



# **Draft Fishery Improvement Plan**

## **SSO3A Oreo Trawl Fishery**

**For all enquiries please contact**

Victoria Jollands  
*Certification Manager*  
Deepwater Group

**E** [victoria@deepwatergroup.org](mailto:victoria@deepwatergroup.org)

**P** +64 21 379 054

## Overview

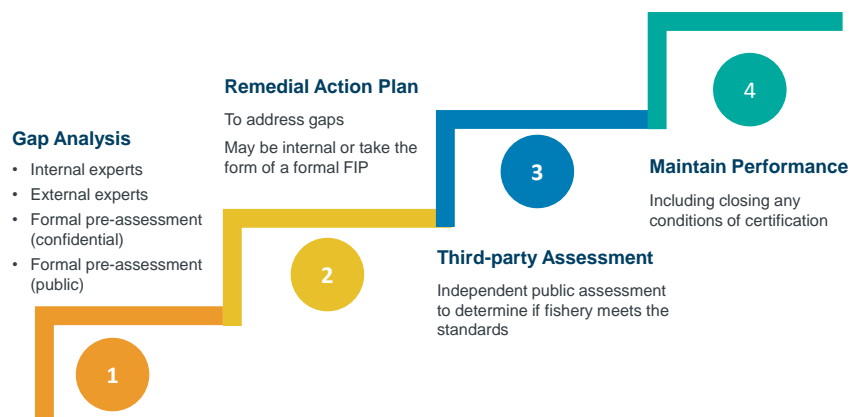
Deepwater Group (DWG) and the Ministry for Primary Industries (MPI) are committed to the ongoing sustainable management of New Zealand’s deepwater fisheries. To this end we have jointly embarked on a Fisheries Certification Programme (FCP) with the objective of achieving independent certification of New Zealand’s key deepwater fisheries (Figure 1). Our FCP is a four-staged work programme and a summary of this process to date can be seen on our [website](#). As part of this programme, three key oreo fisheries are in formal Fishery Improvement Plans (FIP). These are: Black Oreo trawl fishery (BOE3A), Smooth Oreo trawl fishery (SSO3A), and Smooth Oreo trawl fishery (SSO4).

This FIP for SSO3A was provided to MSC Stakeholders for their consideration in June and 2015 July. DWG has developed this FIP using tools and templates provided by MSC to establish a public, transparent, inclusive and stepwise approach towards MSC certification.

The objective of this FIP is to ensure the performance of the fishery meets the MSC Fisheries Standard and subsequently achieves MSC certification. This FIP provides external observers the ability to monitor fisheries improvement, to track progress, and to assess fisheries performance against the MSC Fisheries Standard.









The following sections provide further details on SSO3A FIP including a Gap Analysis and Remedial Action Plan.

SSO3A is currently progressing through Stage 2 Phase 2 FIP (see Figure 1 and Table 1). This involves remedial management actions and monitoring progress according to a public, time-bound FIP. This FIP will be updated and made available on our [website](#) along with all supporting documentation.



**Figure 1** Deepwater Group’s Fisheries Certification Programme Stages

**Table 1** Timelines and milestones for the Fisheries Certification Programme for SSO3A

Fisheries Certification Stage	Deliverables and Outcomes	Action Lead	Timelines for Milestone	Progress
Gap Analysis  	<b>Phase 1 – MSC Confidential Pre-assessments:</b> In September 2009 a Conformity Assessment Body (CAB) undertook a high level confidential pre-assessment of SSO3A against the MSC Fisheries Standard. The performance of this fishery was reviewed against the MSC Fisheries Standard by DWG and MPI in October 2014 and in April 2015.	DWG & MPI	Sept 2009	Completed 
	<b>Phase 2 – Fishery Gap Analysis:</b> Assessed SSO3A against the MSC Fisheries Standard to identify potential non-conformities and information gaps.	DWG & MPI	Oct 2014-Apr 2015	Completed 
	<b>Phase 3 – Fishery Evaluations:</b> Completed on the 'Fishsource' template. Provided the Sustainable Fisheries Partnership (SFP) with current information, for evaluation and for SFP to post to their FishSource™ website. Published relevant documents on the DWG website.	DWG & MPI	Nov 2014-Apr 2015	Completed 
Remedial Action Plan  	<b>Phase 1 – Fishery Improvement Analysis:</b> Identified the reasons why the CAB pre-assessment identified certain Performance Indicators as unlikely to meet the MSC Fisheries Standard and identify remedial management actions. Consulted with MSC Stakeholders.	DWG & MPI	Apr 2015	Completed 
	<b>Phase 2 – Fishery Improvement Plan:</b> Implemented remedial management actions within an agreed and time-bound plan using the MSC Monitoring and Benchmarking FIP Template. Once finalised, posted with SFP for public viewing.	DWG & MPI	Apr 2015-Nov 2019	Remedial Actions In Progress 
Third Party Assessment  	<b>Phase 1 – MSC Assessment:</b> Formal assessment of SSO3A against the MSC Fisheries Standard.	CAB, DWG & MPI	Dec 2019	
	<b>Phase 2 – MSC Certification:</b> Achieved certification of the SSO3A against the MSC Fisheries Standard.	DWG & MPI	Dec 2020	

## Gap Analysis



The first three phases have been completed:

- Phase 1 MSC Confidential Pre-assessments
- Phase 2 Fishery Gap Analysis
- Phase 3 Fishery Evaluations.

This version of the FIP addresses the outcomes of the pre-assessment and the review of these in 2014 and 2015.

### **Phase 3: MSC Confidential Pre-assessment**

In September 2009, Moody Marine Ltd (now Intertek Fisheries Certification Ltd) undertook a confidential pre-assessment of the SSO3A fishery against the MSC Fisheries Standard.

Subsequent reviews of this pre-assessment were undertaken (October 2014 and April 2015) and the fishery was rated for each Performance Indicator (PI) and a detailed rationale was provided. The pre-assessment and reviews identified areas of non-conformity to provide an indication of the work required for the fishery to meet the MSC SG80 and SG60 Certification Requirements.

The compiled outcomes from Intertek Fisheries Certification Ltd's confidential pre-assessment and subsequent October 2014 and April 2015 reviews are summarised in Table 2. This is a snapshot of the fishery and results for each PI are categorised as:

- Red = likely to score below 60
  - Orange = likely to score between 60 & 80
  - Green = likely to score above 80.
-

**Table 2** SSO3A pre-assessment results

MSC Component	MSC Performance Indicator	MSC Performance Indicator	Outcome				
Outcome	1.1.1	<b>Stock Status:</b> Stock at a level which maintains high productivity					
	1.1.2	<b>Reference Points:</b> Appropriate limits and reference points for the stock					
	1.1.3	<b>Stock Rebuilding:</b> Where stock depleted - there is evidence of rebuilding	N/A				
Management	1.2.1	<b>Harvest Strategy:</b> Precautionary and robust harvest strategy in place					
	1.2.2	<b>Harvest Control Rules &amp; Tools:</b> Well defined harvest control rules in place					
	1.2.3	<b>Information &amp; Monitoring:</b> Relevant Information collected to support harvest strategy					
	1.2.4	<b>Assessment of Stock Status:</b> Assessment of stock status is adequate					
	<b>P1 ALL</b>	<b>Sustainability of Exploited Stock</b>					
Retained Species	2.1.1	<b>Retained Species Outcome:</b> Does not cause serious or irreversible harm to retained species					
	2.1.2	<b>Retained Species Management:</b> Strategy in place for managing retained species					
	2.1.3	<b>Retained Species Information:</b> Relevant information to help manage retained species					
Bycatch species	2.2.1	<b>Bycatch Species Outcome:</b> Does not cause serious or irreversible harm to bycatch species					
	2.2.2	<b>Bycatch Species Management:</b> Strategy in place for managing bycatch species					
	2.2.3	<b>Bycatch Species Information:</b> Relevant information to help manage bycatch species					
ETP species	2.3.1	<b>ETP Species Outcome:</b> Meets national and international requirements for ETP protection					
	2.3.2	<b>ETP Species Management:</b> Precautionary management strategies in place					
	2.3.3	<b>ETP Species Information:</b> Relevant information to support management of impacts					
Habitats	2.4.1	<b>Habitats Outcome:</b> Does not cause serious or irreversible harm to habitat structure					
	2.4.2	<b>Habitats Management:</b> Information is adequate to determine risk to habitat types					
	2.4.3	<b>Habitats Information:</b> Information adequate to determine risk to habitats					
Ecosystem	2.5.1	<b>Ecosystem Outcome:</b> Does not cause serious or irreversible harm to ecosystem					
	2.5.2	<b>Ecosystem Management:</b> Measures are in place to mitigate risk to ecosystem					
	2.5.3	<b>Ecosystem Information:</b> Adequate knowledge of impacts of fishery on the ecosystem					
	<b>P2 ALL</b>	<b>Maintenance of Ecosystem</b>					
Governance and Policy	3.1.1	<b>Legal/Customary Framework:</b> Management system exists with legal/customary framework					
	3.1.2	<b>Consultation, Roles &amp; Responsibilities:</b> Management system has clear processes					
	3.1.3	<b>Long Term Objectives:</b> Management policy contains clear long-term objectives					
	3.1.4	<b>Incentives for Sustainable Fishing:</b> Management system has sustainability incentives					
Fishery specific management system	3.2.1	<b>Fishery Specific Objectives:</b> Fishery has clear and specific outcome objectives					
	3.2.2	<b>Decision Making Processes:</b> Management system includes effective decision making					
	3.2.3	<b>Compliance &amp; Enforcement:</b> Monitoring, control and surveillance mechanisms in place					
	3.2.4	<b>Research Plan:</b> Research plan that addresses management needs are in place					
	3.2.5	<b>Management Performance Evaluation:</b> Performance Evaluation processes in place					
	<b>P3 ALL</b>	<b>Effective Management System</b>					
<b>Key:</b>	Indicative Assessment Scores	>80 (Pass)	60-80 (Condition)	<60 (Fail)	Indicative Aggregate Scores	Pass	Fail

---

## Remedial Action Plan



There are two phases to the Remedial Action Plan:

- Phase 1 Fishery Improvement Analysis
- Phase 2 Fishery Improvement Plan.

### Phase 1 Fishery Improvement Analysis

The performance of SSO3A has been considered against the MSC Fisheries Standard to identify non-conformities and information gaps against the MSC Performance Indicators (SG80 and SG60) (Appendix 1).

### Phase 2 Fishery Improvement Plan

This involves implementing the remedial management actions and monitoring progress according to a public, time-bound FIP.

Table 3 presents management actions to remedy identified gaps in Phase 1 of the Remedial Action Plan.

Table 4 gives timelines for each of the remedial management actions.

---

**Table 3 Remedial management actions**

ACTIONS		ACTION LEAD & PARTNERS	Links to Relevant MSC Performance Indicators							
			P1 Target Stocks						P2 Ecosystem Components	
			1.1.1	1.1.2	1.1.3	1.2.1	1.2.2	1.2.3	1.2.4	2.2.1
			Reference points	Stock rebuilding	Harvest Strategy	Harvest control rules and tools	Information and monitoring	Assessment	Bycatch species status	ETP species status
<b>1. Stock assessment</b>										
1.1	Review biomass survey methodologies and undertake improved SSO3A biomass surveys.	DWG & MPI								
1.2	Validate ageing information and age estimation method for SSO3A.	DWG & MPI								
1.3	Develop and update stock assessment methodology appropriate for SSO3A stock and fishery.	DWG & MPI								
1.4	Acceptance of SSO3A stock assessment methods by MPI.	DWG & MPI								
1.5	Conduct a Management Strategy Evaluation to define appropriate harvest strategy and harvest control rules. Review the SSO3A harvest strategy and harvest control rules to align with Management Strategy Evaluation.	DWG & MPI								
1.6	Implement harvest strategy and harvest control rules through a Management Procedure.	DWG & MPI								
1.7	Review the need for, and implement if deemed necessary, a rebuilding plan.	DWG & MPI								
<b>2. Habitats and ecosystems</b>										
2.1	Undertake analysis to provide metrics of main/minor bycatch species in SSO3A and in the EEZ.	DWG & MPI								
2.2	Document the management strategy for main/minor bycatch species in SSO3A and in the EEZ.	DWG & MPI								
2.3	Quantitatively determine distributions of ETP corals within the SSO3A fishery, the bioregion, and the New Zealand EEZ.	DWG & MPI								
2.4	Assess nature and extent of impact by the SSO3A fishery on ETP corals.	DWG & MPI								
2.5	Document the management strategy to provide information and outline management measures ensure the fishery does not hinder recovery and minimises mortality of ETP coral species.	DWG & MPI								

Notes: DWG (Deepwater Group Ltd) MPI (Ministry for Primary Industries for New Zealand)

**Table 4** Timelines for each of the remedial management actions

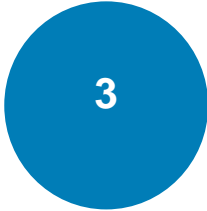
		Progress (see key below)											
		2015		2016		2017		2018		2019		2020	
		H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
<b>MSC Principle 1: Stock Status</b>													
1.1	Review biomass survey methodologies, undertake improved SSO3A biomass surveys.	In-progress	Completed				In-progress	Completed					
1.2	Validate ageing information and age estimation method for SSO3A.			In-progress	Completed								
1.3	Develop and update stock assessment methodology appropriate for SSO3A stock and fishery.			In-progress	In-progress	In-progress	Completed						
1.4	Acceptance of SSO3A stock assessment methodology by MPL.					In-progress	Completed						
1.5	Conduct a Management Strategy Evaluation to define appropriate harvest strategy and harvest control rules. Review the SSO3A harvest strategy and harvest control rules to align with Management Strategy Evaluation.			In-progress	Completed				In-progress	Completed			
1.6	Implement harvest strategy and harvest control rules through a Management Procedure.								In-progress	Completed			
1.7	Review the need for, and implement if deemed necessary, a rebuilding plan.								In-progress	Completed			
<b>MSC Principle 2: Ecosystem Management</b>													
2.1	Undertake analysis to provide metrics of main/minor bycatch species in SSO3A and in the EEZ.	In-progress	Completed										
2.2	Articulate and formalise management strategy for main/minor bycatch species in SSO3A and in the EEZ.								In-progress	Completed			
2.3	Quantitatively determine distributions of ETP corals within the SSO3A fishery and the New Zealand EEZ.								In-progress	Completed			
2.4	Assess nature and extent of impact by the SSO3A fishery on ETP corals.								In-progress	Completed			
2.5	Document the management strategy to provide information and outline management measures ensure the fishery does not hinder recovery and minimises mortality of ETP coral species.								In-progress	Completed			

	In-progress
	Completed
	Expected completion date



---

### Third-party Assessment



#### MSC Assessment

Stage 3 of the SSO3A FCP requires the submission of this fishery for full MSC Assessment by an accredited MSC Conformity Assessment Body against the MSC Fisheries Standard. It is anticipated that the SSO3A fishery will be ready for full MSC assessment in December 2019.

#### MSC Certification

Certification of SSO3A against the MSC Fisheries Standard is achieved, the report is published and appropriate certificate(s) granted. Any Conditions of Certification laid out in the certification report will be addressed by managers within the agreed timeframes. It is anticipated that SSO3A will complete the full MSC assessment process by December 2020.

---

## Appendix 1

### SSO3A Fishery Improvement Analysis (Actions are referenced to Tables 3 and 4)

PI 1.1.1 – The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
<b>MSC SG80 Certification Requirements</b>	a) It is highly likely that the stock is above the point where recruitment would be impaired. b) The stock is at or fluctuating around its target reference point.	
<b>Gap Analysis Findings</b>	The Gap Analysis found that: <ul style="list-style-type: none"> <li>Lack of quantitative assessments based on fitting population dynamics models.</li> </ul>	
<b>Responses</b>	<ul style="list-style-type: none"> <li>Demonstrate through an accepted stock assessment that the stock status is highly likely to be above the point at which recruitment would be impaired and at or fluctuating around its target reference point.</li> </ul>	<b>Action 1.1 - 1.4</b>
PI 1.1.2 – Limit and target reference points are appropriate for the stock		
<b>MSC SG80 Certification Requirements</b>	a) Reference points are appropriate for the stock and can be estimated. b) The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity. c) The target reference point is such that the stock is maintained at a level consistent with $B_{MSY}$ or some measure or surrogate with similar intent or outcome. d) For key low trophic level species, the target reference point takes into account the ecological role of the stock.	
<b>Gap Analysis Findings</b>	The Gap Analysis found that: <ul style="list-style-type: none"> <li>Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.</li> <li>The stock demonstrates the limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.</li> </ul>	
<b>Responses</b>	<ul style="list-style-type: none"> <li>Undertake a Management Strategy Evaluation (MSE) to establish and test Management Procedures and harvest control rules that meet the requirements of PI 1.1.2.</li> </ul>	<b>Action 1.2 &amp; 1.5 – 1.6</b>

**PI 1.1.3 – Where the stock is depleted, there is evidence of stock rebuilding within a specified timeframe**

<b>MSC SG80 Certification Requirements</b>	<p>a) A rebuilding timeframe is specified for the depleted stock that is the shorter of 20 years or 2 times its generation time. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.</p> <p>b) There is evidence that the rebuilding strategies are rebuilding stocks, or it is highly likely based on simulation modelling or previous performance that they will be able to rebuild the stock within the specified timeframe.</p>	
<b>Gap Analysis Findings</b>	<p>The Gap Analysis found that:</p> <ul style="list-style-type: none"> <li>No evidence that the stock was depleted therefore this PI was not scored.</li> </ul>	
<b>Responses</b>	<ul style="list-style-type: none"> <li>Develop and implement a rebuilding plan for the SSO3A fishery.</li> <li>Test the robustness of the rebuilding plan using the MSE based on the stock assessment model.</li> </ul>	<b>1.1 – 1.2 &amp; 1.5 - 1.7</b>

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

<b>MSC SG80 Certification Requirements</b>	<p>a) The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.</p> <p>b) The harvest strategy may not have been fully tested but monitoring is in place and evidence exists that it is achieving its objectives.</p>	
<b>Gap Analysis Findings</b>	<p>The Gap Analysis found that:</p> <ul style="list-style-type: none"> <li>The lack of analyses to demonstrate that the harvest strategy (HS) is responsive to the state of the stock or to demonstrate that the HS elements successfully work together towards achieving management objectives reflected in the target and limit reference points.</li> <li>The lack of analyses to demonstrate the efficacy of the HS in achieving its objectives.</li> </ul>	
<b>Responses</b>	<ul style="list-style-type: none"> <li>Undertake a Management Strategy Evaluation to develop and test a Management Procedure and harvest control rules to establish that these are responsive to the state of the stock and the stock management processes.</li> </ul>	<b>Action 1.2 &amp; 1.5 – 1.6</b>

PI 1.2.2 – There are well defined and effective harvest control rules in place

<p><b>MSC SG80 Certification Requirements</b></p>	<p>(a) Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.</p> <p>(b) The selection of the harvest control rules takes into account the main uncertainties.</p> <p>(c) Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.</p>
<p><b>Gap Analysis Findings</b></p>	<p>The Gap Analysis found that:</p> <ul style="list-style-type: none"> <li>• Generally understood harvest control rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.</li> <li>• The harvest control rule, as it is implemented for New Zealand fish stocks and for oreos in particular, is consistent with the aims of the harvest strategy standard, although it is not fully-specified at present.</li> <li>• The projections on which management advice is based account for uncertainty regarding the parameters of the “best” model as well as uncertainty in future recruitment success.</li> <li>• Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.</li> </ul>
<p><b>Responses</b></p>	<ul style="list-style-type: none"> <li>• Undertake a Management Strategy Evaluation to establish and test Management Procedures and harvest control rules that meet the requirements of PI 1.2.2.</li> </ul> <p style="text-align: right;"><b>Action 1.2 &amp; 1.5 – 1.6</b></p>

**PI 1.2.3 – Information and Monitoring**

<p><b>MSC SG80 Certification Requirements</b></p>	<p>(a) Sufficient relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.</p> <p>(b) Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.</p> <p>(c) There is good information on all other fishery removals from the stock.</p>	
<p><b>Gap Analysis Findings</b></p>	<p>The Gap Analysis found that:</p> <ul style="list-style-type: none"> <li>The fishery lacks information related to stock structure, including validating ageing information and age estimation methodology.</li> </ul>	
<p><b>Responses</b></p>	<ul style="list-style-type: none"> <li>Formalise stock structure information for SSO3A (including information on natural mortality, growth and ageing).</li> <li>Validate age estimation method for smooth oreo.</li> </ul>	<p><b>Action 1.2</b></p>

**PI 2.2.1 – The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups**

<p><b>MSC SG80 Certification Requirements</b></p>	<p>a) Main bycatch species are highly likely to be within biologically based limits (if not, go to scoring issue (b) below).</p> <p>b) If main bycatch species are outside biologically based limits there is a partial strategy of demonstrably effective mitigation measures in place such that the fishery does not hinder recovery and rebuilding.</p>	
<p><b>Gap Analysis Findings</b></p>	<p>The gap analysis found that:</p> <ul style="list-style-type: none"> <li>The lack of information to score the stock status of key bycatch species.</li> <li>The lack of information to determine whether or not a species comprises 5-20% or more of the total catch of that species.</li> </ul>	
<p><b>Responses</b></p>	<ul style="list-style-type: none"> <li>Provide information to demonstrate (semi-quantitatively) that bycatch species are highly likely (70%) to be within biologically based limits or there is evidence that the fishery does not hinder recovery and rebuilding (<math>B_{LIM}</math>).</li> <li>Identify vulnerable species and document impacts of this fishery on those species.</li> <li>Where possible document bycatch that are recorded under generic codes as species.</li> <li>Provide information (semi-quantitatively) to support findings and to demonstrate the nature and extent of the impacts of the smooth oreo fishery on bycatch stocks.</li> </ul>	<p><b>Actions 2.1 &amp; 2.2</b></p>

PI 2.3.1 – The fishery meets national and international requirements for protection of ETP species. The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species.		
<b>MSC SG80 Certification Requirements</b>	<ul style="list-style-type: none"> <li>a) The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species.</li> <li>b) Direct effects are highly unlikely to create unacceptable impacts to ETP species.</li> <li>c) Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.</li> </ul>	
<b>Gap Analysis Findings</b>	<p>The Gap Analysis found that:</p> <ul style="list-style-type: none"> <li>• There was a lack of robust distributional information of several cold water coral species (that overlap with the OEO Fishery) outside fished areas.</li> <li>• There was a lack of information describing the level of impacts with fisheries of protected corals, species identification, quantities taken and distribution.</li> <li>• There was a lack of any rationale to quantitatively determine if any impacts are such that they pose a risk of serious or irreversible harm to ETP coral species.</li> </ul>	
<b>Responses</b>	<ul style="list-style-type: none"> <li>• Document national (and relevant international) requirements for the protection of corals, demonstrating that direct effects (considering also indirect effects) are highly unlikely to create unacceptable impacts (impacts that hinder recovery or rebuilding) to ETP coral species.</li> <li>• Undertake a desktop analysis of the nature and extent of information used in modelling coral density distributions, including (where possible) the distribution of corals within fished areas, outside fished areas, and within protected areas (BPAs and Seamount Closures).</li> <li>• Undertake desktop analysis of the distribution of coral genera/species in the New Zealand EEZ and within the SSO3A fishery, coral taken within the SSO3A fishery and determine (where possible) which genera/species are affected most by the SSO3A fishery Undertake a semi-quantitative analysis to demonstrate the nature and extent of the interactions with corals in areas that are fished (taking into account recovery and closed areas). Determine if effects of the fishery are: highly likely to be within limits of national (and international) requirements for protection of ETP coral species; highly unlikely to create unacceptable impacts to ETP coral species; and, consider indirect effects.</li> </ul>	<b>Actions 2.3 - 2.5</b>