

MSC Surveillance Report

For The

Southern Gulf of St Lawrence Snow Crab (*Chionoecetes opilio*) Trap Fishery

Facilitated By the

Affiliation of Seafood Producers Association of Nova Scotia (ASPANS)

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Client Name	Affiliation of Seafood Producers Association of Nova Scotia (ASPANS)	
Fishery Units	<ul style="list-style-type: none"> • <u>Species</u>: Snow crab <i>Chionoecetes opilio</i> • <u>Geographical Area</u>: Southern Gulf of St Lawrence, Canada • <u>Method of Capture</u>: Baited Trap 	
Date of Report	17th October 2014	
Certification Date	25 th September 2012	
Assessment Team	Eric Dunne, Assessor Ivan Mateo, Lead Assessor	
On-site audit	19th September 2014	
Surveillance Audit completion	X	Surveillance Audit 1: September 2013
	X	Surveillance Audit 2: October 2014
		Surveillance Audit 3: September 2015
		Surveillance Audit 4: September 2016
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Acronyms

ASPANS	Affiliation of Seafood Producers Association of Nova Scotia
B_{lim}	Biomass limit reference point
B_{MSY}	Biomass at Maximum Sustainable Yield
B_{USR}	Biomass Upper Stock reference point
CFA	Crab Fishery Area
CI	Confidence intervals
CPUE	Catch per unit effort
DFO	Fisheries and Ocean Canada
ER	Exploitation rate
F_{lim}	Removal rate limit reference point
FMPME	Fishery Management Performance Monitoring and Evaluation
HCR	Harvest Control Rules
IFMP	Integrated Fisheries Management Plan
IQ	Individual Quota
ITQ	Individual Transferrable Quota
MSC	Marine Stewardship Council
PA	Precautionary Approach
PI	Performance Indicator
TAC	Total Allowable Catch
SGSL	Southern Gulf of St Lawrence

Summary

The Southern Gulf of St Lawrence (SGSL) Snow Crab Trap Fishery was certified on the 25th September 2012. This report contains the findings of the second surveillance audit in relation to the certificate of the Southern Gulf of St Lawrence Snow Crab Fishery:

The Affiliation of Seafood Producers Association of Nova Scotia (ASPANS) Southern Gulf of St Lawrence Snow Crab Trap Fishery (One Unit of Certification).

The second surveillance audit focused on the stock status and any changes in the management regime or regulations and legislation since the initial certification, and monitoring continued compliance with the MSC Principles and Criteria.

The conditions of certification for Year 1 stipulated that the IFMP for the SGSL should be shown to contain fishery-specific objectives designed to achieved the requirements of MSC's Principles 1 and 2 (PI 3.2.1) and that evidence must be provided that there is in place an effective review and evaluation of the fishery specific management system (PI 3.2.5). The fishery was found on target on condition 1 (P1 3.2.1) and condition 2 (PI 3.2.5) was closed out. For Year 2, the condition 1(P3 3.2.1) stipulated that the IFMP for the SGSL should be adopted, and published by the second year.

Based on the evidence provided, the assessment team concluded that the Year 1 and Year 2 milestones on Conditions 1 and 2 have been met. Therefore, both conditions have been closed. The score of relating PIs has been revised, and according to the revised score, the overall notation of the SGSL snow crab fishery has been modified (Section 9).

SAI Global¹ determines that the Affiliation of Seafood Producers Association of Nova Scotia (ASPANS) Southern Gulf of St Lawrence Snow Crab Trap Fishery continues to operate a well-managed and sustainable fishery and therefore, continued certification to the MSC Principles and Criteria for Sustainable Fishing is awarded.

On the behalf of the MC client, ASPANS, SAI Global would like to extend thanks to the management organization and stakeholders of the Southern Gulf of St Lawrence Snow Crab Fishery who took part in this surveillance audit.

Surveillance Team:

- Assessor: Eric Dunne has an extensive senior level experience in all aspects of fishery resource management and policy.
- Assessor: Lead Ivan Mateo is an assessor with SAI Global with 15 years of extensive experience in fisheries science providing scientific advice for the management of tropical and temperate species .

¹ As of May 1st 2012, SAI Global plc (SAI Global) became owners of Global Trust Certification (GTC). This report contains both historical references to Global Trust (GTC) from previous initial full assessment and reference to SAI Global.

1. Introduction

This report sets out the results of the second annual surveillance assessment of:

The Affiliation of Seafood Producers Association of Nova Scotia (ASPANS) Southern Gulf of St Lawrence (SGSL) Snow Crab Trap Fishery.

To be awarded an MSC certificate for the fishery, the applicants agreed in a written contract to develop an action plan for meeting the required 'Conditions' against the performance indicators that scored below 80% in the initial assessment. Action Plans for each Condition were submitted by each fishery client and these were approved by SAI Global as the certification body of record.

The applicant also agreed in a written contract to be financially and technically responsible for surveillance visits by an MSC accredited certification body, which would occur at a minimum of once a year, or more often at the discretion of the certification body (based on the applicant's action plan or by previous findings by the certification body from annual surveillance audits or other sources of information).

Announcement of Surveillance Audit

A written notification was sent to the list of stakeholders representing the consultation plan during the initial assessment of this fishery and in many cases follow up mails were also made to ensure that stakeholders had been provided with sufficient opportunity to meet with or submit information on the fishery to the assessment team.

Table 1 provides a list of the stakeholders and management organizations engaged in the process either through meetings, conference call or submission of information. These consultations focused on the questions and evidence that demonstrates the status of the Southern Gulf of St Lawrence snow crab stock, the performance of the fishery throughout the year and measures that supported the fulfilment of the Conditions of Certification placed upon ASPANS at the initial certification decision.

Meetings with the fishery management organization of the SGSL snow crab fishery, the Department of Fisheries and Oceans (DFO), were held in Moncton, New Brunswick on September 19, 2014.

A number of scientific and meeting reports were also examined by the surveillance team in producing this report, as detailed in the information sources section.

2. The Surveillance Process

The Surveillance Audit followed MSC Certification Requirements Version 1.3 and implemented by SAI Global accredited MSC Procedures (QP).

<http://www.msc.org/documents/scheme-documents/msc-scheme-requirements>

The determination of the Surveillance level based on Table C3 and C4 was a normal surveillance. The score was calculated by adding scores from sections 1-4 in Table C3 below.

Default Assessment tree used?	
Yes	0
No	2
2. Number of conditions	
Zero conditions	0
Between 1-5 conditions	1
More than 5	2
3. Principle Level Scores	
≥85	0
<85	2
4. Conditions on outcome PIs?	
Yes	2
No	0

The surveillance score of 3 was used to identify the surveillance level appropriate to the fishery;

Table C4: Surveillance Level Years after certification or recertification					
Surveillance score (from Table C3)	Surveillance level	Year 1	Year 2	Year 3	Year 4
2 or more	Normal Surveillance	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & recertification site visit

The surveillance audit was conducted as a normal on-site surveillance audit as based on the score of 3.

The Surveillance Audit was comprised in general of:

1. A review and evaluation of the fishery status, scientific evaluation and changes to the management regime and regulation since the initial assessment with respect to confirming that the fishery continues to meet the MSC Principles and Criteria for certification.
2. A review and evaluation of the client activities and evidence that supports the implementation of the Action Plans agreed at the original certification of each fishery.

The surveillance audit consisted of the announcement to stakeholders and interested parties as required through the MSC website and more direct stakeholder contact with the original stakeholders that took part

in the initial assessment and management organizations that comprise the management system and regime for the SGSL snow crab fishery. Through this process, a stakeholder consultation plan was developed as part of the on-site assessment.

Individual letters were sent to stakeholders and management agencies, with follow up e-mails and information on the objectives of the surveillance audit. From this, a surveillance on-site meeting plan was organized and appointments for each individual meeting set. Due to the nature of the management of SGSL Snow Crab, and the geographic location of the respective clients, meetings were offered at locations convenient for the stakeholders. However, only one meeting was necessary: with the Client and DFO .

- On site Surveillance Audit dates was September 19th 2014.
- On-site audits were performed by Eric Dunne and Ivan Mateo.

Meetings generally consisted of a 120-180 minute discussion with a pre-set generic agenda used in each case. The agenda was set out so as to allow specific stakeholder interests and concerns to be covered through a structured approach.

Information and notes from the consultation phase of the assessment were combined with a review of formal documentation from science and management agencies, regulatory amendments and the direct evidence collected during each of the client consultation meetings.

3. Summary of stakeholder and client meetings

Arising out of the stakeholder consultation plan preparation a considerable number of stakeholders were contacted directly by surface mail and e-mail. Arising out of this process a final direct consultation plan for the audit was undertaken. Table 1 details the dates, meeting locations and organizations that were consulted through direct meetings or conference calls during the on-site surveillance assessment.

All meetings were conducted by the Surveillance Team Assessors, Eric Dunne and Ivan Mateo.

Table 1. Consultation Meetings during on Site Surveillance Assessment of the Southern Gulf of St Lawrence Snow Crab Fishery.

Name Organization	Present at Meetings	Location	Venue	Date/Time	Purpose
ASPANS (Client)	Peter Norsworthy Eric Dunne Ivan Mateo	Dartmouth, NS	Various	18 th September 2014, 9.00 am	To brief Client of Audit and verify concerns and involvement in the conduct of the approved Client Action Plan.
DFO	Peter Norsworthy Eric Dunne Ivan Mateo From DFO: Manon Mallet Sylvie Leger Leroy MacEachern Mikio Moriyasu Tony Gaudet Matthew Hardy Ron Belliveau Rejean Hebert	Moncton, NB	Gulf Region Fisheries Centre	19 th September 2014, 8:30am	Status of the fishery, stock and stock assessment and the management system as well as progress on the Milestones contained in the Action Plan approved for the two Conditions attached to Certification of this fishery.

4. Fishery observations

Information quoted from DFO 2014

Fleet structure

In the entire SGSL snow crab fishery, 440 licenses were issued in 2013. There were utilized by 418 active vessels in 2013. The total number of traps allowed was 41,802 in 2013. Table 2 shows the number of licenses, vessels, traps, quotas, catches and fishing season opening and closing dates by Crab Fishing Area (CFA) for 2013. No real changes have taken place in overall fleet structures in 2014 (ASPANS, *pers. comm.* during site visit).

Table 2. Number of allocation shares, vessels, traps, quotas, opening dates, and dates of last landing of the snow crab fishery by management area in the southern Gulf of St. Lawrence in 2013.

Characteristic	Area 12	Area 12E	Area 12F	Area 19	Southern Gulf
Allocation shares	264 ¹	4	16	156	440
Number of active vessels	299	4	16	99	418
Total number of traps allowed	38,363	450	1,290	1,699	41,802
Opening date	April 28	April 28	April 24	July 15	
Date of last landing	July 15	July 09	June 26	August 21	
Quota (t)	22,548	204	543	2,654	25,949 ²
Landings (t)	22,645	204	543	2,657	26,049

¹ The number of quota allocations among which the Total Allowable Catch is divided (Source: DFO Administrative List for Snow Crab areas 12, 12E, 12F, and 19)

² Quota includes 376 t set aside to finance the trawl survey in 2013 (under Section 10 of the Fisheries Act)

The 2014 quota allocations and catches are as follows. Note that these final quotas take into account distribution of the scientific quota of 379mt to the individual fishing areas and a quota reconciliation as described in the snow crab IFMP:

	Quota 2014 (t)
Area 12	19,332.49
Area 19	3,687.78
Area 12E	169.33
Area 12F	1,658.84
Scientific survey quota	379.00
Total	25,227.44

(As of October 8th 2014). The detailed information shown in Table 2 above (and in Tables 3, 4, 5 and 6) will be available for the 2014 fishery from the 2015 Stock Assessment Report.

Catch data

Snow crab landings from the Southern Gulf of St. Lawrence have fluctuated without trend from 1969 to the present with three periods of high landings: 1981-1986, 1994-1995, and more recently 2002 to 2009 (Figure 1). The peak landing of the entire history was in 2005 at 36,118 t. The landings of snow crab from the southern Gulf of St. Lawrence in 2013 were 26,049 t from a quota of 25,949 t. (Figure 1).

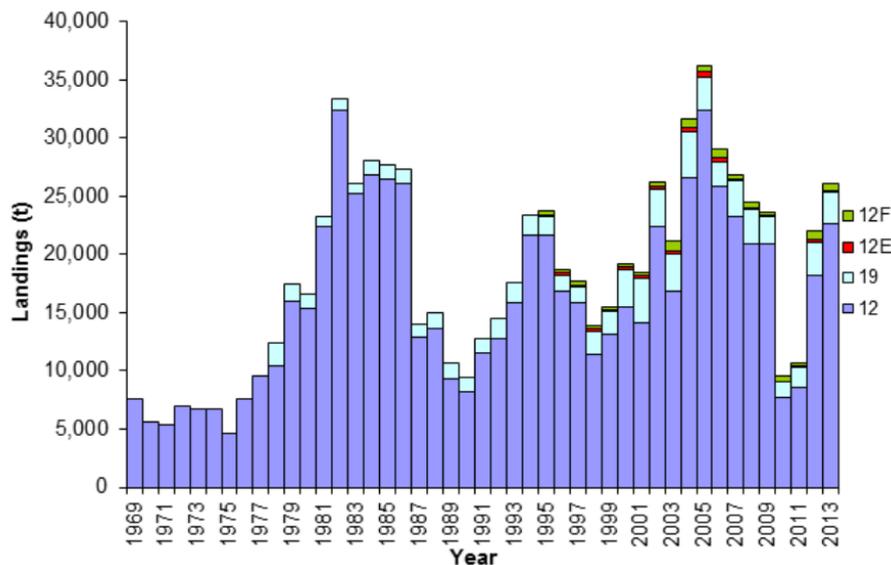


Figure 1. Landings (t) in the SGSL snow crab fishery, 1969 to 2013.

The 2013 fishing season in Area 12 opened on April 28 and the last landings were recorded on July 15 with reported landings of 22,645 t (quota of 22,548 t) (Tables 3 Figure 1). In accordance with the soft-shelled crab protocol, 5 of 323 grids were closed during the 2013 fishing season. The fishing effort estimated from logbooks has varied from 243,339 to 544,454 trap hauls between 1987 and 2009, but decreased considerably to 161,148 trap hauls in 2011 (Table 3), the lowest of the time series since 1987. The fishing effort was 296,398 trap hauls in 2013, an increase from 2012 (267,044 th).

Table 3. Quota and landings (t), fishing effort (trap hauls) and catch performance for the snow crab fishery in Area 12, 2005 to 2013

Fishery descriptor	2005	2006	2007	2008	2009	2010	2011	2012	2013
Quota (t)	32,336	25,869	23,207	20,900	20,900	7,700	8,585	18,143	22,548
Landings (t)	32,363	25,889	23,243	20,911	20,896	7,719	8,618	18,159	22,645
CPUE (kg/trap-haul) ¹	63.7	64.4	65.7	56.4	48.2	47.9	53.0	68.0	76.4
Effort (trap hauls)	508,053	402,702	353,775	370,762	433,527	161,148	162,604	267,044	296,398
Soft-shelled crab (%) in catches ²	3.9	3.1	2.0	3.0	5.0	6.5	6.2	3.7	2.8
Grids closed (total of 323)	68	11	5	3	78	74	233	7	5

¹ CPUE values are not standardized and do not account for changes in management measures.

² The percentage is based on a durometer reading of 68. Catches are defined as male crab of all sizes (commercial \geq 95 mm and non-commercial) in traps.

(N.B. Yellow highlighting is an artefact from the original publication and not applicable in this report).

The open season for the 2014 fishery in CFA 12 was May 7, 2014 to July 22.

The 2013 fishing season in Area 19 opened on July 15 and the last date of landings was August 21 with

reported landings of 2,657 t (quota of 2,654 t) (Tables 4; Figure 1). In accordance with the white crab protocol (shell hardness <72 durometer units), no sector within Area 19 was closed during the 2013 fishing season. The fishing effort in Area 19 has varied from 16,733 to 55,977 trap hauls between 1987 and 2009, but considerably decreased to 11,138 trap hauls in 2010, the lowest of the time series since 1987. The effort in 2013 was 17,890 trap hauls.

Table 4. Quota and landings (t), fishing effort (trap hauls) and catch performance for the snow crab fishery in Area 19 2005 to 2013.

Fishery descriptor	2005	2006	2007	2008	2009	2010	2011	2012	2013
Quota (t)	2,878	2,000	3,074	3,002	2,433	1,360	1,703	2,907	2,654
Landings (t)	2,827	1,989	3,034	2,929	2,370	1,360	1,701	2,906	2,657
CPUE (kg/trap-haul) ¹	68.1	84.4	71.3	76.3	71.4	122.1	133.3	178.1	148.5
Effort (trap hauls)	41,512	23,566	42,553	38,388	33,193	11,138	12,761	16,317	17,890
White crab (%) in catches ²	7.7	6.1	7.4	9.0	11.6	6.4	11.5	4.5	3.0
Sectors closed ³	0/4	2/4	0/4	4/4	9/9	4/9	0/9	0/9	0/9

¹ CPUE values are not standardized and do not account for changes in management measures.

² The percentage is based on a durometer reading of 72. Catches are defined as male crab of all sizes (commercial >= 95 mm and non-commercial) in traps.

³ Total number of sectors was changed from 4 to 9 sectors in 2009.

(N.B. Yellow highlighting is an artefact from the original publication and not applicable in this report).

The open season in 2014 for Area 19 was July 14, 2014 to September 13, 2014.

The 2013 fishing season in Area 12E began on April 28 and the date of last landings was July 9 with reported landings of 204 t (quota of 204 t) (Tables 5; Figure 1). The fishing effort in Area 12E slightly decreased from 5,623 trap hauls in 2012 to 5,097 trap hauls in 2013. In accordance with the soft-shelled protocol, no grids within Area 12E were closed during the 2013 fishing season.

Table 5. Quota and landings (t), fishing effort (trap hauls) and catch performance for the snow crab fishery in Area 12E 2005 to 2013.

Fishery descriptor	2005	2006	2007	2008	2009	2010	2011	2012	2013
Quota (t)	450	550	221	400	200	67	75	251	204
Landings (t)	449	411	220	187	67	50	76	185	204
CPUE (kg/trap-haul) ¹	80.6	40.8	37.2	20.3	14.4	27.4	31.5	32.9	40.1
Effort (trap hauls)	5,571	10,074	5,914	9,232	4,653	1,825	2,413	5,623	5,097
Soft-shelled crab (%) in catches ²	2.9	7.8	1.3	10.1	7.8	14.7	8.4	3.3	15.9
Grids closed (total of 8)	0	2	0	0	2	0	0	0	0

¹ CPUE values are not standardized and do not account for changes in management measures.

² The percentage is based on a durometer reading of 68. Catches are defined as male crab of all sizes (commercial >= 95 mm and non-commercial) in traps.

(N.B. Yellow highlighting is an artefact from the original publication and not applicable in this report).

The open season in 2014 for Area 12E was May 4 to July 22.

In Area 12F, the fishery in 2013 opened on April 24 and the last date of recorded landings was June 26 with reported landings of 543 t (quota of 543 t) (Table 6; Figure 1). The fishing effort decreased from 16,890 trap hauls in 2012 to 11,086 trap hauls in 2013. In accordance with the soft-shelled protocol, no sector within Area 12F was closed during the 2013 fishing season.

Table 6. Quota and landings (t), fishing effort (trap hauls) and catch performance for the snow crab fishery in Area 12F 2005 to 2013.

Fishery descriptor	2005	2006	2007	2008	2009	2010	2011	2012	2013
Quota (t)	480	815	408	585	465	420	314	706	543
Landings (t)	479	787	370	431	309	420	313	706	543
CPUE (kg/trap-haul) ¹	93.7	55.9	30.2	27.8	22.0	29.3	32.5	41.8	49.0
Effort (trap hauls)	5,112	14,079	12,252	15,504	14,045	14,335	9,631	16,890	11,086
Soft-shelled crab (%) in catches ²	0.8	3.5	2.4	7.3	11.4	8.6	2.6	9.4	2.4
Sectors closed (total of 3)	0	0	1	3	3	2	0	0	0

¹ CPUE values are not standardized and do not account for changes in management measures.

² The percentage is based on a durometer reading of 68. Catches are defined as male crab of all sizes (commercial \geq 95 mm and non-commercial) in traps.

(N.B. Yellow highlighting is an artefact from the original publication and not applicable in this report).

The open season in 2014 for Area 12F was May 1 to July 22.

Catch per unit of effort (CPUE) expressed as kg per trap-haul (kg/th) is calculated directly from logbook data as the ratio of total landings (kg) to total effort (trap-hauls). CPUE values are not standardized and do not account for changes in management measures and fishing practices and as a result may not be directly proportional to biomass. In Area 12, the annual mean CPUE increased in 2013 (76.4 kg/th) compared to 2012 (Figure 2). In Area 19, the CPUE has been increasing since 2009 and reached 178.1 kg/th in 2012, but decreased to 148.5 kg/th in 2013 (Figure 2). The CPUE in Areas 12E (40.1 kg/th) and 12F (49.0 kg/th) increased in 2013 compared to 2012 (Figure 2). Catch per unit of effort (CPUE) estimated from at-sea observer sampling of individual traps provides generally similar trends in CPUE to those estimated from logbooks.

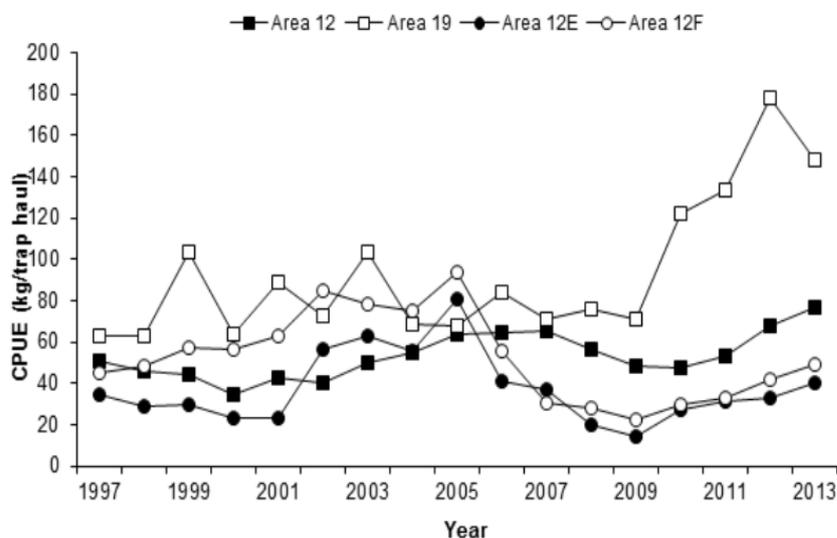


Figure 2. Catch per unit effort (kg per trap haul) in the SGSL snow crab fishery, CFAs 12, 19, 12E AND 12F,

based on logbooks, 1997 to 2013

Enforcement activities

Table 7. Level of enforcement in the SGSL snow crab fishery in 2013 (as of 24 February, 2014)

	Gulf & Quebec Regions / Régions du Golfe et du Québec
Total Fishery Officer Hours (all CFAs) / Heures totales par les agents (toutes les ZPCs)	11,567 hours / heures
At Sea Observer coverage percentage (Average coverage between both region) / Pourcentage de couverture des observateurs en mer (Moyenne de couverture pour les deux régions)	- CFA/ZPC 12 = 24.5% - CFA/ZPC F = 18.5% - CFA/ZPC E = 24.5% - CFA/ZPC 19 = 8%

CCG Vessel Patrols / Patrouilles sur les bateaux de GCC	Gulf & Quebec Regions / Régions du Golfe et du Québec
LAUZIER	420 hours / heures

	Gulf & Quebec Regions / Régions du Golfe et du Québec
Violations Infractions	110
Charges pending Accusations en cours	57
Warnings Avertissements	47
Charges laid Accusation portées	6

5. Stock status observations

Assessment

Snow crab in fishing areas 12, 19, 12E, and 12F comprise a single biological population and the southern Gulf of St. Lawrence stock is considered as one unit for assessment purposes. The survey design and biomass estimation polygon covers the entire area of the southern Gulf of St. Lawrence defined by the 20 to 200 fathoms depth contours (corresponding to the areal extent of bottom temperatures < 5 °C which are favourable for snow crab and encompassing the area of the southern Gulf of St. Lawrence biological unit) (Figure 3). The sampling design was modified in 2013 from 2012 with an increase in the number of stations in 2013 to 355 from 325 in 2012 (DFO 2013; Hebert et al. 2014). The survey spatial sampling design partitioned this area into square grids of 12.7 km x 12.7 km. The increase in the number of stations in 2013 was the result of a request from the snow crab advisory committee to increase the number of sampling stations in the smaller fishing zones. A total of 444 tows were attempted in 2013 and 352 stations were successfully trawled; three sampling squares had to be abandoned due to failures to successfully trawl the area. The survey was conducted between July 9 and Oct. 14, 2013. All at-sea survey and sampling protocols were identical to previous years

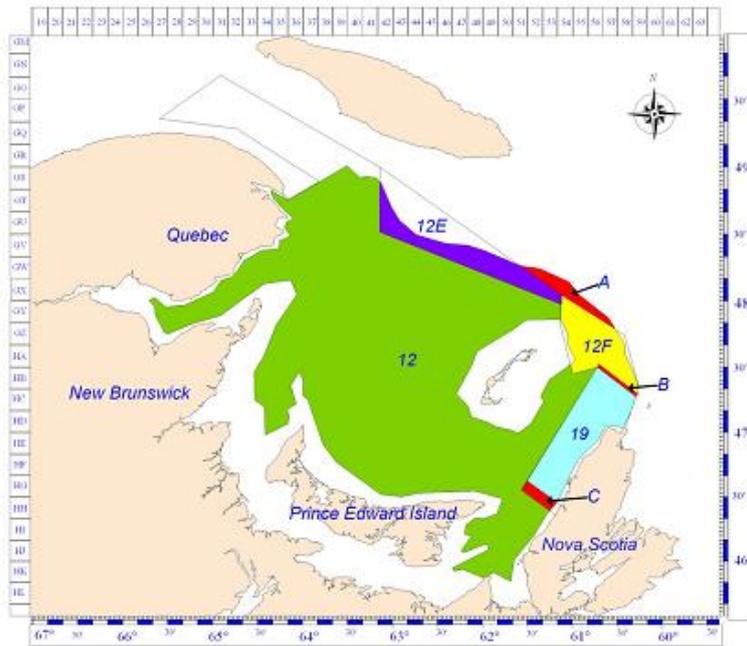


Figure 3. The survey and estimation polygon of 57,840 km² used for the 2013 snow crab (*Chionoecetes opilio*) stock assessment in the southern Gulf of St. Lawrence (all of the coloured areas) and corresponding estimation polygons for the four crab fishing areas (12, 12E, 12F, and 19). The unassigned zone north of areas 12E and 12F (label A) and buffer zones (labels B and C) are also shown.

Stock condition

Interpretation of stock status is based on inferences from abundance data from annual trawl surveys conducted during July to October, over the entire area of snow crab distribution in the southern Gulf. The surveys provide estimates of commercial biomass which are comprised of residual biomass (hard-shelled adult males of legal size remaining after the fishery) and recruitment biomass (soft-shelled adult males ≥ 95 mm CW (R-1) that will be available to the fishery the following fishing season). The snow crab trawl survey also provides indices of future male recruitment to the fishery (pre-recruits defined as R-4, R-3 and R-2). The pre-recruits R-4, R-3 and R-2 represent adolescent male crabs with a carapace width range of 56-68, 69-83, and larger than 83 mm, respectively. A portion of these crabs could be available to the fishery in 4, 3 and 2 years, respectively. An index of abundance of small male crab (34-44 mm CW) is also presented as an indicator of potential long-term recruitment. It takes at least six years for these small male crabs to reach the commercial size of 95 mm CW.

The biomass of commercial-sized adult males in the southern Gulf of St. Lawrence from the 2013 trawl survey was estimated at 65,868 t (95% confidence interval (C.I.) range of 56,283 t to 76,610 t; Figure 4). The estimated commercial biomass in the southern Gulf decreased by 12.2% relative to the 2012 estimate (74,997 t; 95% C.I. 65,822 t – 85,086 t).

The recruitment to the fishery at the time of the 2013 survey was 38,981 t (95% C.I. 28,969 t to 51,346 t), comprising 59.2% of the commercial biomass (Figure 4). The recruitment to the fishery in 2013 decreased by 20.4% compared to the 2012 estimate. The residual biomass (carapace conditions 3 to 5) of commercial-sized adult male crab after the 2013 fishery was estimated at 26,886 t (95% C.I. 22,909 t to 31,352 t), which is comparable to 2012 (Figure 4)

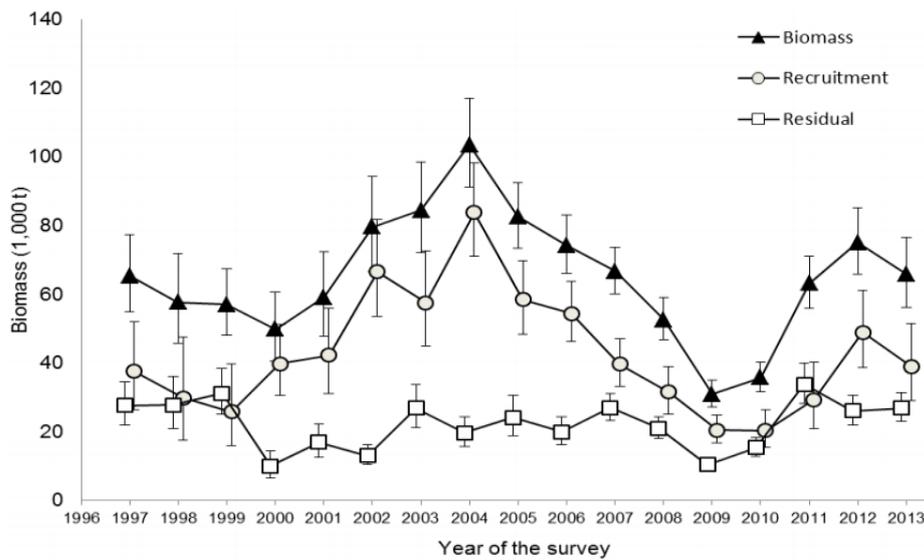


Figure 4. Total commercial biomass, recruitment commercial biomass, and residual commercial biomass (1,000 t; means with 95% confidence intervals) of snow crab in the SGSL, 1997 to 2013.

A second fishery independent survey of the SGSL is used to provide and index abundance of commercial-sized male crab. The multi-species research vessel bottom trawl survey has been conducted annually in September since the early 1970's although the estimation of commercial-sized male crab abundance is available only since 2001.

Over the available time series, the September multi-species bottom trawl survey index shows generally similar trends in biomass (within the estimation precisions of the surveys) in commercial adult male snow crab biomass between 2001 and 2013 as the biomass estimates from the dedicated snow crab trawl survey (Figure 5).

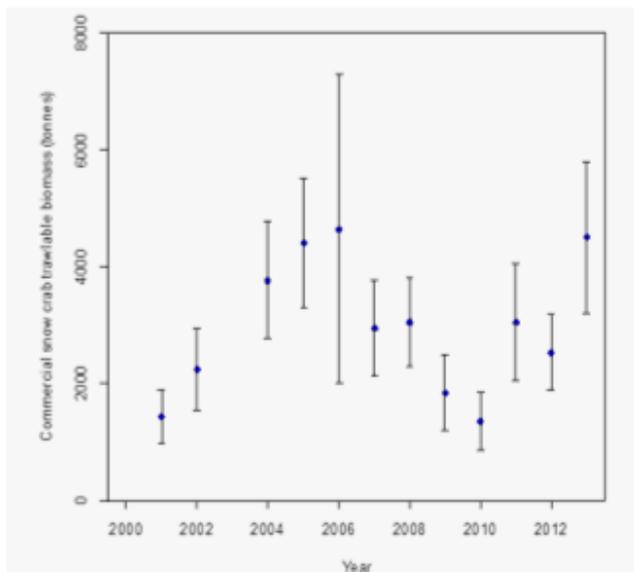


Figure 5: Index of trawlable biomass (t, means and 95% confidence intervals) of adult male snow crab ≥ 95 mm carapace width in the September RV survey for 2001 to 2013 excluding 2003.

Recruitment and Reproduction

Based on abundance of adolescent males of R-2, R-3 and R-4 from recent surveys, the trend in the recruitment of commercial-sized adult male crab to the fishery is anticipated to remain stable at the levels comparable to those observed in 2012 until the 2016 fishery (Figure 6). The index of abundance of small male crab (34-44 mm CW) from the trawl survey in 2012 is comparable to the index estimated since 2007 (Figure 7).

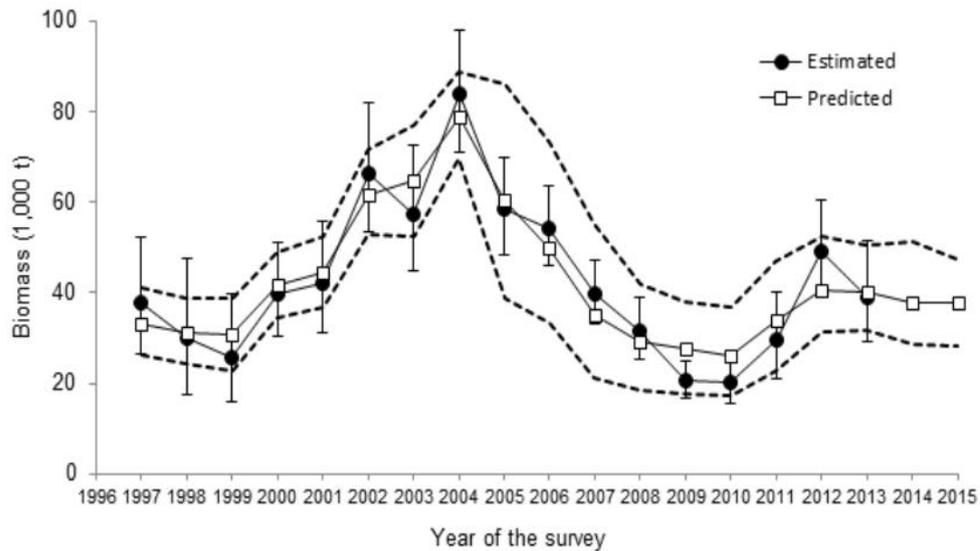


Figure 6. Estimated (black circle symbols are the means with 95% confidence interval vertical bars) and predicted (open square symbols are the means with the 95% confidence interval bands as dashed lines) biomasses of R-1 (adult male crabs ≥ 95 mm carapace width of carapace condition 1 and 2) snow crab in the year of the survey, 1997 to 2015. The predicted abundances are based on a relationship to the estimated abundances of R-2 (adolescent male crab larger than 83 mm CW) in the previous year.

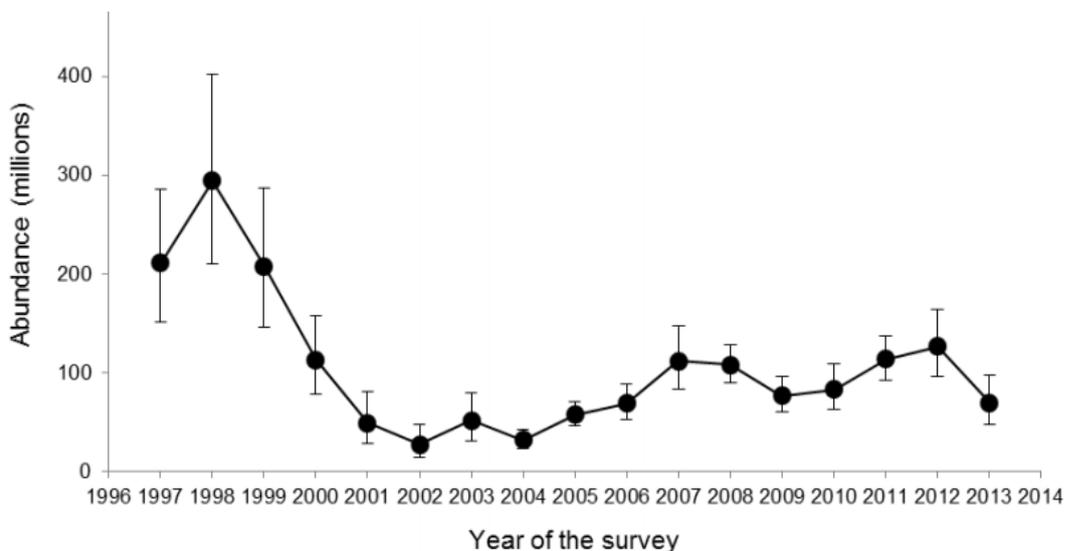


Figure 7. Index of abundance of small male crab of 34 to 44 mm, based on the trawl surveys conducted in the SGSL, 1997 to 2013.

The abundance of mature females decreased in 2013 compared to 2012 and was lower than the historical average (1997-2012, Figure 8). The decrease of pubescent females observed in the 2013 survey suggests that the abundance of mature females may decrease in the coming years (Figure 8).

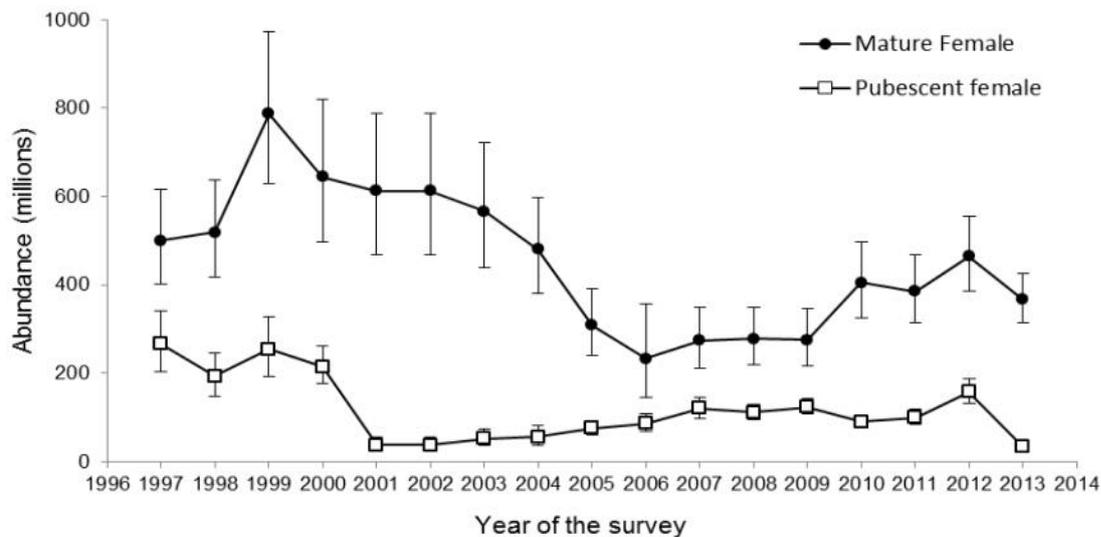


Figure 8. Estimated abundances of mature female and pubescent females in the SGSL based on the trawl surveys during 1997 to 2013.

Biological Reference Points

Within the Precautionary Approach (PA) framework (DFO 2009), the Limit Reference Point for biomass (Blim) defines the critical / cautious zones and an upper stock reference (BUSR) delimits the cautious / healthy zones on the stock status axis. A removal rate limit reference point (Flim) defines the maximum removal rate in the healthy zone. The upper stock reference point (BUSR) is 41,400 t of commercial-sized adult males of all carapace conditions as estimated from the trawl survey (DFO 2012b). Commercial-sized adult male crabs of all carapace conditions are available for the fishery in the year following the trawl survey. The biomass limit reference point (Blim) value is 10,000 t (DFO 2012b). The biomass limit reference point was chosen as the lowest biomass of hard shelled commercial-sized adult males which produced good recruitment rates of small male crabs of 34-44 mm CW (referred to as Instar VIII) (DFO 2010). The removal reference point (Flim) is 34.6% (DFO 2012b). The southern Gulf of St Lawrence commercial biomass estimate from the trawl survey should be used for evaluating catch options relative to the defined reference points.

The trajectory of stock abundance (biomass of commercial-sized adult male crab from the snow crab trawl survey in year $t - 1$) versus exploitation rate on this biomass in the fishery of year t is shown in Figure 9. The commercial biomass has varied between 30,920 t and 103,429 t during 1998 to 2013. Over this same period, exploitation rates have varied between 20.8% and 45.0%.

The estimated biomass from the 2013 snow crab survey, which would be available to the fishery in 2014, is 65,868 t (95% CI 56,283 – 76,610 t). The 2013 survey biomass estimate is in the healthy zone.

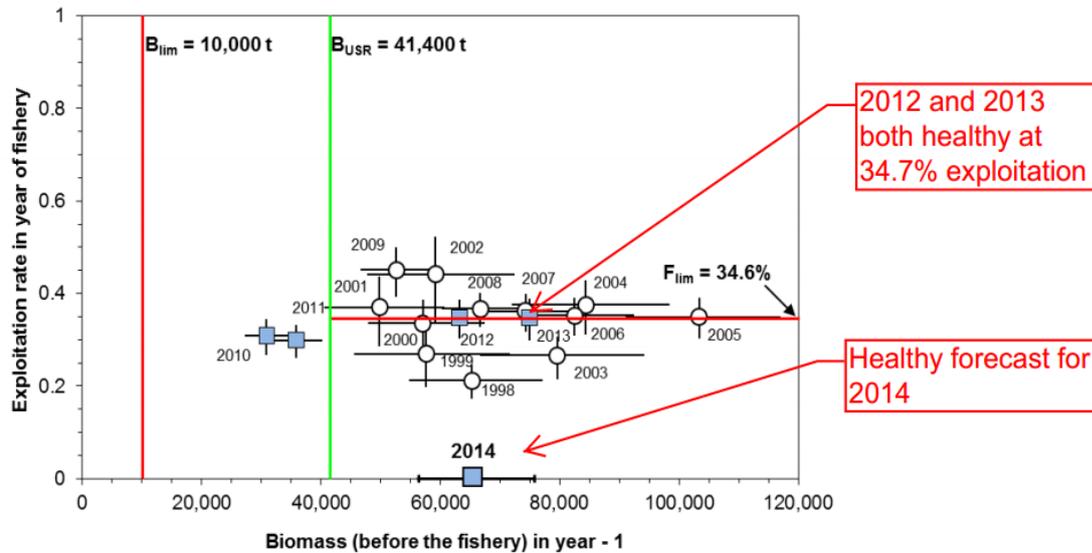


Figure 9. Trajectory of stock abundance (biomass of commercial-sized adult male crab as estimated from the trawl survey in year before the fishery) versus exploitation rate in the fishery year. Year of the fishery is labeled on the figure. Error bars are 95% CI. White circle symbols are biomass and exploitation rate levels used to define the reference points. Grey squares are the years when the reference points were used within the PA to decide on the fishery quota. The biomass estimate available for the 2014 fishery (with 95% CI) is also shown.

Snow crab catch option risk analysis for 2014

A risk analysis was developed relative to various catch options in 2014 (Table 8; Figure 15). Candidate decision rules that conform to the Precautionary Approach framework have been evaluated and a number of rules were evaluated as conforming to the Precautionary Approach (DFO 2014).

The condition under which harvest decision rules are assessed for compliance to the PA policy is that there must be a very low probability ($\leq 5\%$) of the stock falling into or remaining in the critical zone due to fishing exploitation.

For 2014, the TAC was set at 25,227.44 t based on an exploitation rate of 38.3%, as specified in the harvest decision rules. The TAC distribution in each of the management zones in the Southern Gulf of St. Lawrence is as follows:

	Quota 2014 (t)
Area 12	19,332.49
Area 19	3,687.78
Area 12E	169.33
Area 12F	1,658.84
Scientific survey quota	379.00
Total	25,227.44

Because of concerns about the survey estimates for the CFA, the original allocation for CFA 12F was not made available to the fishery; the final amount of quota allocated was 861.1 mt.

Table 8. Risk analysis of catch options in 2014 for the southern Gulf of St. Lawrence snow crab fishery showing probabilities of exceeding Flim, of the hard-shell commercial-sized adult male remaining biomass falling below Blim, and of the total commercial-sized adult male biomass being below BUSR post-fishery in 2014. Also shown is the expected commercial biomass for the 2015 fishery.

Catch option (t)	Probability			Expected biomass for the 2015 fishery
	> F _{lim} (0.346)	< B _{lim} (10,000 t)	< B _{USR} (41,400 t)	
15,000	0	0	0	70,450 (59,888-80,943)
16,000	< 0.01	0	0	69,450 (58,888-79,943)
17,000	< 0.01	0	0	68,450 (57,888-78,943)
18,000	<0.01	0	0	67,450 (56,888-77,943)
19,000	0.02	0	0	66,450 (55,888-76,943)
20,000	0.06	0	0	65,450 (54,888-75,943)
21,000	0.16	0	0	64,450 (53,888-74,943)
22,000	0.33	0	< 0.01	63,450 (52,888-73,943)
22,790	0.50	< 0.01	< 0.01	62,660 (52,098-73,153)
23,000	0.55	< 0.01	< 0.01	62,450 (51,888-72,943)
24,000	0.75	< 0.01	< 0.01	61,450 (50,888-71,943)
25,000	0.89	< 0.01	< 0.01	60,450 (49,888-70,943)
26,000	0.96	< 0.01	< 0.01	59,450 (48,888-69,943)
27,000	0.99	< 0.01	< 0.01	58,450 (47,888-68,943)
28,000	>0.99	0.01	0.01	57,450 (46,888-67,943)
29,000	> 0.99	0.02	0.01	56,450 (45,888-66,943)
30,000	1	0.03	0.01	55,450 (44,888-65,943)
37,510	1	0.50	0.15	47,940 (37,550-58,586)
43,970	1	0.94	0.50	43,970 (31,090-52,120)

6. Relevant changes to Legislation and Regulations²

While there have been no substantial changes in the overall Legislation and Regulations for SGSL snow crab fishery, a number of adjustments/advances have taken place since the First Surveillance Audit. These were outlined in detail in the Fishery Management Presentation at the Site Visit meeting:

The use of fish to provide funds for scientific research and management initiatives continued in 2014 through collaborative agreements with fishermen to use small amount of snow crab to finance annual stock estimation surveys . Allocation of fish to finance scientific activities and fishery management are taken from the total catch allocation.

The Soft Shell Protocol continued in 2014 and a total of 8 quadrants were closed under it.

A three year renewal of the use of Temporary Flexibilities was established in April, 2014. These permit license holders to temporarily combine enterprises or quota allocations into partnerships or “trios” for one fishing year. In conjunction with this, the minimum 30 days requirement for transfer of a fishing vessel was waived. Temporary transfers of 100% of individual allocations will not be permitted as of 2015. The Region aims to have all crab fleets move from IQ to ITQ arrangements by March 31, 2015. (This will further improve the Incentives for Sustainable Fishing in this fishery)

7. Relevant changes to Management Regime³

The overall consultative/advisory process maintained the same structure as in 2012/13, although fisheries management is moving to a multiyear approach in 2015. There will be an advisory committee in early 2015 and the next one will then be in 2017. Scientific evaluation of the crab will be carried out annually. License conditions and data collection have not changed substantially. The at sea observer coverage was reduced by 5% in 12, 12E and 12F. In CFA 19, the allocation of 10 observers per day to this day-fleet

continued. Science Branch confirmed that the reduction in observer coverage would not have a negative impact on the efficiency of the program.

Following an industry working group recommendation and peer review process harvest control rules compliant with the precautionary approach were developed, approved and applied to set the overall initial 2014 snow crab allocation at 25,227.44 t at an exploitation rate of 38.3 %.

The new IFMP for SGSL Snow Crab was finalized, adopted in time for the 2014 fishing and was published on the DFO Website in September, 2014.

8. The General Conditions of Certification

The general 'Conditions' set for each Certificate holder were as follows:

- ASPANS must recognize that MSC standards require regular monitoring inspections at least once a year, focusing on compliance with the 'Conditions' set forth in this report (as outlined below) and continued conformity with standards of certification;
- ASPANS must agree by contract to be responsible financially and technically for compliance with required surveillance audits by an accredited MSC certification body, as a contract must be signed and verified by GTC prior to certification being awarded;
- ASPANS must recognize that MSC standards require a full-evaluation for certification (as opposed to yearly monitoring for update purposes) every five years;
- Prior to receiving final certification, ASPANS shall develop, an Action Plan for meeting the Condition for continued Certification and have it approved by GTC.

An Action Plan was submitted and accepted prior to initial certification.

During the surveillance audit, ASPANS was deemed to be in conformance with the general conditions of certification. Prior to the initial certification of the client fishery, Action Plan was developed and submitted to GTC by the client and accepted by the assessment team. During the surveillance audit, the evaluation of any changes to the client group was also undertaken for the fishery.

9. The Specific Conditions of Certification

During the initial assessment of the SGSL snow crab fishery, a conditional score was allocated for Pls 3.2.1 and 3.2.5 of the MSC Default Scoring Tree.

Condition number	Condition	Performance indicator	Score
1	Documentary evidence shall be provided that the fishery has adopted clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2.	3.2.1	70
2	Documentary evidence shall provide there is a system of monitoring and evaluating the performance of the fishery-specific management system against its objectives and that there is an effective and timely review of the fishery-specific management system in place.	3.2.5	70

Table of Conditions, Action Plan and Observations from Evidence Collected during the Surveillance Audit Conditions Set on the ASPANS

Item 5:	Condition 1 (of 2)	
<i>Performance Indicator & Guidepost Issue</i>	PI 3.2.1 Fishery-specific objectives The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2.	Guide post 80 (Issue a) Short and long-term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the management system.
<i>Condition 1</i>	Documentary evidence shall be provided that the fishery has adopted clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2. By surveillance audit Year 1, the IFMP for the SGSL snow crab should be shown to contain fishery objectives designed to achieve the requirements of Principles 1 and 2. By surveillance audit Year 2, the IFMP, including the specific objectives to achieved requirements of Principles 1 and 2, should be adopted.	
<i>Action Plan</i>	<ul style="list-style-type: none"> ● The draft IFMP will be developed in accordance with IFMP development guidelines 43 and reviewed internally by DFO. DFO will ensure that the IFMP is consistent with MSC's Principles 1 and 2. ● The draft IFMP will be presented to the SGSL snow crab advisory committee and any other relevant committees or groups for stakeholder consultations. ● Upon completion of stakeholder consultations, the final IFMP shall be published and made publically available. <p>By the first annual surveillance audit, the CAB will be presented with evidence that the IFMP that has been developed is consistent with MSC principles 1&2. By the second year surveillance audit, the CAB will be presented with evidence that the IFMP is published, consultations have been completed and the IFMP adopted.</p>	
<i>Evidence</i>	This surveillance audit focused on the work undertaken to satisfy Year 1 milestones. A draft of an IFMP for the snow crab in SGSL CFAs 12, 12E, 12F and 19 containing fishery-specific objectives has been developed and circulated in July 2013 to industry for review and comment by end of August 2013. The final approval is expected at the 2014 SGSL Snow Crab Advisory Committee.	
<i>Conclusion and Outcome on Condition 1</i>	The evidence presented during the first surveillance audit demonstrated that ASPANS had fulfilled the requirements of the Action Plan for the Year 1 milestones of Condition 1. The Condition was not closed out since the original rational and the score (70) for this condition remains unchanged. Status of Condition 1: Open – On Target.	
<i>Evidence 2 year</i>	Before the second surveillance audit site visit meeting, evidence was presented to the assessment team that consultations were completed and the IFMP was adopted and published in September 2014. This evidence package was received on September 16 2014 and contained the published IFMP and a list of the public consultations.	
<i>Conclusion and Outcome on Condition 1</i>	The evidence presented during the 2 year surveillance audit demonstrates that ASPANS has fulfilled the requirements of the Action Plan for the Year 2 milestones of Condition 1. The Condition is now closed out since the original rational and this condition was re-scored. Status of Condition 1: Closed.	

Item 5:	Condition 2 (of 2)	
<i>Performance Indicator & Guidepost Issue</i>	PI 3.2.5 Monitoring and Management Performance Evaluation There is system for monitoring and evaluating the performance of the fishery-specific management system against its objectives.	Guide post 80 (Issue b) The fishery-specific management system is subject to regular internal and occasional external review.
<i>Condition 2</i>	<p>Documentary evidence shall provide there is a system of monitoring and evaluating the performance of the fishery-specific management system against its objectives and that there is an effective and timely review of the fishery-specific management system in place.</p> <p>By surveillance audit Year 1, evidence must be provided that there is in place an effective review and evaluation of the fishery specific management system.</p> <p>This condition is related to the Condition 1 in that the review processes required to meet this condition must be expressed within the IFMP.</p>	
<i>Action Plan</i>	<ul style="list-style-type: none"> ● The draft fishery management performance monitoring and evaluation (FMPME) methods will be developed in accordance with IFMP development guidelines and reviewed internally by DFO. ● The draft FMPME will be presented to the SGSL snow crab Advisory Committee and any other relevant committees or groups for stakeholder consultations. ● Upon completion of stakeholder consultations, the final FMPME shall be incorporated into the IFMP. <p>By the first annual surveillance audit, the CAB shall be presented with evidence that the FMPME has been developed, relevant stakeholders have been consulted and the FMPME has been adopted in policy.</p>	
<i>Evidence</i>	<p>During the first surveillance audit site visit meeting, evidence was presented to the assessment team that the FMPME has been developed, relevant stakeholders have been consulted and the FMPME has been adopted in policy and is contained in the draft of the IFMP, which is now been reviewed by industry.</p>	
<i>Conclusion and Outcome on Condition 1</i>	<p>The evidence presented during the surveillance audit demonstrates that ASPANS has fulfilled the requirements of the Action Plan for the Year 1 milestones of Condition 1. It is therefore considered as a result of the surveillance Audit 1 that an effective review and evaluation of the fishery specific management system was put in place.</p> <p>Status of Condition 2: Closed at first surveillance audit. Score of PI 3.2.5 was revised.</p>	

An additional reporting requirement in each Surveillance Report to include details for any conditions that are raised during the surveillance audit that refer to conditions raised in the previous assessment(s), closed

at some point during the (re)certification period, and which are being 're-raised' in the surveillance audit (CR section CG4).

New requirements and guidance to make explicit under what circumstances progress against open conditions can be deemed 'adequate' to allow reassessment to commence with outstanding conditions (CR section Part C 27.24). Changes to requirements for Recertification of fisheries with outstanding conditions (CR Part C section 27.24).

Revised Evaluation Table: PI 3.2.1 SGSL Snow Crab

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?	Y	Y	N
	Justification	<p>The current updated IFMP for SGSL Snow Crab was adopted by the Gulf Region in February, 2014 and was published on the DFO website in September, 2014. (http://www.inter.dfo-mpo.gc.ca/Gulf/FAM/IFMP/2014-Snow-Crab-Gulf-Region). This document meets the Departmental Template for IFMPs and contains fishery specific objectives in Section 10.</p> <p>The current IFMP for SGSL Snow Crab was adopted by the Gulf Region in February, 2014 and is now published on the DFO website in September, 2014. (http://www.inter.dfo-mpo.gc.ca/Gulf/FAM/IFMP/2014-Snow-Crab-Gulf-Region). This document meets the Departmental Template for IFMPs and contains fishery specific objectives in Section 10. These objectives are both short- and long-term and are now explicitly part of the SGSL Snow Crab fishery management system, as they will be reviewed on an ongoing basis in the Regions advisory committee system. They are generally consistent with achieving MSC's Principles 1 and 2..</p> <p>While the fishery specific objectives contained in Section 10 of the new SGSL Snow Crab IFMP are explicit in the fishery management system and fairly well defined, they are all not actually measurable and have yet to be proven to demonstrably consistent with achieving MSC's Principles 1 and 2 outcomes. Therefore a score of 100 could not be given at this time.</p>		
References		. The new IFMP for SGSL Snow Crab @ .(http://www.inter.dfo-mpo.gc.ca/Gulf/FAM/IFMP/2014-Snow-Crab-Gulf-Region).		
OVERALL PERFORMANCE INDICATOR SCORE:				80
CONDITION NUMBER (if relevant):				NA

According to the revised score, the overall notation of the SGSL snow crab fishery is as following:

Principle	Wt (L1)	Component	Wt (L2)	PI No.	Performance Indicator (PI)	Wt (L3)	Weight in Principle	Score	Contribution to Principle Score		
One	1	Outcome	0.5	1.1.1	Stock status	0.5	0.25	90	22.50		
				1.1.2	Reference points	0.5	0.25	100	23.75		
				1.1.3	Stock rebuilding	0.333	0.1667	NA	NA		
		Management	0.5			1.2.1	Harvest strategy	0.25	0.125	100	11.25
						1.2.2	Harvest control rules & tools	0.25	0.125	95	10.00
						1.2.3	Information & monitoring	0.25	0.125	100	11.25
						1.2.4	Assessment of stock status	0.25	0.125	100	11.25
Two	1	Retained species	0.2	2.1.1	Outcome	0.333	0.0667	100	6.67		
				2.1.2	Management	0.333	0.0667	100	6.67		
				2.1.3	Information	0.333	0.0667	100	6.67		
		By-catch species	0.2			2.2.1	Outcome	0.333	0.0667	100	5.33
						2.2.2	Management	0.333	0.0667	100	6.33
						2.2.3	Information	0.333	0.0667	90	6.00
		ETP species	0.2			2.3.1	Outcome	0.333	0.0667	100	6.00
						2.3.2	Management	0.333	0.0667	95	6.00
						2.3.3	Information	0.333	0.0667	85	6.00
		Habitats	0.2			2.4.1	Outcome	0.333	0.0667	90	4.67
						2.4.2	Management	0.333	0.0667	95	5.33
						2.4.3	Information	0.333	0.0667	95	4.67
		Ecosystem	0.2			2.5.1	Outcome	0.333	0.0667	100	5.33
						2.5.2	Management	0.333	0.0667	100	5.33
						2.5.3	Information	0.333	0.0667	100	6.33
Three	1	Governance And policy	0.5	3.1.1	Legal & customary framework	0.25	0.125	85	11.25		
				3.1.2	Consultation, roles & responsibilities	0.25	0.125	80	10.63		
				3.1.3	Long term objectives	0.25	0.125	80	11.25		
				3.1.4	Incentives for sustainable fishing	0.25	0.125	90	10.00		
		Fishery specific management system	0.5			3.2.1	Fishery specific objectives	0.2	0.1	80	8.00
						3.2.2	Decision making processes	0.2	0.1	80	9.00
						3.2.3	Compliance & enforcement	0.2	0.1	85	9.00
						3.2.4	Research plan	0.2	0.1	90	8.50
						3.2.5	Management performance evaluation	0.2	0.1	80	8.00

Final Principle Scores	
Principle	Score
Principle 1 – Target Species	96.9
Principle 2 - Ecosystem	96.7
Principle 3 – Management System	83.4

10. Harmonization

The MSC wishes to discourage overlapping assessments to avoid potential financial, consistency and credibility costs, including:

- fisheries managers, scientists and stakeholders receiving duplicate requests for information
- duplication of costs for a fishery's certification, including that expense incurred by fishery management agencies pre- and post-certification; and
- the possibility of different assessments placing different conditions upon the same fisheries managers and upon different fishery clients.

There are no harmonization issues for the Southern Gulf of St Lawrence snow crab fishery.

11. Conclusions and Recommendations

The assessment team conducting this 2nd surveillance audit confirms that ASPANS has met the general requirements for continued certification to the MSC Principles and Criteria for Sustainable Fishing.

The assessment team also concludes that there is sufficient evidence and information provided by the client and substantiated through the course of consultation meetings during the surveillance audit to confirm that commitment to meeting the specific conditions of certification have been met. Therefore, the assessment team recommends that continued certification be awarded to the respective client fisheries:

- The Southern Gulf of St Lawrence Snow Crab Trap Fishery.

The assessment team considered Condition 1 and Condition 2 as closed. The score of the relating PI has been revised, and according to the revised score, the overall notation of the SGSL snow crab fishery has been modified (Section 9).

SAI Global concludes that, based on the evidence provided, the fishery continues to meet the requirements for continued certification. The third surveillance audit, scheduled in September 2015, will focus on the stock status and any changes in the management regime or regulations and legislation since the second surveillance audit, and monitoring continued compliance with the MSC Principles and Criteria.

Default Assessment tree used?	
Yes	0
No	2
2. Number of conditions	
Zero conditions	0
Between 1-5 conditions	0
More than 5	0
3. Principle Level Scores	
≥85	0
<85	2
4. Conditions on outcome PIs?	
Yes	0
No	0

Surveillance score (from Table C3)	Surveillance level	Year 1	Year 2	Year 3	Year 4
2 or more	Normal Surveillance	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & recertification site visit

12. Outcome of SAI Global Assurance Services Decision

SAI Global determines that:

- The Southern Gulf of St Lawrence Snow Crab Trap Fishery.

Continue to operate a well-managed and sustainable fishery and therefore, continued certification to the MSC Principles and Criteria for Sustainable Fishing is awarded.

Information Sources

Meetings:

Refer to table of meetings itemized in Section 3 (Table 1).

Reports & publications:

DFO. 2014. Gulf Region Snow Crab Quota Report, @ [http://www.glf.dfo-mpo.gc.ca/Gulf/Quota-Report/Query/Report?rep_cdE=238&fishery_idE\[\]=18&view_report=View+Gulf+Quota+Report](http://www.glf.dfo-mpo.gc.ca/Gulf/Quota-Report/Query/Report?rep_cdE=238&fishery_idE[]=18&view_report=View+Gulf+Quota+Report)

DFO. 2014. Fishery Management Decisions; SGSL Snow Crab @ <http://www.dfo-mpo.gc.ca/decisions/fm-2014-gp/atl-008-eng.htm>

DFO. 2014. Assessment of snow crab in the southern Gulf of St. Lawrence (Areas 12, 19, 12E and 12F) and advice for the 2014 fishery. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2014/008.

DFO. 2013. Assessment of snow crab in the southern Gulf of St. Lawrence (Areas 12, 19, 12E and 12F) and advice for the 2013 fishery. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2013/002.

DFO. 2014. *Integrated Fisheries Management Plan Snow Crab in the Southern Gulf of St. Lawrence Crab Fishing Areas 12, 12E, 12F, 19.*

DFO. 2012. Assessment of snow crab in the southern Gulf of St. Lawrence (Areas 12, 19, 12E and 12F) and advice for the 2012 fishery. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2012/003.

DFO. 2012. Proceedings of the Gulf Region Science Peer Review Framework Meeting of Assessment Methods for the Snow Crab Stock of the southern Gulf of St. Lawrence; November 21 to 25, 2011. DFO Can. Sci. Advis. Sec. Proceed. Ser. 2012/023.

DFO. 2012. Revised reference points for snow crab to account for the change in estimation area of the southern Gulf of St. Lawrence biological unit. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2012/002.

DFO. 2010. Reference points consistent with the precautionary approach for snow crab in the Southern Gulf of St. Lawrence. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2010/014.

Hébert, M., Wade, E., Biron, M., DeGrâce, P., Landry, J.-F., and Moriyasu, M. 2012. The 2011 assessment of the snow crab (*Chionoecetes opilio*) stock in the southern Gulf of St. Lawrence (Areas 12, 19, 12E and 12F). DFO Can. Sci. Advis. Sec. Res. Doc. 2012/080. Iii+ 75p.

Southern Gulf of St. Lawrence snow crab stock assessment, related research and fisheries Information (Areas 12, 19, 12E and 12F), DFO Science Presentation at Site Visit Meeting Part 1.

Fishery and Stock Status (Background information), DFO Science Presentation at Site Visit Meeting Part 2. DFO Fishery Management Presentation at Site Visit Meeting.

DFO Conservation and Protection Presentation at Site Visit Meeting.

DFO Gulf Region: Vessel Replacement Guidelines at the following website:
http://www.glf.dfo-mpo.gc.ca/folios/00164/docs/licensing_policy_gulf-eng.pdf

DFO Gulf Region: ITQ Guidelines for Prince Edward Island Snow Crab Fishermen.

DFO Gulf Region: Administrative Rules for the Individual Transferable Quotas (I.T.Q.) Program for Snow Crab Fishing Enterprises in Area E.

DFO Gulf Region: Administrative Rules for the Individual Transferable Quotas (I.T.Q.) Program for Traditional Snow Crab Fishing Enterprises in Area 12E.

APPENDIX 1: Stakeholder Comments

All written and a detailed summary of verbal submissions received during surveillance site visits pertaining to issues of concern material to the outcome of the assessment regarding the specific assessment.(Refer to Tab 29 v2).

CBs shall include all written submissions made by stakeholders during the annual surveillance audit process in full in the appendix of the annual Surveillance Reports, together with the explicit responses of the assessment team that identify:

- a. specifically what (if any) changes to scoring, rationales, or conditions have been made as a result of the information submitted; and
- b. where the need for changes is suggested but no change is made, a substantiated justification.

No stakeholder comments were received.