and OBOs report. Previous surveillance reports and the original certification report of this fishery.
OVERALL PERFORMANCE INDICATOR SCORE:		**100**
CONDITION NUMBER (if relevant):		**-**

Evaluation Table for PI 2.2.1

This PI was scored using RBF. The scoring was 80. The assessment team assigned a condition, but in this surveillance process, following MSC certification procedures it has been changed to recommendation.

Evaluation Table for PI 2.2.2

PI 2.2.2		**There is a strategy in place for managing by-catch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to by-catch populations**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	There are **measures** in place, if necessary, which are expected to maintain main by-catch 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 a **partial strategy** in place, if necessary, for managing by-catch 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 a **strategy** in place for managing and minimizing by-catch.
	Met?	YES	YES	NO
	Justification	*There are measures, and even there is a partial strategy in place, for managing by-catch species at levels which are not only expected but highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery (if it was the situation)*. By-catch species survive the catching and sorting processes and are returned to the seafloor alive. Mortality of by-catch species returned to the seafloor is considered to be less than 10% (Bremec *pers.com*.). 1. One partial strategy to maintain by-catch species at high levels is to minimize their direct mortality from fishing. By-catch and non-commercial size scallops are separated from the commercial size scallop catch in a large diameter, rotary sieve that revolves slowly, with the by-catch cushioned in flowing water. The by-catch suffers no visible damage and is returned to the seafloor within 30 minutes of capture (Bremec, *pers. com*.). Little by-catch is killed. Discard mortality for most by-catch species is estimated to be less than 10% apart from the attached Cnidaria and sponges that appear to fail to reattach on discard (Bremec, *pers. com*.). 2. Another partial strategy to maintain populations of by-catch species is use of no-fish zones, (set aside from the inception of the fishery), in each management unit (Resolution CFP N° 4/2005, Annex III b). The benthos of these areas will provide sources of larvae of both scallops and by-catch species for re-colonization of fished areas should they become depleted (Roberts *et al.,* 2005; Bohnsack *et al.,* 2004). *Although by-catch is well-managed, its management process is poorly documented, and there is no evidence of a clear strategy in place for minimizing by-catch. So, the fishery meets with SG80 level of performance for this SI.*		
b	**Guidepost**	The measures are	There is **some objective**	**Testing** supports **high**

		considered **likely** to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/species).	**basis for confidence** that the partial strategy will work based on some information directly about the fishery and/or the species involved.	**confidence** that the strategy will work, based on information directly about the fishery and/or species involved.
	Met?	YES	YES	NO
	Justification	*The measures are not only considered likely to work, based on plausible argument, and there is also 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 are some direct investigations of populations of by-catch species in the benthic habitat of the scallop fishery that the partial strategy will work* and show that species composition and numbers are not significantly different from the pre-fishery condition of the benthic habitat (Schejter *et al.,* 2008; Sanchez *et al.,* 2011). *However, no testing has been conducted to support high confidence that the strategy will work, based on information directly about the fishery and/or species involved. Therefore, the fishery meets with the SG80 level for this SI.*		
c	**Guidepost**		There is **some evidence** that the partial strategy is being implemented successfully.	There is **clear evidence** that the strategy is being implemented successfully.
	Met?		YES	NO
	Justification	*Several experiences in seabed demonstrate that the partial strategy is being implemented successfully.* It demonstrated the importance of spatial closures and temporary fishery for benthic community due there is evidence that biomass of species impacted by trawling is recovered more quickly in the exclusion area. The importance of this partial strategy is noteworthy a control area or baseline to distinguish between natural changes those caused by trawling. This study extended the knowledge of the benthic community, and allows better understand the functioning of marine ecosystems and identify which groups of organisms is necessary to preserve fishing activity. INIDEP research group plans to continue developing this line of research studies similar to other management units to analyze the variation of the benthic community regarding closures both time and space (Escolar *et al.,* 2015) and to obtain clear evidence that the strategy is being implemented successfully. *Therefore, this scoring issue does comply with SG80 of performance.*		
d	**Guidepost**			There is some **evidence** that the strategy is achieving its objective.
	Met?			YES
	Justification	The studies of Schejter *et al.* (2008) and Sanchez *et al.* (2011) indicate there has been little or no change since the commencement of the fishery in populations of by-catch species in the benthic environment. *Hence there is some evidence that the strategy is achieving its objective and the fishery meets with the SG100 level of performance for this SI.*		
References		Schejter *et al.* (2008); Sanchez *et al.* (2011); Roberts *et al.* (2005); Bohnsack *et al.* (2004);		

	Escolar *et al. (*2015).
OVERALL PERFORMANCE INDICATOR SCORE:	**85**
CONDITION NUMBER (if relevant):	**CLOSED**

Evaluation Table for PI 2.2.3

PI 2.2.3		**Information on the nature and the amount of by-catch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage by-catch**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	**Qualitative information** is available on the main by-catch species affected by the fishery.	**Qualitative information and some quantitative information** are available on the amount of main by-catch species affected by the fishery.	**Accurate and verifiable information** is available on the amount of all by-catch and the consequences for the status of affected populations.
	Met?	YES	YES	NO
	Justification	*Qualitative and some quantitative information are available on the amount of main by-catch species affected by the fishery from the observer program and from scientific surveys* (that now use commercial trawls for biomass surveys). By-catch is marked by a high volume of material and a rich assortment of species (Lasta & Bremec, 1998; Bremec & Lasta, 2002). On Board Observers, randomly subsample 10L of the catch of every tow (see Observer manual procedures) and record the weight of scallops, and all accompanying fauna and individually, weight of: scallop valves, sponges, ophuroids, and weight and numbers of; starfish, echinoids, gastropods, crabs, polychaete tubes, anemones, ascidians, ray egg cases, and since June 2010, all species of fish (see Observer spreadsheet example). The 10 L sub- sample taken randomly from one representative tow every day, on each vessel, has been frozen and delivered to the benthic research team at INIDEP for specific identification (see Observer Manual procedures). The by-catch from scientific sampling of biomass surveys has also been subsampled in the same manner for laboratory analysis at INIDEP. *However, we consider that the information on the by-catch species would be actually really accurate and verifiable if the on-board information was actualized and analyzed quickly. Therefore, since it cannot be supported that information available on the amount of all by-catch and the consequences for the status of affected populations is accurate and verifiable information is available, the fishery meets with the SG80 level of performance for this SI.*		
b	**Guidepost**	Information is **adequate** to **broadly understand** outcome status with respect to biologically based limits.	Information is **sufficient to estimate** outcome status with respect to biologically based limits.	Information is **sufficient** to quantitatively estimate outcome status with respect biologically based limits with a **high degree of certainty**.
	Met?	RBF / SICA	RBF / SICA	RBF/SICA
	Justification	Scoring issue not scored as RBF used to score PI 2.2.1.		
c	**Guidepost**	Information is adequate to support **measures** to manage by-catch.	Information is adequate to support a **partial strategy** to manage main by-catch species.	Information is adequate to support a **comprehensive strategy** to manage by-catch, and **evaluate** with a **high degree of certainty** whether a strategy is

				achieving its objective.
	Met?	YES	YES	NO
	Justification	*Information is adequate to support partial strategy to manage by-catch. By-catch species are known, and even the most fragile species do not appear to be damaged in the sorting process before being returned to the sea and, now the information support the partial strategy (Colonello & Massa, 2014; Villalba & Colonello, 2015).* Abundance of by-catch species has remained stable in the benthos of fished areas (Schejter *et al.,* 2008) suggesting by-catch is being managed well in this fishery. One measure, for example, is to return all by-catch alive to the sea after sorting. Adequate information has been collected on by-catch from biomass surveys and the commercial fleet by OBO to determine how effective this has been. The chondrichthyan species retained on deck were ruled mostly by applying "best practices", meaning that the individuals are discarded quickly, without using hooks or "gaffs" (CFP Resolution N° 4/2013). Observations indicate that survival rate was higher in specimens collected on deck. The species collected during the production process crossed the wells and washing machines where water pressure is applied. It is likely that this latter process significantly decreases the survival of them. The experiences should be continued to increase the guarantees on the survival of the rays (Villalba & Colonello, 2015). *However, information is not adequate to support a comprehensive strategy to manage by-catch, and evaluate with a high degree of certainty whether a strategy is achieving its objective. So, this PI meets with SG80 level of performance for this SI.*		
d	**Guidepost**		Sufficient data continue to be collected to detect any increase in risk to main by-catch species (e.g., due to changes in the outcome indicator scores or the operation of the fishery or the effectively of the strategy).	Monitoring of by-catch data is conducted in sufficient detail to assess ongoing mortalities to all by-catch species.
	Met?		YES	YES
	Justification	*Sufficient data continue to be collected to detect any increase in risk to main by-catch species. Survivorship and degree of harm of the main by-catch species was studied in relation with the fishing and selection processes by experiments addressed to investigate which species are more affected.* The weight of by-catch species in each trawl to continue to be recorded by observers. Samples of by-catch continue to be taken by OBO and biomass surveys. *Such, the fishery meets with SG100 level of performance.*		
References		Lasta & Bremec (1998); Bremec & Lasta (2002); Schejter *et al.* (2008), Swartz et al. (2014); Escolar et al (2014); Colonello & Massa (2014); Villalba & Colonello (2015)		
OVERALL PERFORMANCE INDICATOR SCORE:				**85**
CONDITION NUMBER (if relevant):				**CLOSED**

Evaluation Table for PI 2.3.1

PI 2.3.1	**The fishery meets national and international requirements for the 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**		
Scoring Issue	SG 60	SG 80	SG 100

a	**Guidepost**	Known effects of the fishery are **likely** to be within limits of national and international requirements for protection of 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.	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.
	Met?	YES	YES	YES
	Justification	*There are no populations of protected, threatened and endangered species in the habitat of the Patagonian scallop so ETP species will not be impacted by this fishery.* No species present in Argentine waters listed in CITES appendixes are captured by the Patagonian scallop fishery. Resolution CFP Nº 13/2009 establishes measures to protect rays and sharks. These measures are considered likely to work, based on effort from the different stakeholders interested in protecting these vulnerable groups. Whales, other mammals and turtles have never been seen by observers along the Patagonian Shelf Break Front, seabirds are common coastally particularly along coastal fronts but are not found along the shelf-break front, and turtles are only found coastally in the northern sector (G. Blanco, *pers. com.*), therefore these cannot be affected by the fishery. The footrope and head rope of the trawl are attached directly to the doors and without sweeps the gear does not herd fish well and combined with the low headline height, the trawl catches few demersal fish. The few demersal fish caught are all juveniles. With the slow towing speed (3.8 knots), and narrow mouth opening (1-1.20 m high; E. Gonzalez Lemmi, *pers. com*. and 11.5-12.6 m wide; Lasta & Iribarne, 1997), the trawl would not readily catch any birds or mammals that might stray into the fishery area. OBO records show none do. It is considered that the effects of the fishery are known and there is a high degree of certainty that these are within limits of national and international requirements for protection of ETP species*, so the fishery meets the SG100 level of performance for this SI.* Each fishing trip is accompanied by On Board Observer and the catch is sampled rigorously.		
b	**Guidepost**	Known direct effects are **unlikely** to create **unacceptable impacts** to ETP species.	Direct effects are **highly unlikely** to create **unacceptable impacts** to ETP species.	There is a **high degree of confidence** that there are no significant **detrimental direct effects** of the fishery on ETP species.
	Met?	YES	YES	YES
	Justification	*There are no populations of protected, threatened and endangered species in the habitat of the Patagonian scallop so ETP species will not be impacted by this fishery, and the fishery meets the SG100 level of performance for this SI.*		
c	**Guidepost**	Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.	There is a **high degree of confidence** that there are no significant **detrimental direct effects** of the fishery on ETP species.	There is a **high degree of confidence** that there are no significant **detrimental indirect effects** of the fishery on ETP species.
	Met?	YES	YES	YES
	Justification	*There are no populations of protected, threatened and endangered species in the habitat of the Patagonian scallop so ETP species will not be impacted by this fishery, and the fishery meets the SG100 level of performance for this SI.*		
References		Lasta & Iribarne (1997)		

	Stakeholder comments (See section Appendix 3. Stakeholder submissions of re-certification report)
OVERALL PERFORMANCE INDICATOR SCORE:	**100**
CONDITION NUMBER (if relevant):	**-**

Evaluation Table for PI 2.3.2

PI 2.3.2		**The fishery has in place precautionary management strategies designed to:** • **Meet national and international requirements;** • **Ensure the fishery does not pose a risk of serious harm to ETP species;** • **Ensure the fishery does not hinder recovery of ETP species; and** • **Minimise mortality of ETP species.**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	There are **measures** in place that minimize mortality, and are expected to be **highly likely to achieve** national and international requirements for the protection of ETP species.	There is a **strategy** in place for **managing the fishery's impact** on ETP species, including measures to minimize mortality, which is designed to be **highly likely to achieve** national and international requirements for the protection of ETP species.	There is a **comprehensive strategy** in place for managing the fishery's impact on ETP species, including measures to minimize mortality that is designed to achieve **above** national and international requirements for the protection of ETP species.
	Met?	YES	YES	YES
	Justification	*There are no populations of protected, threatened and endangered species in the habitat of the Patagonian scallop so ETP species will not be impacted by this fishery.* Moreover, precautionary management strategies are in place in Argentina, designed to meet international requirements, ensure that fisheries do not pose risks or harm ETP species, such as the National Plan of Action for the Conservation and Management of Sharks of Argentina (PAN-Sharks) and other specific measures for Chondrichtyes). *Therefore, the fishery meets the SG100 level of performance for this SI.*		
b	**Guidepost**	The measures are **considered likely** to work, based on **plausible argument** (e.g., general experience, theory or comparison with similar fisheries/species).	There is an **objective basis for confidence** that the strategy will work, based on **information** directly about the fishery and/or the species involved.	The strategy is mainly based on information directly about the fishery and/or species involved, and a **quantitative analysis** supports **high confidence** that the strategy will work.
	Met?	YES	YES	YES
	Justification	*There are no populations of protected, threatened and endangered species in the habitat of the Patagonian scallop so ETP species will not be impacted by this fishery, so the fishery meets the SG100 level of performance for this SI.* The absence of encounters is monitored by on board observers on 100% of vessels. The management authority has developed National Action Plans to follow the FAO International Action Plans for Sharks and Seabirds for all Argentinean fisheries. The Observers Program monitors any interactions between the fleet and Sharks and Seabirds if they occur. The data supports high confidence that the strategy does work, and the fishery has no impact on ETP species.		

c	**Guidepost**		There is **evidence** that the strategy is being implemented successfully.	There is **clear evidence** that the strategy is being implemented successfully.
	Met?		YES	YES
	Justification	*There are no populations of protected, threatened and endangered species in the habitat of the Patagonian scallop so ETP species will not be impacted by this fishery, so the fishery meets the SG100 level of performance for this SI.* Juvenile sharks are caught occasionally and the numbers are recorded for every tow by the Observers who return them to the sea. No birds have been recorded. There is clear evidence that the strategy is being implemented successfully and the fishery has no impact on ETP species.		
d	**Guidepost**			There is evidence that the strategy is achieving its objective.
	Met?			YES
	Justification	*There are no populations of protected, threatened and endangered species in the habitat of the Patagonian scallop so ETP species will not be impacted by this fishery, so the fishery meets the SG100 level of performance for this SI.*		
References		On Board Observer Procedure Manual and Fishing Trips Records. National Action Plans for Sharks and Sea birds.		
OVERALL PERFORMANCE INDICATOR SCORE:				**100**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 2.3.3

PI 2.3.3		**Relevant information is collected to support the management of fishery impacts on ETP species, including:** • **Information for the development of the management strategy;** • **Information to assess the effectiveness of the management strategy; and** • **Information to determine the outcome status of ETP species.**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	Information is sufficient to qualitatively estimate the fishery related mortality of ETP species.	**Sufficient data** are available to allow fishery related mortality and the impact of fishing to be **quantitatively** estimated for ETP species.	Information is **sufficient** to **quantitatively** estimate outcome status of ETP species with a high degree of certainty.
	Met?	YES	YES	YES
	Justification	*There are no populations of protected, threatened and endangered species in the habitat of the Patagonian scallop so ETP species will not be impacted by this fishery, so the fishery meets the SG100 level of performance for this SI.* Moreover, there is sufficient information available to quantitatively estimate fishery related mortality and the impact of fishing for ETP species with a high degree of certainty. There has been a 100%-coverage of national OBOs. OBOs are trained according to the INIDEP sampling protocol designed by the research project. Information is analyzed by INIDEP and presented as Advice and Transference Report (not published) or Technical Report (published). This includes information on numbers, weights and lengths of		

		incidentally caught species and can be used to confirm their noncommercial nature, both in quantity and size. Dockside monitoring records on 100% of landings provide the amounts of all landed species in this fishery. Information on directed and other incidental species is also available from commercial logbooks.		
b	**Guidepost**	Information is **adequate** to **broadly understand** the impact of the fishery on ETP species.	Information is **sufficient** to determine whether the fishery may be a threat to protection and recovery of the ETP species.	**Accurate and verifiable information** is available on the **magnitude of all impacts, mortalities and injuries** and the **consequences for the status** of ETP species.
	Met?	YES	YES	YES
	Justification	*There are no populations of protected, threatened and endangered species in the habitat of the Patagonian scallop so ETP species will not be impacted by this fishery, so the fishery meets the SG100 level of performance for this SI.* Juvenile sharks are caught occasionally and the numbers are recorded for every tow by the Observers who return them to the sea. No birds have been recorded. The observer data provide accurate and verifiable information on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species, so that the fishery has no impact and causes no injury or mortality to ETP species.		
c	**Guidepost**	Information is adequate to support **measures** to manage the impacts on ETP species.	Information is sufficient to measure trends and support a full **strategy** to manage impacts on ETP species.	Information is adequate to support a **comprehensive strategy** to manage impacts, minimize mortality and injury of ETP species, and evaluate with a **high degree of certainty** whether a strategy is achieving its objectives.
	Met?	YES	YES	YES
	Justification	*There are no populations of protected, threatened and endangered species in the habitat of the Patagonian scallop so ETP species will not be impacted by this fishery, so the fishery meets the SG100 level of performance for this SI.* Observer reports show the fishing operation ensures no ETP species are impacted. The observer data is adequate to support a comprehensive strategy (if needed) to manage impacts, minimize mortality and injury of ETP species, and evaluate with a high degree of certainty whether a strategy is achieving its objectives, in this case, that the fishery has no impact on ETP species.		
References		On Board Observer Procedure Manual and Fishing Trips Records. National Action Plans for Sharks and Sea birds.		
OVERALL PERFORMANCE INDICATOR SCORE:				**100**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 2.4.1

This PI was scored using RBF. The scoring was 70. The assessment team was assigned a condition.

Re-scoring table for PI 2.4.1

PI 2.4.1	**The fishery does not cause serious or irreversible harm to habitat structure, considered**

		on a regional or bioregional basis, and function		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	The fishery is **unlikely** to reduce habitat structure and function to a point where there would be serious or irreversible harm.	The fishery is **highly unlikely** to reduce habitat structure and function to a point where there would be serious or irreversible harm.	There is **evidence** that the fishery is highly unlikely to reduce habitat structure and function to a point where would be serious or irreversible harm.
	Met?	YES	YES	YES
	Justification	*There is evidence that the fishery is highly unlikely to reduce habitat structure and function to a point where would be serious or irreversible harm.* A technical report with sorting identification, weighing and counting of lowest possible taxa of all benthos species has been provided, including a comparison with fished and un-fished area (between MU and samples obtained out of the MU). A qualitative and quantitative comparative study of the benthic communities of Reserve Area and MU B were done during 2014 (Schejter *et al.,* 2014). The differences detected could be produced by the presence of new species and not to the influence of the fishing, due to the MU B remained closed during several years. The results were consistent with those reported by Schejter (2014) and the biological association of invertebrates has been persistent over time, and the recorded differences between years were due to the variation in biomass of such taxa with dominance in the community. During 2015, a study was addressed to gather information of the invertebrate benthic community in fishing areas and reserves zones within the MU B from data of the survey carried out in 2015; and to compare results with previous survey in 2013. No differences were detected between zones in commercial scallop, total scallop and associated fauna. *Therefore, the fishery complies with the SG100 level of performance with this SI.*		
References		Schejter *et al.* (2014); Schejter (2014)		
OVERALL PERFORMANCE INDICATOR SCORE:				**100**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 2.4.2

PI 2.4.2		**There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	There are **measures** in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.	There is a **partial strategy** in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.	There is a **strategy** in place for managing the impact of the fishery on habitat types.
	Met?	YES	YES	NO

	Justification	*There are measures and even there is a partial strategy in place for managing the impact on habitats, which expects to achieve the Habitat Outcome 80 level of performance or above*. As scallops are the keystone species in the benthic habitat, the Management Plan ensuring sustainability of scallop populations (Principle 1), indirectly will also ensure the sustainability of benthic habitat of scallop beds. Significant areas of each scallop bed are closed to fishing and so will preserve some of the habitat from disturbance; fishers follow a rotational fishing strategy so no area of a bed is fished for prolonged periods; shells of processed scallops are returned to sea at point of capture so helping preserve habitat structure. These measures are expected to achieve the Habitat Outcome 80 level of performance. The sea floor of the Patagonian Shelf Large Marine Ecosystem is sandy and similar across the whole shelf. Abundance of all benthic species is heightened under the highly Shelf Break Front where bento-pelagic coupling maintains high benthic production. As the scallops are the principal keystone species that structures the benthic habitat of scallop beds, successful management under principle 1 will ensure sustainability of the fishery habitat. By-catch species are returned alive to the sea at point of capture, as are the shells of processed scallops. These returns help preserve habitat structure. Significant areas of each scallop bed are closed to fishing and preserve habitat and maintain recruitment of scallops and the benthic habitat. Fishery managers plan to expand these areas to cover 20% of each management unit. Fishers follow a rotational harvest strategy that results in fishing moving on from beds before scallops and bed structure become too reduced. The fishery plan that results in sustainability of the scallop fishery ensures that the habitat primarily structured by the Shelf Break Front and the scallops themselves, is also preserved. By-catch species are returned alive to the sea at point of capture, as are the shells of processed scallops. These returns help preserve habitat structure. However, since there is not experimental evidence of the survival returned by-catch, and although significant areas of each scallop bed are closed to fishing to preserve habitat and maintain recruitment of scallops and the benthic habitat (and fishery managers plan to expand these areas to cover 20% of each management unit) this coverage has not been still achieved, and it cannot be considered that the Fishery fully complies with a strategy in place for managing the impact of the fishery on habitat types. *So the fishery meets with the SG80 level of performance for this SI.*		
b	**Guidepost**	The measures are considered **likely** to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/habitats).	There is some **objective basis for confidence** that the partial strategy will work, based on **information directly about the fishery and/or habitats** involved.	**Testing** supports **high confidence** that the strategy will work, based on **information directly about the fishery and/or habitats** involved.
	Met?	YES	YES	NO
	Justification	*This partial strategy for habitat conservation have been used in other shellfish fisheries and proved effective.* So, it is understood that the measures are considered likely to work, based on plausible argument; and that there is some objective basis for confidence that the partial strategy will work, based on information directly about the fishery and/or habitats involved. Scallop biomass and populations of by-catch species within beds has been maintained through the period of the fishery. Information obtained directly from the fishery, gives		

		objective confidence that this strategy is effective. *However, no testing has been conducted in order to neither estimate the outcome of the strategy nor support high confidence that the strategy will work, based on information directly about the fishery and/or habitats involved. So the fishery scores 80 for this SI.*		
c	**Guidepost**		There is **some evidence** that the partial strategy is being implemented successfully.	There is **clear evidence** that that strategy is being implemented successfully.
	Met?		YES	NO
	Justification	*There is some evidence that the partial strategy is being implemented successfully, but the reasonable uncertainty related with the effects of trawling exists avoiding to define it as clear.* Scallop biomass within beds has been maintained through the period of the fishery. Hence the habitat scallops structure has also been maintained. On the other hand, some changes in composition of by-catch species over time have been observed, but they were not considered significant. The benthic habitat preserved in the un-fished reserve areas would provide a source of recruits for scallops and species of the benthic habitat as well as important undisturbed sites for experimental investigations and control sites in testing the effects of fishing. *Then, no clear evidence that the strategy is being implemented successfully for preserving habitat types is available. So the fishery meets with SG80 level for this SI.*		
d	**Guidepost**			There is some evidence that the strategy is achieving its objective.
	Met?			NO
	Justification	*Although there is some evidence that the partial strategy is being implemented successfully, there is still certain uncertainty related with the effects of trawling, and it cannot be evidenced that the strategy is achieving its objective. So the fishery does not meet the SG100 level of performance for this SI.*		
References		INIDEP Technical Reports. Scallop fishery Management Plan (CFP Resolution N° 4/2008)		
OVERALL PERFORMANCE INDICATOR SCORE:				**80**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 2.4.3

PI 2.4.3		**Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	There is **basic understanding** of the types and distribution of main habitats in the area of the fishery.	The nature, distribution and **vulnerability** of all main habitat types in the fishery are known at a level of detail relevant to the scale and intensity of the fishery.	The distribution of habitat types is known over their range, with particular attention to the occurrence of vulnerable habitat types.
	Met?	YES	YES	NO

	Justification	*It is considered that there is, not only a basic understanding, but the nature, distribution and vulnerability of all main habitat types in the fishery are known from the extensive sampling by trawl and dredge during annual biomass surveys.* Preliminary investigation of the physical environment of the seafloor has indicated relationships between sediment composition and structure and scallop beds. The benthic habitat of the Patagonian Shelf Large Marine Ecosystem is simple and widespread and similar across the outer shelf and scallop beds. Scallops are widespread across the shelf but the dense beds occur only at the Shelf Break Front. The scallop beds themselves are the main habitat type. The sediment of the seafloor of the Patagonian Shelf Large Marine Ecosystem is primarily fine sand with some mud and has little relief. The continuing series of annual biomass surveys with their fine-scale sampling shows the nature and distribution of the main habitat types of this fishery is stable. Taking into account the likelihood of the encounterability and eventually alteration of the habitat due to the fishing gear, there is enough evidence to considered that these habitats are not vulnerable to fishing at the scale and intensity of fishing. Although the benthic habitat of the entire Patagonian Shelf Large Marine Ecosystem has not been systematically sampled, the evidence from the scallop fishery and other fisheries further inshore, point to being largely one simple habitat. Scallop fishing occurred on the firmer more reflective habitat of fine sand. The sediments show strong linear distribution patterns along the shelf indicating that seafloor currents are important in sediment transport and probably are an important factor in structuring benthic habitat as well. Although INIDEP have swath-mapped parts of the scallop beds in 2004 and 2005 (INIDEP, 2005), only preliminary results have been presented but further analysis was proposed to develop bottom classification ground trothed by sediment sampling, followed by correlation analysis of sediment type, scallop abundance and biomass of accompanying fauna. Therefore, while *it is considered that the nature, distribution and vulnerability of all main habitat types in the fishery are known at a level of detail relevant to the scale and intensity of the fishery and even over their range, there is not enough evidence to affirm that there is particular attention to the occurrence of vulnerable habitat types.* *So the fishery meets with SG80 level for this SI.*		
b	**Guidepost**	Information is adequate to broadly understand the nature of the main impacts of gear use on the main habitats, including spatial overlap of habitat with fishing gear.	Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent of interaction, and the timing and location of use of the fishing gear.	The physical impacts of the gear on the habitat types have been quantified fully.
	Met?	YES	YES	NO
	Justification	*Information is adequate to broadly understand the nature of the main impacts of gear use on the main habitats, including spatial overlap of habitat with fishing gear; and this data is sufficient and available to allow the nature of the impacts of the fishery on habitat types to be identified. Moreover, there is evidence that there is reliable information on the spatial extent of interaction, and the timing and location of use of the fishing gear.* *All* data are gathered during the annual biomass surveys. The fishing position data recorded in management, allow precise spatial analysis of information on distribution of fishing effort and habitat. The usefulness of this is illustrated in swath bathymetry information relating sediments to fishing effort (INIDEP, 2005). These data give a broad understanding		

		of the main impacts of gear use on the main habitats of the scallop fishery. Spatial data on biomass of the target species and composition of by-catch is collected during the observer monitoring of fishery catch and by-catch as well as in the fishery independent annual biomass surveys. These data are sufficient to identify any change in the habitat types from fishing. Electronic fishery records are kept that permit tow by tow analysis of fishing on scallop beds that can be used to relate to individual catches. Hence localized fishing effort and catch can be analyzed. One example used an overlay of tow data with swath-bathymetry (INIDEP, 2005). The data can be used to identify habitat types fished, and whether the habitat is subsequently modified. *While sufficient data is being gathered and is available to allow the nature of the impacts of the fishery on habitat types, physical impacts of the gear on the habitat types have not been fully quantified at the moment and the fishery meets with the SG80 level for this SI.*		
c	**Guidepost**		Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	Changes in habitat distributions over time are measured.
	Met?		YES	NO
	Justification	Data continue to be collected in the fishery to establish that it has little impact on the distribution and abundance of scallop beds and associated fauna and these data are supplemented by data gathered independently of the fishery in annual biomass surveys. Several documents have been produced with information about habitat and the effects of fishing. Even when this information is sometimes indirect (referred to Reproductive Reserves and changes in benthic assemblages) it can be supported that this *data is sufficient to detect any increase in risk to habitat* (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures). Changes in habitat distributions over time have not been measured yet. *Therefore, the fishery complies with the SG80 level for this SI.*		
References		INIDEP Technical Reports for scallop and bycatch. Scientific publications on bycatch. Observer's bycatch data. Bremec et al. (2013); Escolar et al., (2015); Campodónico & Mauna (2014); Daleo (2015); Bogazzi et al., (2013)		
OVERALL PERFORMANCE INDICATOR SCORE:				**80**
CONDITION NUMBER (if relevant):				**CLOSED**

Evaluation Table for PI 2.5.1

PI 2.5.1		**The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	The fishery is **unlikely** to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	The fishery is **highly unlikely** to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	There is **evidence** that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible

				harm.
	Met?	YES	YES	YES
	Justification	*There is evidence that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.* Considering the wider system structure and function, it arise that Scallops are the keystone species in the habitat and the ecosystem of the Atlantic Shelf Break Front. The Patagonian Shelf Large Marine Ecosystem is too large in relation to the area of scallop beds (scallop beds cover 0.006% of the area of the ecosystem), and its productivity depends on physical attributes rather than the biological ones of the scallop beds, so the fishery is unlikely to disrupt the key elements of underlying ecosystem structure and function. This supports the hypothesis that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm, and can be considered as evidence. The Patagonian Shelf Large Marine Ecosystem is supported by a high primary production resulting from the "upwelling" of cold waters of the Malvinas Current that when reaching the surface fuel a high primary production (this is named the Atlantic Shelf Break Front). This permanent Shelf Break Front has remained stable in position from year to year and its production is strongly linked to the seafloor in a stable bento-pelagic coupling. The production of algae and detritus provides food for the scallop populations which are particularly dense underneath the front. Eddies in this frontal system are capable of retaining scallop larvae over these populations and are probably important. Scallops are the keystone species in the habitat and the ecosystem of the Shelf Break Front. As a result of the Patagonian Shelf Break Front production, the whole Argentinean shelf has associated high secondary production which supports important pelagic (squid) and demersal (hake) fisheries. These fisheries are outside the area of the scallop fishery. It is not yet clear whether the high density of scallops associated with the front is due more to larval retention than increased food supply, but it is probably both. An important species assemblage of suspension feeders, deposit feeders and predators are closely associated with the scallop dominated habitat in this rich feeding zone. *There are no signs of trophic cascade depletion of top predators or gross changes species biodiversity so the fishery is highly unlikely to disrupt the key elements of the underlying ecosystem structure and functions to a point where there would be serious or irreversible harm.* Scallop beds have remained unchanged in position and density since the inception of the fishery and the composition and diversity of by-catch has also remained unchanged, but further analyses are required to fully document the evidence of this stability. *The fishery meets with SG100 level of performance for this SI.*		
References		Alemany *et al.,* (2009); Botto *et al.,* (2006); Franco, 2010; Matano *et al.,* (2010) and Mauna, 2008		
OVERALL PERFORMANCE INDICATOR SCORE:				**100**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 2.5.2

PI 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**		
Scoring Issue	SG 60	SG 80	SG 100

a	**Guidepost**	There are **measures** in place, if necessary.	There is a **partial strategy** in place, if necessary.	There is a **strategy** that consists of a **plan**, in place.
	Met?	YES	YES	YES
	Justification	*There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function, which represent a strategy in place that consists of a plan*. This is reflected in the Management Plan for the fishery, legally settled in CFP Resolution N° 4/2008 which regulates the Patagonia Scallop Fishery, and have the capacity to achieve ecosystem outcomes as defined. Bento-pelagic coupling of the Patagonian Shelf Break Front determines the production of food for scallop and associated species in the benthic community. Eddies in the currents associated with the front probably ensure larvae of scallops and associated species in the benthic community are retained close to parent populations. Fishing can have no effect on the dynamics of this major oceanographic feature. Scallop fishing is confined to the area under the Patagonian Shelf Break Front. Scallop fishing has no impact on the ecosystem beyond the limits of the Shelf Break Front. Therefore, no strategy needs to be developed to protect the ecosystem from fishing. The Fishery Management Plan implemented in Principle 1, ensures the sustainability of the fishery and protects the ecosystem structure and function of the benthic component. *The fishery meets with SG100 level of performance for this SI.*		
b	**Guidepost**	The **measures** take into account potential impacts of the fishery on key elements of the ecosystem.	The partial strategy 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 **strategy**, which consists of a **plan**, contains 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.
	Met?	YES	YES	NO
	Justification	*The measures not only take into account potential impacts of the fishery on key elements of the ecosystem; but the partial strategy 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 benthic ecosystem in the area of the fishery is structured by scallop populations and energy flow is dominated by scallops. The management plan ensures sustainability of the		

		scallop beds and hence the benthic ecosystem. The benthic community under the front is primarily structured by scallop populations and the fishery management plan ensures that the scallop population and its associated species are not irreversibly harmed. In this fishery the successful outcome of principle 1 ensures the successful outcome of this Principle 2 indicator. The Fishery Management Plan implemented in Principle 1, ensures the sustainability of the fishery and protects the ecosystem structure and function. *Benthic impacts are reduced by a number of implicit strategies that could be structured into explicit plans and strategies.* *Therefore, although there are national strategies, these strategies have not been documented and made explicit -constituted as a plan with an ecosystem approach specifically developed for this fishery, which contains measures to address all main impacts of the fishery on the ecosystem-, and at least some of these measures, are addressed and in place. Continuing with this SI, there is no evidence of any plan and measures based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem. And there is no evidence of any plan that provides for development of a full strategy that restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm.* *So the fishery complies with SG80 level for this SI.*		
c	**Guidepost**	The measures are considered likely to work, based on **plausible argument** (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The partial strategy is considered likely to work, based on **plausible argument** (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The measures are considered likely to work based on **prior experience**, plausible argument or **information** directly from the fishery/ecosystems involved.
	Met?	YES	YES	NO
	Justification	*Not only measures but even the partial strategy is considered likely to work, based on plausible argument.* INIDEP Reports and general experience indicate that because so small a portion of the ecosystem is trawled, and even that on a rotational basis, fishing does not pose a risk to this very large ecosystem. The partial strategy of un-fished area in each management unit, would provide a source of larvae for scallops and associated species of benthic community, as well as ecological services, to the area that is fished should the benthic community become depleted. Should the benthic habitat influence the entire ecosystem, there is a considerable body of information on benthic habitat and by-catch abundance awaiting full analysis and documentation that could establish the stability of benthic habitat in the face of fishing. *Therefore, even when the partial strategy is considered likely to work, based on plausible argument, there is not enough prior experiences documented involved to guarantee that the measures are considered likely to work based on this, and the fishery meets with SG80 level of performance for this SI.*		
d	**Guidepost**		There is **some evidence** that the measures comprising the partial strategy are being **implemented successfully.**	There is evidence that the measures are being **implemented successfully**.
	Met?		YES	NO

	Justification	*There is some evidence that the measures comprising the partial strategy are being implemented successfully***.** Satellite monitoring and Observer records show the un-fished areas remain undisturbed by fishing. There is also some other evidence of the success of the management plan in maintaining stability of the benthic portion of the ecosystem, but it is still waiting for analysis. *Therefore, because of the lack of complete analyzed or reliable information, or statistic tests that may provide strong evidence that the measures are being implemented successfully, the fishery meets with SG80 level of performance for this SI.*
References		Scallop fishery Management Plan (CFP Resolution N° 4/2008)
OVERALL PERFORMANCE INDICATOR SCORE:		**85**
CONDITION NUMBER (if relevant):		**-**

Evaluation Table for PI 2.5.3

PI 2.5.3		**There is adequate knowledge of the impacts of the fishery on the ecosystem**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	Information is adequate to **identify** the key elements of the ecosystem (e.g., trophic structure and function, community composition, productivity pattern and biodiversity).	Information is adequate to **broadly understand** the key elements of the ecosystem.	
	Met?	YES	YES	
	Justification	*Information is adequate not only to identify but to broadly understand the key elements of the ecosystem. The Patagonian Shelf Large Marine Ecosystem is huge, but the key elements can be identified from the extensive investigations of its structure and productivity.* The Patagonian Shelf Large Marine Ecosystem covers 2.7 million km^2. The scallop fishery operates only 15,000 km^2 along the Patagonia Shelf Break Front. The Shelf Break Front is the source of the high productivity of phytoplankton dominated by dinoflagellates, coccolythphorids and cyanophyciens which bloom throughout the year unlike coastal driven productivity. Living and dead algae are transported to the seafloor along the front and enhance the productivity of the benthos of the marine ecosystem in this local area. The information is adequate to broadly understand the key elements of the ecosystem. *The fishery meets with SG80 level of performance for this SI.*		
b	**Guidepost**	Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, and **have not been investigated in detail**.	Main impacts of the fishery on these key ecosystem elements can be inferred from existing information and **some have been investigated in detail**.	Main interactions between the fishery and these ecosystem elements can be inferred from existing information, and **have been investigated**.
	Met?	YES	YES	YES
	Justification	*Main impacts and interactions between the fishery and these key ecosystem elements can be inferred from existing information, and have been investigated in detail.* The scale of the fishery compared to the size of the ecosystem, as well as the dependence of the key elements of the ecosystem on physical aspects of the environment rather than the biological, shows that scallop fishing can have little impact on the ecosystem. Main interactions between the fishery and the ecosystem elements have been investigated. *The scale of the Patagonia Shelf Large Marine Ecosystem and its dynamics renders the*		

		likelihood of detecting changes due to scallop fishing, and these changes are unlikely. So, overall, the main interactions between the fishery and these ecosystem elements can be inferred from existing information, and have been investigated, therefore meeting the requirements for SG100 for this SI.		
c	**Guidepost**		The main functions of the Components (i.e., target, By-catch, Retained and ETP species and Habitats) in the ecosystem are **known**.	The impacts of the fishery on target, By-catch and ETP species are **identified** and the main functions of these Components in the ecosystem are **understood**.
	Met?		YES	YES
	Justification	*The impacts of the fishery on target, by-catch and ETP species are identified and the main functions of these Components in the ecosystem are known and understood.* All these groups of species and habitats depend on the production of the Patagonia Shelf Break Front as primary or secondary consumers, or predators on the rich algae and fauna developed there. The same fauna exists right across the rest of the ecosystem but at much lower densities and productivity The fishery has had no measurable impact on the density and distribution of the scallop target species or on that of the by-catch species although the first signs of reduction in by-catch have been detected. No ETP species occur in the fishery. *The fishery meets with SG100 level for this SI.*		
d	**Guidepost**		Sufficient information is available on the impacts of the fishery on these Components to allow some of the main consequences for the ecosystem to be inferred.	Sufficient information is available on the impacts of the fishery on the Components **and elements** to allow the main consequences for the ecosystem to be inferred.
	Met?		YES	NO
	Justification	*Sufficient information is available on the impacts of the fishery on the components in the ecosystem to allow some of the main consequences for the ecosystem to be inferred. The ecological community and ecosystem in which the fishery operates is well known. However, information available does not take into account all the elements, and so the fishery complies with SG80 level for this SI.*		
e	**Guidepost**		Sufficient data continue to be collected to detect any increase in risk level (e.g., due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	Information is sufficient to support the development of strategies to manage ecosystem impacts.
	Met?		YES	NO
	Justification	*Data are continuously collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures), although it may not be fully analyzed and published, or may not be sufficient,* By-catch is continued to be monitored by the On Board Observers. Changes in the benthos, if they occur within the fished area can be detected. Changes across the rest of the ecosystem outside the area fished are not being monitored. Therefore, while sufficient data continue to be collected to detect any increase in risk,		

		information is still *not sufficient to support the development of strategies to manage ecosystem impacts. So, the fishery complies with SG80 level for this SI.*
References		References are provided in the background of Principle 2 in the re-certification report of Patagonian scallop fishery.
OVERALL PERFORMANCE INDICATOR SCORE:		**90**
CONDITION NUMBER (if relevant):		**-**

Principle 3:

Evaluation Table for PI 3.1.1

PI 3.1.1		**The management system exists within an appropriate legal and/or customary framework which ensures that it:** • **Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; and** • **Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and** • **Incorporates an appropriate dispute resolution framework.**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.	The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.	The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1and 2.
	Met?	YES	YES	YES
	Justification	*The management system is generally consistent with local, national and international laws and standards that are aimed at achieving sustainable fisheries.* There are mechanisms established that accept norms, commonly held values, beliefs and agreed rules. The Argentinian fisheries management has a well-established legislative framework as noted in the Re-Certification Report and continues to improve. At the end of 2014, it has adopted the ITQ system described in the CFP Resolutions N° 20/2014 (catch quotas are set out. The articles N° 1, 2 and 3 establish specific regime, assignment and weighting parameters, respectively) and N° 1/2015 (article N° 1- replaces the subsection b) of Article N° 10 of the CFP Resolution N° 20/2014, by the following: "to capture the species at a rate less than SEVENTY PERCENT (70%) for two consecutive years or three alternate"). In this last resolution, the Individual Transferable Quotas (ITQ) (Cuotas Individuales Transferible de Captura - CITC) for Patagonian scallop species (*Zygochlamys patagonica*) shall to expire missing average percentage to seventy percent (70%). From evidence exposed before in the Re-Certification Report, *the fishery meets with the SG100 level of performance for this SI.*		
b	**Guidepost**	The management system incorporates or is subject by law to a **mechanism** for the resolution of legal disputes arising within the system.	The management system incorporates or is subject by law to a **transparent mechanism** for the resolution of legal disputes which is **considered to be effective** in dealing with most issues and that is appropriate to the context	The management system incorporates or subject by law to a **transparent** mechanism for the resolution of legal disputes that is appropriate to the context of the fishery and has been **tested and proven to be effective**.

			of the fishery.	
	Met?	YES	YES	YES
	Justification	*The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes arising within the system; which is considered to be effective in dealing with most issues. Moreover, this mechanism is appropriate to the context of the fishery and has been tested and proven to be effective.* The dispute resolution system is well defined in the Federal Fishing Law N° 24.922. Usually, CFP receives and discusses in their public minutes any comment which emerges from any stakeholder group. There is a formal dispute-resolution mechanism but it is not independent of the Management Authority. When the resolution of the dispute is not accepted, affected parties have recourse to the legal system. There is an elaborate sanction and penalty structure in the Fisheries. CFP acts when a legal dispute arises, under request from a stakeholder. Decisions are written in minutes and published in its website, and efficacy has been tested during years of practice. Additionally, verbatim transcripts of the proceedings of CFP do exist, which can be consulted if necessary in order to clarify issues related to the criterion applied in its decisions. It provides a mechanism for parties to challenge decisions of administrative bodies. In case of civilian disputes against administration decisions, the Administrative Procedure Law N° 19.549 and its Regulatory Federal Decree N° 1.759/72 are applied, which establishes, *inter alia*, mechanisms for dispute resolutions. Fisheries regulations (Law N° 24.922 and N° 25.470) repeat the same recursive procedures as Administrative Procedure Law N° 19.549 (explicitly described in the Re-Certification Report of Patagonian scallop fishery (2012)). For cases in which the administration's decision involves an imminent harm to a constitutional right. Legal disputes respecting fishing violations are adjudicated quickly, fairly and transparently, any citizen can appeal directly to the ordinary justice system and submit an urgent application, which requires the presiding judge to resolve in an extremely executive manner (1 to 3 days), in order to restore the right allegedly injured. Nevertheless, it will then continue with a judicial investigation in order to resolve definitively with more information and certainty. *The management system is subject to an open, transparent mechanism provided through federal legislation in open and has been tested numerous times and proven to be effective.* *For all exposed, it is considered that there is enough evidence that supports SG100 level of performance for this SI.*		
c		Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability of the fishery.	The management system or fishery is attempting to comply in a timely fashion within binding judicial decisions arising from any legal challenges.	The management system or fishery acts proactively to avoid legal disputes or rapidly implements binding judicial decisions arising from legal challenges.
	Met?	YES	YES	YES
	Justification	*The management system or fishery, represented by the 'Dirección Nacional de Regulación Pesquera' acts proactively to avoid legal disputes and rapidly implements binding judicial decisions arising from legal challenges.* Its staff involves lawyers specialized in fishery activities and regulations. And if *it was subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability of the fishery. And not only that, but the*		

		management system or fishery is attempting to comply in a timely fashion within binding judicial decisions arising from any legal challenges. The internal review is provided from MINAGRI – Internal Audit Unit and occasional external reviews from the National General Syndication, which depends on National Congress (Law N° 24.156/1990), and Auditoria General de la Nación. Also, any administration's decision affecting the rights of third parties requires a control and legal opinion prior to its sanction. Such control is carried out by a statutory body external to the agency that promotes the sanction of the rule. All these procedures are established by Administrative Procedure Law N° 19.549 and its Regulatory Federal Decree N° 1.759/1972. To minimize the legal wrangling, any administration's decision affecting the rights of third parties requires a control and legal opinion prior to its sanction. Such control is carried out by a statutory body external to the agency that promotes the sanction of the rule. From above, it is considered that *this SI is met at SG100 level.*		
d	**Guidepost**	The management system has a mechanism to generally respect the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	The management system has a mechanism to **observe** the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	The management system has a mechanism to **formally commit** to the legal rights created explicitly or established by custom of people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.
	Met?	YES	YES	YES
	Justification	The management system observes all legal regulations and interests of any group or individual related to the fishery. The fishing policy and regulations sanctioned by the CFP and applied by SAGPyA take in account long-term interests of people dependent on fishing. The complaint resolution mechanisms are clearly established in the Federal Fishing Law N° 24922 and are respected. This fishery has been developing in the last 20 years and far away from the coast, and there were not native populations in more than 100 years that were engaged in marine fishing. Later, immigrants settled mainly in Mar del Plata where fishing evolved from artisanal fisheries to semi-industrial fishing, which is considered within the Argentina legislation Federal Fisheries Act (Law N° 24.922 and N° 25.470). Legal rights created explicitly or established by custom of people dependent on fishing and their long term interests, are considered within the legal and/or customary framework for managing fisheries system and/or its policies and procedures for managing fisheries under a legal framework. *Therefore, since there is a mechanism, not only to generally respect and to observe, but to formally commit to the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC, Principles 1 and 2; these legal rights are taken into account in the Argentine Legislation Federal Fisheries Act, and the fishery complies with SG100 level for this SI.*		
References		CFP Resolutions N° 20/2014. Argentina legislation Federal Fisheries Act (Law N° 24.922 and N° 25.470). National General Syndication, which depends on National Congress (Law N° 24.156/1990) Administrative Procedure Law N° 19.549 and its Regulatory Federal Decree N° 1.759/1972.		
OVERALL PERFORMANCE INDICATOR SCORE:				**100**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 3.1.2

PI 3.1.2		The management system has effective consultation processes that are open to interested and affected parties. The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are **generally understood.**	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are **explicitly defined and well understood for key areas** of responsibility and interaction.	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are **explicitly defined and well understood for all areas** of responsibility and interaction.
	Met?	YES	YES	YES
	Justification	*The Patagonian scallop fishery identifies all organizations and individuals involved in the management process including implementing agencies, fishery business groups, national and provincial government and food inspection agency. Functions, roles and responsibilities,* as described in section 3.5 "Principle Three: Management System Background" of Re-Certification Report of Patagonian Scallop Fishery (2012). The structure, purpose, scope and administration of the consultative process are defined in the terms of reference and the process is clearly defined. The responsibilities of Consejo Federal Pesquero (CFP) composed by Ministerio de Agricultura, Ganadería y Pesca is described in the Federal Fishing Law N° 24.922. CFP are responsible to establish procedures of fishing operation, administrative structures and its members, including its responsibilities. All of these public agencies have missions and functions accurately defined and established by laws, while respecting manuals and instructions. The Federal Fishing Law and Federal Decree N° 214/99, Federal Decree N° 373/2007 establishes specific functions, Federal Decree N° 571/2008 updates SSPyA's functions. Federal Law N° 21.673/1977, CFP Resolution N° 4/2008, Laws N° 18.398/1969 and N° 20.325/1973, Federal Decree N° 4.238/1968. See at in the Re-Certification Report. The Federal Fishing Law and Federal Decree N° 214/99 also designates the ex-Secretaria de Agricultura, Ganadería, Pesca y Alimentos as the Enforcement Authority and delegates same of its functions on the Undersecretary of Fisheries and Aquaculture (ex SAGPyA Resolution N° 27/2003), who acts through its dependent areas: Dirección Nacional de Coordinación Pesquera, Dirección Nacional de Planificación Pesquera and Dirección Nacional de Regulación Pesquera. Federal Decree N° 373/2007 establishes specific functions for each of these directions and Federal Decree N° 571/2008 updates the Undersecretary of Fisheries and Aquaculture's functions. Federal Law 21.673/1977 designates INIDEP as Federal Scientific Authority. INIDEP Resolution N° 118 /2010 establishes its new organizational chart. Regularly INIDEP Resolution approves/improve the Activities Planning for each of its dependent research, operative and administrative areas during the following years. *Therefore, it is considered that organizations and individuals involved in the management process have been identified; and functions, roles and responsibilities are not only generally but well understood; and are explicitly defined, for all areas of responsibility and interaction. And so, the Patagonian scallop fishery meets SG100 level of performance for this SI.*		

b	**Guidepost**	The management system includes consultation processes that obtain **relevant information** from the main affected parties, including local knowledge, to inform the management system.	The management system includes consultation processes that **regularly seek and accept relevant** information, including local knowledge. The management system demonstrates consideration of the information obtained.	The management system includes consultation processes that **regularly seek and accept relevant** information, including local knowledge. The management system demonstrates consideration of the information and **explains how it is used or not used**.
	Met?	YES	YES	YES
	Justification	*The management system includes consultation processes that regularly obtain, seek and accept relevant information from the main affected parties, including local knowledge, to inform the management system represented by the Mixed Technical-Scientific Advisory Commission created by CFP Resolution N° 4/2005 for the analysis and monitoring of the Patagonian Scallop Fishery. Moreover, the management system not only demonstrates consideration of the information obtained, but also explains how it is used or not used. Regularly, INIDEP updates the research program to obtain information and knowledge in order to advice the Management System (www.inidep.edu.ar) (I.e., see INIDEP Resolution N° 133/2010)*. As well, Law N° 24.922 recognizes that scientific data can be provided by other research institutions. Consejo Federal Pesquero makes their minutes (acts), resolutions, technical reports and other received documents public. It also convenes regularly with researchers or interest groups for technical advice prior to the decision-making and reports it in their minutes (www.cfp.gob.ar). SSPyA carries out similar meetings, although there are not saved detailed records (minutes) of them. The Management Plan for the Patagonian Scallop fishery (CFP Resolution N° 4/2008) created a Commission for Analysis and Monitoring of this fishery, integrated by two representatives of INIDEP, two representatives of the Application Authority, and one representative for each company licensed for the exploitation of Patagonian scallop. This Commission has legal force as an advisor body and must meet, at least, every three months, producing a minute summarizing the issues discussed during its meetings and providing its conclusions to CFP. The management system demonstrates consideration of the information and explains how it is used or not used. Law N° 24.922 specifically establishes that restrictive measures, such as close areas or seasons, must be given widespread coverage and must be communicated adequately in advance to fishermen and to the proper control, surveillance and monitoring authorities. It can be observed from analyzed legislation that fisheries regulations of lower hierarchy set out the requirements in a comprehensible manner, with an adequate extension and basis considering the reasonability of the adopted measures, allowing to understand adequately: • Facts and antecedents to which measures respond. • Regulated topic. • Motivation of measures, meaning knowing the reasons that inducted their establishment. • Objective of measures, ensuring these are proportional and adequate. Decisions based on technical advice or consultation process are expressed through CFP, MINAGRI or SSPyA regulations and applied on desired time to the fishery. Thus, the management of the fishery is adjusted as a result of the consultation process.		

		Finally, Law N° 25.831/2003 establishes the free access to ambient public information. *From the above, it is concluded that the management system includes good consultation processes that regularly seek, accepts and demonstrates consideration of relevant information including local knowledge when available. There is also evidence that the management system explains how the information is used or not used.* So, t*he Patagonian scallop fishery meets this SI at the SG100 level of performance.*		
c	**Guidepost**		The consultation process **provides opportunity** for all interested and affected parties to be involved.	The consultation process **provides opportunity and encouragement** for all interested and affected parties to be involved, and **facilitates** their effective engagement.
	Met?		YES	YES
	Justification	*The Patagonian scallop consultation process provides opportunity and encouragement for all interested and affected parties to be involved and facilitates their effective engagement*. Interested stakeholders have the opportunity to be involved in the consultation process and facilitate their effective engagement. Patagonian Scallop Follow-up Commission was created (Resolution CFP N° 4/2008), which is consulted by CFP and SSPyA prior to taking any decision on the fishery. In the Article 1 of the Resolution CFP N° 21/2014 establishes: "Authority is instructed to Law Enforcement N° 24.922 to conduct invitations to monitoring committees of the various fisheries as Patagonian scallop (*Zygochlamys patagonica*), benthic crustaceans, varied coastal, Patagonian toothfish (*Dissostichus eleginoides*), Polish (*Micromesistius australis*), hoki (*Macruronus magellanicus*), hake (*Merluccius hubbsi*) and they could settle in the future with a minimum frequency of two (2) times per year". There is also an Honorary Consultant Commission at the CFP (as main management body), created through Federal Fisheries Law and Resolution CFP N° 7/2004, that represents all direct and some non-direct stakeholders is composed both of all business associations and workers present in the country, and it is used to advise on all matters related to fishing activities. As well, CFP and Secretaría de Ambiente y Desarrollo Sustentable promote stakeholder's meetings/workshops on specific issues, and interested stakeholders have the opportunity to be involved in the consultation process. In both cases stakeholders are encouraged to participate in different events according to the issue involved, by means of sending their concerns to the aforementioned advisory commission or to the Scallops Follow up Commission. *Therefore, it is considered that there is enough evidence to support that the consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement; and so the fishery complies with SG100 for this SI.*		
References		Federal Fishing Law N° 24.922. INIDEP Resolution N° 133/2010. Law N° 25.831/2003 establishes the free access to ambient public information. CFP Resolutions N° 21/2014 and N° 7/2004).		
OVERALL PERFORMANCE INDICATOR SCORE:				**100**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 3.1.3

PI 3.1.3	**The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach**		
Scoring Issue	SG 60	SG 80	SG 100

a	**Guidepost**	Long-term objectives to guide decision-making, consistent with the MSC Principles and Criteria and the precautionary approach, are **implicit** within management policy	**Clear** long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are **explicit** within management policy	**Clear** long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are **explicit** within **and required by** management policy.
	Met?	YES	YES	YES
	justification	Argentinean fisheries management has a solid legislative foundation through *the clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are explicit in the Federal Fishing Law N° 24.922.*From that legal framework flow an elaborate outline of policies, goals, objectives, processes and procedures are outlined in the Re-Certification Report. The Emerging Species Policy sets out the requirements and procedures for new fisheries that must be followed before the fishery can be initiated. A cornerstone of the policy is the establishment of a scientific base with which stock responses to new fishing pressures can be assessed and that was establish at the beginning of the fishery allowing two vessels to an exploratory fishery. Later with the results of one year fishery the Argentine Government by means of Resolution ex-SAGPyA N° 150/1996 authorized the fishing of the Patagonian Scallop to be carried out by 4 factory vessels belonging to two Argentinean companies. In essence, the Argentine Government established a legal regulation in order to ensure that the fishery is developed following scientific advice. The Policy to Manage the Impacts of Fishing on Sensitive Benthic Areas deals with the mitigation of the impacts of fishing on sensitive benthic areas or avoidance of impacts of fishing that are likely to cause serious or irreversible harm to sensitive marine habitat communities and species. Incorporating an adaptive criterion, both operational and long-term measures were implemented. The first are related to annual survey results, such an open-closed areas and establishment of a Total Allowable Catch (TAC). The overarching legislative and policy framework explicitly outline clear long-term objectives that guide decision-making which are: 1) Minimum legal size was set at 55 mm of total height (3-4 years). 2) No fishing season imposed. 3) Fishing effort fixed at four vessels (two per company). 4) TAC: harvest rate fixed at no more than 0.4 of lowest or mid biomass determination from those particular areas inside a given management unit where biomass density is equal or superior to 10 t/km^2. 5) Obligatory discard of free living juveniles at the place of capture. 6) Establishment of no taken zones for research and reproductive purposes which are around 5.4% of the total area defined as management units. CFP Resolution N° 5/2009, Creation of a government – private Technical Fisheries Advisor Commission. The overarching legislative and policy framework explicitly outline clear long-term objectives that guide decision-making. The application of the precautionary approach is statutorily required and clearly outlined in policy and practice in this fishery, Federal Fisheries Law N° 24.922 and in the Regulatory Decree N° 748/1999, CFP Resolution N° 14/2008, CFP Act N° 48/2007, and CFP Resolution N° 4/2008. See Re-Certification Report. The important overarching objectives for fisheries management are in the Policy Framework: 1) Conservation and sustainable use of marine resources and habitat, 2) Shared stewardship involving participants in fisheries management decision-making processes, and 3) A stable and transparent access and allocation approach through a rules-based process etc. *Therefore, evidence supports that clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are not only implicit but explicit within and required by management policy, and*		

		so the Patagonian scallop fishery fully meets this PI at the SG100 level of performance.
References		Federal Fishing Law N° 24.922. CFP Resolution N° 5/2009. Federal Fisheries Law N° 24.922 and in the Regulatory Decree N° 748/1999, CFP Resolution N° 14/2008, CFP Act N° 48/2007, and CFP Resolution N° 4/2008.
OVERALL PERFORMANCE INDICATOR SCORE:		**100**
CONDITION NUMBER (if relevant):		**-**

Evaluation Table for PI 3.1.4

PI 3.1.4		**The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure **that perverse incentives** do not arise.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and **explicitly considers** incentives in a **regular review** of management policy or procedures to ensure they not contribute to unsustainable fishing practices.
	Met?	YES	YES	PARTIAL
	Justification	*The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2. They are expressed by stock status and ecosystem, and are exclusive to the client group, which has the greatest interests in being able to ensure that the fishery is well-managed and it will be continuing being so for the long-term. There are powerful economic, social and environmental incentives that contribute to sustainable fishing and ecosystem management.* For example, the Catch Authorizations Management System and its associated policies provide stability and security for fisheries operations and introduce a powerful conservation incentive. Moreover, Individuals Transferable Quotas (ITQ) (Cuotas Individuales Transferible de Captura - CITC) for Patagonian scallop species (*Zygochlamys patagonica*) are set out in the CFP Resolution N° 20/2014 Individual. See 3.1.1 issue a). ITQ fishing strategy of Enterprise Allocations provides an incentive to fish the stock for value and not volume, preserve the stock for future years, maximize yields without harming productivity, and to avoid harm to the habitat or other species that comprise the fishery's ecosystem. The fleet is particularly conscious of its impact on the environment, and has reduced the bottom contact of its gear dramatically in recent years. Furthermore, the management system, through the ITQ system, provides incentives consistent with achieving the outcomes of P1 and P2; and seeks to ensure that perverse incentives do not arise. In order to get to this, the system has developed associated policies to provide stability and security for fisheries operations, introducing a powerful conservation incentive, such as the quota of the TAC. Federal Fisheries Law N° 24.922 also establishes incentives for those operators that respect fisheries regulations. As an example, it is expressed that ITQ s will not be allocated to persons or entities maintaining any type of relation, legal or economical, with vessels operating without fishing licenses, neither to those receiving any advantage or profit from them. Sanctioning regime considers the possibility of suspending or cancelling fishing		

		licenses, ITQs and Capture Authorizations when transgressions to the fishery regulations may occur. When the infraction is related to fishing operations without license, the penalty should be 500 times higher than the minimum. Customary and legal rights are taken into account in the management system. There is recognition of international treaty partnership for the protection of living resources. There are mechanisms in place and opportunities for all stakeholders. No direct subsidies contributing to unsustainable fishing exist. There are enough incentives and regulations already established to promote sustainable fishing of the main species and some of the by catch species, there is the need to promote actions in order to deal with uncertainties existing on several subjects related to the effect of the fishing gear on the habitat and by catch species. For example, considerations could be given to management plans in order to provide incentives for the development of gear that could reduce by catch. However, these incentives are not a regular review of management policy or procedures to ensure they not contribute to unsustainable fishing practices. Therefore, while evidence supports that the management system does provide for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure that perverse incentives do not arise; there is not enough evidence to affirm that there is a *regular review* of management policy or procedures (that considers the role of incentives in the fishery), to ensure they not contribute to unsustainable fishing practices. *The Patagonian scallop fishery meets the first component but not the second component of the SG100 level of performance for this SI, and so the fishery scores 90 for this PI.*
References		CFP Resolution N° 20/2014. Federal Fisheries Law N° 24.922.
OVERALL PERFORMANCE INDICATOR SCORE:		**90**
CONDITION NUMBER (if relevant):		**-**

Evaluation Table for PI 3.2.1

PI 3.2.1		**The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	**Objectives**, which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are **implicit** within the fishery's 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's 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's management system.
	Met?	YES	YES	PARTIAL
	Justification	*Objectives are well defined in the Management Plan which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are not only implicit but explicit within the fishery's specific management system which is reviewed and updated every 5 years.* The management system is based on fishing licenses as authorization to enter the fishing ground and ITQ allowing access to the exploitation of fisheries resources. There is also a plan of spatial closures for research and protection or reproductive capacity purposes, establishing habilitated low impact gears with the obligatory discard of by catch species immediately and with the least damage as possible, plans for marine birds'		

		protection, Chondrichthyes protection and Cetaceans protection. Data collection of environmental aspects of the fishery during fishing operations is the responsibility of the on board observers program, and INIDEP Program Benthic Molluscs, whoalso states the objectives of scallop and associated species research objectives. All objectives are described in the Re-Certification Report of Patagonian scallop fishery (2012). For the present Surveillance, the existence of a Management Plan, whose main objective is maintaining the sustainability of the Fishery, consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, Management Units are defined and precisely delimited. CFP Resolution N° 5/2014 set coordinated scallop management unit UM. TAC is set annually for each Management Unit in tons of total legal sized scallop. CFP Resolution N° 19/2014 describes TAC scallops for management unit UM A, C, F, G, H, I and J. The National Action Plan for Marine Mammals Protection is still in the stakeholders consulting process, so there are not more clear objectives for mammal's protection at this moment Therefore, even though explicit short and long term objectives consistent with achieving the outcomes expressed by MSC's Principles 1 and 2 are well defined, and are explicit within the fishery's management system, since they are not compiled in a single regulation, its overall comprehension is complicated, and there is no clear evidence of their measurability. *Thus it is considered that SG100 performance indicator is partial completed, and the fishery scores 90 for this PI.*
References		CFP Resolutions N° 5/2014 and N° 19/2014.
OVERALL PERFORMANCE INDICATOR SCORE:		**90**
CONDITION NUMBER (if relevant):		**-**

Evaluation Table for PI 3.2.2

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

	Justification	*There are not only some but there is established an adequate framework related to decision-making processes in CFP that result in measures and strategies to achieve the fishery-specific objectives. This framework is the same for all marine fisheries in Argentina, and it is represented by Executive Power and representants of each province with marine coastal.* Management decision making processes are clearly outlined in the Federal Fisheries Law N° 24.922, the Federal Decrees N° 748/1999, N° 571/2008 and N° 373/2007, amongst other legal documents. Consejo Federal Pesquero is the main authority, who establishes the TAC based on scientific biological recommendations and other social and economic aspects. CFP has the responsibility to ensure it is provided with carefully analyzed alternatives for taking into account before making any decisions. The Patagonian Scallop Technical Adviser Commission, the research programs led to obtain information and knowledge in order to advice the Management System (www.inidep.edu.ar), an Honorary Commission at Consejo Federal Pesquero exists and is used to work on specific issues for which involved stakeholders are invited to participate. Consultative commissions and stakeholders are called by CFP or SSPyA when it is required. In this stage, any stakeholders may request a hearing with the administration bodies and is heard prior to decision-making. So, research, monitoring, evaluation and consultation issues are taken account the transparency, timely and adaptive manner and take account of the wider implications of decisions. Workshops are conducted with all interest parties in order to analyze the issues prior to the decision-making. Moreover, these processes together create measures and strategies to achieve the stated objectives for the fishery. *From all above, it is considered that there are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives, and so the Patagonian scallop fishery meets the SG100 level of performance for this SI.*		
b	**Guidepost**	Decision-making processes respond to **serious issues** identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take **some** account of the wider implications of decisions.	Decision-making processes respond to **serious and other important issues** identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.	Decision-making processes respond to **all issues** identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.
	Met?	YES	YES	YES
	Justification	*Decision-making processes not only respond to serious and other important issues identified but to all issues identified in relevant research monitoring, evaluation and consultation, in a transparent, timely and adaptive manner, and take account of the wider implications of decisions.* All the fishery jurisdictions take part in the Technical Commission, as part or the decision making process, which responds to any issues identified in the fishery. All consultative commissions and stakeholders are called by the CFP or by the SSPyA when required. Any stakeholder may request a hearing with the administration bodies and is heard prior to decision is taken. Management decision making processes are clearly outlined in the Federal Fisheries Law N° 24.922, the Federal Decrees N° 748/1999, N° 571/2008 and N° 373/2007, amongst other legal documents. Consejo Federal Pesquero is the main authority, who establishes the TAC based on scientific biological recommendations and other social and economic aspects. CFP has the responsibility to ensure it is provided with carefully analyzed alternatives for taking		

		into account before making any decisions. The Patagonian Scallop Technical Adviser Commission, the research programs led to obtain information and knowledge in order to advice the Management System (www.inidep.edu.ar), an Honorary Commission at Consejo Federal Pesquero exists and is used to work on specific issues for which involved stakeholders are invited to participate. Workshops are also conducted with all interest parties in order to analyze the issues prior to the decision-making. At least twice a year as was stated by CFP the meeting of the Patagonian Scallop Fishery Follow-up Commissions should be consulted. When reviews of all issues identified through research, monitoring, evaluation and consultation will be provided. A Scientific Advisory Report is presented every year to CFP and a Stock Status Report updates the stock situation in the year, it will be presented a monitoring report and how the Fisheries Management worked on the previous years. The industry is able to respond quickly to all serious and other important issues identified in the previous Commission. *Therefore, as it can be identified in the Re-Certification Report, there is evidence that supports that decision-making processes respond to all issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions; and so the Patagonian scallop fishery meets with SG100 for this SI.*		
c	**Guidepost**		Decision-making processes use the precautionary approach and are based on best available information.	Decision-making processes use the precautionary approach and are based on best available information.
	Met?		YES	YES
	Justification	*Decision-making processes use the precautionary approach in the exploitation of marine resources based on best available information and is legislatively enshrined in the Federal Fisheries Law N° 24.922, the Federal Decrees N° 748/1999, N° 571/2008 and N° 373/2007, amongst other legal documents*. The obligation of CFP is detailed in the Sustainable Fisheries Framework and Fishery Decision-Making Framework Incorporating the Precautionary Approach to ensure that the precautionary approach is built into fisheries management decisions. A formal Precautionary Approach Framework has been implemented in the scallop fishery the existence of a Management Plan, whose main objective is maintaining the sustainability of the Fishery, consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, Management Units are defined and precisely delimited. CFP Resolution N° 5/2014 set coordinated scallop management unit UM. TAC is set annually for each Management Unit in tons of total legal sized scallop. CFP Resolution N° 19/2014 describes TAC scallops for management unit UM A, C, F, G, H, I and J. *Therefore, it is considered that decision-making processes use the precautionary approach and are based on best available information, and so the fishery fully meets with SG100 level for this SI.*		
d	**Guidepost**		**Explanations** are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.	**Formal reporting** to all interested stakeholders describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.

	Met?		YES	NO
	Justification	*Explanations are provided for any actions (or lack of actions) associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.* These are released in INIDEP Technical Reports. These reports are referred to CFP and its reception published in its meetings' records, which in turn are published on its website (www.cfp.gob.ar). Once published by CFP, they become available for anyone who wants to obtain a copy on INIDEP's web site (www.inidep.edu.ar). Fishery statistics are also published in CFP's and SSPyA's websites. On the other hand, CFP makes public through their Minutes any considerations and technical and legal advice taken into account in decision-making as well as the concerns being submitted or exposed for any stakeholders to CFP. *However, since there is no clear evidence of formal reporting to all interested stakeholders describing how the management system responds to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity, it is considered that the fishery does not fully complies with SG100 level, and it is assigned a score of 80 for this SI.*		
References		Federal Fisheries Law N° 24.922, the Federal Decrees N° 748/1999, N° 571/2008 and N° 373/2007. CFP Resolutions N° 5/2014 and N° 19/2014. Published on its website (www.cfp.gob.ar), INIDEP Technical Reports and website www.inidep.edu.ar. CFP Resolution N° 4/2008.		
OVERALL PERFORMANCE INDICATOR SCORE:				**95**
CONDITION NUMBER (if relevant):				**-**

Evaluation Table for PI 3.2.3

PI 3.2.3		**Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	Monitoring, control and surveillance mechanisms exist are implemented in the fishery under assessment and there is a reasonable expectation that they are effective.	A monitoring, control and surveillance **system** has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.	A **comprehensive** monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.
	Met?	YES	YES	YES
	Justification	*There are not only mechanisms, but a comprehensive monitoring, control and surveillance system has been implemented in the fishery under assessment, that includes electronic vessel monitoring systems (VMS) on each vessel, at-sea observations by patrol vessels and fixed-wing aircraft, 100% dockside monitoring of landings, catch and effort data, on-board observer coverage with protocols to monitor fishing operations and mandatory submission of fishing vessel log books.* *The system has not only demonstrated a reasonable expectation that is effective, but it also has demonstrated a consistent ability to enforce relevant management measures, strategies and rules.* Argentina endeavors to deter fisheries-related offenses through a successful prosecution and deterrent penalties. Penalties to fisheries-related offences include fines and forfeiture of fish, vessels, other property and quota (Law N° 25.470, Federal Fisheries Law N° 24.922 and Federal Decree N° 748/1999).		

		A number of monitoring, control and surveillance tools are used in order to control the activities of vessels fishing within Argentine fisheries waters. There are described in the Re-Certification Report of Patagonian scallop fishery (2012). The administration of the fishery works closely with stakeholders to ensure understanding of the requirements. Detailed conditions of license are outlined for each vessel in the fishery. All this control tools are adequately implemented and seem to be extremely efficient, to the extent that there is not systematic non-compliance with in force regulations, due to a very strict control system, proving its ability to enforce relevant management measures, strategies and/or rules. In regard to the operative control of the fleet, SSPyA has implemented the Integrated Control of Fishing Activities (SICAP), comprising: a) Satellite Positioning System of the National Fishing Fleet, b) All satellite data of the area where foreign fishing vessels operate outside the ZEEA provided by the National Commission on Space Activities, and c) The activity of control and surveillance conducted by PNA, Navy and Air Force, which have water units (Coast Guard and corvettes) and air units (aircraft and helicopters) to control illegal fishing. This information is complemented with that taken from the control of landings and documentary information on board. Therefore evidence indicates that a comprehensive monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce management measures, strategies and rules; as is reflected in the low number of infractions over a long period. And so, *the Patagonian scallop fishery complies with the SG100 level of performance for this SI.*		
b	**Guidepost**	Sanctions to deal with non-compliance exist and there is some evidence that they are applied.	Sanctions to deal with non-compliance exist, **are consistently applied** and thought to provide effective deterrence.	Sanctions to deal with non-compliance exist, are consistently applied and **demonstrably** provide effective deterrence.
	Met?	YES	YES	NO
	Justification	*Sanctions to deal with non-compliance exist and there is evidence that they are consistently applied and thought to provide effective deterrence, in case that an unacceptable behavior in the fishery occurs. If it is the case, sanctions are applied through the administration of the fishery through a court-based system, where there are many instances of negotiation to resolve understanding of the rights of the fishers and even legal recourses if required.* *However, there is some doubt about the timeliness of the justice system, there is no clear evidence on how consistently these sanctions are applied and how demonstrably provide the effective deterrence. Due to this last, the Patagonian scallop meets with SG80 for this SI.*		
c	**Guidepost**	Fishers are **generally thought** to comply with the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.	**Some evidence exists** to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.	There is a **high degree of confidence** that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery.
	Met?	YES	YES	YES

	Justification	*There is evidence that the fishers respect the main established regulatory or customary rules, in the fact that a sanction (or even an attention) has never been needed to be applied; and during all the years that the fishery has been operating, As mentioned, the assessment team believes the fishery to clearly respect the main established regulatory or customary rules.* During the re-certification process, the assessment team interviewed to Dirección Nacional de Coordinación Pesquera and Dirección Nacional de Planificación Pesquera. They commented there have not had non-compliance sanctions during last years, and neither there had been much since the beginning of the fishery. *The very low rate of violations indicates that fishers comply with the management system under assessment*. *Nevertheless, if any exist, it is unlikely to be related to a negative impact on fishing recourses or to the stock's detriment*. This attests to the effectiveness of the system as well as attitude of the harvesters toward the resource. Fishers provide information through mandatory reporting as well as voluntarily through such programs as on-board and port sampling. Industry programs attest to responsible stewardship. In consults, the previous interviews are on line. Therefore, there are not only thoughts or some evidence, but there is a high degree of confidence that the fishers comply with the management system, including providing information of importance to the effective management of the fishery. *Such, the fishery meets with SG100 for this SI.*		
d	Guidepost		There is no evidence of systematic non-compliance.	
	Met?		YES	
	Justification	*The team found no evidence of systematic non-compliance and so the Patagonian scallop meets the SG80 level of performance for this SI.*		
References		Law N° 25.470, Federal Fisheries Law N° 24.922 and Federal Decree N° 748/1999.		
OVERALL PERFORMANCE INDICATOR SCORE:				95
CONDITION NUMBER (if relevant):				-

Evaluation Table for PI 3.2.4

PI 3.2.4		**The fishery has a research plan that addresses the information needs of management**		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	**Research** is undertaken, as required, to achieve the objectives consistent with MSC's Principles 1 and 2.	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.	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.
	Met?	YES	YES	NO

	Justification	*There is evidence that research is undertaken, and that there is established a research plan that 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. It b*egins with the assessment framework. The INIDEP Resolution N° 133/2010 establishes a research program on Benthic Mollusc to obtain information and knowledge in order to advice the Management System (www.inidep.edu.ar). There is then a written offshore scallop research plan that establishes methodologies for determining stock status, stock productivity, reference points and advice on harvest levels and research recommendations. The plan takes a proactive approach by participating in a partnership with the management and the industry, the aim being to produce high quality analyses of fishery and survey data that reduce advice uncertainty and allow the fishing industry to identify with the scientific approach adopted. Both companies participating in the fishery provide their fishing vessels for research activities to the INIDEP (20 days year/vessel) and one of them gives financial support to Universidad Nacional de Mar del Plata's Scallop research team. The other company has pointed to the assessment team their intention to participate on it. A research cruise provide direct information of the fishery, use for research purpose, annual stock surveys are conducted throughout all areas but major production areas are especially monitored. The complete INIDEP research programs include Patagonian Scallop fishery, genetics, related species, oceanographic conditions and other ecosystem-related issues, such as productivity. INIDEP technical information is sent immediately to Consejo Federal Pesquero and SSPyA. Both organisms receive information of research groups from other academic institutions along with the INIDEP. A clear example is the PANs elaboration procedure, which included workshops with all country public and civilian organizations interested on participating or especially invited. As it was said in previous sections, there are other academic institutions dealing with Patagonian Scallop Fishery, mainly Universidad Nacional de Mar del Plata. These groups are in contact with INIDEP researchers, although no clear formal relations included in the research programs of any individual group have been identified. Therefore, there is sufficient evidence to affirm that the research plan and research activities are undertaken, and provide 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. However, while t*he work plan is a strategic document, there are still many lacks of information to be researched in order* to *consider it sufficiently comprehensive, particularly concerning some ecosystems aspects.* *Therefore, while 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, the Patagonian scallop fishery meets the requirements of this SI at SG 80. but and not to meet SG100*

b	**Guidepost**	Research results are **available** to interested parties.	Research results are **disseminated** to all interested parties in a **timely** fashion.	Research **plan** and results are **disseminated** to all interested parties in a **timely** fashion and are **widely and publicly available**.
	Met?	YES	YES	NO
	Justification	*Research results are widely disseminated to all CFP and the fishery follow up Commission, and available to all interested parties by Federal Fisheries Law N° 24.922, on INIDEP's*		

		website (www.inidep.edu.ar) in a timely fashion. Law N° 25.831 guaranties the free access to public environment information. *However, there is no strong evidence that the internal research plan and results are proactively disseminated and publicly available to all interested parties, and so the fishery meets SG80 for this SI.*
References		INIDEP Resolution N° 133/2010 establishes a research program on Benthic Mollusc. The fishery follow up Commission and available (Federal Fisheries Law N° 24.922) on INIDEP's website (www.inidep.edu.ar).
OVERALL PERFORMANCE INDICATOR SCORE:		**80**
CONDITION NUMBER (if relevant):		**-**

Evaluation Table for PI 3.2.5

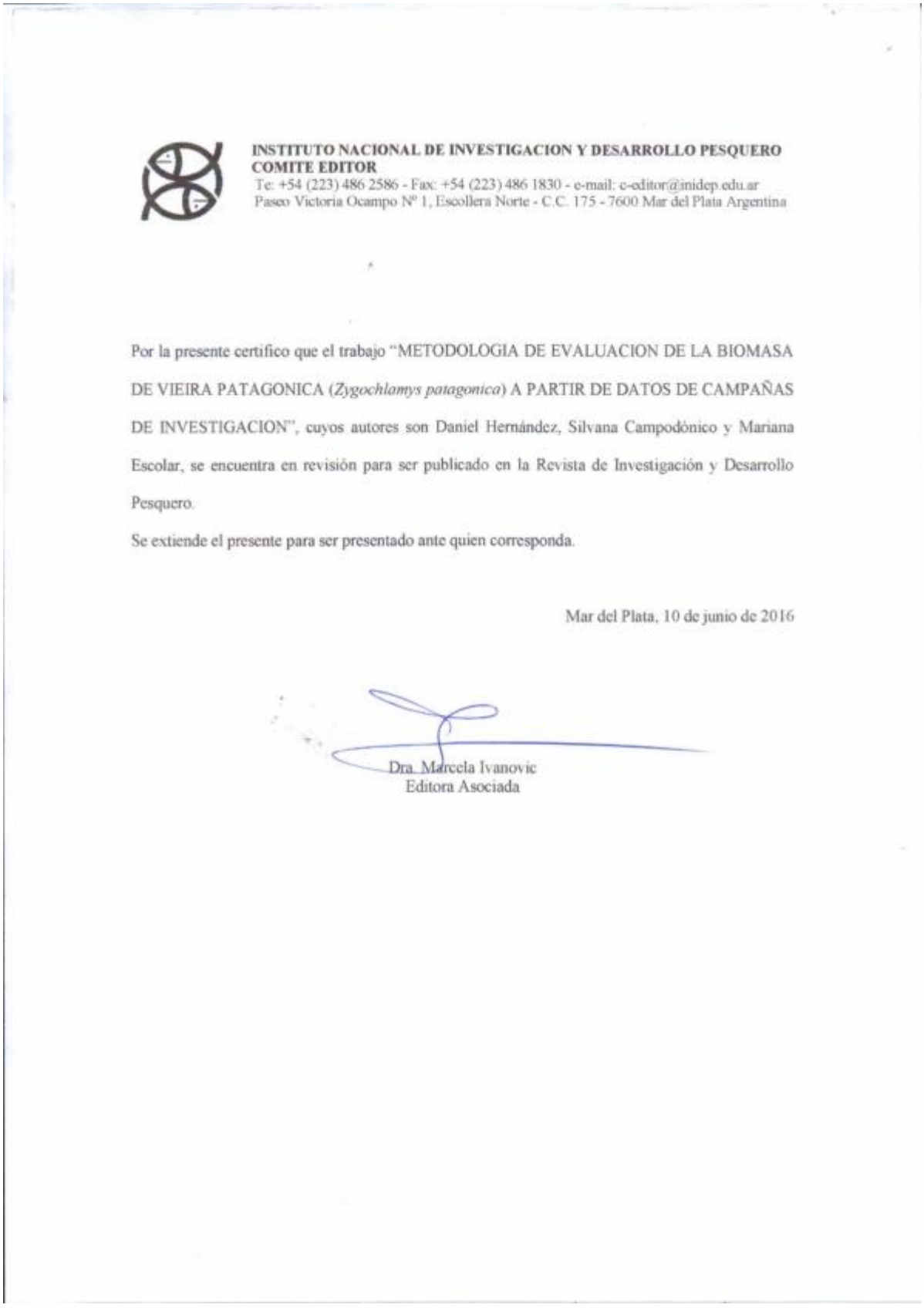
PI 3.2.5		**There is a system of monitoring and evaluating the performance of the fishery-specific management system against its objectives** **There is effective and timely review of the fishery-specific management system**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Guidepost**	The fishery has in place mechanisms to evaluate **some** parts of the management system.	The fishery has in place mechanisms to evaluate **key** parts of the management system	The fishery has in place mechanisms to evaluate **all** parts of the management system.
	Met?	YES	YES	YES
	Justification	*The fishery has in place mechanisms to evaluate not only some or key parts but all parts of the management system.* The performance of the management system against the stated objectives is constantly monitored through the fishing season by the industry and INIDEP in the Patagonian Scallop Fishery Follow-up Commission. To the CFP has a Patagonian Scallop Technical Adviser Commissions which is permanently consulted about the management. The fishery has in place mechanisms to evaluate all parts of the management system composed by a full internal review of the performance of the fishery against stated goals takes place at the may be more than an annual year meeting that is attended by the interested parties as mention above and some meetings at INIDEP with the enterprises. Presentations are made on the status of the stock, management measures used and operational issues, as well as on an overview of the monitoring of the fishery by the surveillance program for the previous year; adjustments are made subsequently to the management system as required. Key aspects of the management system are to subject to a regular internal review from the MINAGRI – Internal Audit Unit and occasional external reviews from the National General Syndication, which depends on National Congress (Law N° 24.156/1990), and Auditoria General de la Nación. Also, Any administration's decision affecting the rights of third parties requires a control and legal opinion prior to its sanction. Such control is carried out by a statutory body external to the agency that promotes the sanction of the rule. All this procedures are established by Administrative Procedure Law N° 19.549 and its Regulatory Federal Decree N° 1.759/1972. INIDEP has a permanent delegation from Sindicatura General de la Nación, through which a Biologist audits on a biannual basis the performance of all INIDEP's Projects and Programs. The control is based on indicators previously designed for each of them (see corresponding interview in the Re-Certification Report). *Therefore, from all above, it is considered that the Patagonian scallop fishery complies with SG100 level of performance for this SI.*		

b	**Guidepost**	The fishery-specific management system is subject to **occasional internal** review.	The fishery-specific management system is subject to **regular internal** and **occasional external** review.	The fishery-specific management system is subject to **regular internal and external review.**
	Met?	YES	YES	NO
	Justification	*The fishery-specific management system is subject to regular internal and occasional external review.* The Patagonian Scallop Fishery Follow-up Commission could be considered as a revision instance for the complete system (management, research and fishery), with the participation of companies which are part of the fishery but external to the research and management system. As an internal revision is considered the Patagonian Scallop Technical Adviser Commissions which provide the result to CFP. On board inspectors elaborate a fishing trip report, which is submitted to DNCP to be reviewed by the Enforcement Authority in order to evaluate their performance. Workshops are frequently conducted with the participation of all interest parties in order to analyze the issues prior to the decision-making, even though there are not many records reporting the use of such methodology in Patagonian Scallop fishery. However, the same is currently used in both the administrative and research systems, thus it can be carried out if necessary. Fishery statistics are also published in CFP's and SSPyA's websites, such as the positioning of fishing vessels, which is updated twice a day (www.minagri.gob.ar). The way in which CFP publishes its sessions and decisions, such as the Publishing of the INIDEP reports, imply the opportunity for all the stakeholders to assess the system (see www.cfp.gob.ar and www.inidep.edu.ar). *However, there is not enough evidence to supports how fishery-specific management system or administration system key parts are subject to regular external review, and so the Fishery does not meet issue b) of SG100, and a score of 80 is assigned to this SI.*		
References		National General Syndication, which depends on National Congress (Law N° 24.156/1990), and Auditoria General de la Nación. Administrative Procedure Law N° 19.549 and its Regulatory Federal Decree N° 1.759/1972.		
OVERALL PERFORMANCE INDICATOR SCORE:				**90**
CONDITION NUMBER (if relevant):				**-**

Appendix 2. Stakeholder submissions

All stakeholder submissions were related with Action Plan evidences (i.e. technical reports). These written documents are identified in “References”.

There are not any comments during the annual surveillance audit process that require explicit responses of the team.



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Por la presente certifico que el trabajo "METODOLOGIA DE EVALUACION DE LA BIOMASA DE VIEIRA PATAGONICA (*Zygochlamys patagonica*) A PARTIR DE DATOS DE CAMPAÑAS DE INVESTIGACION", cuyos autores son Daniel Hernández, Silvana Campodónico y Mariana Escolar, se encuentra en revisión para ser publicado en la Revista de Investigación y Desarrollo Pesquero.

Se extiende el presente para ser presentado ante quien corresponda.

Mar del Plata, 10 de junio de 2016

Dra. Marcela Ivanovic
Editora Asociada

Fig. 4. INIDEP's notification about peer review process

Appendix 3. Surveillance audit information

All surveillance audit information was included in the report.

Appendix 4. Additional detail on conditions/ actions/ results

There are not any additional details on conditions, actions and results.

Appendix 5. Revised Surveillance Program

Not applicable at this surveillance.

Table 13: Surveillance level rationale

Year	Surveillance activity	Number of auditors	Rationale
N/A			

Table 14: Timing of surveillance audit

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
N/A	N/A	N/A	N/A

Table 15: Fishery Surveillance Program

Surveillance Level	Year 1 Concluded	Year 2 Concluded	Year 3 Concluded	Year 4 Actually
Level 6	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit

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