

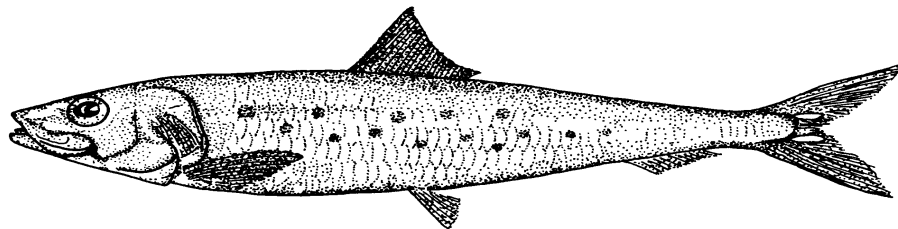


Integrated Fisheries Management Plan Summary

Pacific Sardine (*Sardinops Sagax*)

Pacific Region

2015-2018



The purpose of this Integrated Fisheries Management Plan (IFMP) summary is to provide a brief overview of the information found in the full IFMP. This document also serves to communicate the basic information on the fishery and its management to DFO staff, legislated co-management boards and other stakeholders. This IFMP provides a common understanding of the basic “rules” for the sustainable management of the fisheries resource. The full IFMP is available on request.

This IFMP summary is not a legally binding instrument which can form the basis of a legal challenge. The IFMP can be modified at any time and does not fetter the Minister's discretionary powers set out in the *Fisheries Act*. The Minister can, for reasons of conservation or for any other valid reasons, modify any provision of the IFMP in accordance with the powers granted pursuant to the *Fisheries Act*.

Where DFO is responsible for implementing obligations under land claims agreements, the IFMP will be implemented in a manner consistent with these obligations. In the event that an IFMP is inconsistent with obligations under land claims agreements, the provisions of the land claims agreements will prevail to the extent of the inconsistency.

GENERAL INTRODUCTION / OVERVIEW

IFMP Section 1

The Pacific sardine fishery is an opportunistic fishery dependent on the migration of sardines into Canadian waters. Sardine migration and population levels are heavily influenced by oceanic conditions that determine the survival and recruitment of juveniles into the adult stock. Ocean conditions off California have been favourable in recent years. It is anticipated that Pacific sardine stock size and production will be sufficient to support a moderate fishery in B.C. over the short and medium term.

From 1996 to 2001, there was a limited experimental harvest of Pacific sardines by a small number of harvesters. Given the results of the experimental fishing, and the de-listing of Pacific sardines by the Federal-Provincial Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in May 2002 as a species of “special concern”, the seine component of the fishery moved to a commercial phase in 2002 consistent with the New Emerging Fisheries policy (NEFP). A one-year interim plan was developed in 2002 using a precautionary approach while providing opportunity for continued assessment of the viability of the fishery and the potential for future expansion. An experimental/exploratory phase was initiated to investigate the feasibility of alternative gear types and areas. From 2003 to 2006, the Department developed a three year fishing plan that allowed for an incremental approach to development of the fishery while continuing to follow the principles of the NEFP. Since 2007, the Department has developed an annual Integrated Fisheries Management Plan to support growth of the fishery.

There are a total of 50 licences for the Pacific sardine fishery (25 commercial and 25 communal commercial licences). All commercial harvest of Pacific sardine is currently made using purse seine gear. In recent years only 13 to 20 vessels have been active in any one year. Vessels are generally 60 – 70 feet in length with 4 - 5 crew members. The fishery is open from June 1 to February 9 each year and is managed by individual licence quotas. The majority of the harvest occurs from August to October.

STOCK ASSESSMENT, SCIENCE & TRADITIONAL KNOWLEDGE

IFMP Section 2

Stock Assessment

United States scientists annually produce a stock assessment of the California Current sardine population that incorporates fishery catch data (landings and biological data) and research survey data (from acoustic-trawl, aerial, and ichthyoplankton-trawl surveys) into an age structured Stock Synthesis model which collectively represents sardine abundance from northern Baja Mexico to British Columbia (Hill et al. 2012). The methods and results associated with the population assessment are formally reviewed every two to four years. Data from Canadian sardine samples, representing length and age composition and total catch have been provided to the Stock Synthesis assessment.

Since 1997, a summer pelagic trawl survey off the west coast of Vancouver Island has occurred most years to characterize regional distribution, relative abundance and biological information of sardine in British Columbia waters. The trawl survey has been conducted at night since 2006 to improve variability in catch data and sample acquisition and the sampling design has included a

defined core survey region. Using data from trawl surveys, methods to estimate seasonal biomass and migration of sardine have been developed (Schweigert and McFarland 2001; Schweigert et al 2010; Flostrand et al 2011).

British Columbia catch data has been collected for all years of the commercial fishery. These data include geographic positions of fishing activities and biological data (length, weight and sex, fat content etc) from samples. Some ageing has also been done on catch samples from some years.

Ecosystem Interactions

Pacific sardine are a transboundary species spawning off southern California and migrating to the Pacific Northwest including British Columbia during the summer to feed on abundant plankton resources. The extent of the northward migration is, in part, related to oceanographic conditions, particularly sea surface temperature, such that stocks move further north during warmer years. Sea surface temperature has also been related to juvenile survival for recruitment to the adult spawning population with stronger recruitment occurring during warmer years.

Similar to other forage fish species in British Columbia waters, sardine are eaten by a variety of predators, particularly salmonids, sharks, sea lions, and humpback whales and seabirds. Their seasonal distribution in British Columbia waters corresponds with salmon and humpback whale foraging and migrating seasons. Research continues to develop a better understanding of ecosystem processes, including environmental effects on sardine recruitment, and the role that sardines play in ecosystem structure and function.

Aboriginal Traditional Knowledge / Traditional Ecological Knowledge

Aboriginal Traditional Knowledge and Traditional Ecological Knowledge in the form of observations and comments collected from commercial and aboriginal harvests over many years contributed to decisions on scientific survey locations and are considered in management decisions. At present, ATK/TEK is not available for Pacific sardine.

ECONOMIC, SOCIAL, CULTURAL IMPORTANCE

IFMP Section 3

The sardine fishery has 50 commercial licences with a 50% split between commercial and communal commercial licence holders. Each licence is allocated an equal share of the TAC. Starting in 2008, vessels have been able to stack licences and associated quota. This has created direct economic efficiencies and benefits to the fleet. The ability to increase harvest per boat has led to an increase in both days fished and in the percentage of the TAC annually caught. At the same time there has been a significant increase in available TAC and these changes have led to improved financial returns. For more information, please see section 3 of the IFMP.

SHARED STEWARDSHIP ARRANGEMENTS

IFMP Section 8

The Department and the sardine industry have a long and productive history of working together in a co-managed fashion to improve the sustainability and economic prosperity of Pacific fisheries. Given the co-management arrangements since the inception of this fishery, the Department's goal is to continue engaging all Pacific sardine fish harvesters in the co-management process.

As in previous years and consistent with the development of the sardine fishery under the New Emerging Fisheries Policy (NEFP), a tripartite Joint Project Agreement (JPA) with The First Nation Sardine Association (FN SA) and the Canadian Pacific Sardine Association (CPSA) continues to be in place for the cost sharing of science and management activities related to the fishery.

Each year, the Department works with industry associations to develop the Joint Project Agreement based on science and management priorities for the coming season and in consideration of the cost to harvesters.

In-kind costs borne by the Department have and will continue to include infrastructure, management, science, enforcement, travel, licensing, and administration.

The Department (after sardine industry consultations) and a DFO certified third party monitoring company cooperatively plan and administer the sardine logbook program. This monitoring program, including coordination, distribution and submission of data is fully funded by industry.

GOVERNANCE PROCESS

IFMP Section 1

National

Management of Pacific sardine is directed by the *Fisheries Act* and the regulations made thereunder. These documents are available on the internet at:
<http://www.dfo-mpo.gc.ca/acts-lois/acts-lois-eng.htm>.

The IFMP is developed annually through consultations with the Sardine Integrated Advisory Board (SIAB), which provides recommendations and advice to the Department on policy and management of the sardine fishery.

ACCESS AND ALLOCATIONS

IFMP Section 6

The Minister can, for reasons of conservation or for any other valid reasons, modify access, allocations, and sharing arrangements as outlined in this IFMP in accordance with the powers granted pursuant to the *Fisheries Act*.

First Nations

Aboriginal harvest of Pacific sardine for FSC purposes may occur coast wide where authorized by a communal licence. To date, no limits have been placed on aboriginal harvest for food, social and ceremonial purposes. There is no known FSC fishery for Pacific sardine.

Recreational

Recreational harvest of Pacific sardine may occur coast wide if authorized by a British Columbia Tidal Waters Sport Fishing Licence. The daily limit for Pacific sardine is 100 pieces and the possession limit is 200 pieces. There is no known recreational harvest of Pacific sardine.

Commercial

The Total Allowable Catch (TAC) for Pacific sardine is set on an annual basis based on advice received from DFO Science. The entire TAC is allocated for the commercial fishery, where 50% is allocated to the communal commercial (First Nations) licences and 50% is allocated to the commercial licences. There are a total of 50 licences, and each licence has an equal share of the TAC (25 communal commercial licences and 25 commercial licences). Please see Appendix 5 for updated TAC levels for the current year.

MANAGEMENT OF THE FISHERY

IFMP Sections 4, 5 and 7

#	Management Issue	Objectives	Management Measure
1	Catch Monitoring	<p>Meet conservation objectives that ensure healthy and productive fisheries and surrounding ecosystems.</p> <p>Ensure monitoring program provides accurate information on catch and effort and is designed to provide the information necessary for management of the sardine resource.</p>	<p>There is minimal incidental catch in the sardine fishery. However, because the sardine fishery generally takes place in the same areas (west coast of Vancouver Island (WCVI)) and during the same times as migrating salmon populations in the WCVI, there is a concern that salmon are vulnerable to interception by the sardine fleet.</p> <p>From 2008 to 2011, 100% at-sea observer coverage (from July 15 – October 1) was utilized in the sardine fishery to monitor impacts of the sardine fleet on WCVI salmon stocks. In 2010 and 2011, the sardine industry requested that the level of at-sea observer coverage be reduced from 100% in order to be more practical and affordable for the fleet. In response to the request, DFO agreed to undertake an audit of logbook, dockside validation and at-sea observer report data in order to inform decisions for the future of the sardine monitoring program, and in particular to determine the appropriate level of at-sea observer coverage in Areas 23-27 (WCVI) based on DFO resource management, science and salmon stock assessment objectives.</p> <p>An audit of the sardine monitoring program was conducted during the summer of 2011 and presented to SIAB later that fall. The audit results were accepted by SIAB and it was recommended that a sardine monitoring program Working Group was formed in order for DFO resource managers, DFO salmon stock assessment biologists, and SIAB representatives to cooperatively plan and adjust the monitoring program in order to create an</p>

			<p>effective, practical and adaptable program which meets the objectives of both DFO and industry stakeholders.</p> <p>The sardine monitoring program Working Group was formed and met for the first time in February, 2012. The working group has developed a “Salmon Bycatch and Discard Management Framework” which outlines management measures to implement in the sardine fishery in order to mitigate possible impacts on migrating WCVI salmon populations. The working group meets at least once per year to discuss and evaluate the sardine monitoring program.</p> <p>The sardine monitoring program operates at an “enhanced” level of monitoring as per the “Strategic Framework for Fishery Monitoring and Catch Reporting in the Pacific Fisheries”.</p> <p>100% dockside validation is required for all catch within the sardine fishery. Further details of the sardine monitoring program can be found in Appendix 5. Incidental catch statistics can be found in Appendix 1.</p> <p>A copy of the “Salmon Bycatch and Discard Management Framework” can be found in Appendix 11.</p>
2	Communal Commercial Licence Distribution	<p>Make reasonable effort to provide opportunities for economic prosperity while maintaining conservation objectives.</p> <p>Conduct stable, transparent and predictable consultation and management processes.</p>	<p>Beginning in 2006, the process used in the distribution of communal commercial licences has included an initial application process for participants in the previous year and a lottery process for any remaining licences after a deadline. Due to an increased interest in the sardine fishery, 2008 was the first year in which all 25 available licences were issued. Since 2009, all 25 licences were issued to those who participated in the previous year and no lottery process has taken place.</p>

		<p>Stakeholder engagement for informed management decisions and cooperatively developed solutions to issues related to management of the sardine fishery</p>	<p>Concerns with the lack of opportunity to apply for additional access under the current licensing process have been raised by some participants at First Nation sardine workshops with several different solutions suggested. However, it remains unclear at this time which of the alternatives suggested has support from First Nations. The Department will continue to work collaboratively with interested parties to develop a consensus proposal.</p> <p>Until a change in licensing distribution occurs, the established licensing process for communal commercial licences will remain in place, as it provides a method for issuing licences annually to twenty-five participants through a priority application process (which provides stability for past participants issued licences in previous years) and a lottery process opportunity (which is fair and available broadly) for any remaining licences after the priority application deadline date has passed.</p> <p>The Department is interested in developing a long-term process to allocate the twenty-five communal commercial licences with the objective of increasing stability and certainty for communal commercial participants. Developing a long-term licensing process will require extensive consultations with First Nation groups, SIAB, and other interested parties. The communal commercial licence application process is detailed in Appendix 5.</p> <p>To provide feedback or recommendations on a long term process to distribute communal commercial licences, please contact a SIAB representative (in Appendix 9) or the Sardine Resource Manager.</p>
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COMPLIANCE PLAN

IFMP Section 9

Users of the resource have a responsibility to report violations. Any suspected or actual fisheries, wildlife or pollution violations can be quickly and discretely reported to the appropriate enforcement officer by using the toll free Observe, Record and Report hotline. This toll free number is available 24 hours a day.

OBSERVE, RECORD and REPORT: 1-800-465-4DFO (1-800-465-4336)

Enforcement enquiries can also be directed to the local field offices during regular office hours.

Regional Compliance Program Delivery

Enforcement of the sardine fishery will be tempered by commitments to higher priority issues, such as species at risk, CSSP and fisheries that have conservation concerns. C&P staff will pursue opportunities to monitor and enforce problems related to the sardine fishery in conjunction with the monitoring and enforcement activities dedicated to the identified priority fisheries in the Pacific region.

Fishery Officers conduct a range of activities to promote compliance during the sardine fishery. These activities include attending industry and working group meetings, defining key enforcement concerns with Fisheries Management prior to the commercial fishery, in-season monitoring of compliance with Conditions of Licence, aerial surveillance, and detailed post-season reporting.

PERFORMANCE REVIEW

IFMP Section 10

Assessment of the 2014/2015 fishery objectives against the stated Performance Measures is available in the Post-Season Review (Appendix 1 of the IFMP).

The fishery is evaluated in the areas of stock conservation, consultation, and compliance. The review also includes catch and effort summaries for the 2014/2015 season.

FISHERIES AND OCEANS CONTACT

For additional information on this IFMP Summary or to request an electronic version of the full IFMP, please contact Courtney Druce at 604-666-2188 or Courtney.Druce@dfo-mpo.gc.ca.