

Response to Marine Stewardship Council

Indicators for Principle 3- Fishery Management System

Pacific Wild Salmon Fishery

Barkley Sound Sockeye

Fisheries and Oceans Canada

Pacific Region

May 2004

TABLE OF CONTENTS

Table of Contents i

 Introduction 1

 Indicator 3.1.1 1

 Indicator 3.1.2 3

 Indicator 3.1.3 5

 Indicator 3.1.4 6

 Indicator 3.1.5 9

 Indicator 3.1.6 10

 Indicator 3.1.7 15

 Indicator 3.1.8 17

 Indicator 3.2.1 22

 Indicator 3.2.2 24

 Indicator 3.3.1 26

 Indicator 3.4.1.1 30

 Indicator 3.4.1.2 31

 Indicator 3.4.2.1 33

 Indicator 3.4.2.2 35

 Indicator 3.5.1 38

 Indicator 3.5.2 39

 Indicator 3.5.3 42

 Indicator 3.5.4 43

 Indicator 3.6.1 44

 Indicator 3.6.2 46

 Indicator 3.6.3 47

 Indicator 3.7.1 49

 Indicator 3.7.2 52

 Indicator 3.7.3 53

Indicator 3.7.4..... 55

Indicator 3.7.5..... 56

Introduction

The BC Wild Salmon Fishery has applied for certification of its fisheries to the Marine Stewardship Council.

In June 2003, the Marine Stewardship Council published their MSC Evaluation Criteria for BC Salmon fisheries (which included Units of Certification, Performance Indicators and Scoring Guideposts) describing in detail how the certification process will be conducted.¹ The Marine Stewardship Council has defined a total of 47 Indicators under three Principles.

This document prepared with the assistance of Fisheries and Oceans Canada is the BCSMC's technical submission on the indicators for Fraser River sockeye for all three principles. This principle evaluates the rules and procedures of the managing agency, how they are implemented to maintain a sustainable fishery and to ensure that the impact on the marine environment is minimized.

The Scoring Guideposts as identified by MSC have been colour coded to indicate the level of agreement with the statements.

Green - The requirements of the guidepost have been met.

Red - The requirements of the guidepost have not been met.

Orange - The requirements of the guidepost have partially been met.

Black - The requirements of the guidepost are not applicable to the Fraser River sockeye fishery

Indicator 3.1.1

The management system has a clear and defensible set of objectives for the harvest and escapement for target species and accounts for the non-target species captured in association with, or as a consequence of, fishing for target species.

DFO Response

Current Situation

The Barkley Sound sockeye fishery is managed according to the Somass sockeye management plan. The overall objectives of the plan are to:

- provide an interim lower bound to harvesting (i.e. an LRP);
- provide contrast in escapement levels to learn more about the productivity of the stocks;

¹ Marine Stewardship Council. 2003. MSC Evaluation of BC Salmon Fisheries: Units of Certification, Performance Indicators and Scoring Guideposts.

- provide more consistent fishing opportunities with reduced variability of catch;
- ensure First Nations' food, social, and ceremonial requirements are met;
- provide consistent sport fishing opportunities;
- provide opportunities for commercial fleets to harvest gear allocations;
- recover in-season stock assessment costs (test fishing);
- reduce fishing impacts on non-target stocks and species.

Harvest rates and escapement goals are based on a variable harvest rate strategy.² Allowable harvest rates range from 8%, up to 67%, depending on the expected run size. The former rate corresponds to the lowest 'fishable' return of 200,000 adults (interim LRP) and the latter rate corresponds to the highest observed return of 1.8 million. For an average return of 760,000 adults, the allowable harvest rate is 48%. For a given run size, the total allowable catch (TAC) is apportioned in the *pre-season* consultation process according to gear and sector type. At low returns, First Nation and sport sectors are given priority to the limited catch. Commercial opportunities are not allowed until the return is forecast to be at least 400,000.

Although no formal TRPs or LRPs have been set, operational equivalents exist. The interim target reference point (TRP) for adult escapement is 350,000. The interim limit reference point is 200,000. These targets are further described in Indicators 1.1.3.1 and 1.1.3.2.

Harvest controls are effective with regard to achieving management objectives as evident from the discussion under Indicators 1.2.1 and 1.2.2. The TRP for escapement has been met or exceeded in most years. The stock has been rebuilt from low levels several times. The in-season decision-making process involves weekly consultations with fishing groups allowing for modification of fishing plans depending on stock status information.

The management system provides for estimates for all catches, landings and bycatch as described in Indicator 1.1.2.1.

Provisions to reduce catch of non-target stocks or species are described in Indicators 2.11 to 2.1.4.

Scoring Summary

The information presented demonstrates that the management system has clear and defensible objectives for escapement and harvest of target stocks and accounts for non-target species fished concurrently with target stocks.

All three of the 60 Scoring Guideposts are in effect.

All four 80 Scoring Guideposts have been achieved.

Four of five 100 Scoring Guideposts are true and other guidepost being partially true.

² The Barkley Sound sockeye management system is summarised in Appendix A, Principle 1.

100 Scoring Guidepost

- Management objectives are clearly defined for all of the target stocks and are consistent with the MSC criteria for a well-managed fishery.
- Harvest rates and escapement goals are precisely set for each target stock unit in the fishery, as qualified by relevant environmental factors.
- Target Reference Points and Limit Reference Points are clearly defined and documented for each target stock unit in the fishery.
- Harvest controls are effective with respect to the attainment of management objectives for each target stock unit in the fishery.
- The management system provides estimates for all catches, landings and bycatch.

80 Scoring Guidepost

- Management objectives are clearly defined for most of the target stocks and are consistent with the MSC criteria for a well-managed fishery.
- Harvest rates and escapement goals are set for target stocks or target species in the fishery, as qualified by relevant environmental factors.
- Harvest controls are precise and effective for major target stocks or target species in the fishery.
- The management system provides estimates for all major catches, landings, and bycatch.

60 Scoring Guidepost

- Management objectives are clearly defined and consistent with MSC criteria for a well-managed fishery for the majority of target stocks.
- Harvest controls are effective for the majority of the fisheries on target stocks.
- The management system provides for the estimation of catch, landing, and bycatch for the majority of the fisheries.

Indicator 3.1.2

The management system provides for periodic assessment of the biological status of the target species and the impact of fishing.

DFO Response

Current Situation

Target stocks are assessed through pre-season run size forecasts, in-season harvest and run size estimates, and post-season reviews of catch and escapement. DFO Science and Stock Assessment branches prepare annual pre-season run size forecasts as well as periodic detailed stock status assessments that are reviewed by PSARC and publicly available to stakeholders.³

During the fishing season, stock status is assessed through the test fishery, catch monitoring and escapement data. The Barkley Sound Working Group, consisting of biologists, fishery managers and enforcement officers, meets weekly to discuss stock status and fishing impacts and to re-forecast the expected run size.⁴ The local manager then advises stakeholders of the stock status and weekly fishing plans are set.

There is an annual cycle of meetings with First Nations, commercial, recreational and NGO representatives as part of the pre and post-season stakeholder advisory processes. In these meetings, stock status, fishing plans, management objectives and fishing opportunities are reviewed and discussed. Internally, stock assessment and resource management staff meet twice yearly to strategically review and improve stock status and catch monitoring programs.

The management system provides for periodic assessment of the biological status of the target species by undertaking test fisheries, effective catch monitoring in all fisheries and spawning ground assessments. More information is included in Indicator 1.1.2.4

Scoring Summary

The information presented describes the management system's provisions for assessing the biological status of the target species and the impact of fishing.

All of the three 60 Scoring Guideposts have been met.

All three of the 80 Scoring Guideposts have been met.

All three 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- There is an annual assessment or update of the status of stocks for each major target stock unit in the fishery.
- When results of the assessments or updates indicate that there has been a substantial change in the status of the stocks, this new information is made available to stakeholders in conjunction with the implementation of changes to management measures.

³ S2003-06: Review of the 2002 return of Barkley Sound Sockeye Salmon and Forecasts for 2003

⁴ This process is described in the Appendix A, Principle 1.

- Reports on the methodologies used for the assessments are published on a regular basis in peer-reviewed journals and PSARC, and/or the appropriate PSC committee regularly reviews the technical analyses for the assessments.

80 Scoring Guidepost

- Assessments or updates of the status of the stocks for the major target stock units are made on a periodic basis, dependent upon the level of exploitation.
- Results of assessment and updates of the status of the stocks are made available to stakeholders in a timely fashion.
- Reports on the methodologies used for the assessments are published in non-peer reviewed reports, and PSARC or the appropriate PSC committee reviews the technical analyses for the assessments.

60 Scoring Guidepost

- Assessments or updates of the status of the stocks for the majority of the target species are made for major fishing regions within the fishery.
- Results of assessment or updates of the status of the stocks are made available to stakeholders.
- Technical analysis and methodologies used for the assessments are published or distributed to stakeholders.

Indicator 3.1.3

The management system includes a mechanism to identify and manage the impact of fishing on the ecosystem.

DFO Response

Current Situation

The major ecosystem issue for the Barkley Sound sockeye fishery is to ensure that there are sufficient salmon escaping the fishery to supply freshwater predators and maintain nutrient cycles in the nursery lakes. Both the Great Central and Somass Lakes sockeye populations are well above historical levels of abundance. Therefore, it is likely that escapement levels are sufficiently high to meet ecosystem needs.

The non-target Henderson Lake sockeye population is less productive and escapement levels are much lower. Studies of predator utilisation of returning salmon within the system have shown no evidence that salmon are limiting.⁵ It is unlikely that gear and fishing methods cause

⁵ Dr. Kim Hyatt, DFO, personal communication, unpublished data.

significant habitat damage (see Indicators 2.1.1 - 2.1.3). As part of their routine work, observers, charter patrolman and fishery enforcement officers inspect for habitat damage. Habitat and stock assessment biologists monitor habitat conditions when conducting regular field surveys.

Scoring Summary

The information presented establishes that the management system investigates and monitors impacts of fishing on the ecosystem.

Since none has been reported or alleged, several of the Scoring Guideposts are not applicable (they remain coloured black rather than red or green).

The sole 60 Scoring Guideposts has been met.

One of two 80 Scoring Guideposts have been met and the other is not applicable.

Three 100 Scoring Guideposts do not appear to be applicable. The remaining one has been partially met.

100 Scoring Guidepost

- **Monitoring systems are in place to detect the impact of fishing on the ecosystem.**
- Where potential impacts of fishing on the ecosystem have been identified, the management system has clear and well-defined objectives for evaluating and managing the impact of the fishery on the ecosystem.
- Control mechanisms are used to minimize impacts of fishing on the ecosystem.
- There is sufficient evidence to indicate that when used, control mechanisms are adequate for meeting the management objectives.

80 Scoring Guidepost

- **The management system includes mechanisms to identify and evaluate the impact of fishing on the ecosystem.**
- Control mechanisms are used to minimize impacts of fishing on the ecosystem.

60 Scoring Guidepost

- **The management system takes measures to control the impacts of the fishery on the ecosystem in the majority of cases where impacts have been verified.**

Indicator 3.1.4

When dealing with uncertainty, the management system provides for utilizing the best scientific information available to manage the fishery, while employing a precautionary approach.

Uncertainty always exists in estimates of the status of a stock, and technically it is not generally possible to determine the accuracy of the assessments. This uncertainty results from sampling and measurement error, limited understanding of the biology of the fish being modeled, error in model assumptions, and an inability to model all of the important processes that affect the dynamics of the stock. It can also arise as a result of changing fishing technology. However, some idea of the uncertainty can be detected or measured through sampling theory, by lack of fit of the model being used, or by sensitivity analysis.

DFO Response

Current Situation

Nationally, Fisheries and Oceans Canada has adopted the precautionary approach to fisheries management as a working principle. Guidelines for consistent application of the precautionary approach are summarised in the report, "*A Canadian Perspective on the Precautionary Approach/Principle and Canada's Framework for the Application of Precaution in Science-Based Decision-making about Risk*", which is available on the Internet.⁶

For Barkley Sound sockeye, uncertainty is considered in both the pre-season forecasts and in-season re-forecasts of total run size. Pre-season forecasts, which are reviewed by PSARC, are reported as a point estimate with a 50% probability distribution. Other information may temper how the pre-season forecast is interpreted in light of fishery expectations. For example, a particularly low return of age 3.2 jacks in 2000 was thought to signal poor marine survival for the brood despite a relatively optimistic forecast for 2001, which was based on a large 4.2 return. Consequently, pre-season expectations were downgraded from the PSARC forecast to manage fisher expectations. It turned out to be the correct course of action because the return was significantly less than forecast.

During the fishery season, several sources of data are considered to re-forecast run size, including catch, escapement and test fishery indices. The accuracy of these data varies. While catch and escapement are estimated with a reasonably high level of accuracy, estimates of Alberni Inlet abundance are much less accurate. Although the bias and error of the estimates are not quantified in-season, the data are considered accordingly. The fishery is managed very conservatively in the first few weeks until the run size re-forecasts are less uncertain. The re-forecasts are considered more robust near the peak of the run, or when a significant portion (eg, half) of the return accounted for is by-catch and escapement.

Migration timing is also a source of uncertainty during the fishing season. The re-forecast is based on average, early and late run-timing curves. Migration timing varies significantly from year to year, often due to environmental conditions. When river temperatures are high and water levels low, fish can hold for protracted period of times in Alberni Inlet. The resulting low escapement levels coupled with quite high catch rates in Alberni Inlet suggest, probably erroneously, that the return is significant. This situation occurred in 2001. Under the precautionary approach, fishery managers correctly limited effort anticipating the return was much lower than measures of Inlet abundance indicated. This action resulted in significant political protest by various fishing groups.

⁶ www.dfo-mpo.gc.ca/cppa/menu.htm; www.dfait-maeci.gc.ca/tna-nac/social-en.asp

In contrast, during the 2003 season abundant early-season escapement suggested the run was large, but this trend was not supported by test fishery estimates of variation in Inlet abundance from week to week. The run was, in fact, early. Without sufficient data to determine run-timing early in the season, the working group opted for more conservative re-forecasts than suggested by 'average' run-timing.

As part of the post-season review process, managers assess the impact of their actions by comparing pre-season objectives with results. Issues that are identified are addressed in the pre-season planning and consultation process.

Scoring Summary

The information presented describes the management system's approach to dealing with uncertainty. Since Fraser River sockeye marine net fisheries are well established (ie, there are no newly developing fisheries among them), some of the Scoring Guideposts are not applicable (these remain coloured in black rather than red or green).

All applicable 60 Scoring Guideposts have been met.

Three of three applicable 80 Scoring Guideposts have been met.

Three of three applicable 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- The management system provides for the routine assessment of the level of uncertainty in the information collected for management and establishes management controls to address these uncertainties using the best available scientific information and a precautionary approach.
- The management system implements research efforts to address data gaps.
- For newly developing fisheries for which there is very limited data and information, the management system implements controls on the development of the fishery that are precautionary in nature.
- The management system always quantitatively evaluates the effect of implementation uncertainty (the tendency for actual harvest rates or escapements to differ from those intended by the management regulations) on the effectiveness of the proposed management actions.

80 Scoring Guidepost

- The management system provides for some assessment of the level of uncertainty in the information collected for management and establishes management controls which take into account these uncertainties, using the best available scientific information and a precautionary approach.

- In situations when precautionary measures are necessary to manage the fishery, the management system calls for increasing research efforts in order to fill data and information gaps.
- In most cases where there are newly developing fisheries, the management system implements controls on the development of the fishery that are precautionary in nature.
- The management system considers the effect of implementation uncertainty on the effectiveness of most of the proposed management actions.

60 Scoring Guidepost

- The management system for the majority of newly developing fisheries is consistent with a precautionary approach.
- The management system considers the effect of implementation uncertainty on the effectiveness of the majority of the proposed management actions.

Indicator 3.1.5

Management response to new information on the fishery and the fish populations is timely and adaptive.

Intent: The management system should be timely and adaptive i.e., new information used by the management system to initiate new management measures or to update and/or improve current management measures in a timely fashion, because characteristics of the fishery can change and/or the natural system can show reduced or increased productivity over time.

DFO Response

Current Situation

The in-season fishery management process cycles weekly through three phases: data collection, data evaluation, and decision-making/implementation (see discussion under Indicator 3.1.4 and Appendix A in Principle 1). The management team constantly monitors incoming stock assessment data and adjusts forecast return size weekly. Fishing plans are adjusted weekly as required to meet escapement targets. The in-season fishery management process incorporates a stakeholder advisory process that facilitates exchange of fishery and stock information. This process allows for timely implementation of management actions in response to new information.

Scoring Summary

The information presented establishes that DFO performs well against this indicator.

The lone 60 Scoring Guidepost is met.

Both 80 Scoring Guideposts have been met.

Both 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- The management system provides a mechanism for rapid adjustments to be made to its management programs.
- When new information or findings support altering the management and conservation programs (such as stock recovery plans), there is evidence to demonstrate that such adjustments are made within 6 months of obtaining the new information.

80 Scoring Guidepost

- The management system provides a mechanism for responding to unexpected changes in the fishery.
- When new information or findings support altering the management and conservation programs, adjustments are made within 12 months of obtaining the new information.

60 Scoring Guidepost

- For the majority of cases there are provisions for making timely adjustments to the management program, and when they are made the lag time is not so great as to result in the adjustments being ineffectual.

Indicator 3.1.6

The management system provides a process for considering the social and economic impacts of the fishery.

DFO Response

Current Situation

Policies and regulations bearing on social and economic impacts of the fishery include the Allocation Policy⁷, Section 35 of the *Constitution of Canada* which protects the aboriginal right to fish for food, social, and ceremonial purposes, the Canadian Fisheries Adjustment and Restructuring Program (CFAR), and the *Fisheries Development Act*⁸. They are summarised later in this section.

The variable rate harvest strategy employed in the Barkley Sound sockeye fishery⁹ respects the Allocation Policy. At low forecast returns, limited fishing opportunities are allowed after

⁷ Allocation Policy: <http://www-comm.pac.dfo-mpo.gc.ca/publications/allocation/AllocationPolicyoct201.htm>

⁸ Fisheries Development Act: http://www.dfo-mpo.gc.ca/communic/reports/fda/fda2001_e.htm

⁹ For details, see Principle 1, Appendix A, especially Table 1.

the interim LRP escapement is met. At low abundance, priority access is given to local First Nations to meet their food, social and ceremonial purposes. Limited sport fishing opportunities are also permitted. At higher abundance and once the TRP escapement level is achieved, commercial fishing opportunities are permitted. All three sectors, First Nation, sport and commercial, are consulted regarding fishing plans and allocations during the pre-season advisory process, which is well established at the local and regional levels.

At the departmental level, First Nations' interests are represented through the Aboriginal Fisheries Strategy (AFS). AFS representatives moderate annual negotiations with Band representatives and DFO managers to establish food, social, and ceremonial needs. NTC biologists, who regularly communicate with DFO managers and biologists, also represent the Bands' interests. Many First Nations harvesting Barkley Sound sockeye are currently negotiating treaties with the governments of Canada and BC. The federal Department of Indian and Northern Affairs (DINA) and the BC government manage these negotiations. When these treaties are ratified, First Nation fishery allocations will be formally established.

The Alberni canal sport fishery has developed over the past 10 to 15 years and now helps support the local economy. The management objective of the fishery is to permit constant sport fishing opportunity, albeit with area and bag limit restrictions if required for conservation reasons. This objective was developed in 2001 after consultation with the Port Alberni Town Council and mayor, who expressed concern over negative economic impacts when the sport fishery was temporarily shut down that season.

Tentative commercial fishing plans are developed during pre-season consultations with representatives of the troll, gillnet and seine sectors. Notwithstanding conservation objectives, commercial fishing plans are designed to achieve specific objectives of the fishers, such as maximisation of the economic benefit of the catch through harvest timing. Barkley sockeye are most valuable in early summer because of their prime condition and the limited sockeye supply then. Traditionally, the seine fleet was not permitted to enter the fishery until after the run size was well established (e.g. mid-July). However, after consultation with fleet representatives in 2002, a limited entry pool fishery was established. This change allows the fishery manager to conduct a 'small bite' seine fishery limiting the impact of the fleet while at the same time allowing the seine fishery access to valuable early fish.

As part of the pre-season planning process, the fishery manager schedules stakeholder meetings to discuss concerns regarding access to stocks. Within the commercial sector, issues include starting dates, fishing times and areas, and gear conflicts. Multi-stakeholder meetings are intended to reduce conflict between groups by developing contingency plans prior to the start of the season. For example, after concerns are identified in the pre-season process, commercial fishing openings are planned for times and areas that would have the least impact on the recreational fishery. The preseason commercial plan takes into account the needs of the aboriginal and recreational fishery, i.e. no weekend fisheries. In season, the manager discusses commercial proposals with aboriginal and recreational advisors and if there are situations that are unusual or considered significant, multi-party meetings will be scheduled.

Policies and Regulations

Social and economic impacts of the fishery are largely enmeshed in harvest allocations.

An Allocation Policy for Pacific Salmon was finalized in October, 1999. The Allocation Policy is available at the following web site.

<http://www-comm.pac.dfo-mpo.gc.ca/publications/allocation/AllocationPolicyoct201.htm>

The Allocation Policy is made operational each year in the form of an annual Allocation Plan. The 2003 Pacific Salmon Allocation Plan appears in the 2003 IFMP as Appendix 1.¹⁰

Based on the Allocation Policy and Plan, fishing opportunities allocated to different fishing sectors at different abundance levels are described in the Decision Guidelines of the IFMP.¹¹

First Nations

The Constitution of Canada protects aboriginal rights (section 35) including the right to fish for food, social and ceremonial purposes as established in the *Sparrow Decision* of the Supreme Court of Canada.¹²

The Allocation Policy for Pacific Salmon provides that, after requirements for conservation, the first priority for salmon allocation is to provide harvest opportunities for First Nations for food, social and ceremonial purposes under communal FSC licences issued to First Nations and treaty rights to harvest opportunities for domestic purposes (consistent with Treaty Final Agreements).¹³

While this opportunity is given priority over all other allocations (except conservation), it does not mean that fishery targets for First Nations will be fully achieved before other fisheries can proceed. Many First Nations conduct their fisheries in terminal areas while other fisheries are undertaken in marine or approach areas. The fishing plan must adequately provide for the First Nations food, social and ceremonial harvests over a reasonable range of potential run sizes.¹⁴

DFO field staff engages in consultations with First Nations. There has been a history of interaction between DFO and First Nations. The Aboriginal Fisheries Strategy (AFS) has been developed/implemented to foster positive working relationships with First Nations. Part of this is the negotiation regarding communal licences where the views and customs of the First Nation are considered. This process follows the Policy for the Management of Aboriginal Fisheries¹⁵.

¹⁰ IFMP 2003, Appendix 1, page 102.

¹¹ IFMP 2003, Section 4.1.3, page 23 and Table 1, page 24.

¹² IFMP 2003, Section 2.5, first paragraph, first sentence, page 14.

¹³ IFMP 2003, section 4.1.4, first paragraph, page 24.

¹⁴ IFMP 2003, section 4.1.4, second paragraph, page 24.

¹⁵ Bert Ionson, Fisheries and Oceans Canada, pers comm.

Coastal Communities

The Allocation Policy establishes allocations for the commercial sector and the recreational sector and for commercial gear groups (eg, seine, gillnet, troll).

The Allocation Policy addresses harvest share arrangements in both fishing sectors and gear groups. Coastal communities are not specifically addressed in the Allocation Policy. However, fishing fleets are centered in coastal communities.

Fisheries and Oceans Canada has area and sub-division offices in many coastal communities. DFO employees are well aware of the dependence of many coastal communities on the fishery.

Coastal communities frequently make representation to Fisheries and Oceans Canada concerning social and economic issues related to fisheries and their impact on those communities.

Subsidies to the Fishery

The Canadian Fisheries Adjustment and Restructuring Program (CFAR) was a set of conservation, adjustment and restructuring measures announced in June, 1998 under the *Fisheries Development Act* to put harvesting capacity in balance with resource availability and ensure the long-term sustainability of the fishing sector on both the Atlantic and Pacific coasts.

In Pacific Region, where the Pacific Salmon Commercial Licence Retirement Program had previously concluded, expenditures in 2001-2002 amounted to \$12.4M. Resources were used for the Pacific Salmon Resource Rebuilding Program (\$9.8M), selective fishing (\$2.2M) and fisheries diversification (\$0.4M).

Information on the *Fisheries Development Act* is available at the following web address.

http://www.dfo-mpo.gc.ca/communic/reports/fda/fda2001_e.htm

The *Fisheries Improvement Loans Act* came into force in December 1955, for an initial period of three years, and was amended from time to time in later years to authorize additional lending periods. The last of these lending periods expired on June 30, 1987, and no further lending under the Act has been authorized.

The *Small Businesses Loans Act* was amended on June 30, 1987, to include fishing as an eligible business enterprise under the terms of that Act. The Department of Fisheries and Oceans continues to administer outstanding guaranteed loans made in the past under the *Fisheries Improvement Loans Act*.

No new loans have been registered since 1986/87.

No claims were paid in 2001-2002. Guaranteed loans outstanding at the beginning of the fiscal year totalled \$14,811. In the same period, \$4,598.01 in recoveries has been received on subrogated debts.

In fiscal year 2001-2002, no accounts were written-off pursuant to the Bankruptcy and Insolvency Act and the Debt Write-off Regulations.

Appended to this Report are tables showing a summary of operations from inception to March 31, 2002 (see the following web site).

http://www.dfo-mpo.gc.ca/communic/reports/fila/fila2001_e.htm#A

Socio-Economic Issues

Fisheries and Oceans Canada has an extensive consultations process to address all fisheries issues including socio-economic ones.

http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/default_e.htm

Fisheries and Oceans Canada employs analyses of social and economic impacts in determining its policies. Recent examples include Pacific Fisheries Adjustment and Restructuring (PFAR) and the Salmon Allocation Policy. Under PFAR, the number of salmon vessels in the fleet was reduced by one-half. Socio-economic factors were included among considerations underlying the Salmon Allocation Policy (and the many processes leading up to it).

The management system receives advice on socio-economic issues formally (eg, post-season reviews) and informally (eg, phone calls, general conversations) that is considered in the development of fishing plans. As well, DFO managers regularly consult with DFO and PSC advisory bodies (South Coast Advisory Committee, Fraser Panel) where the different commercial gear groups and other commercial interests (processors, UFAWU, communities) can raise and discuss social and economic impacts of the fishery.¹⁶

Socio-economic issues are also raised in a number of consultation arenas. The Canadian Section of the Fraser Panel is comprised of members of the commercial, recreational and First Nations fishing community who identify socio-economic issues to be considered in the management of the fishery. In addition, representatives of the Province of B.C. raise socio-economic issues that have been identified by the industry and communities.

Scoring Summary

The information presented establishes that DFO performs well against this indicator.

All four of the 60 Scoring Guideposts have been met.

All four of the 80 Scoring Guideposts have been met.

Three of four 100 Scoring Guideposts have been met and the remaining scoring guidepost has been partially met.

Future Changes

A new process for salmon harvest planning has been developed in consultation with commercial and recreational fishers, conservation groups and First Nations. The department is in the process of implementing this new process.

http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/consultations/salmon/sap_e.htm

¹⁶ Bert Ionson, Fisheries and Oceans Canada, pers comm.

100 Scoring Guidepost

- There exists a formal and well-defined process to consider, over the short and long term, the views, customs, and interests of indigenous peoples who depend on fishing for their food or livelihood.
- There is a formal and well-defined process to consider, over the short and long term, the impact of the fishery on coastal communities that are closely tied to the fishery.
- There are no direct subsidies to the fishing industry.
- The management system regularly seeks and considers input from stakeholders in an effort to understand and address socioeconomic issues related to the fishery.

80 Scoring Guidepost

- The management system regularly undertakes to consider the views, customs and interests of indigenous peoples whose livelihood or food are dependent on the fishery.
- The management system regularly takes into consideration the impact of the fishery on coastal communities that are closely tied to the fishery.
- There are no subsidies to the fishing industry that would lead to unsustainable fishing or ecosystem degradation.
- The management system regularly undertakes measures to understand the socioeconomic impacts resulting from the management of the fishery.

60 Scoring Guidepost

- The management system more often than not considers the views, customs, and interests of indigenous peoples who depend on fishing for a livelihood or food.
- More often than not the management system considers the impact of the fishery on coastal communities that are closely tied to the fishery.
- For the majority of the fisheries there are no subsidies that threaten sustainable fishing.
- More often than not, the input of stakeholders is sought by the management system.

Indicator 3.1.7

The management system provides decision makers with useful and relevant information and advice for managing the fishery.

DFO Response

Current Situation

The decision-making process for the Barkley Sound sockeye fishery is described in the IFMP¹⁷ and Appendix A in Principle 1. The decision-making process for the 2001 season was reviewed by the Parliamentary Standing Committee on Fisheries¹⁸.

The pre-season forecast and in-season stock assessment provide useful and timely information for decision makers. Pre-season planning is based on expectations and forecasts derived from observations of previous years' return. Pre-season forecasts are completed and reviewed by PSARC in early March. In-season decision-making is based on data collected weekly, including test fishery estimates of Alberni Inlet abundance and fish age, condition and size, catch and escapement observations, and environmental data, such as Inlet and river temperatures and river flow. The post-season review and consultative process allow for critical review of the years' management decisions in light of the return.

No formal risk assessment is conducted for alternative decisions. However, the Barkley Sound working group regularly considers a range of alternatives when determining in-season management plans. The working group consists of the fishery manager, stock assessment biologists and technicians, and enforcement officers. Professional judgement and experience allow for consideration of alternative decisions in light of biological and fishery risks.

Scoring Summary

The information presented establishes that the indicator has been well met.

Two of two 60 Scoring Guideposts have been met.

Two of two 80 Scoring Guideposts have been met.

Two of three 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- The management system provides decision makers with a range of alternatives for achieving the objectives of management, including risk assessments for each alternative.
- All management decisions are based on useful and relevant information and advice that is provided through the management system.
- The management system, whenever possible, provides information to decision makers within a time frame that permits management controls to be determined before they need to be taken.

¹⁷ 2003 South Coast Salmon IFMP, Sec. 4 page 52

¹⁸ Laurie Gordon, DFO, personal communication.

80 Scoring Guidepost

- The management system provides managers with a range of alternatives for management.
- Management decisions consistently rely on useful and relevant information provided within the system and there is not a record of decisions going against the information provided.

60 Scoring Guidepost

- The majority of management decisions rely on data, useful and relevant information, or advice provided through the management system.
- Risk assessments are considered in formulating important management decisions.

Indicator 3.1.8

The management system provides for socioeconomic incentives for sustainable fishing.

DFO Response

Current Situation

Selective Fishing, and co-management are two examples of significant programs that provide socio-economic incentives for sustainable fishing.

Selective Fishing

In 1998, when selective fishing was introduced into the salmon fishery to protect threatened stocks of coho, considerable effort was expended to assess the socio-economic impacts of the proposed changes. A contract was let solely for the purpose of assessing the socio-economic impacts of the proposed fishing plan. \$200 million was subsequently spent on licence retirements.

The Selective Fisheries Program was designed to facilitate the transition to new, more selective fishing gear and techniques. The Selective Fisheries Program is described in the Final Report, available at the following web site.

http://www-comm.pac.dfo-mpo.gc.ca/publications/SFFinalReport_e.pdf

The Selective Fisheries Program included five components.

- Experimental Pilots.
- First Nations' Gear Purchase.
- Research Projects.
- Education, Training and Communication.
- Compliance.

New selective fishing technologies were evaluated in experimental fisheries. Modified traditional fisheries were used to evaluate the effectiveness of full-scale commercial operations. Scientific design of experiments combined with intensive monitoring and evaluation were necessary to demonstrate that alternative approaches are more selective than historical practices. New knowledge was transferred to harvesters and anglers through training and communications.

In the four years that the Selective Fisheries Program operated (1998-2001), \$21.5 million was expended on the five program components, including 122 selective fishing experimental projects.¹⁹

Selective fishing gear and methods are now widely used and required in all fisheries.²⁰

Since the inception of the selective fishing policy, up to 5% of the annual TAC is available to support selective fishing experiments. The TAC is made available to individuals who have identified a gear modification that will permit the escape of non-target species or their release with no or very low rates of mortality.

DFO publicly announces that proposals are being solicited and has an evaluation process to rank projects. DFO involves area organizations in the selection and considers their views but does, on occasion, over-rule their input.

Co-Management

Co-management is implemented by means of a collaborative agreement. A collaborative agreement is a formal co-management arrangement with a legally constituted, representative industry organization and allows for meaningful involvement of stakeholders in fisheries research incremental to that of the department, and in the co-operative development and implementation of fisheries management and stewardship. When an industry organization can demonstrate that it is representative (greater than 66% membership) of the licence holders in a licence area, the department may enter into a collaborative agreement with that group. A stakeholder organization may access a small portion of their annual TAC to fund projects (eg, selective fishing, test fishing, special harvesting initiatives) and cover co-management costs.

Co-management arrangements have existed for the past decade in Pacific fisheries (sablefish, for example, has had a co-management agreement since 1993). Co-management arrangements have been used to foster improved compliance with fisheries regulations, safer fishing practices and to put in place joint scientific, monitoring and enforcement programs. The experience gained from co-managed fisheries such as black cod, halibut and geoduck has been very valuable and has provided direction for the development of co-management in other fisheries.²¹

The Status Report on Co-Managed Fisheries is available at the following web site.

http://www.bcseafoodalliance.com/BCSA/BCSA_BLEWETT.html

¹⁹ Selective Fisheries Program Final Report, page 12, left hand column, last paragraph.

²⁰ IFMP 2003, section 4.1.9, second paragraph, line 4, page 26.

²¹ Status Report on Co-Managed Fisheries, page 1, fourth paragraph.

Industry representatives canvassed regarding co-management cited the following as key elements of co-management.:

- Shared purpose of sustainable, viable fisheries.
- Defined roles and responsibilities.
- Shared responsibilities.
- Shared accountabilities.
- Shared decision-making.
- Shared costs.

The dominant themes that emerged from interviews with industry representatives regarding co-management are listed below.

- Economic/financial viability.
- Greater certainty.
- Greater stability.
- Long-term sustainability.
- Greater control over economic well-being.
- Security of access.

A more subtle theme that emerged from the research conducted for the Status Report on Co-Management concerns the effect of co-management upon licence holders and fishery participants: co-management fosters an enhanced attitude towards resource stewardship. Under co-management, licence holders tend to take a longer-term view of the fishery, focusing less on annual catches and values and more on the long-term value of the fishery as an asset. As one industry representative put it: "the more involved licence holders are and the more they have invested, the more interested they become in ensuring the efforts and investments are productive and beneficial."²²

Incentives to limit exploitation on stocks of concern include prohibiting fishing and taking enforcement action against individuals in possession of prohibited species. When coho conservation measures were announced, all fisheries that could impact on coho were closed. Since then only fisheries that can demonstrate an ability to avoid coho have been permitted.

Barkley Sound Sockeye

For the Barkley Sound sockeye fishery, co-management of the commercial allocation occurs through the commercial, sport, and First Nation sectors' weekly participation in the fishery management process. After the run size re-forecast, fisheries management staff consults with commercial, sport and First Nation advisors to develop weekly fishing plans.

During the 2003 season, the seine fleet developed more sustainable fishing practices in response to the economic incentive of gaining access to more valuable early returning sockeye. Prior to 2003, the commercial harvest of sockeye commenced at a run size of

²² Status Report on Co-Management, section entitled "Benefits to Licence Holders", last paragraph.

400,000 for gill net and trollers only. No seine harvest was permitted until the forecast run size exceeded 700,000. As well, seine harvest was generally not permitted until later in the season after the run size was well established. These restrictions were in place because the seines traditionally fished with a high impact full fleet.

However, during the 2003 pre-season advisory process, the seine fleet requested access to the commercial allocation at early parts of the return and run sizes smaller than 700,000. Development of new seine harvest strategy was therefore required. The strategy included limited fleet size, weekly harvest allocations and catch validation requirements. The seine sector responded with a fishing plan that met all the criteria by incorporating a pool fishery that represented all licence holders. This fishery varied fleet size according to weekly allocation targets. The fleet size varied from 3 to 17 vessels depending on the catch target. This innovative approach to co-operative harvest management allowed the seine sector fishing opportunities that previously did not exist, while at the same time reducing the impact of the full-fleet traditional Barkley seine fishery.

As well, participation in commercial fisheries depends on the ability of fleets to restrict or eliminate impacts on non-target species. In the Somass sockeye fishery, selective fishing practices are incorporated into the IFMP and commercial salmon licence conditions. As a condition of licence, all boats are required to operate approved revival tanks while fishing. The gill net fleet has a maximum soak time of 1 hour for each set. The seine fleet must brail all catch and the troll fleet is restricted barbless hooks. Access to target stocks is restricted when catch monitoring indicates bycatch of non-target species has reached unacceptable levels.

Scoring Summary

The information presented describes two programs that provide socioeconomic incentives for sustainable fishing.

Both 60 Scoring Guideposts have been met.

Three of four 80 Scoring Guideposts have been met and one has partially been met.

Four of five 100 Scoring Guideposts have been met and one has partially been met.

Future Changes

In the future, priority will be given to those who have demonstrated the ability to meet or exceed selective fishing standards. Fisheries & Oceans Canada encourages the incorporation of selective fishing experiments into regular fisheries, where appropriate, to realize cost savings.²³

The salmon fishery is relatively well-developed (compared to other fisheries) in terms of selective fishing but relatively less-developed in terms of co-management.

Co-management can be expected to increase in all fisheries, including salmon, in the future.

²³ IFMP 2003, section 4.1.9, third paragraph, line 2, page 26.

100 Scoring Guidepost

- The management system has formal procedure for providing social and economic incentives to stakeholders in the fishery to develop and utilize sustainable fishing practices, particularly the development of selective fishing gear and practices that lead to improved conservation.
- The management system creates strong incentives for harvesters not to exceed target catches or exploitation rates.
- The stakeholders in the fishery regularly avail themselves of the opportunity to utilize these incentives.
- Evidence provided by the management system demonstrates that such incentives have contributed to improved conservation.
- The management system continually attempts to understand the impact of their decisions on social and economic factors affecting the stakeholders in the fishery and regularly takes action to mitigate the impacts on stakeholders.

80 Scoring Guidepost

- The management system regularly considers the use of social and economic incentives to the stakeholders in the fishery, which are designed to facilitate the development of fishing gear and practices that can lead to sustainable fishing.
- The management system includes a program to create incentives for harvesters to not exceed target catches or exploitation rates.
- Evidence demonstrates that the stakeholders in the fishery have used such incentives.
- The management system attempts to understand the impact of their management decisions on social and economic factors affecting the major stakeholders in the fishery and takes action to lessen the major impacts on stakeholders.

60 Scoring Guidepost

- The management system provides for the use of social or economic incentives to ensure sustainable fishing.
- The management system attempts to understand the impact of its decisions on social and economic factors affecting the stakeholders in the fishery and is responsive to requests to reduce these impacts.

Indicator 3.2.1

The research plan covers the scope of the fishery, includes all target species, accounts for the non-target species captured in association with, or as a consequence of, fishing for target species, and considers the impact of fishing on the ecosystem and socio-economic factors affected by the management program.

DFO Response**Current Situation**

Licence holders are required to report catches, landings and discards of target and non-target species (see response to indicators 1.1.2.1 and 2.1.1).

Fisheries and Oceans Canada annually collects data on escapements of target salmon stocks (see response to indicator 1.1.2.2).

The response to Indicator 2.1.2 establishes that DFO considers the impact of fishing on the ecosystem as those impacts are defined for the BC salmon fishery in the "Intent" statement following indicator 2.1.2 (ie, the primary concerns are related to the bycatch of non-salmon species and the removal of large numbers of the target salmon species).

Consideration of socio-economic impacts is not as formalized as the impacts considered in the preceding paragraphs (see response to Indicator 3.1.6).

Regular funding is available for research. Within DFO's stock assessment division, the current budget for monitoring and assessment research on all species of salmon is \$14 million. DFO is reviewing its salmon stock assessment and monitoring programs, and funding requirements. Additional resources have been allocated to deal with specific issues such as late-run sockeye research.

The process to ensure that research results are utilized in forming management strategies is as follows. The IFMP development process provides for drafts of the IFMP to be circulated first within DFO and then externally. At these stages, available information from research is considered in the development of management responses.

Research on target and non-target stocks is regularly published in journals and is peer reviewed at PSARC.²⁴

²⁴ Examples are:

Buchanan, S., Farrell, A.P., Fraser, J., Gallagher, P. Joy, R., and R. Routledge. 2002. Reducing gillnet mortality of incidentally caught coho salmon. N. Amer. J. Fish. Mgmt. 22(4):1270-1275.

Hargreaves, N.B. and Tovey, C. 2001. Mortality rates of coho salmon caught by commercial salmon gillnets and the effectiveness of revival tanks and reduced soak time for decreasing coho mortality rates. PSARC Working Paper S2001-10. 47p.

Simpson, K, Dobson, D, Semple, R, Lehmann, S., Baillie, S, and Matthews, I. 2001. Status in 2000 of coho stocks adjacent to the Strait of Georgia. PSARC Working Paper S2001-11. 90p.

Scoring Summary

The information presented establishes that DFO performs very well against this indicator.

Both 60 Scoring Guideposts have been met.

Seven of eight 80 Scoring Guideposts have been met.

Five of seven 100 Scoring Guideposts have been met, one has been partially met and one has not been met.

Future Changes

Work has just commenced regarding the development of a risk assessment framework to increase the transparency regarding decision-making around complex and often conflicting objectives regarding salmon management. Socio-economic considerations will be a part of the risk assessment framework.²⁵

100 Scoring Guidepost

- The management system incorporates a research component that considers relevant data and information needs for formulating management strategies for all target species, and also information leading to an understanding of the dynamics of the ecosystem including data on the catch, landings and discards of non-target species.
- The framework for research includes investigations dealing with socio-economic impacts of the fishery.
- The research plan responds in a timely fashion to unexpected changes in the fishery.
- Funding is secure and sufficient to meet long-term research needs.
- There is significant continuing progress in understanding the impact of the fishery on target and non-target species, and the ecosystem in general.
- Research results form the basis for formulating management strategies and decisions.
- Research is regularly published in peer review journals and/or is reviewed by PSARC or the PSC.

80 Scoring Guidepost

- The management system incorporates a research component that provides for the collection and analysis of information necessary for formulating management strategies and decisions for both target and non-target species.

²⁵ Bert Ionson, Fisheries and Oceans Canada, pers comm.

- The research plan addresses concerns related to the impact of the fishery on the ecosystem.
- The research plan addresses socio-economic issues that result from the implementation of management.
- The research plan is responsive to changes in the fishery.
- Funding is adequate to support short-term research needs.
- There is progress in understanding the impact of the fishery on target and non-target species.
- Research results are utilized in forming management strategies.
- Research is reviewed by PSARC or PSC, or other appropriate and technically qualified entities.

60 Scoring Guidepost

- Research provides for the collection of catch statistical and biological data for the target species.
- There has been useful research on the impact of fishing on target and non-target species taken in the fishery, and on the ecosystem in general.

Indicator 3.2.2

Research results are available in a timely fashion to interested parties, and there is a mechanism for periodic review of the content, scope and results of the research plan.

DFO Response

Current Situation

Availability of Information

The department has accumulated an extensive library of web-based information. Print-outs can be requested from any DFO office.

An index of web-based research materials is available at:

http://www.pac.dfo-mpo.gc.ca/sci/psarc/ResDocs/res_docs_e.htm.

Daily test fishery information is available at:

<http://www.psc.org/TestFish/OutofSeason.htm>.

Descriptions and daily catch summaries for test fisheries are also available at:

<http://www.pac.dfo-mpo.gc.ca/ops/fm/Salmon/testfish/Sockeye/default.htm>

Frequent summaries of test fisheries, biological data and further fishing plans are made public as Salmon Bulletins at:

<http://www.pac.dfo-mpo.gc.ca/ops/fm/Salmon/bulletins/bulletin.htm>.

For a more general audience, Salmon Updates are regularly released. These describe the outlook for the season, provide in-season updates, and a post-season wrap-up:

http://www.pac.dfo-mpo.gc.ca/comm/pages/mediacentre/salmon_updates_e.htm.

PSARC research documents are available at:

http://www.pac.dfo-mpo.gc.ca/sci/psarc/Default_e.htm.

Unlike the fishing plan, there is no explicit review of the research plan; rather the research plan is developed collaboratively by Chiefs of Stock Assessment, Core Stock Assessment, and fishery management staff.

Advice from external and internal reviews is implicitly incorporated but not expressly reported on.

A description of PSARC, steps in the PSARC Review Process, organizational structure, meeting schedule and PSARC documents are described in full at the following web site:

http://www.pac.dfo-mpo.gc.ca/sci/psarc/whatis_e.htm.

PSARC research documents that have been through the process described at the web site above are available at the following web site:

http://www.pac.dfo-mpo.gc.ca/sci/psarc/ResDocs/diadrom_02_e.htm.

Research documents are peer reviewed by individuals that are both internal and external to the management system. Forecasts of run timing, spread, and diversion rate are developed pre-season. The methods have been approved by PSARC. Annual forecasts using PSARC-approved methodologies are scrutinised by PSARC but are not sent out for assessment by external reviewers.

Scoring Summary

The information presented establishes that research results are easily available and describes the processes for peer and stakeholder reviews of research.

All three 60 Scoring Guideposts have been met.

All four 80 Scoring Guideposts have been met.

Three of four 100 Scoring Guideposts have been met.

Future Changes

Results from consultations will be reported on the DFO web site. This will include advice that was received and how it was considered.

100 Scoring Guidepost

- There is a formal and codified arrangement for annual stakeholder review of the content and scope of research plans and results, including matters related to its funding, which is open and transparent.
- There is a formal and codified arrangement for peer review of ongoing research
- The management system regularly incorporates into the research plan recommendations emanating from these reviews.
- Research results are made available to all interested stakeholders on a regular basis and in a timely manner.

80 Scoring Guidepost

- The management system provides for periodic reviews by stakeholders in the fishery, of the content and scope of research, including funding requirements.
- There are periodic peer reviews of ongoing research.
- Inputs from these reviews are used by the management system to modify research plans.
- Research results are available to interested parties on a regular basis.

60 Scoring Guidepost

- While there are no formal arrangements for stakeholder research review, such reviews are held on a periodic basis for the majority of the research plans and/or results.
- While there are no formal arrangements for peer review of ongoing research, such reviews are periodically conducted for the majority of ongoing research plans and/or results.
- The majority of research results are available to interested parties.

Indicator 3.3.1

The management system provides for a consultative process that is open to all interested and affected stakeholders, which allows for their input on a regular basis into the management process.

DFO Response

Current Situation

For Barkley Sound, advisory meetings are held prior to the start of the fishing season to identify individual stakeholder concerns, bring issues to the attention of all stakeholders, and to discuss dispute resolution mechanisms. In-season, fisheries management staff schedule weekly meeting with commercial fishermen and local First Nations representatives. Advisory meetings with recreational advisors are held as needed. Typically, these are single stakeholder meetings. If disputes arise between stakeholder groups, a multi-stakeholder advisory meeting is held. An inclusive advisory process allows stakeholders to share concerns and co-operate to realise their respective expectations.

Regional Perspective

The interests of First Nations and stakeholders are integrated into pre-season planning and development of decision guidelines through the extensive consultative process both regionally and locally. DFO's consultation schedule/calendar is available to the public on the web at the following site:

http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/calendar/calender_e.htm

General Consultation Process

The general consultation process involves two main elements; the post-season review and IFMP development. The post-season review occurs in December to January depending on the availability of post-season information. Issues and concerns raised by the department and stakeholders during the season are reviewed and discussed. Further analysis is undertaken to address issues and a draft IFMP is released in mid-to-late March for consultation with stakeholders and those with an interest in the management of the fishery.

Meetings with individual gear groups (eg, southern seines) and multi-licence area meetings (eg, South Coast Advisory) are held to review the provisions of the draft IFMP. Notices of the meetings are available on the website and the meetings are open to those with an interest in the management of southern BC salmon. DFO emails notices of meetings to individuals identified by each fleet in a licenced area as its representative. The Department attempts to accommodate views being advanced and where they cannot be accommodated, reasons are provided.

In addition to broad input into the IFMP, the fleet is consulted through "work groups" consisting of fleet representatives to provide input into specific issues. For example, one such work group provides recommendations regarding the allocation of salmon among commercial gear types. DFO facilitates another work group made up of commercial and recreational representatives to address allocation issues between the commercial and recreational sectors.

Similar processes are in place for the recreational sector, through the Sport Fishing Advisory Board, and with First Nations through established consultation processes with communities, bands, tribal councils and First Nations within watersheds.

First Nations Consultation Process

The management system operates in accordance with the Policy for the Management of Aboriginal Fisheries, which establishes priority for fisheries for food, social and ceremonial purposes and prescribes consultations on fishing plans with First Nations and with other sectors that might affect First Nations' fisheries.

Fisheries and Oceans Canada meets with individual bands and tribal councils, and with representatives from several bands, to discuss local issues. The department supports watershed meetings attended by representatives of bands and tribal councils to review broad policy approaches and other initiatives of importance to all bands on the Fraser River (eg, setting of escapement goals).

The consultation process for First Nations mirrors that of the commercial fishery. Post-season review meetings are held to review management actions, the performance of the fisheries and final escapements. Concerns and issues are identified and discussed. This process culminates in a draft IFMP that serves as a basis for further discussion prior to finalisation of the annual IFMP which is signed by the Minister and released in late May or early June.

Consultations on Policy Development

Policy development consultation is undertaken in several steps;

- Release of a discussion document to First Nations, industry and those with an interest in the management of salmon.
- Series of meetings with representatives, and public meetings to explain and receive feedback on the discussion document.
- Release of a final policy.

The time frame for this process can range from one year (Selective Fishing Policy) to several years (Improved Decision-making). The objective is to consult as widely as possible.

The discussion document is made available in hardcopy in departmental offices and in electronic version on the Web. There is opportunity to provide feedback in person at public meetings or electronically.

On occasion, technical experts from outside DFO are engaged in the development of the discussion document.

Following are some examples of policy initiatives for which consultations have been retained:

- Wild Salmon Policy process (http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/wsp-sep/default_e.htm).
- Improved Decision-making Initiative (http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/decision_e.htm).
- Selective fishing initiative (<http://www.pac.dfo-mpo.gc.ca/ops/fm/selective/4archive/sfarchives.htm>).

- Fishery Monitoring feedback elicitation: (http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/fisheriesmgmt/reportingframework/default_e.htm).

Scoring Summary

The information presented establishes that DFO fully conforms with this Indicator and all of its Scoring Guideposts.

The lone 60 Scoring Guideposts has been met.

Four of four 80 Scoring Guideposts have been met.

All four 100 Scoring Guideposts have been met.

Future Changes

The environmental organisations will be a part of the consultation process in 2004 and beyond.

100 Scoring Guidepost

- The management system provides a formal arrangement for the direct participation of all interested and affected stakeholders from both the public and private sectors, on matters of a social, cultural, economic and scientific nature.
- The management system provides timely, advanced notice of meetings at which there can be stakeholder participation.
- The management system does not exclude any interested and affected stakeholder from the consultative process.
- The management system addresses the interests of all interested and affected stakeholders.

80 Scoring Guidepost

- The management system provides for the regular participation of most interested and affected stakeholders on matters of a social, cultural, economic and scientific nature.
- The management system generally provides notice of meetings at which there can be stakeholder participation.
- The management system does not usually exclude involvement of any interested and affected stakeholder.
- The views of most interested and affected stakeholders are regularly considered in the formulation of management strategies.

60 Scoring Guidepost

- The majority of interested and affected stakeholders are provided with a forum for input into the formulation of management plans and measures.

Indicator 3.4.1.1

The management system utilizes methods to limit or close fisheries in order to achieve harvest and/or escapement goals, including the establishment of closed areas, no-take zones, and closed dates and times when appropriate.

DFO Response

Current Situation

The Somass sockeye management system has instituted a number of measures to limit or close fisheries to achieve harvest and/or escapement goals for target and non-target species. The Somass Sockeye Harvest allocation table establishes harvest rates based on run size forecasts. Stock allocation for each stakeholder group is set and weekly harvest allocations are developed depending on run size expectations.

An in-season stock assessment and fisheries management process monitors the activity of fishing fleets as they intercept returning sockeye stocks. This process includes four components:

- a comprehensive catch monitoring program of native, commercial and recreational fisheries that uses onboard vessel observers, fishery officers, contract patrolmen and a recreational creel survey to collect real time catch data. Commercial fishers are also required to phone in detailed catch data at the conclusion of each fishery opening.
- an annual test fishing program;
- a comprehensive river escapement monitoring program;
- a fishery management team, the 'Barkley Sound Working Group', that reviews the above noted data sources to provide in-season adjustments to fishing plans if necessary.

In conjunction with the catch monitoring and escapement assessment programs, the fishing plan employs area closures and time sensitive access to fishing areas to minimise impacts on non-target species. Catch estimates for each stakeholder group (by fishery) are prepared weekly throughout the fishing season. The management team conducts weekly assessments of catch and escapement data relative to pre-season run forecasts and escapement goals to determine allowable harvest rates. This weekly management process allows for adjustments to harvest plans by limiting or closing fisheries if required.

Scoring Summary

The information presented establishes that the Scoring Guideposts have all been met.

Both 60 Scoring Guideposts have been met.

All four 80 Scoring Guideposts have been met.

All five 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- The management system provides a formal and codified system to achieve harvest and/or escapement goals for target stock units and, as appropriate, non-target species of fish.
- The management system provides a formal and codified mechanism for establishing closed areas, no-take zones, and closed dates and times for any areas of the fishery.
- Management sets exploitation and escapement levels designed to maintain the target stock units at levels of abundance that can sustain high productivity.
- There is no evidence provided by the management system to indicate that, as a result of fishing, target stock units are in serious decline or degradation of the ecosystem is occurring.
- Measures are currently implemented to achieve these objectives.

80 Scoring Guidepost

- Harvest rates and/or escapement levels designed to achieve target goals are regularly implemented.
- The management system provides for the establishment of closed areas, no-take zones and closed dates and times.
- Controls are set to maintain or restore target species to high productivity levels, and in a manner that does not contribute significantly to ecosystem degradation.
- Measures that limit harvest rates and set escapement goals are implemented when necessary.

60 Scoring Guidepost

- Harvest rates and/or escapement goals for the majority of the target stocks are effective in halting declines in stock abundance caused by the fishery.
- Established harvest and/or escapement goals for target stocks consider the impact of the fishery on the majority of the non-target species, and on the ecosystem generally.

Indicator 3.4.1.2

The management system provides for restoring depleted target species to specified levels within specified time frames.

DFO Response

Current Situation

There is an approach, but no specific timelines for recovery in the Somass sockeye variable harvest rate strategy. When abundance of target stocks is low, the strategy permits only very low harvest rates.²⁶ In the past two to three decades, low returns have been observed when marine conditions are unfavourable (ie, the smolt-to-adult survival rate is low). With modest or no harvest allowed at low returns, the stocks have been built up from depleted levels several times (see Indicator 1.2.2).

Scoring Summary

The information presented establishes that DFO “provides for restoring depleted target species to specified levels within specified time frames.”

The sole 60 Scoring Guideposts is true.

One of two 80 Scoring Guideposts have been met.

One of the 100 Scoring Guidepost has been partially met.

Future Changes

The Wild Salmon Policy, under development will identify reference points of abundance as benchmarks of conservation unit performance. The status of the conservation units in relation to these benchmarks will be assessed on a regular basis. This status will then inform the development of fishing strategies and fishing plans that reflect appropriate time lines for restoring stocks to specified levels that balance conservation risks and concerns with the social and economic importance of the fisheries.

100 Scoring Guidepost

- The management system has a formal and codified mechanism, which is adequate for restoring depleted target stocks to the TRP or equivalent high level of abundance, as qualified by relevant environmental factors.
- The mechanism includes strict guidelines for restoring these depleted populations within a certain time frame are formalized by the management system.

80 Scoring Guidepost

- The management system includes measures that are adequate to restore depleted populations of target stock to the TRP or equivalent high level of abundance as qualified by relevant environmental factors.
- A time schedule for restoration, which considers environmental variability, is determined by the management system.

²⁶ For details, see Principle1, Appendix A.

60 Scoring Guidepost

- The management system includes measures for restoring the majority of depleted populations of target stock to the TRP or equivalent high level of abundance.

Indicator 3.4.2.1

The management system includes compliance provisions.

DFO Response**Current Situation**

The Department of Fisheries and Oceans employs a comprehensive compliance strategy to achieve fisheries management objectives. The key elements of the compliance strategy are education, information and motivation. The fisheries management system through its local and regional advisory processes, informs stakeholders of scientific studies, stock assessment methods and fisheries management objectives. Stakeholders have access and input through this process to science, fisheries management and policy reviews and the opportunity to query fisheries management staff. The management system disseminates information to a wider audience through: websites, email, posted Notices, field staff and public meetings.

The use of compliance provisions is a three step process of information, motivation and enforcement to achieve the objectives of the management system.

The intent of the management system is to protect and maintain Canada's marine and freshwater fishery resources through information, dialogue, and education. In the event that education and information fail to achieve compliance objectives the management system adopts a motivational approach.

Motivational compliance provisions can be viewed as providing an incentive for achieving compliance. For example, compliance with selective fishing options and catch monitoring programs can be used as a *quid pro quo* for access to fishing opportunities.

The final option in motivational compliance provisions is the use of punitive actions when alternative compliance provisions have failed. For example, when fishers are not complying, fisheries can be closed, harvest allocations reduced or charges laid.

DFO's Conservation and Protection Directorate is mandated to protect Canada's Marine and Freshwater Resources.

The Pacific Region's Conservation & Protection Directorate (within Fisheries Management) currently deploys 170 Fisheries Officers plus Marine Enforcement Officers and Aboriginal Fishery Guardians. Further details are available at the following web site²⁷:

http://www.pac.dfo-mpo.gc.ca/ops/CP/default_e.htm.

²⁷ IFMP 2003, section 3.5, pages 21-22.

Main Conservation & Protection Program Activities are described at: http://www.pac.dfo-mpo.gc.ca/ops/cp/programs_e.htm.

The management of Canadian fisheries requires an integrated approach to monitoring, control and surveillance that involves the deployment of fishery officers to air, sea and land patrols; observer coverage on fishing vessels; dockside monitoring; and remote electronic monitoring. Conservation and Protection activities are designed to ensure compliance with legislation, policies and fishing plans for conservation and sustainable use of the resource.

DFO operates a fleet of patrol vessels supplemented by Department of National Defence (DND) vessels in special circumstances. Vessels are required for patrolling closed and boundary areas and for conducting inspections at sea to ensure compliance with all regulations designed to ensure orderly fisheries. Contracted aircraft are used to monitor, locate and track fishing fleets and detect violations. Aerial surveillance is also supplemented by DND. Aerial presence serves as a visible deterrent to illegal fishing and allows more effective deployment of patrol vessels.

Charter patrolmen employed under a vessel charter contract are designated as "fishery inspectors". Their primary duty is to "observe, record and report".

At the end of each season, statistics are compiled on the number of checks conducted from various platforms (at-sea, vehicle and foot) and the number of charges resulting from these checks. DFO deploys contracted observers on all foreign vessels fishing in Canadian waters and on some Canadian vessels. These observers gather scientific information and provide on-site compliance monitoring. They also report infractions such as dumping/discarding, fishing in closed areas, catch misreporting, retention of prohibited catch and the use of illegal gear.

Dockside monitors/observers verify the quantity and species of fish landed. These contracted individuals monitor the offloading of fishing vessels as they land their catches ashore. These data are used for scientific evaluation of fish stocks, fisheries management decisions and compliance monitoring. This effort is complemented by random vessel inspections carried out by Fishery Officers at landing sites.

Post-season review meetings with C&P and resource management staff are held annually. From these sessions, staff identify key enforcement issues and recommend strategies for addressing these issues.

Conservation & Protection Issues and Strategies are described at: http://www.pac.dfo-mpo.gc.ca/ops/Cp/issues_e.htm.

Scoring Summary

The information presented establishes that DFO has a comprehensive, multi-faceted compliance system in place.

The lone 60 Scoring Guideposts has been met.

Both 80 Scoring Guideposts have been met.

All four 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- The management system provides for a formal arrangement, such as a compliance committee or a staff review team on compliance, to review the effectiveness of enforcement.
- Education and enforcement procedures are implemented and applicable rules are consistently applied.
- Enforcement actions are effective in achieving the objectives of management.
- There are no infractions being consistently committed in the fishery.

80 Scoring Guidepost

- The management system includes compliance provisions that are effective for the fisheries.
- Infractions, which result in adverse impacts on the status of the stocks or on the ecosystem, are rare.

60 Scoring Guidepost

- The management system includes compliance provisions that are effective for the majority of the fisheries.

Indicator 3.4.2.2

The management system includes monitoring provisions.

DFO Response

Current Situation

The management system incorporates monitoring provisions to review catch, escapement, regulatory compliance and stakeholder input.

Catch Monitoring

Timely and accurate catch monitoring and reporting programs are vital to the proper assessment, management and enforcement of fisheries to ensure the conservation of fisheries resource and its long-term sustainability. As well, these programs assist in promoting trust among users, and provide assurance to the general public and non-governmental organizations that fisheries are being managed in a responsible fashion²⁸. The Somass sockeye commercial fishery component is subjected to a four phase catch monitoring system:

²⁸ Comparison of Catch Reporting Systems for Commercial Salmon Fisheries in British Columbia, L. Bijsterveld¹, S. Di Novo, A. Fedorenko² and L. Hop Wo³

- On-grounds hails
- Observer program
- Log book program
- Log book program
- Sales Slip program

On-grounds Hails

During commercial fishery openings, catch information is collected by hail teams or by onboard observers. Hail teams consisting of Charter Patrolmen or Fishery Officers randomly interview 25 - 50% of fleet to collect catch information. This information is passed to the fishery manager to assist in providing preliminary catch estimates .

Observer Program

The observer program samples only a portion of the salmon fleet. The observer program is the responsibility of DFO and was initiated in 1998 to operate in conjunction with the logbook program. Trained, DFO-certified observers are deployed on-board commercial fishing vessels to provide accurate and detailed catch information on a representative sample of the fleet. On-board observers monitor catch and release by species, gather biological samples (eg, fish weight, length, scales, DNA) and conduct coho/chinook condition experiments. Data standards for catch reporting are upheld through a rigorous training course and certification examination, developed by DFO in conjunction with Malaspina University College. Currently, DFO funds the majority of the observer program, which is about four times the cost of the logbook program.

Logbook Program

The logbook program was initiated by DFO in 1998 to improve catch reporting and address by-catch concerns, especially for coho salmon. The program consists of collecting detailed catch and release information from each fisherman in South Coast commercial salmon fisheries. Fishermen are required to report by phone their logbook catch-summary weekly (sometimes daily), and to mail completed logbooks to DFO by the end of the season. The phone-in data are used by fisheries managers to guide in-season decision-making. This program is mandatory for all commercial fishermen. It provides a large, cost-effective database encompassing the entire fleet.

Sales Slip Program

The sales slip program was initiated in Pacific Region in 1951. It has been the principal official means of capturing information on commercial fish landings for the past half century. Sales slips are completed at the time when fish are sold/off-loaded and submitted by commercial buyers or off-loaders (on behalf of commercial fishermen) to the department. Fishermen are responsible for ensuring that their records are complete. Current licensing conditions make it mandatory for sales slips to be completed for all fish caught, even if the fish landed are used for bait, personal consumption, public or private sale, or disposed of otherwise.

Sales slips document the quantity (accurate weight and estimated numbers), value and species of the retained catch. Information about the sale includes: commercial buyer, purchase date, catching vessel, statistical area of catch, number of days fished, gear type, catch in numbers and weight by species, size and grade, as well as the price per pound and value of the catch. The completed sales slips are forwarded to DFO regional headquarters for processing. Sales slips are a federal and provincial requirement for all commercial landings, and are to be completed and submitted to DFO within 7 days of landing the catch. Sales slip books are purchased or printed by buyers, off-loaders and fishermen.

In addition to the catch monitoring system, there are also the following components:

Escapement Monitoring

Somass sockeye escapements are monitored electronically on both the Sproat and Stamp Rivers. Each river has a fish way that allows fish to pass in-river obstructions. Stock assessment technicians are responsible for the installation and calibration of electronic fish counters at both sites. Stock Assessment technicians manage and co-ordinate crews that collect escapement data at both sites. See Indicator 1.1.2.2.

Regulatory Compliance Monitoring

Fishery Officers are responsible for compliance monitoring associated with all Somass sockeye fisheries. Fishery Officer activities are designed to ensure compliance with legislation, policies and fishing plans for the conservation and sustainable use of the resource. Fishery Officers have access to catch monitoring (Fishery Operations System) and compliance monitoring (Departmental Violations System) databases.

Stakeholder Input

The department is in the process of consulting on a new Monitoring and Reporting Framework. The text of the Monitoring and Reporting Framework is available at the following web site:

http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/fisheriesmgmt/reportingframework/monitoringpaper_e.htm#1.%20OVERVIEW

The Monitoring and Reporting Framework is intended to facilitate a review by Fisheries and Oceans Canada, in cooperation with First Nations and stakeholders, of fishery monitoring and catch reporting systems in Pacific Region. The objective of this review is to identify improvements in these systems required to better meet the needs of the resource, the government, stakeholders, the general public and the international community.

Scoring Summary

The information presented addresses policy and practice of fishery monitoring and addresses the Scoring Guideposts. Fisheries and Oceans Canada has recognised shortcomings with its fishery monitoring and catch reporting systems and is addressing issues and concerns in a structured, consultative fashion.

The single 60 Scoring Guideposts has been met.

Both 80 Scoring Guideposts have been met.

All of the three 100 Scoring Guideposts have been met.

Future Changes

Fisheries and Oceans Canada is undertaking a detailed review of its monitoring and reporting programs in all fisheries and is consulting with stakeholders on necessary improvements to these programs.

Principles for the fishery monitoring and reporting review are presented in sections 6 of the document (see web document; web address above).

100 Scoring Guidepost

- The management system incorporates a formal, effective program for monitoring the fishery, which fully evaluates the performance in terms of whether the regulations are resulting in the intended harvest rates and/or escapements, and achievement of objectives regarding impacts on the ecosystem caused by the fishery.
- Monitoring is comprehensive, and includes all relevant components of the fishery
- Results are reported widely on a regular and timely basis.

80 Scoring Guidepost

- The management system incorporates an effective monitoring program, which evaluates the performance of the fishery relative to management goals and policies.
- Monitoring is broad in scope, and results are available to the majority of the stakeholders.

60 Scoring Guidepost

- The management system includes provisions for a monitoring program to evaluate the performance of the majority of the fisheries against its policies and objectives.

Indicator 3.5.1

There is an effective and timely system for internal review of the management system.

DFO Response

Current Situation

Local Perspective

The Barkley Sound Working Group conducts an annual Barkley Sound Sockeye post-season review. The review assesses the in-season decision-making process, data collection systems, available resources, advisory structures and final catch and escapement estimates. South Coast Resource Management and Stock Assessment staff meet bi-annually to review all fisheries and related issues. Implementation issues are also identified.

Regional Perspective

Internal post-season reviews are undertaken and written up by the local manager with input from the local Chief of Resource Management and Regional Resource Manager – Salmon. These documents are released prior to the post-season review meetings with First Nations and stakeholders.

Scoring Summary

The information presented demonstrates the DFO performs well against this indicator.

The 60 Scoring Guideposts is true.

Both 80 Scoring Guideposts have been met.

Both 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- The management system provides for continuing internal review that is broad in scope, effective, and timely.
- The review process and results are made available to all stakeholders.

80 Scoring Guidepost

- The management system includes provision for an internal review that is conducted periodically as the need arises.
- The results of the review are made available to interested stakeholders.

60 Scoring Guidepost

- The management system provides for internal review of its performance, and when available, review results are made available to the majority of interested stakeholders.

Indicator 3.5.2

There is an effective and timely system for external review of the management system.

DFO Response

Current Situation

External reviews of the management system are conducted by government and stakeholder groups. The department is committed to an annual external advisory process with stakeholders and First Nations.

Here are several examples of external review processes:

1. Conservation Council or the Auditor-General of Canada.
2. Program evaluations mandated by the federal government.
3. Parliamentary Standing Committee on Fisheries and Oceans.
4. Stakeholder and First Nations consultative procedures that provide external review.²⁹

The response to Indicator 3.4.2.2 mentions reviews by the Pacific Fisheries Resource Conservation Council and the Auditor-General of Canada. The latest *Policy and Standards for Evaluation* (April 1, 2001) are available at the following web site.

http://www.tbs-sct.gc.ca/eval/common/policies-politiques_e.asp

Among other things, they require each federal government department to have a senior head of evaluation, an evaluation committee and an evaluation plan. See the *Policy Requirements* section at the following web site.

http://www.tbs-sct.gc.ca/pubs_pol/dcgpubs/tbm_161/ep-pe_e.asp

Following are examples of evaluations that have been completed under Fisheries and Oceans Canada's Evaluation Plan.

- Terms of Reference were completed in 2003 for summative evaluations of the Selective Fisheries Program and the Resource Rebuilding component of the Pacific Fisheries Adjustment and Restructuring Program.
- The fleet component of PFAR was evaluated in 2001.
- DFO's Response to the Recommendations of the Fraser River Sockeye Public Review Board were evaluated in 1995/96.
- The (then) pilot IQ programs for halibut and sablefish were evaluated in 1992.
- DFO Resource Management was evaluated in 1991/92.

²⁹ See response to Indicator 3.3.1 for detailed description of stakeholder and First Nations consultative procedures that provide external review.

DFO evaluations of the Pacific fishery management system would include external reviewers (ie, they would be included among the individuals and organisations canvassed during the conduct of an evaluation). The Pacific fishery management system is open to external review in that (1) it would be so reviewed by means of an Evaluation and a number of these that have been performed in the past decade are cited, and (2) an external agency such as the Pacific Fisheries Resource Conservation Council or the Auditor-General of Canada can conduct such external reviews when they choose.

Scoring Summary

The information presented established a requirement for regular external evaluation of DFO programs including Pacific fishery management, although that requirement is part of the department's responsibilities and not built into the Pacific fishery management system itself.

The 60 Scoring Guidepost is met.

The 80 Scoring Guideposts are not explicitly met, but are addressed in the federal Treasury Board stipulations regarding program evaluation in federal government departments and of departmental programs.

Two of the three 100 Scoring Guideposts have been met.

This score would be higher if the Treasury Board requirements for DFO regarding program evaluation were construed as being part of the "management system" as referred to in the Scoring Guideposts.

100 Scoring Guidepost

- The management system provides for one or more independent experts to review at least bi-annually all of the important components of management performance.
- The format and standards of the review are established with input from outside the management system.
- Provision is made for making public the review results.

80 Scoring Guidepost

- The management system provides for a review of management performance by one or more independent experts at least once every five years.
- The format and standards of the review are established within the management system.
- Review results are made available to the public.

60 Scoring Guidepost

- The management system is open to external review at least once every 10 years.

Indicator 3.5.3

There is a mechanism for incorporating into the management system recommendations resulting from the review process.

DFO Response

Current Situation

DFO has a series of annual advisory meetings with stakeholder representative groups (See Indicator 3.3.1) that facilitate incorporation of stakeholder recommendations. In commercial fishery advisory meetings, Licence Area breakout sessions are held in which issues are tabled and recommendations prepared and submitted for incorporation into the annual IFMP^{30, 31}. Similar advisory processes are conducted with other stakeholder groups.

Through the development of the annual IFMP, recommendations from internal DFO review processes are incorporated into the management system (See Indicator 3.5.1).

The post-season review and the development of the IFMP pre-season, and associated consultations, are the mechanisms by which recommendations resulting from review processes are incorporated into the management system.

Recommendations from internal and external reviews are acted upon and incorporated into the management process when appropriate. A recent example is the steps taken to date by DFO responding to the 2002 Review of the Fraser River sockeye fishery. These steps include a report documenting DFO's response to each recommendation in the 2002 Post-Season review³².

Scoring Summary

The information presented establishes the Indicator has been fully achieved.

The 60 Scoring Guidepost has been met.

The 80 Scoring Guideposts has been met.

Both 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- **The recommendations from internal and external reviews are always acted upon and, where appropriate, incorporated into the management system.**

³⁰ Licence Area Breakout Session Issues/Recommendations Document, SCSA Meeting Dec 11-12, 2003

³¹ Listing of Agendas from the Commercial and Area Harvest Committees can be found at:

http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/consultations/salmon/CSAB/default_e.htm

³² Bert Ionson, Fisheries and Oceans Canada, pers comm.

- The management system provides for a report to all interested stakeholders describing how it acted on the recommendations of these reviews.

80 Scoring Guidepost

- The recommendations from internal and external reviews are usually, but not always, used to make changes to the management system.

60 Scoring Guidepost

- Recommendations from internal and external reviews are considered by the management agency and an explanation is provided for the actions or lack of action associated with the majority of these recommendations.

Indicator 3.5.4

There is an appropriate mechanism for resolving disputes.

DFO Response

Current Situation

Dispute resolution is addressed twice: pre/post-season and in-season. The Department uses its post/pre-season stakeholder advisory process as a forum for discussion and dispute resolution. There is broad stakeholder participation in this process which addresses issues common to many participants. For example, catch monitoring issues relevant to all commercial gear types may be discussed.

The Somass sockeye fishery (Barkley Sound and Alberni Inlet) includes harvesters from all stakeholder groups, including First Nations. Fisheries are conducted in a relatively small geographical area. By early-to-mid July, on any given day, Alberni Inlet may have 80 -110 gill net vessels, 15- 20 seine vessels, 40 troll vessels, 400-500 recreational vessels and 50-75 First Nations vessels operating. Past experience has shown that, to resolve disputes, a well organized and informed representative advisory process is essential. Advisory meetings are held prior to the start of the fishing season to identify individual stakeholder concerns and bring them to the attention of all stakeholders. A dispute resolution mechanism is incorporated into the Somass sockeye stakeholder advisory process.

In-season, fisheries management staff schedule weekly meeting with commercial fishermen and local First Nations. Advisory meetings with recreational advisors are held as necessary. These are single stakeholder meetings. If disputes arise between stakeholder groups, a multi-stakeholder advisory meeting is held. An inclusive advisory process allows stakeholders to share concerns and provides for co-operation among gear types and sectors.

Scoring Summary

The information presented establishes that there is a dispute resolution mechanism in place—Ministerial decision—but that it is not likely to be viewed as acceptable by stakeholders or dispute resolution experts.

The lone 60 Scoring Guideposts is met.

Three of three 80 Scoring Guideposts have been met.

None of the three 100 Scoring Guideposts have been met.

Future Changes

The Pacific Allocation and Licensing Board, the Policy Advisory Committee and the Commercial Harvest Planning Committee are intended to provide fair and accountable decision-making on issues of importance to stakeholders in the Pacific salmon fishery. In this manner, disputes would be minimized and, where not resolvable, decisions would be made by the appropriate body.

Fisheries and Oceans Canada does not envision that the Minister's discretion in matters pertaining to the Pacific salmon fishery would ever be fettered.

100 Scoring Guidepost

- The management system has a formal and codified mechanisms for resolution of disputes arising as a result of the fishery.
- Affected parties routinely use the dispute resolution mechanism.
- The dispute resolution mechanism is unbiased and fair respecting all disputing parties.

80 Scoring Guidepost

- The management system has a dispute-resolution process for resolving significant disputes.
- The dispute resolution mechanism is available for use by affected parties, but is not routinely used.
- The dispute resolution mechanism does not discriminate against any disputing party.

60 Scoring Guidepost

- There is a mechanism for resolving disputes that is provided for by the management system.

Indicator 3.6.1

The fishery is not operated in a unilateral manner in contravention to international agreements.

For the purposes of this Indicator, only treaties and conventions which the government of Canada has signed, ratified or otherwise is a High Contracting Party to, shall apply.

DFO Response

Current Situation

International Treaties and conventions considered include:

- UN Convention on the Law of the Sea.
- Convention on Biological Diversity.
- The Pacific Salmon Treaty.
- UN Convention on the Law of the Sea

As a signatory to the UN Convention on the Law of the Sea, the Agreement relating to Part XI of the Convention, and the Agreement for the Implementation of the Convention relating to the conservation and management of straddling fish stocks and highly migratory fish stocks, Canada operates in accord with all aspects of the Convention on the Law of the Sea.

The UN Convention on the law of the sea can be found at the following web site:

http://www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf

The Agreement for the Implementation of the Convention relating to the conservation and management of straddling fish stocks and highly migratory fish stocks can be found at the following web address:

http://www.un.org/Depts/los/convention_agreements/texts/fish_stocks_agreement/CONF164_37.htm.

Scoring Summary

The information presented establishes that DFO performs very well against this indicator.

The one 60 Scoring Guideposts is true.

All three 80 Scoring Guideposts have been met.

All three 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- When the stocks of fish under the authority of the management system are also under the authority of an international treaty to which the Government of Canada is a party, treaty obligations are respected, and actions by the management system are coordinated with the recommendations of the treaty organization.
- All measures taken within the management system are in compliance with relevant international treaty obligations.
- The management system does not undertake unilateral exemption from any treaty obligation pertaining to the fishery.

80 Scoring Guidepost

- The management system does not willingly act in contravention to any international treaty obligations pertaining to the fishery.
- The management system does not knowingly undertake unilateral exemption from any treaty obligation pertaining to the fishery.
- Evidence indicates any inadvertent action with regard to the contravention of any international treaty obligations by the management system is rare.

60 Scoring Guidepost

- The management system is in compliance with the majority of international treaty recommendations dealing with the fishery.

Indicator 3.6.2

The fishery is carried out in a manner consistent with all relevant domestic laws and regulations relevant to the fishery.

DFO Response

Current Situation

Domestic laws being considered include:

- Fisheries Act.
- Coastal Fisheries Protection Act.
- Oceans Act.

Full texts of acts and regulations governing Pacific salmon management are available at the following website: http://www.dfo-mpo.gc.ca/communic/policy/dnload_e.htm

The Fisheries Act is used to manage the fishery. To ensure compliance, DFO enforcement officers monitor complaints and conduct patrols of Barkley sockeye fisheries. When non-compliance is noted, enforcement action is taken. Enforcement officers report that compliance rates are very high.³³

The fishery does not contravene provisions of Acts that are in place to address other policy objectives. The Conservation & Protection Directorate conducts an Evaluation of Enforcement and Compliance annually as part of the department's post-season review and evaluation of the fishery.

³³ [Alistair Thomson, Fisheries and Oceans Canada, Pers Comm](#)

With regard to the 100 Scoring Guidepost, DFO does conduct an annual assessment of fisheries compliance but we are not aware of any management systems that can claim full compliance with laws and regulations. It is simply too costly to enforce 100% compliance in any regulatory system.

Scoring Summary

The information presented establishes that the Fraser River sockeye fishery is carried out in a manner consistent with all relevant domestic laws and regulations relevant to the fishery.

The single 60 Scoring Guidepost has been met.

The lone 80 Scoring Guidepost has been met.

The sole 100 Scoring Guidepost has been met as fully as possible.

100 Scoring Guidepost

- The management system conducts annual assessments of the fisheries compliance with relevant domestic laws and regulations, and these assessments have confirmed full compliance with these laws and regulations.

80 Scoring Guidepost

- The management system conducts at least bi-annual assessments of the fisheries compliance with relevant domestic laws and regulations, and these assessments have confirmed that none of the violations that have occurred would result in failure to achieve the objectives of the management plan.

60 Scoring Guidepost

- The management system conducts periodic assessments of the fisheries compliance with relevant domestic laws and regulations, and these assessments have not identified any violations that would result in failure to achieve the objectives of the management plan.

Indicator 3.6.3

The management system provides for the observation of legal and customary rights of First Nation peoples.

DFO Response

Current Situation

The Government of Canada's legal and policy frameworks identify a special obligation to provide First Nations a priority opportunity to harvest fish for food, social and ceremonial purposes. The Aboriginal Fisheries Strategy (AFS) was implemented in 1992 to address several objectives related to First Nations and their access to the resource, including:

- Improving relations with First Nations.
- Providing a framework for the management of the First Nations fishery in a manner that is consistent with the 1990 Supreme Court of Canada Sparrow decision.
- Greater involvement of First Nations in the management of fisheries.
- Increased economic returns from First Nations fisheries (Allocation Transfer Program).³⁴

Fisheries & Oceans Canada's First Nations' objective is "to manage fisheries to ensure that, subject to conservation needs, first priority is accorded to First Nations for opportunities to harvest fish for food, social, ceremonial (FSC) purposes and any treaty obligations."³⁵

Feedback from consultation sessions is relied on to measure the performance of providing first priority to First Nations for opportunities to catch fish for FSC purposes and treaty obligations.

DFO's performance on its First Nations' objective in 2002, assessed in the Post-Season Review, indicates that the department met its First Nations' objective.³⁶

The department's consultation process with First Nations is described in the response to Indicator 3.3.1.

Scoring Summary

The information presented describes how the management system provides for the observation of legal and customary rights of First Nation peoples.

The lone 60 Scoring Guidepost has been met.

Both 80 Scoring Guideposts have been met.

Both 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- The management system is in compliance with all major legal and customary rights of First Nation peoples that are impacted by the fishery.
- The management system includes processes for consultation with First Nations peoples on the impact of the commercial fishery on their food, social and ceremonial fisheries.

³⁴ IFMP 2003, section 2.5, page 14.

³⁵ IFMP 2003, section 3.2, page 20.

³⁶ IFMP 2003, section 8.2, page 100.

80 Scoring Guidepost

- The management system is found to be in compliance with all legal and most of the customary rights of First Nation peoples that are impacted by the fishery.
- The management system includes processes for providing information to First Nations peoples on the major impacts of the commercial fishery on their food, social and ceremonial fisheries.

60 Scoring Guidepost

- The management system is in compliance with the legal rights of First Nation peoples that are impacted by the fishery.

Indicator 3.7.1

Utilization of gear and fishing practices that minimize both the catch of non-target species and the mortality of this catch.

DFO Response

Current Situation

Local Perspective

The management system provides incentives to those who can fish selectively by providing enhanced opportunities. In Barkley Sound and Alberni Inlet, all three commercial salmon gear types are required by way of agreement and condition of licence to use selective fishing practices. All three gear types must use approved revival tanks. All gear types are subject to specific fishing times and areas to minimize encounters with non-target species and stocks. In addition, the gill net fleet has maximum net soak times, trollers must use barbless hooks and seines must use a brailer to remove fish from the seine net.

Regional Perspective

In January 2001, the Department released *A Policy for Selective Fishing in Canada's Pacific Fisheries*. Under the Department's selective fishing initiative, harvester groups have experimented with a variety of methods to reduce the impact of fisheries on non-target species, with a number of measures reaching implementation in fisheries. Experiments will be undertaken in 2003 to explore additional options for improving selective harvesting practices.³⁷

The Selective Fisheries Program included an Education, Training and Communications component. The Selective Fisheries Program is described in the Final Report, available at the following web site: http://www-comm.pac.dfo-mpo.gc.ca/publications/SFFinalReport_e.pdf

See the response to Indicator 3.1.8.

³⁷ IFMP 2003, section 2.2, fourth paragraph, page 12.

The Department will be reviewing current management measures in the salmon fishery to assess impacts on listed species under SARA. Research in this area is ongoing and management measures may have to be changed based on the conditions described in section 2.4 of the 2003 IFMP.³⁸ For more information on SARA please see the Public Registry at:

www.sararegistry.gc.ca

The IFMP includes:

- Conservation objectives for non-target stocks.³⁹
- Use of selective fishing gear and methods, and development of the Canadian Code of Conduct for Responsible Fishing Operations.⁴⁰
- Gear restrictions to help avoid stocks of concern and non-target stocks/species or release them with minimal harm (eg, revival tanks, gillnet construction and selective fishing).⁴¹

Conditions of Licence

Management objectives for catch of non-target stocks and species are reflected in the *Conditions of Licence* for each of the licence areas. Revival tanks conforming to the conditions of licence are required for all vessels participating in commercial salmon fisheries. All prohibited species captured incidentally must be revived in the revival tank and released, or released directly to the water in a manner that causes the least harm⁴².

Scoring Summary

The information presented demonstrates that the management agency is well along in requiring the use of gear and fishing practices that minimize the catch of non-target species and the mortality of this catch.

The lone 60 Scoring Guidepost is met.

All three 80 Scoring Guideposts have been met.

All three 100 Scoring Guideposts (one with three sub-parts) have been met.

³⁸ IFMP 2003, section 2.4, pages 13-14.

³⁹ IFMP 2003, section 3.1, pages 16-20.

⁴⁰ IFMP 2003, section 4.1.9, page 26.

⁴¹ IFMP 2003, sections 7-3 to 7-6, pages 86-87.

⁴² Conditions of 2003/2004 Salmon Area B Licence, part 2, section 1 (no page numbers in Licence Conditions). <http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/MPLANS/MPlans.htm>

100 Scoring Guidepost

- There are requirements in the management system to reduce the capture of non-target species, which include:
 1. Controlling the use of gear types and fishing practices that result in significant catches of non-target species or undersized individuals of target species, and/or
 2. Implementing closed seasons and no-fishing zones during times and in areas where the probability of making significant catches of non-target species or undersized individuals of target species is high, and
 3. Holding education programs for the fishing industry and other relevant stakeholders to make them aware of the benefits of using fishing techniques and gear that minimize the catch of non-target species or undersized individuals of target species.
- Taking into consideration natural variability in population abundance and the possibility of declining abundance resulting from heavy exploitation, the management system can demonstrate the effective use of these methods by fishers by the existence of downward trends in the catches of non-target species.
- The management system creates incentives to decrease the catch of non-target species (eg, by providing more fishing time for vessels achieving certain standards for reducing such catches).

80 Scoring Guidepost

- Through educational programs for members of the fishing industry and other relevant stakeholders, the management system discourages the use of gear types and fishing practices that result in high catches of non-target species or undersized individuals of target species, and encourages them to avoid fishing in areas identified to have high concentrations of non-target species or undersized individuals of target species.
- Taking into consideration natural variability in population abundance, there is evidence that the capture and discard of non-target species or undersized individuals of target species is trending downward, or is at a level of exploitation that has been determined by management to be acceptable.
- Fishers generally conduct their fishing activity in a manner that is consistent with the goal of reducing the catch of non-target species or undersized individuals of target species.

60 Scoring Guidepost

- The majority of fisheries are conducted in a manner that is consistent with the goal of reducing the catch of non-target species or undersized individuals of target species.

Indicator 3.7.2

Prohibits the use of destructive fishing practices such as poisons and explosives.

DFO Response

Current Situation

The use of explosives is prohibited by section 28 of the *Fisheries Act*. The text of the *Fisheries Act* may be viewed on the Internet.⁴³

The type, size and quantity of fishing gear and equipment that is permitted to be used and the manner in which it may be used are specified in the Conditions of Licence.⁴⁴ Neither explosives nor poisons are included in the list of permitted gear and equipment.

Scoring Summary

The information presented establishes that the indicator is fully achieved in the Pacific salmon fishery.

The single 60 Scoring Guidepost is met.

The single 80 Scoring Guidepost is met.

Both 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- The management system prohibits fishing practices that utilize poisons or explosives, or other such devices that damage or destroy physical, chemical, and/or biological features or characteristics of the areas where such practices are prosecuted.
- Evidence can be provided by the management system that such destructive practices are not currently being employed in the fishery.

80 Scoring Guidepost

- The management system can demonstrate that destructive fishing practices, such as poisons or explosives, are not currently being used in the fishery.

⁴³ <http://laws.justice.gc.ca/en/f-14/59326.html>

⁴⁴ Eg, Conditions of 2003/2004 Salmon Area B Licence, part 1, section 3 (no page numbers in Licence Conditions).

60 Scoring Guidepost

- The management system prohibits or discourages the use of destructive fishing practices.

Indicator 3.7.3

Minimizes operational waste such as lost fishing gear, oil spills, on-board spoilage of catch, etc.

DFO Response**Current Situation**

The *Fisheries Act* states that: "...no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water."⁴⁵

The *Fisheries Act* may be viewed at the following web address:

<http://laws.justice.gc.ca/en/f-14/59326.html>.

The Canadian commercial fishing sector has responded positively to the growing conservation consciousness by developing its own *Canadian Code of Conduct for Responsible Fishing Operations*. Over 80 percent of Canada's fishing organizations have signed on and ratified the Code that is overseen by a Responsible Fishing Board.⁴⁶

The Code can be viewed at the following web site: http://www.dfo-mpo.gc.ca/communic/fish_man/code/cccrfo-cccpr_e.htm

Principle 6 of the Canadian Code of Conduct for Responsible Fishing Operations states: "Reduce waste and adverse impacts on the freshwater and marine ecosystems and habitats..."

Guideline 1.2 of the Code states: "Practice environmentally sound waste management in all aspects of harvesting operations."

Guideline 5.7 states: "Cooperate with appropriate regulatory authorities to establish sound waste management policies and procedures."

Guideline 2.6 states: "Employ fishing practices that minimize the risk of gear loss."

Guideline 2.7 states: "Establish jointly with regulatory agencies protocols for the marking, retrieving and reporting of lost gear."

⁴⁵ *Fisheries Act*, section 36, sub-section 3. See body of report for web link to text of *Fisheries Act*.

⁴⁶ IFMP 2003, section 4.1.9, fourth paragraph, first two sentences, page 26.

Guideline 2.8 states: "Make every reasonable effort to retrieve lost fishing gear, reporting all lost gear."

Conditions of licence require salmon harvesters to release fish whose possession or retention is prohibited back to the water "in a manner which causes them the least harm" which may include the use of a revival tank.⁴⁷

As part of the licencing scheme, vessels have to be inspected to ensure, among other things that operational waste is not released into holding areas. Similarly inspection programs are in place in fish plants to ensure that operational waste is minimized and disposed of properly.

The BC Institute of Technology (BCIT) in partnership with the Provincial Ministry of Agriculture, Fisheries and Food (MAFF) carries out fish handling/ freezing workshops to promote proper fish killing, bleeding, freezing etc, encourages strategic planning for HR capacity building, etc.⁴⁸ The BC Salmon Marketing Council prepares and distributes materials on fish handling and quality.⁴⁹ BC industry and government participate in initiatives to improve the seafood value chain.⁵⁰ Also, MAFF is funding the BCIT Food Technology Section to do research aimed at expanding and diversifying fish product forms.

Scoring Summary

The information presented demonstrates that fish harvesters have recognised the importance of fishing sustainably and avoiding/minimising the deleterious effects of their operations.

The single 60 Scoring Guidepost have been met.

Both 80 Scoring Guideposts have been met.

All three 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- The management system has a formal program to reduce operational waste in the fishery, with the long-term goal of eliminating such waste.
- The program is effective, as reflected by reduced incidents of operational waste.
- The management system has a formal program in which they work with the fishing industry and other relevant stakeholders to promote the proper handling of catch.

⁴⁷ Eg, Conditions of 2003/2004 Salmon Area B Licence, part 1, section 5, sub-section 2 (no page numbers in Licence Conditions).

⁴⁸ Workshop on Development of HR Training Capacity for the BC Seafood Harvesting, Culture and Processing Sector. May 21, 2003. BCIT Burnaby.

⁴⁹ BC Salmon Marketing, various publications, videos, posters

⁵⁰ Seafood Value Chain Roundtable. June 17-18, 2003. Agrifood Canada. Aylmer Quebec

80 Scoring Guidepost

- The management system has a program that sets guidelines for reducing operational waste.
- The management system encourages the fishing industry and other relevant stakeholders to promote programs for the proper handling of catch.

60 Scoring Guidepost

- There is a program to reduce operational waste.

Indicator 3.7.4

The management system solicits the cooperation of the fishing industry and other relevant stakeholders in the collection of data on the catch and discard of non-target species and undersized individuals of target species.

DFO Response

Current Situation

In January 2002, DFO released a *Fishery Monitoring Framework* to facilitate a review of the current catch monitoring and reporting systems in Pacific Region (Fisheries and Oceans Canada 2002). The objective of the review is to identify the necessary improvements to these systems to better meet the needs of the resource and all interested sectors (governments, First Nations, stakeholders, general public and international agencies).

Fisheries monitoring and catch reporting systems serve a variety of purposes including fisheries management, stock assessment, socio-economic analyses, and reporting to international agencies. Accurate information on the total catch (fish harvested, released and discarded) is required in the long-term to establish conservation targets for fishery resources, and in the short-term to ensure that these targets are met.

Presently DFO is in the process of developing and implementing catch monitoring guidelines in the commercial salmon fishing sector. This program requires fishermen to accept onboard monitors and report detailed catch data on target and non-target species. These catch reporting requirements are regulated under the authority of the Fisheries Act; their success depends on cooperation of and assistance from the commercial fishing industry.

Scoring Summary

The information presented describes the department's progress on this indicator.

The lone 60 Scoring Guidepost is met.

The sole 80 Scoring Guidepost has been met.

Both 100 Scoring Guideposts have been met.

Future Changes

The Fishery Monitoring and Catch Reporting Discussion Document will provide a base for continuing improvements in these areas once consultations are complete.

100 Scoring Guidepost

- The majority of fish harvesters and processors is in compliance with management requests for the collection of data on catches and discards of non-target species and undersized individuals of target species.
- Continued improvement in the quality and quantity of catch and discard data is evident.

80 Scoring Guidepost

- Sufficient numbers of fish harvesters and processors comply with requests for data on catches and discards of non-target species and undersized individuals of target species to ensure that reliable estimates of total catches and discards for the fishery can be obtained.

60 Scoring Guidepost

- Catch and discard data provided by the fishing industry and other relevant stakeholders are sufficient to manage the harvests from the majority of the non-target species and undersized individuals from the majority of the target species.

Indicator 3.7.5

Implements fishing methods that minimize adverse impacts on habitat, especially in critical zones.

DFO Response

Current Situation

Commercial sockeye fishing activities in Barkley Sound and Alberni Inlet are conducted in deep-water areas. Commercial gillnets fish in the upper 10 meters of the ocean. Seine nets and troll gear types are not effective when in contact with the ocean floor.

Section 35 of the *Fisheries Act* prohibits “any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat.” The *Fisheries Act* may be viewed on the Internet.⁵¹ Fisheries officers will charge or prosecute individuals or organisations shown to damage fish habitat.

⁵¹ <http://laws.justice.gc.ca/en/f-14/59326.html>

Scoring Summary

The information presented establishes that the indicator is fully achieved in the Fraser River sockeye commercial fishery.

The one 60 Scoring Guidepost has been met.

Both 80 Scoring Guideposts have been met.

All three 100 Scoring Guideposts have been met.

100 Scoring Guidepost

- The management system has a formal program to identify and document the impact of the fishery on habitat, and implements measures to restrict gear and fishing practices that have been shown to adversely affect habitat.
- The crews of fishing vessels comply with such measures and thereby avoid damaging the habitat.
- There is no evidence of continued impacts of fishing on habitat.

80 Scoring Guidepost

- The management system undertakes measures to identify and document the impact of the fishery on habitat and to set guidelines for reducing habitat impacts.
- Fish harvesters are encouraged to follow the guidelines for reducing habitat impacts.

60 Scoring Guidepost

- The management system has a program for assessing the impact of the fishery on habitat, and for making fishers aware of suitable fishing gear and practices that are known to reduce adverse impacts on habitat.