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# Canada Bay of Fundy Atlantic herring - purse seine Fishery Improvement Project Workplan

*Prepared by*

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## Summary

This document presents the Fisheries Improvement Project (FIP) workplan for the Canada Bay of Fundy Atlantic herring - purse seine fishery. The fishery targets Atlantic herring (*Clupea harengus*) by purse seine in the Bay of Fundy, Canada, with landings at Blacks Harbour. The purse seine fishers usually operate overnight and have one fishing trip per day, catching up to 125 metric tonnes of fish each time. The vessels land their catch in the wharf adjacent to the processing factory. The fishery is managed by the Department of Fisheries and Oceans Canada (DFO).

Table 1: Workplan Overview

<b>Workplan Version and Date</b>	30 September 2025
<b>Start date</b>	<b>End date</b>
April 2020	September 2028
<b>FIP Lead</b>	<b>Improvements recommended by</b>
Matt Walsh, Connor Bros Marine Corp	Connor Bros Marine Corp and Ocean Outcomes
<b>FIP Coordinator</b>	<b>Workplan developed by</b>
Jocelyn Drugan, Ocean Outcomes MSC Technical Consultant	Jocelyn Drugan and Matt Walsh

### Acronyms

DFO	Fisheries and Oceans Canada
EM	Electronic monitoring
ETP	Endangered, threatened, or protected (species)
FIP	Fishery Improvement Project
MSC	Marine Stewardship Council
MSE	Management Strategy Evaluation
MP	Management Procedure
NGO	Non-governmental organization
TAC	Total Allowable Catch
UoA	Unit of Assessment

Table 2. Unit of Assessment (UoA).

UoA 1	Description
<b>Target species (common and scientific name)</b>	Atlantic herring ( <i>Clupea harengus</i> )
<b>Stock</b>	Atlantic herring
<b>Geographical area</b>	Area 21 (Atlantic, Northwest)
<b>Fishing method or gear type</b>	Purse seine
<b>Fishing fleet or group of vessels, or individuals fishing operators pursuing stock</b>	Connor Brothers Marine Corporation

## Overview

The UoA fishery achieved certification against the MSC Certification Requirements (version 1.3) in November 2016 and underwent a surveillance audit in November 2017 before voluntarily withdrawing from the MSC process due to the status of the target stock, which was at a low level despite management efforts. Industry stakeholders have continued working with DFO and others to address deficiencies identified in the MSC assessment, and aim to do so through a FIP framework until the fishery is deemed ready to re-enter the MSC certification process. A subsequent scoping document was prepared based on the MSC assessment and certification documentation from the fishery.

The main strengths of the fishery are:

- Presence of an established management framework;
- Potentially limited impacts on ecosystems, habitats and other species caught.

The main weaknesses of the fishery are:

- The stock is below the limit reference point;
- Lack of independent observer records in recent years;
- The DFO does not respond to significant issues in a timely way.

Tables 3a-c below show the scoring for Performance Indicators (PIs) that scored less than 80 and are being addressed in the FIP.

Legend	<60	60 – 79
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Table 3a. Principle 1 PIs that scored less than 80.

PI No.	Component	Performance Indicator	Atlantic herring
1.1.1	Outcome	Stock status	
1.1.2	Outcome	Stock rebuilding	

Table 3b. Principle 2 PIs that scored less than 80.

PI No.	Component	Performance Indicator	
2.3.3	ETP Species	Information	

Table 3c. Principle 3 PIs that scored less than 80.

PI No.	Component	Performance Indicator	
3.2.2	Fishery specific management system	Decision making processes	



## FIP Actions

### Principle 1: Sustainability of fish stocks

Table 4. Performance Indicator Action Plan Table for Action 1

<b>Action Number and Name</b>	<b>1 - Support stock rebuilding</b>
<b>Action Goal</b>	Adopt and implement a plan to rebuild the 4VWX herring stock, with rebuilding measures and progress monitoring
<b>Action Description</b>	<p>This action has two goals associated with it.</p> <ul style="list-style-type: none"> <li>• PI 1.1.1.1 Sla - The Atlantic herring stock is above the point where recruitment would be impaired.</li> <li>• PI 1.1.2 Sla and b - Having a stock rebuilding plan with evidence of stock rebuilding within a specified timeframe.</li> </ul> <p>Both require development and negotiation with the Department of Fisheries and Oceans Canada (DFO) to conduct rebuilding scenarios and build a robust, comprehensive rebuilding strategy to enable fishing to be at MSY levels.</p>
<b>Expected Completion Date</b>	September 2028
<b>Priority</b>	High
<b>Estimated Cost</b>	CAD \$5,000 per year
<b>Responsible Parties</b>	Industry stakeholders and DFO



<b>MSC PIs Addressed</b>	1.1.1, 1.1.2
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<b>Action 1 - Support stock rebuilding</b>					
<b>Tasks/ Milestones</b>	<b>Responsible (lead)</b>	<b>Responsible (supporting role)</b>	<b>Starting date</b>	<b>Expected completion date</b>	<b>Evidence of completion</b>
<p>Implement voluntary measures and other applicable measures to rebuild the 4VWX Atlantic herring stock.</p> <p>Industry stakeholders developed and have been implementing voluntary management measures, including restrictions on fishing areas and sizes of fish caught. The stakeholders meet periodically to review these measures. They also engage with DFO on management strategy evaluation (MSE) and data collection.</p>	Industry stakeholders	NGOs	September 2020	Ongoing	Meeting documents
<p>Update and publish rebuilding plan</p> <p>A rebuilding plan for Southwest Nova Scotia / Bay of Fundy herring was triggered and adopted in 2013. Subsequently, DFO has implemented a management strategy evaluation (MSE) framework to evaluate management procedures (MP) to rebuild and maintain the herring stock. An MP that includes a strategy to rebuild the stock is expected to be adopted.</p>	DFO	Industry stakeholders, NGOs	May 2024	September 2028	MP or rebuilding plan document



<p>Monitor progress against the rebuilding plan</p> <p>DFO is required to periodically review measures to rebuild and maintain stocks. Such review takes place through the Regional Advisory Process and the Scotia-Fundy Herring Advisory Committee, the latter of which includes participation from industry members.</p>	DFO	Industry stakeholders, NGOs	September 2020	Ongoing	Meeting documents
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Table 5. Performance Indicator Action Plan Table for Action 2

<b>Action Number and Name</b>	<b>2 - Update harvest strategy and stock assessment</b>
<b>Action Goal</b>	Update the stock assessment framework and develop a MSE for the herring fishery
<b>Action Description</b>	PI 1.2.1 Sla and Slb, and PI 1.2.4 Slb - A robust and precautionary harvest strategy is needed for the target stock. The fishery has a harvest strategy in place, which includes a total allowable catch (TAC). Since 2019, DFO has conducted a framework review that includes evaluation of management procedures (MPs) under a management strategy evaluation (MSE) process. Once adopted, an MP essentially serves as a harvest strategy. Although the MSE process was used to lower the TAC to 16,000 t from 2024-2027, as of 2025 an MP is yet to be agreed and adopted.
<b>Expected Completion Date</b>	September 2028
<b>Priority</b>	Medium
<b>Estimated Cost</b>	CAD \$15,000 per year
<b>Responsible Parties</b>	Industry stakeholders and DFO



<b>MSC PIs Addressed</b>	1.2.1, 1.2.4
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<b>Action 2 - Update harvest strategy and stock assessment</b>					
<b>Tasks/ Milestones</b>	<b>Responsible (lead)</b>	<b>Responsible (supporting role)</b>	<b>Starting date</b>	<b>Expected completion date</b>	<b>Evidence of completion</b>
<p>Engage in the framework and MSE processes where applicable</p> <p>Industry stakeholders participate in framework and IFMP processes via the Scotia-Fundy Herring Advisory Committee and have continued to do so throughout the course of the FIP. They also provide acoustic data to DFO for use in stock assessment.</p>	Industry stakeholders	NGOs	September 2020	Ongoing	Meeting documents
<p>Develop MSE that includes consideration of target reference points</p> <p>DFO initiated development of a Management Strategy Evaluation (MSE) for this fishery, which includes an objective to consider a variety of management scenarios and target reference points.</p>	DFO	Industry stakeholders, NGOs	September 2020	Ongoing	MSE documents
<p>Take MSE results into consideration for harvest strategy development</p> <p>DFO aims to increase its use of MSE to develop fishery management strategies. One of their objectives in conducting MSE for this fishery is to</p>	DFO	Industry stakeholders, NGOs	May 2024	Ongoing	MSE, MP, and TAC documents



generate management advice relating to the TAC.					
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## Principle 2: Minimising Environmental Impacts

Table 6. Performance Indicator Action Plan Table for Action 3

<b>Action Number and Name</b>	<b>3 - Develop more explicit management of ecosystem impacts</b>
<b>Action Goal</b>	Update the assessment framework and IFMP so that they include more explicit consideration of the role of herring in the ecosystem
<b>Action Description</b>	While PI 2.5.2 Sla achieved a passing score, it is recommended that the client works closely with DFO scientists to account for the special situation of herring as a forage fish.
<b>Expected Completion Date</b>	September 2028
<b>Priority</b>	Medium
<b>Estimated Cost</b>	CAD \$5,000 per year
<b>Responsible Parties</b>	Industry stakeholders, DFO



<b>MSC PIs Addressed</b>	2.5.2
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<b>3 - Develop more explicit management of ecosystem impacts</b>					
<b>Tasks/ Milestones</b>	<b>Responsible (lead)</b>	<b>Responsible (supporting role)</b>	<b>Starting date</b>	<b>Expected completion date</b>	<b>Evidence of completion</b>
Engage in the framework and IFMP processes where applicable  Industry stakeholders participate in framework and IFMP processes via the Scotia-Fundy Herring Advisory Committee.	Industry stakeholders	DFO	September 2020	Ongoing	Meeting documents
Develop a clearer basis for management of ecosystem impacts from the herring fishery in the assessment framework and IFMP  DFO is making efforts to more explicitly consider herring's role as a forage species and address ongoing ecosystem requirements. For example, the review of the stock assessment framework includes an objective to examine sources of ecosystem information and consider how that information might be incorporated into the framework.	DFO	Industry stakeholders	September 2020	September 2028	MSE documents

Table 7. Performance Indicator Action Plan Table for Action 4

<b>Action Number and Name</b>	<b>4 - Obtain quantitative information to adequately assess the fishery's impact and potential threat to the protection and recovery of ETP species - NEW ACTION RESULTING FROM THE 3RD YEAR AUDIT</b>
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<b>Action Goal</b>	Observer or EM data available for the UoA vessels
<b>Action Description</b>	<p>Due to the fishery having no recent observer data since the MSC assessment in 2015, there is no way to measure the trends in ETP (endangered, threatened, protected) species interaction over time.</p> <p>Availability of comprehensive logbook data and observer data for the entire UoA fleet would ensure the ability to conduct a more comprehensive assessment of which ETP species would potentially interact with the fishery. This process will also focus data collection plans and management approaches best suited to these species for incorporation into the future.</p> <p>Focused data collection will improve the availability of fisheries specific information over time, and raise the fishery performance to a level where there is 'information adequate to support measures to manage ETP species' and therefore meet higher scores required for an unconditional pass.</p>
<b>Expected Completion Date</b>	September 2028
<b>Priority</b>	Medium
<b>Estimated Cost</b>	CAD \$30,000 per year
<b>Responsible Parties</b>	Industry stakeholders and DFO
<b>MSC PIs Addressed</b>	2.3.3

**Action 4 - Obtain quantitative information to adequately assess the fishery's impact and potential threat to the protection and recovery of ETP species**



Tasks/ Milestones	Responsible (lead)	Responsible (supporting role)	Starting date	Expected completion date	Evidence of completion
Industry stakeholders to liaise with DFO about provision of representative onboard observer data and an improved strategy to collect data on ETP species impacts.	Industry stakeholders	DFO	September 2023	September 2027	Meeting documents
Industry stakeholders will explore options to improve data collection on ETP species impacts, for example via independent observers and/or electronic monitoring (EM).	Industry stakeholders	DFO and NGOs	December 2023	Ongoing	Meeting documents
Implement improved data collection strategy.	Industry stakeholders		September 2024	Ongoing	Data on ETP species impacts

### Principle 3: Effective Management

Table 8. Performance Indicator Action Plan Table for Action 5

<b>Action Number and Name</b>	<b>5 - Decision-making processes for Canada - NEW ACTION RESULTING FROM THE 3RD YEAR AUDIT</b>
<b>Action Goal</b>	Decision-making processes for Canada respond to serious and other identified important issues in a transparent, timely and adaptive manner and take account of the wider implications of decisions.



<b>Action Description</b>	Canada does not appear to respond to serious and other important issues brought to it, in a timely manner (Sib), as evidenced by the amount of time taken so far to finalise the MSE framework.
<b>Expected Completion Date</b>	September 2025
<b>Priority</b>	High
<b>Estimated Cost</b>	CAD \$25,000 per year (overlaps with the cost estimates for Actions 1, 2, 3)
<b>Responsible Parties</b>	Industry stakeholders and DFO
<b>MSC PI Addressed</b>	3.2.2

<b>Action 5 - Decision-making processes for Canada</b>					
<b>Tasks/ Milestones</b>	<b>Responsible (lead)</b>	<b>Responsible (supporting role)</b>	<b>Starting date</b>	<b>Expected completion date</b>	<b>Evidence of completion</b>
FIP participants continue to encourage work on the stock rebuilding and MSE development as per Actions 1 and 2.	DFO	Industry stakeholders	September 2023	Ongoing	Meeting documents