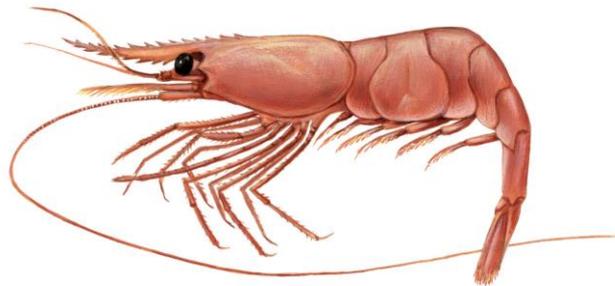


MSC SUSTAINABLE FISHERIES CERTIFICATION



Acoura Marine Ltd.

1st annual Surveillance Report

Prepared for:

L'Association Québécoise de l'Industrie de la Pêche
L'Association Coopérative Des Pêcheurs De L'île Ltee.
Produits Belle-Baie Ltee.
Association of Seafood Producers

Prepared For: Gulf of St Lawrence Northern Shrimp Trawl Fishery

Prepared By: Acoura Marine Ltd.

Certificate code: F-IFC-160

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1 General Information

Name of Fishery	Gulf of St. Lawrence Northern Shrimp Trawl Fishery		
Date certified	20 March 2014	Date of expiry	19 March 2019
Date of surveillance audit	22 September 2015		

2 Unit/s of assessment

Species	<i>Pandalus borealis</i>
Stock Name	Shrimp Fishing Areas 8, 9, 10, 12
Geographical Area	Gulf of St. Lawrence, Canada
Fishing Method/s	Otter trawl.
Management System/s	Fisheries and Oceans Canada
Client Group	SFA 8, 9, 10, 12 – L'Association Québécoise de l'Industrie de la Pêche, L'association Coopérative Des Pêcheurs De L'île Ltee. Produits Belle-Baie Ltee. SFA 8 - Association of Seafood Producers
Other Eligible Fishers	There are no other trawl fishers.

Surveillance level and type	Level	4	Type	Off-site
	Any changes in surveillance activity since PCDR / previous surveillance report		The fishery was re-certified on 20th March 2014. It was proposed that the first annual audit would take place in late April or May, however, owing to key stakeholder availability, the date of the audit had to be delayed.	
Surveillance number (tick one)	1st Surveillance		<input checked="" type="checkbox"/>	
	2nd Surveillance		<input type="checkbox"/>	
	3rd Surveillance		<input type="checkbox"/>	
	4th Surveillance		<input type="checkbox"/>	
	Other (expedited etc)		<input type="checkbox"/>	
Surveillance program changed?			<input type="checkbox"/>	
Surveillance team	Lead assessor:		Steven Devitt	
	Assessor(s):		Howard Powles	
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3 Background

3.1 Changes since last published report

3.1.1 Changes to Management systems

Since the fishery was recertified in 2014, there have been no significant or unplanned changes to the management system. As discussed in the Public Certification Report (IFC, 2014), the fishery managers have implemented a biennial stock assessment and fishery advisory process. During the assessment years, the full stock assessment process is conducted, the assessment documents (Stock Advisory Report and Research Document) are updated, peer review is conducted and the results are presented in full to the Estuary and Gulf Shrimp Advisory Committee.

In the off years between assessments, the assessment indices are updated and are reported to the Estuary and Gulf Shrimp Advisory Committee. The TACs are adjusted based on this update and the decision rules of the precautionary approach. Also, during the off years between assessments, a subcommittee is in place to ensure annual follow-up of the IFMP action plan and other management measures. The subcommittee can make recommendations to the Advisory Committee or DFO for adjustments or new management measures. Feedback provided by members of the subcommittee indicate that the process worked well during the first off year reporting.

An updated Integrated Fisheries Management Plan (IFMP) has been prepared by DFO and circulated for comment and feedback with the fishery advisory committee, harvesters and other stakeholders. The document was provided (in draft) to the audit team and will be publically available upon request once the final version is vetted by DFO.

3.1.2 Changes to Relevant Regulations

Conditions of licence for the fishery were provided during the audit. There were no significant changes to any of the relevant regulations for the fishery. There was one change reported, which is that a “multi-zone” fishing trip can now be conducted with the same licence conditions if there is an at-sea observer on-board the vessel. Prior to this change, harvesters were required to return to port, offload and obtain area specific licence conditions prior to changing fishing areas.

3.1.3 Changes to personnel involved in science, management or industry

There have been changes in personnel within DFO including individuals involved directly with the science of the fishery and within other positions involved with the management of the fishery. Louise Savard, the DFO biologist responsible for the GSL shrimp assessments since the initial certification assessment retired and has been replaced by Hugo Bourdages.

Other personnel in the department, including the Regional Director have changed, however, these positions are not specifically key for this certified fishery.

3.1.4 Changes to scientific base of information - including stock assessments

There have been no changes to the stock assessment framework and methods since publication of the Certification Report. A main stock indicator based on combining standardised abundance indices of male and female components of the population from commercial and research data tracks stock abundance in relation to identified reference points (an upper stock reference and a limit reference point). Detailed assessments are conducted every two years, while an update of indices is conducted in intervening years. The last full assessment was in January 2014 (DFO 2014), while the most recent stock update was in January 2015 (DFO 2015a).

For the four areas fished, the main stock status indicator remained well above the upper stock reference point in the most recent year for which data are available (2014), and has been above since the late 1990s (Figure 3-1). Stock levels have recently been somewhat below those of the early 2000s in three of four areas (Sept-Iles, Anticosti, Esquiman), but 2014 values were as high as or higher than 2013 in all areas.

Projected harvests for 2015 provided in the stock update (DFO 2015a), based on the guidelines adopted for relating the main stock status indicator in the most recent year to the following year's harvest level were followed almost exactly in setting the 2015 TACs (DFO 2015b). Fisheries managers applied the guidelines, and TACs in three of the four areas were set slightly lower than the projected harvests, while in the fourth area the harvest projection was implemented exactly. In total the enacted TAC was 807t (2.5%) lower than projected.

TACs and landings have been high throughout the 2000s relative to historical levels, but have declined from maximum levels in the past several years, consistent with the pattern of the main stock indicator (Figure 3-2).

Figure 3-1 Main stock status indicator relative to limit (LRP) and upper (USR) stock reference points for the four fishing areas. Source: DFO (2015a)

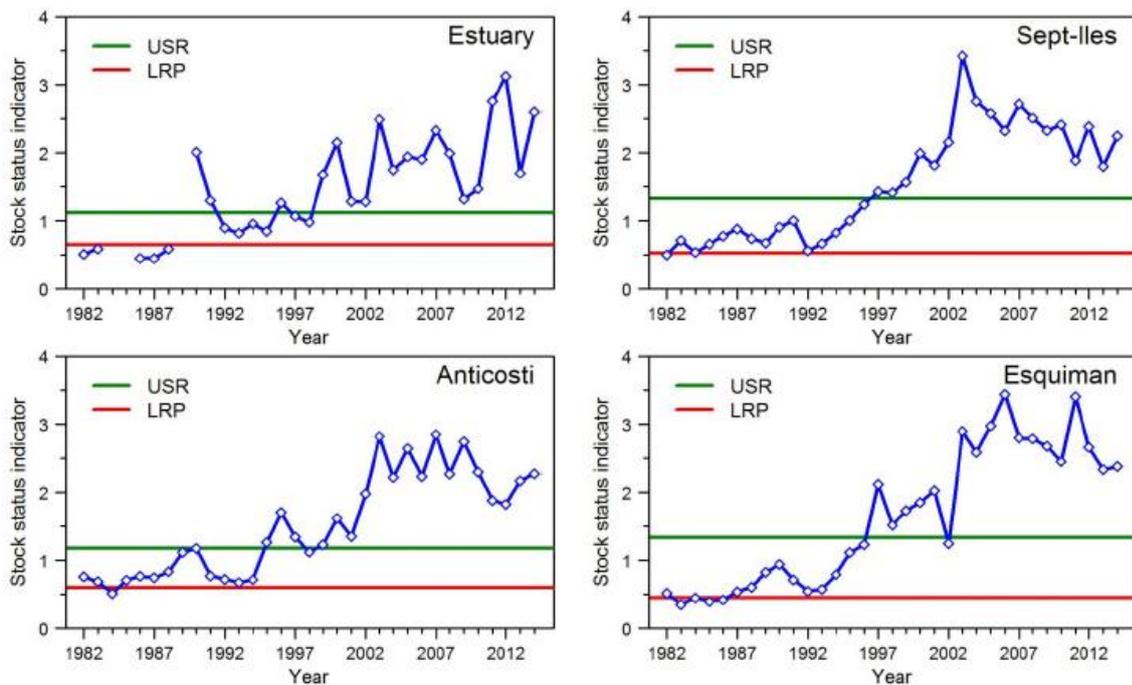
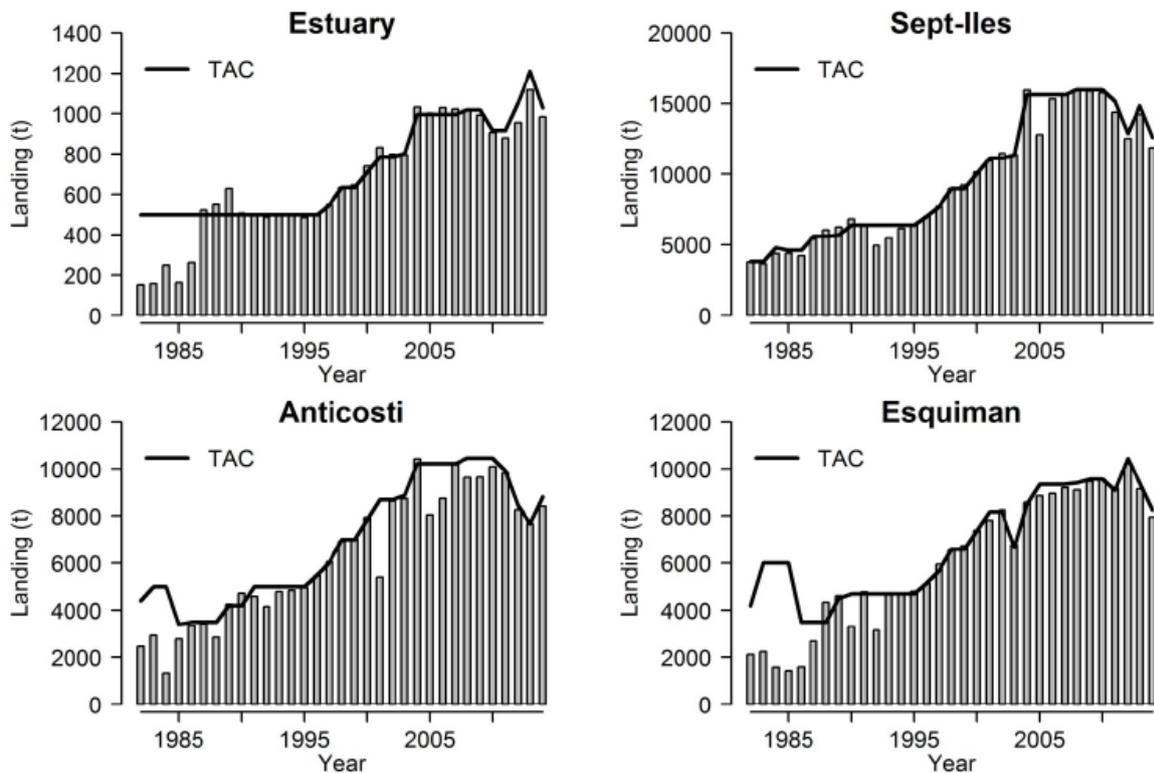


Figure 3-2 Landings and total allowable catches (TAC) for the four fishing areas. Landings for 2014 are preliminary. Source: DFO (2015a)



3.1.5 IPI species

Striped shrimp (*Pandalus montagui*), the only IPI species identified for this fishery, is monitored by samples collected from commercial catches. For the period 2010-2014, *P. montagui* made up less than 0.3% of the total catch weight of target species (H. Bourdages, pers. comm.).

3.1.6 Bycatch

Bycatch PIs scored 80 or higher in the certification report (2.2.1 - 80; 2.2.2 - 100; 2.2.3 - 100). The most recent full assessment of this stock (DFO 2014) noted that bycatch had increased in 2013, particularly of small redfish (*Sebastes* sp). Accordingly the Team queried DFO staff on the status of bycatch in the fishery.

Bycatches of small redfish have indeed been increasing, from approximately 400t in 2013 to approximately 800t in 2014, compared to typical values of 10-46 t/yr previously (IFC 2014). The increase is due to a recruitment pulse of this species, which has highly episodic recruitment. The 2011 cohort now showing up in bycatch has been shown to be strong in groundfish surveys, and the 2012 and 2013 cohorts are also expected to be strong. The most recent previous strong cohort was 1980. Although bycatch has increased, the shrimp fishery is taking 1% or less of the annual survey biomass estimate for individuals of the same lengths. The trawl survey underestimates biomass for these small individuals, since the survey trawl samples the bottom 5 m of the water column, while small redfish are distributed much further

off bottom than this (H. Bourdages, pers. comm.), so in fact bycatch of small redfish represents much less than 1% of their biomass.

The IFMP includes a protocol for closing 10-min longitude by 10-min latitude grid squares when bycatch exceeds a specified level. In 2014, 16 grid squares were closed for bycatch (all species) (14 in the Sept-Iles area, 2 in Anticosti), while in 2015 (to date) 9 squares have been closed (7 in Sept-Iles, 2 in Anticosti) (B. Morin, pers. comm.).

The Team concluded that based on the available information there was no basis for reconsidering scores for these PIs. Although redfish bycatch has been increasing, this is the result of an increase in population abundance. Evidence indicates that the fishery is not having a significant impact on the population, management measures are robust, and information is sound. Monitoring should be continued on future surveillance audits.

3.1.7 Any developments or changes within the fishery which impact traceability or the ability to segregate between fish from the Unit of Certification (UoC) and fish from outside the UoC (non-certified fish)

There have been no changes which impact traceability for the fishery.

3.2 TAC Data

Table 3-1 TAC and Catch Data

	Esquiman (SFA 8)				Anticosti (SFA 9)			
TAC (mt)	Year	2014	Amount	8,249	Year	2014	Amount	8,827
Unit of Assessment share of TAC (%)	Year	2014	Amount	100	Year	2014	Amount	100
Unit of Certification share of TAC (%)	Year	2014	Amount	100	Year	2014	Amount	100
Total green weight catch by UoC (mt)	Year (most recent)	2014	Amount	8,408	Year (most recent)	2014	Amount	8,738
	Year (second most recent)	2013	Amount	9,145	Year (second most recent)	2013	Amount	7,681

	Sept Iles (SFA 10)				Estuary (SFA 12)			
TAC (mt)	Year	2014	Amount	12,606	Year	2014	Amount	1,029
Unit of Assessment share of TAC (%)	Year	2014	Amount	100	Year	2014	Amount	100
Unit of Certification share of TAC (%)	Year	2014	Amount	100	Year	2014	Amount	100
Total green weight catch by UoC (mt)	Year (most recent)	2014	Amount	12,416	Year (most recent)	2014	Amount	984
	Year (second most recent)	2013	Amount	14,217	Year (second most recent)	2013	Amount	1,117

Table 3-2 Summary of Assessment Conditions

Condition number	Performance indicator (PI)	Status	PI original score	PI revised score
1	2.4.2	On target	60	Not revised
2	2.5.2	On target	60	Not revised
3	3.2.4	On target	70	Not revised

4 Assessment Process

4.1.1 Audit Process

Notification of the first annual surveillance audit was initially posted on the MSC website on 19 March 2015, however this notification did not identify the dates of the site visit. A second stakeholder notification was published on the MSC website on August 25, 2015, notifying stakeholders of the forthcoming audit.

The remote audit team members met with the clients and DFO personnel on September 22, 2015 via conference call. There were no other requests for meetings with the audit team.

4.1.2 Scope and history of the assessments

Details of the Unit of Assessment can be found in the General Information section of this report.

This fishery was first MSC certified in 2008 for the current client group and was subsequently recertified using the default tree defined in MSC Certification Requirements version 1.2. There were three conditions of certification raised upon completion of the reassessment.

This is the first surveillance audit in this second certification cycle for this fishery.

IFC confirm that the fishery is in scope, there have been no introductions of destructive fishing practices or unilateral exemptions since the recertification. This was confirmed with the client and personnel from DFO.

4.1.3 Surveillance activities

Stakeholders made no requests to meet and no additional information was provided.

The lead auditor, Steve Devitt, and assessor, Howard Powles, undertook the surveillance audit via teleconference with both the client group and DFO personnel. Don Parsons participated remotely, providing feedback and report review post meeting.

The surveillance visit took place on September 22 via teleconference with all participants. The client representatives for the fishery (Serge Haché, Fernand Brideau, Derek Butler) met with team members for a client meeting prior to meeting with DFO. Subsequently, the client members, the client's contractor and DFO personnel conversed on the status of the fishery, changes to management and science and progress on conditions.

The audit team gathered information from the following individuals during the surveillance audit.

Name	Organization	Issues Reviewed
Serge Haché	Island Fisherman's Co-op (Client)	Changes to management and science, progress on conditions.
Fernand Brideau	Les Produits Belle-Baie (Client)	Changes to management and science, progress on conditions.

Name	Organization	Issues Reviewed
Derek Butler	Association of Seafood Producers (Client in SFA 8 fishery)	Changes to management and science, progress on conditions.
Louise Savard	Client Contractor	Progress on Conditions.
Hugo Bourdages	DFO - Biologist	Stock status, Precautionary Approach, Bycatch.
Bernard Morin	DFO – Resource Manager	Management of the fishery, compliance of fishery, changes to fishery management, IFMP, Harvest Control Rules.

4.1.4 Versions used

MSC Sustainable Fishery Standard	V1.1
MSC Certification Requirements	V2.0
MSC Guidance to the Certification Requirements	V2.0

4.2 Results

Table 4-1 Condition 1

Performance Indicator(s) & Score(s)	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
	2.4.2	<ul style="list-style-type: none"> 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 some objective basis for confidence that the partial strategy will work, based on information directly about the fishery and/or habitats involved. There is some evidence that the partial strategy is being implemented successfully. 	60
Condition	<p>By the 3rd surveillance audit, the client must provide evidence that a partial strategy has been developed and implemented and is expected to achieve the Habitat Outcome 80 level of performance, i.e. the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.</p> <p>In addition, by the 4th surveillance audit, the client must provide evidence to demonstrate 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.</p>		
Milestones	<ul style="list-style-type: none"> For the first annual surveillance audit, the client will have defined the terms of reference for the analysis of how existing measures achieve the Habitat Outcome 80 level of performance, i.e. the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm and contracted a suitable scientist/group for the analysis. The milestone associated with the first surveillance audit has been defined as a means to monitor progress. 		

	<p>Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <ul style="list-style-type: none"> For the second annual surveillance audit, the client will provide evidence that the analysis is underway, and provide a written report to update the Audit Team. The client will provide the identified measures and rationale supporting the agreement the partial strategy for ensuring that the shrimp fishery does not negatively impact habitats. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit. For the third annual audit, the client will provide the full analysis as well as confirm the implementation of the partial strategy, if necessary, for the fishery to achieve the Habitat Outcome (PI 2.4.1) SG80 level of performance. Meeting this milestone should demonstrate that SG 80a has been met and would likely result in a score of 70 for this performance indicator. By the fourth surveillance audit, the client will provide evidence to demonstrate that there is some objective basis for confidence that the partial strategy, if necessary, will work, based on information directly about the fishery and/or habitats involved. Meeting this milestone will demonstrate that all scoring issues of the SG 80 have been met and would result in a score of 80 for this performance indicator.
<p>Client action plan</p>	<p>The Client working in conjunction with DFO as the resource manager and other stakeholders will:</p> <ul style="list-style-type: none"> Provide an analysis of potential requirements to change measures should this become necessary. <p><u>Deliverables</u></p> <p>First Annual Audit – The client will provide the written terms of reference to the analysis of how existing measures achieve the Habitat Outcome SG 80 level of performance, i.e. <u>the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm</u>; evidence that a suitable contractor has been engaged; and, a brief synopsis of work to date.</p> <p>Second Annual Audit – The client will provide evidence that the analysis is underway, and provide a written report to update the Audit Team. Also, the client will identify, if necessary, measures supporting the partial strategy.</p> <p>Third Annual Audit - The client will provide the full analysis indicated above, as well as confirm the implementation of the partial strategy, if necessary, for the fishery to achieve the Habitat Outcome (PI 2.4.1) SG80 level of performance.</p> <p>Fourth Annual Audit - The client will provide evidence to demonstrate that there is a partial strategy, if necessary, in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types 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.</p>
<p>Progress on Condition [Year 1]</p>	<p><i>Client progress report (Savard 2015)</i></p> <p>The Client has engaged a knowledgeable consultant, the biologist formerly responsible for this fishery and recently retired, to lead work toward meeting Conditions.</p> <p>The Client progress report covers Conditions 1 and 2 in the same sections, since the milestones and work required to meet the Conditions are essentially the same.</p> <p>The Client conducted a preliminary assessment of the potential level of risk to sensitive benthic habitats and species from shrimp trawling, concluding that the risk level was moderate to high. The assessment was based on DFO's Ecological Risk Assessment Framework for coldwater corals and sponge dominated communities (DFO 2013).</p> <p>Based on this assessment and the MSC requirements, the Client concluded that a partial strategy was indeed required to meet this PI.</p> <p>The progress report includes Terms of Reference for work to develop a partial strategy for protecting vulnerable habitats and species, which call for a more detailed assessment</p>

	<p>of risks of trawling, for development of regulatory and/or voluntary measures to manage risks, for consultation with industry on impacts of these measures, and for including the strategy in the IFMP.</p> <p>The progress report outlined the information sources available to support risk assessment and risk management measures. In the Team's meeting with the client and DFO it was noted that recent publication of the DFO Coral and Sponge Conservation Strategy (DFO 2015c) would help to guide activities, and that an upcoming CSAS review of distribution of sponge and coral areas (planned for January 2016) would provide more detailed and complete information than is currently available (a review by DFO 2010 has provided the information basis for sponge and coral impact assessments to date, but considerable new information has since become available). A cross-sectoral working group has recently been set up in DFO Québec Region to develop measures to protect sponge and coral habitats and species from fishing (all fisheries, not only the shrimp fishery).</p> <p>The Client noted that the detailed risk assessment to be conducted would be based on a finer-scale analysis of overlap between fished areas and habitats than in previous analyses, which were based on 10-min longitude by 10-min latitude grid squares. Many of the grid squares cover large changes in depth, such that both fished areas and sensitive habitats (at greater depths than the fishery) could occur in a single square without effective overlap.</p> <p>The progress report noted, and it was confirmed in the meeting, that the activities had been planned in collaboration with DFO and that DFO is prepared to undertake the analyses and develop the strategy, with support from the client as necessary.</p> <p>Audit Team Observations</p> <p>Based on the evidence presented, the Audit Team concludes that the Client and DFO continue to undertake a number of activities to assess and manage impacts of the fishery on sensitive habitats. A number of these had been noted in the Certification Report and further work has continued. We noted the recent appearance of a peer-reviewed publication assessing impacts of this fishery on benthic communities over 4, 10 and 20 year time horizons, which concluded that impacts were minimal over these time frames (Moritz et al 2015).</p> <p>Publication of the Coral-Sponge Conservation Strategy (DFO 2015c), the upcoming review of distribution of sponge and coral areas (January 2016), and the formation of a Québec Region Working Group on fishery impacts on sponge and coral areas (2015) are indications that the Region and the Department are taking this issue seriously and moving to improve risk assessment and management.</p> <p>The Team notes that DFO's strategy for managing the impacts of fishing on benthic areas (DFO 2009) focuses on sensitive areas. While this seems appropriate as a first priority, the MSC standard requires consideration of impacts on all areas, not just sensitive areas. Accordingly the partial strategy should also give consideration to impacts on non-sensitive habitats. Measures identified in the Certification Report are considered to ensure that the habitat outcome for PI 2.4.1 is 80 overall, so including non-sensitive areas in the habitat strategy should be possible.</p> <p>The first year milestone has certainly been met - defining terms of reference for an analysis of fishery impacts on habitat and contracting an appropriate expert to conduct the analysis - and progress has gone beyond this in that the need for a strategy has been confirmed and the way forward to developing the strategy has been outlined. Information and personnel resources to develop the strategy are or soon will be in place.</p>
<p>Status of condition</p>	<p>The Team concludes that the first year milestone - defining terms of reference for an analysis of fishery impacts on habitat and contracting an appropriate expert to conduct the analysis - has been met. Progress is accordingly on target toward meeting the Condition as defined.</p>

Table 4-2 Condition 2

	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
<p>Performance Indicator(s) & Score(s)</p>	<p>2.5.2</p>	<ul style="list-style-type: none"> • There is a partial strategy in place, if necessary. • 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 partial strategy is considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems). • There is some evidence that the measures comprising the partial strategy are being implemented successfully. 	<p>60</p>
<p>Condition</p>	<p>By the 4th surveillance audit, the client must provide evidence that a partial strategy has been developed and successfully implemented which takes into account available information and is expected to restrain impacts of the fishery on the benthic biodiversity and communities elements of the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.</p> <p>The client must provide evidence to demonstrate that the partial strategy, if necessary, is considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).</p>		
<p>Milestones</p>	<ul style="list-style-type: none"> • By the first annual audit, the client must provide a written report of activities to identify whether measures in place are adequate such that the shrimp fishery does not negatively impact benthic biodiversity and communities. If it is concluded that a partial strategy is needed, the client will report on what additional measures are being considered . The milestone associated with the first surveillance audit has been defined as a means to monitor progress, meeting the milestone would likely not result in a change in score at this surveillance audit. • By the second annual surveillance audit, the Client will provide evidence, if necessary, that measures have been identified and agreed that will comprise the partial strategy for ensuring that the shrimp fishery does not negatively impact benthic biodiversity and communities. The milestone associated with the second surveillance audit has been defined as a means to monitor progress, meeting the milestone would likely not result in a change in score at this surveillance audit. • By the third surveillance audit, the client will provide evidence that a partial strategy has been successfully implemented that takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem outcome defined in the SG80 of PI 2.5.1, i.e. 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. Meeting this milestone should demonstrate that SG 80b and 80d have been met and would likely result in a score of 70 for this performance indicator. • By the fourth surveillance audit, the client will provide evidence to demonstrate that the partial strategy, if necessary, is considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems). Meeting this milestone will demonstrate that all scoring issues of the SG 80 have been met and would result in a score of 80 for this performance indicator. 		

<p>Client action plan</p>	<p>The client, working in conjunction with DFO as the resource manager and other stakeholders, will:</p> <ul style="list-style-type: none"> • Develop an appropriate partial strategy re. non-catch impacts on benthic biodiversity and community structure. The potential impacts of the fishery on these ecosystem components will be considered and if necessary measures put in place to address potential impacts; • Ensure a partial strategy based on available information is in place to ensure that impacts on benthic biodiversity and community structure are within acceptable limits; and • Ensure a partial strategy is in place to manage non-catch impacts on benthic biodiversity and community structure. <p><u>Deliverables</u></p> <p>First Annual Audit – The client will provide a written report of activities, by a suitable contractor, to identify whether measures in place are adequate such that the shrimp fishery does not negatively impact benthic biodiversity and communities. If it is concluded that a partial strategy is needed, the client will report on what additional measures are being considered.</p> <p>Second Annual Audit – If a partial strategy is found necessary, the client will develop an appropriate partial strategy re. non-catch impacts on benthic biodiversity and community structure. The potential impacts of the fishery on these ecosystem components will be considered and if necessary measures put in place to address potential impacts.</p> <p>Third Annual Audit - DFO will apply the <i>Ecological Risk Assessment Framework</i> identified within its <i>Policy for Managing the Impacts of Fishing on Sensitive Benthic Areas</i> and the client will provide written evidence to confirm a partial strategy, based on available information, is in place to ensure that impacts on benthic biodiversity and community structure are within acceptable limits.</p> <p>Fourth Surveillance Audit - The client will provide evidence to confirm a partial strategy is in place to manage non-catch impacts on benthic biodiversity and community structure; and that the partial strategy is considered likely to work, based on plausible argument.</p>
<p>Progress on Condition [Year 1]</p>	<p>Client progress report (Savard 2015)</p> <p>As noted above (Progress on Condition 1), the Client has engaged a knowledgeable consultant to lead work toward meeting conditions. The Client progress report treated both Conditions 1 (habitat strategy) and 2 (ecosystem strategy) together, since milestones and work required are essentially the same.</p> <p>The Client progress report provided a review of information available on impact of the fishery on benthic species and communities, and conducted a preliminary risk analysis based on DFO’s ERAF for coldwater corals and sponge dominated communities (DFO 2013). They concluded that risk was moderate to high, and that development of a strategy to manage risks was required. A number of regulatory and voluntary measures which might be considered to manage risks was identified in the report.</p> <p>The progress report provided Terms of Reference for work to conduct a more detailed risk analysis and to develop a strategy to manage risk to benthic communities from shrimp trawling. Several recent or planned activities will support this work: publication of DFO’s Coral and Sponge Conservation Strategy for Eastern Canada (DFO 2015c), an upcoming (January 2016) CSAS review of distribution of sponge and coral areas in eastern Canada, incorporating information obtained since the last such review (DFO 2010), and recent formation of a cross-sectoral working group in DFO Québec Region to assess and manage risks to sensitive bottom habitats from all fisheries.</p> <p>The Client report noted, and this was confirmed in the Team’s meeting with the Client and DFO, that activities toward developing a strategy to manage risk to sensitive benthic communities had been developed in consultation with DFO and that DFO was prepared to undertake development of the strategy, with support from the Client as needed.</p>

	<p>Audit Team Observations</p> <p>As with Condition 1 (see above) the Team concludes that work to assess and manage risk to sensitive benthic communities (which had been started at the time of publication of the Certification Report) is continuing, and that this will be adequate to support development of a strategy to manage fishery impacts on benthic communities. In addition to the recent developments noted above, we noted the recent publication of an assessment of fishery impact on benthic species which concluded that impacts had been relatively small over time frames of 4, 10 and 20 years (Moritz et al. 2015).</p> <p>Also as with Condition 1 (see above), the Team encourages the Client to consider impacts to non-sensitive as well as sensitive benthic communities, since the MSC standard requires that harm to all communities (not just those identified as sensitive) not be serious or irreversible.</p> <p>Overall the Team concludes that the Client has made substantial progress toward meeting the Condition, and that progress has gone beyond what was required by the Year 1 milestone.</p>
Status of condition	<p>The Team concludes that the first year milestone - a written report on whether current measures are adequate, and on what additional measures are being considered - has been met. Progress is accordingly on track to meeting the Condition as defined.</p>

Table 4-3 Condition 3

	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
Performance Indicator(s) & Score(s)	3.2.4	<ul style="list-style-type: none"> 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. 	70
Condition	By the 2 nd surveillance audit the client must provide evidence that a documented and approved research plan has been completed to provide the management system with a strategic approach to research, and reliable and timely information sufficient to achieve the objectives consistent with both MSC Principle 1 and Principle 2.		
Milestones	<ul style="list-style-type: none"> By the first annual surveillance audit, the client will provide a draft strategic research plan that is required to achieve the objectives consistent with MSC Principles 1 and 2. The milestone associated with the first surveillance audit has been defined as a means to monitor progress, meeting the milestone would likely not result in a change in score at this surveillance audit. By the second annual surveillance audit, the client will provide evidence that the documented strategic research plan required to achieve the objectives consistent with MSC Principles 1 and 2 has been completed and adopted. Meeting this milestone will demonstrate that all scoring issues of the SG 80 have been met and would result in a score of 80 for this performance indicator. 		
Client action plan	<p>By the first annual surveillance audit, the client, working with DFO and other stakeholders (ex. Catch sector, research institutes, provinces) will prepare a draft strategic research plan to achieve the objectives consistent with MSC Principles 1 and 2.</p> <p>By the second annual surveillance audit, the research plan will be integrated in the Gulf shrimp IFMP.</p>		

<p>Progress on Condition [Year 1]</p>	<p>Client progress report (Savard 2015)</p> <p>The Client Progress Report provided an update of the efforts completed to date on defining a strategic research plan, as required by the condition. The report describes how important research issues for the fishery were identified. In 2012, a forum was conducted by industry, DFO and other key stakeholders on the northern shrimp fishery with the goal of contributing to optimizing economic returns for harvest and processing sectors and preparing for the future of the fishery. An action plan was developed during the forum to respond to the issues raised by participants. This information, along with issues identified in relation to management of the fishery, allowed for development of the strategic research plan.</p> <p>A Strategic Research Plan (SRP) was developed, approved and presented in full within Appendix 6 of the draft 2015 IFMP. The issues identified at the end of the consultations to develop the IFMP were as follows:</p> <ul style="list-style-type: none"> • Sustainable harvest of shrimp; • The impacts of the fishery on the ecosystem; • Fishery governance; • The economic prosperity of the fishery. <p>The issues facing the fishery have allowed DFO to define the objectives of the Integrated Management Plan and the research projects have been developed to provide potential solutions to these issues.</p> <p>The SRP (Appendix 6 of the IFMP) is presented in Appendix 4 of this report.</p> <p>Audit Team Observations</p> <p>The team considers that the information provided, including the Client Progress Report, the 2015 Draft IFMP including Appendix 6 meet the first year milestone. Assuming that the draft IFMP is finalized with no changes to the Strategic Research Plan presented in Appendix 6, the team considers that the second year milestone will also have been met and that the condition will be fulfilled and closed. Publication of the SRP in the final IFMP will address the requirements of the condition, in that the research will have been documented and approved by both DFO and industry stakeholders as part of the IFMP renewal and approval process.</p> <p>The SRP is divided into two themes, including Theme 1: Shrimp productivity and sustainable harvesting (i.e., MSC Principle 1); and Theme 2: The fishery's impact on the ecosystem. (i.e., Principle 2). Within each theme, there are three separate sub-topics, which address various issues relative to the overall themes.</p> <p>The 2015 Draft IFMP has not yet been completely reviewed internally by DFO, and at the time of writing this report, is not yet publically available as a final document. While there is little reason to believe there will be changes to the SRP, this condition can not be closed until the IFMP is finalized. The Team agree that this year's milestone is met and that the condition will be reevaluated at the next audit, when it is due.</p>
<p>Status of condition</p>	<p>The Team concludes that the first year milestone - a draft strategic research plan that is required to achieve the objectives consistent with MSC Principles 1 and 2, - has been met. Progress is accordingly on track to meeting the Condition as defined.</p>

5 Conclusion

5.1 Summary of Findings

IFC confirm that this fishery has met or exceeded its first year milestones and conditions are on target, as such the fishery remains certified.

6 References

Bourdages, Hugo, biologist, DFO, pers. comm. on IPI species and bycatch. Team Meeting with Client and DFO, September 22, 2015.

DFO 2009. Policy for managing the impacts of fishing on sensitive benthic areas.

<http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/benthi-eng.htm>

DFO 2010. Occurrence, sensitivity to fishing and ecological function of corals, sponges, and hydrothermal vents in Canada. Can. Sci. Adv. Sec. Sci. Adv. Rep. 2010/041: 54 pp.

DFO 2013. Ecological risk assessment framework (ERAF) for coldwater corals and sponge dominated communities. Fisheries and Oceans Canada. Available at <http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/risk-ecolo-risque-eng.htm>

DFO 2014. Assessment of northern shrimp stocks in the estuary and Gulf of St. Lawrence in 2013. Can. Sci. Adv. Sec. Sci. Adv. Rep. 2014/016: 12 pp.

DFO 2015a. Update of stock status indicators for northern shrimp in the estuary and Gulf of St. Lawrence. Can. Sci. Adv. Sec. Sci. Response 2015/006: 6 pp.

DFO 2015b. Notices to Fish Harvesters - Shrimp, 8, 9, 10, 12, Gulf - Conservation Harvesting Plan 2015. Available at https://inter-l01.dfo-mpo.gc.ca/applications/opti-opei/notice-avis-detail-eng.php?pub_id=235&todo=view&type=1®ion_id=4&sub_type_id=5&species=702&area=1858

DFO 2015c. Coral and Sponge Conservation Strategy for Eastern Canada 2015. Available at <http://dfo-mpo.gc.ca/oceans/publications/corals-coraux-eng.html>

IFC 2014. Gulf of St. Lawrence Northern Shrimp Trawl Fishery, Shrimp Fishing Areas 8, 9, 10, 12. Public Certification Report. Intertek Fisheries Certification, 20 March 2014. 262 pp.

Morin, Bernard, fishery manager, DFO, pers. comm. on bycatch management measures. Team Meeting with Client and DFO, September 22, 2015.

Moritz, C., D. Gravel, L. Savard, C. W. McKindsey, J.-C. Brêthes and P. Archambault. 2015. No more detectable fishing effect on Northern Gulf of St. Lawrence benthic invertebrates. ICES J. Mar. Sci.; doi:10/1093/icesjms/fsv124.

Savard, L. 2015. Pêche à la crevette dans l'estuaire et le Golfe du Saint-Laurent (ZPC 8, 9, 10 et 12) - rapport sur les progrès du plan d'action du client en réponse aux conditions de la certification MSC accordée en mars 2014. 19 pp.

Appendix 1. Re-scoring evaluation tables (if necessary)

N/A

Appendix 2. Stakeholder submissions (if any)

N/A

Appendix 3. Surveillance audit information (if necessary)

N/A

Appendix 4. Additional detail on conditions/ actions/ results (if necessary)

Strategic Research Plan

(Appendix 6 of Integrated Fisheries Management Plan)

The various scientific research projects can be associated with various components of the Integrated Management Plan for the shrimp fishery in the Estuary and Gulf. The issues identified at the end of the consultations to develop the IFMP are as follows:

- Sustainable harvest of shrimp;
- The impacts of the fishery on the ecosystem;
- Fishery governance;
- The economic prosperity of the fishery.

The issues facing the fishery have allowed us to define the objectives of the Integrated Management Plan and the research projects have been developed to provide potential solutions to these issues.

Scientific projects conducted on the northern shrimp by scientists from the Maurice Lamontagne Institute (MLI) are funded in whole or in part by DFO national programs. They respond directly to priority directions presented in the scientific frameworks and are part of the Ecosystem Science strategic research program. The Benthic Ecology Laboratory projects address the influence of natural and anthropogenic disturbances on benthic biodiversity and benefit from the support of national and international programs related to the evaluation, process or role of biodiversity. The research projects carried out by Merinov and by the Centre for Sustainable Aquatic Resources respond to the issues identified by industry. These projects are completed by initiatives funded by the DFO's core program (research surveys, dockside and at-sea sampling, logbook and Vessel Monitoring System) directly related to monitoring the status of stocks, the ecosystem and the fishery.

Theme A. Shrimp productivity and their sustainable harvesting

To effectively manage the fisheries, an in-depth understanding of the productivity of the population being harvested is required. Changes in the productivity and resiliency of key species can have serious consequences on the overall dynamics of all ecosystems and on the sustainability of fisheries. These changes may be triggered by a number of biological, physical and environmental factors as well as by human activities.

Sub-topic A1. The abundance of shrimp stocks in the Estuary and Gulf

- Status assessment of shrimp stocks by ongoing monitoring activities intended to calculate stock status indicators and determine the appropriate fishery catch shares consistent with the precautionary approach adopted in 2012 – DFO (Core Program) - H. Bourdages et al.

Sub-topic A2. The trophic relationships between the shrimp and its predators

- Description of the general structure, the trophic interactions and the effects of predation on vertebrate and invertebrate communities of the ecosystem by a mass-balance model using inverse methodology for the Estuary and northern Gulf of St. Lawrence for the period of 2011 to 2014 – DFO (Core Program) - C. Savenkoff et al.

Sub-topic A3. Environmental factors influencing the shrimp's productivity

- Status assessment of the physical and biochemical oceanographic environment of the Gulf of St. Lawrence by continuing the Atlantic Zone Monitoring Program to detect, monitor and predict changes in productivity and marine environment status – DFO (Core Program) - P. Galbraith et al.
- Assessment of the northern shrimp's physiological response to climate change and variability – DFO (Science Program - International Governance Strategy, 2011 – 2014) - P. Ouellet, D. Chabot and D. Orr; P. Calosi (University of Plymouth, UK).
- Vulnerability assessment of key commercial species (species selected based on their role in the northern shrimp/Greenland halibut trophic interactions) to climate change – DFO (Aquatic Climate Change Adaptation Services Program, 2013 – 2016). C. Savenkoff, H. Bourdages, P. Galbraith, R. Larocque, M. Castonguay, J. Chassé, S. Dumont and D. Lemelin, S. Vaz (IFREMER, France).
- Assessment of synergic effects of various environmental stressors combined with acidification on the physiology, the growth or the survival of invertebrates that are harvested commercially in the St. Lawrence – DFO (Strategic Program for Ecosystem-Based Research and Advice 2014-2017) - D. Chabot et M. Starr.

Theme B. The fishery's impact on the ecosystem

Fisheries Management's decisions must take into consideration targeted and non-targeted species, the ecosystems of which they are a part and the impact of fishing on these ecosystems. This is the basis of an ecosystem-based approach to fisheries management, which, along with a precautionary approach, constitutes the key to the new sustainable development framework of Fisheries and Oceans Canada (DFO). In compliance with the United Nations Food and Agriculture Organization's (FAO) *Code of Conduct for Responsible Fisheries* (<http://www.fao.org/fishery/code/en>), DFO promotes responsible fishing aimed at reducing bycatch and mitigating impacts on habitat wherever biologically justifiable and cost effective.

Sub-topic B1. Vulnerable benthic habitats and communities

- Study of the distribution, spatial structure, reproduction, ecosystem function and vulnerability to trawling of sea pen fields in the Gulf of St. Lawrence in support of the "Eastern Canadian Coral and Sponge Conservation Strategy" – DFO (Strategic Program for Ecosystem-Based Research and Advice 2014-2017) - B. Sainte-Marie, H. Bourdages, C. Couillard, R. Larocque, C. Savenkoff, M. Ouellet, G. H. Tremblay, S. Cadieux.
- Identification of benthic communities by means of oceanographic campaigns conducted in the Gulf of St. Lawrence to map and predict (using statistical models) benthic biodiversity in this area - Benthic ecology laboratory UQAR - P. Archambault et al.

Sub-topic B2. Species not targeted by the fishery

- Assessment of the significance of shrimpers' bycatch by analyzing data from the At-Sea Observer Program activity monitoring – DFO (Core Program) - H. Bourdages et al.
- Evaluation of the impact of shrimpers' bycatch by performing a risk analysis for cod, Greenland halibut and redfish – DFO (Fisheries Science Collaborative Program) - H. Bourdages, C. Brassard, B. Morin (DFO), J.-P. Couillard, Association des capitaines propriétaires de Gaspésie (ACPG) and J. Lanteigne, Association des crevettiers acadiens du Golfe (ACAG).

Sub-topic B3. Fishing gear

- Development of a semi-pelagic trawl for shrimp fishing (Semi-pelagic shrimp trawl system Phase II) - 2014 - Centre for Sustainable Aquatic Resources, Fisheries and

Marine Institute of Memorial University of Newfoundland – H. DeLouche, T. Bungay, G. Legge and K. Moret.

- Adaptation of fishing equipment and semi-pelagic trawl Thyborøn 15 VF for shrimp fishing in the Gulf of St. Lawrence - 2013 – Merinov - A. Rivière and F. Coulombe.
- At-sea trials of devices designed to reduce bycatch in the shrimp fishery - Research proposals - Centre for Sustainable Aquatic Resources, Fisheries and Marine Institute of Memorial University of Newfoundland – P. Winger
 - Sea trials to evaluate the effectiveness of LED lights to reduce the bycatch of capelin, redfish, and Greenland halibut in inshore shrimp trawls.
 - Sea trials to evaluate the performance of a new trawl-mounted sensor (net sounder) to discriminate shrimp from bycatch.
 - Sea trials to evaluate the performance of a dual-grid system developed by Hampidjan Canada Ltd.

Appendix 5. Revised Surveillance Program (if necessary)

Table A5.1: Surveillance level rationale

Year	Surveillance activity	Number of auditors	Rationale
2	On-site audit	1 auditor on-site with remote support from 1 auditor	From client action plan it is apparent that condition 3 should be closed by the second annual audit and further progress will be made against conditions 1 and 2 toward meeting the conditions by the fourth annual audit. The CAB therefore proposes to have an on-site audit with 1 auditor on-site with remote support for the second annual audit to ensure that all information is collected.

Table A5.2: Timing of surveillance audit

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
2	March 2016	June 2016	Conclusion of the scientific assessment and management cycle in spring of year, proposal to postpone audit to include the final management decisions after the fishery has started.

Table A5.3: Fishery Surveillance Program

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