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Performance Review of the Wild Salmon Policy

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ACRONYMS

ATK	Aboriginal Traditional Knowledge
CU	Conservation Unit
ENGO	Environmental Non-Governmental Organization
FAM	Fisheries and Aquaculture Management
FRSSI	Fraser River Sockeye Spawning Initiative
FTE	Full Time Equivalent
IFMP	Integrated Fishery Management Plans
IMP	Interim Management Planning
ISP	Integrated Strategic Planning
IT	Implementation Team
MSC	Marine Stewardship Council
OHEB	Oceans Habitat Enhancement Branch
OPC	Operations Committee
RD	Regional Director
RDG	Regional Director General
RMAF	Results-based Management and Accountability Framework
RMC	Regional Management Committee
SARA	Species at Risk Act
WSP	Wild Salmon Policy

Summary

About this review

Canada's Policy for Conservation of Wild Pacific Salmon (commonly referred to as the Wild Salmon Policy, WSP) was adopted in June 2005. Its goal is to restore and maintain healthy and diverse Pacific salmon populations and their habitats for the benefit and enjoyment of the people of Canada. This goal is to be achieved by safeguarding the genetic diversity of wild salmon populations, maintaining habitat and ecosystem integrity, and managing fisheries for sustainable benefits.

This review responds to the commitment in the *Policy* to conduct "An independent review of the success of the WSP in achieving its broad goals and objectives..." This report examines progress made in implementing the *Policy*. It provides an assessment of how this work has contributed to achieving the goal and objectives, and identifies internal and external factors and challenges that have influenced success. It also sets out several recommendations intended to accelerate the pace of implementation.

The information relied on to conduct the review includes that found in documentary sources and obtained through interviews with DFO officials, First Nations representatives, representatives of the commercial and recreational fisheries and ENGOs. Documents were obtained mainly from Fisheries and Oceans Canada, and also from ENGOs and individual interviewees. Transcripts of testimony given at the Cohen Commission and materials compiled by the Commission were also used. An attempt to gather opinion using an on-line survey posted to the WSP website yielded limited results.

Main findings

The rationale for the WSP remains strong – In light of the scientific uncertainty surrounding the health of the salmon resource, coupled with the growing threats to salmon populations, the underlying need for the *Policy* is at least as strong today as it was when it was adopted in 2005.

Progress on implementation has been slow – Actual progress in implementing the *Policy* has been much slower than indicated in initial planning documents. While the application of WSP principles and the provisional results of some of the strategic initiatives are informing DFO's day-to-day operations and decisions on fisheries management, insufficient progress has been made in implementing these initiatives to make more than modest progress in realizing the *Policy*'s objectives and goal.

Delineating conservation units (CUs), one of the cornerstones of the *Policy*, was completed in 2008 for BC, with identification of Yukon CUs expected in 2011. The methodological work to develop criteria to assess CU status was completed in 2009, with some provisional abundance benchmarks developed for several Fraser sockeye CUs. Similarly, progress has been made documenting habitat characteristics and developing the methodology to establish habitat benchmarks (2008). *But six years after implementation began, the critical outputs needed to take action on priority CUs, following the approach set out in the Policy, have not yet been completed.*

Implementation does not seem to be a Departmental priority – The slow implementation can be explained in part by complexity and newness of what was being attempted, but ultimately it comes down to a question of priority and resources. The Department has gone to great lengths to stress the broad significance of the *Policy* and bring First Nations and stakeholders into the decision-making process. Expectations have been raised. The risk, of course, is that with limited progress in overall implementation, the partners DFO needs to support the process will grow frustrated and withdraw their participation.

Pacific Region lacked the resources for effective implementation – DFO provided funds at the national level to support WSP implementation. This augmented regional resources, providing a "kick-start" to the *Policy*. Whether this financial commitment was adequate to the task of implementing a *Policy* that DFO held up as "transformative" is another matter. The Ottawa funding in the first two years added 0.2-0.3% to the annual Pacific Region budget, then dropped to the 0.1-0.2% range. It is difficult to escape the conclusion that, given the

great significance attached to the goal and objectives, the resources dedicated to implementation were inadequate to achieving these within the timeframe originally envisaged.

The absence of an implementation plan compromised progress – The *Policy* itself called for an implementation plan “To ensure its commitments are met...”, but one was not prepared. An implementation plan was essential given: the complexity and interdependence of the *Policy* activities; the need to provide a coherent basis for establishing resource and budget requirements; the need to have some basis for establishing accountability and measuring progress; and, the need to communicate both internally and externally the nature, scope, timing and relationship of activities in order to promote understanding and collaboration. It would appear that the limited incremental resources to implement the WSP and the consequent need to take an adaptive approach, coupled with a sense of urgency to get on with it, might account for the decision to forego a formal implementation plan. But rather than diminish the need for plan, these factors would arguably do just the opposite – heighten that need.

Contribution to meeting objectives is modest – Two foundational pieces have been completed in the six years since the *Policy* was adopted: delineating CUs for BC and the Yukon; and, identifying freshwater habitat indicators, metrics and benchmarks. Two other foundational pieces are well advanced: developing criteria to assess the status of CUs; and, developing habitat characteristic templates and completing status reports on six watersheds. While these are clearly fundamental building blocks for a fully realized *Policy*, they are not enough to make more than a modest contribution to the actual objectives and goal of the *Policy*. They provide the technical basis – the framework – for implementing the extensive work needed for the *Policy* to succeed. This work requires activity in three essential areas: establishing abundance and distribution benchmarks for each of the CUs and monitoring and assessing their status; assessing the habitat status of CUs; and, implementing an interim process for managing priority CUs. Until these activities produce their intended outputs and outcomes, the *Policy* objectives will remain largely unrealized and the goal a worthy, but elusive, target.

Challenges and barriers

- ❑ **Complexity and uncertainty:** WSP requires the development and implementation of innovative approaches to safeguarding the genetic diversity of wild Pacific salmon. These have required more time to resolve than originally expected.
- ❑ **Implementation funding:** Policy implementation was to proceed “within the envelope of available funding”. In addition to imposing an overall constraint on implementation, this also added a layer of uncertainty since it effectively limited the horizon to plan activities to a year or so.
- ❑ **Consultation:** DFO engaged in extensive consultations during WSP development. While highly beneficial to *Policy* development and implementation, organizing, conducting and participating in these meetings was also time-consuming and expensive for DFO, First Nations and stakeholders.
- ❑ **First Nations engagement:** The importance of engaging First Nations in WSP implementation is widely recognized within DFO. But the nature and frequency of consultations, and what is expected of First Nations, represents a challenge to the capacity to participate. Moreover, First Nations participation in planning structures is also an issue from the perspective of how decisions are made with respect to weak stocks under Strategy 4. Where title and rights are affected, First Nations contend that decisions should be made within a Tier 2 framework, not Tier 3.
- ❑ **Collecting and applying Aboriginal Traditional Knowledge (ATK)** – The importance of incorporating Aboriginal Traditional Knowledge, ATK into analysis and decision-making is widely recognized and forms an explicit element in the *Policy*. DFO has prepared discussion papers on the question of how to compile and apply ATK, but a framework has not yet been prepared and adopted. First Nations believe that ATK should be an integral part of Tier 2 discussions with DFO.
- ❑ **Jurisdiction and capacity:** For the WSP to work effectively, it has to work at the watershed level. The concern here is that a lack of capacity (human and financial resources) at the provincial level represents a barrier to participation in the form of monitoring, restoration and watershed planning.

- ❑ **Fear and strategic behaviour:** Fear of outcomes once CU benchmarks and status have been determined could affect support for the IMP/ISP process, resulting in strategic behaviour in planning processes and limiting the effectiveness of CU management.
- ❑ **Resources:** The overall level of funding was inadequate to carry out any more than the foundational activities under each of the Action Steps. Inadequate funding slowed down implementation of key activities including developing benchmarks and monitoring under Strategy 1 and habitat status reports under Strategy 2.
- ❑ **Capacity:** the *Policy* envisages the involvement of various partners (First Nations, stakeholders, community groups) to assist DFO in carrying out such work as monitoring, assessment and habitat restoration. The Department itself lacks the capacity (enough people with the right skills) to conduct these activities.
- ❑ **Horizontal management and integration:** DFO conducts its operations within a vertical structure of specialized branches. Despite the extent to which strategies cut across branches and the extent of integration required, there is no one below the Regional Director General (RDG) with horizontal management responsibility for implementing the WSP.
- ❑ **MSC certification:** The conditions set out in the MSC certification of four sockeye fisheries impose a 5-year timeline on completing key elements of the WSP. The Action Plan adopted by DFO commits the Department to meeting these conditions, several of which are dependent on full implementation of the WSP.

Recommendations

Recommendation 1: WSP needs a firm DFO commitment with funding

One of the lessons to emerge from the WSP implementation experience since 2005 is that a lack of a firm DFO commitment to implement the *Policy* is a key reason it has not progressed. So far, the *Policy* is transformative in principle only. If the Department wants the *Policy* to be transformative in practice, then it should make it so. Essential to this is the allocation of sufficient resources to carry out the activities on the critical path to identifying and addressing priority CUs. Failure to make a clear commitment of resources could result in a public perception that conservation is not the highest priority, causing First Nations and stakeholders to question their own continued support for the *Policy*. The amount required is unknown at this point, but it would become clear with the completion of an implementation plan (Recommendation 3).

Recommendation 2: Identify priority action steps and target resources strategically

Proceed expeditiously to complete the technical work and assessments needed to identify priority CUs and the actions needed to address them. This approach is consistent with the top priority assigned to conservation. It gives practical expression to applying the precautionary approach to resource management decisions. It makes it possible to take immediate action to address resource issues through harvest management, recognizing that it may take several more years before habitat and ecosystem information becomes available and structures have been established to develop ISPs.

This approach creates two-track implementation, much along the lines set out in the *Policy*. The tracks would be identified by their main outputs:

- ❑ **Interim Management Planning:** this track consists of essential activities to be completed within one year, directed to identifying priority CUs and creating response teams to develop IMPs as envisaged in the *Policy*. The implementation focus is on issues meeting two criteria: they fall within federal jurisdiction and DFO's mandate, and are susceptible to remedial action that can be planned and implemented in the short run. A first step in developing IMPs is to approve an approach for identifying and planning for priority CUs.
- ❑ **Integrated Strategic Planning:** this track follows the approach set out in the *Policy*, calling for the creation of new planning structures to develop long-term strategic plans that determine biological targets for CUs and for habitat and ecosystem status, while considering the biological, social and economic impacts of fishing. This does not differ from what the *Policy* envisages, but it recognizes that it could be many years before there is sufficient information to integrate.

In short, taking a two-track approach does not mean abandoning the existing pilot planning initiatives. Rather, it recognizes that with the current scope and pace of implementation, it could be many years before WSP activities produce the full range of biological, habitat and ecosystem information needed to prepare ISPs, and many years before the pilot initiatives provide useful lessons on structure and process. The IMP approach responds to the urgency of addressing priority CUs, but could evolve into an ISP process as ongoing work produces habitat and ecosystem information.

Recommendation 3: Develop a formal implementation plan

WSP implementation would benefit greatly from a road map setting out the nature and scope of the activities needed to produce the various outputs, how they will be integrated, and what is required in terms of time and resources to complete each of them. This is particularly the case given Recommendation 2. An implementation plan would provide insight into the longer term relationship amongst activities and outputs, and give a 5-year timetable for activities, thereby allowing DFO, partners and the public to gain insight into what can be expected and when.

Recommendation 4: Make a senior manager accountable for implementation

This recommendation is aimed at strengthening the accountability framework. At present, responsibility for WSP implementation is spread across branches, with each director accountable for a set of specified activities to be carried out by staff within that branch. A potential weakness in this system arises from the absence of an individual with responsibility and accountability for the horizontal aspects of the WSP – which operational activities that cut across branch lines. This is more than a coordinating function, in that it would include the operational authority to ensure staff are doing what they have committed to do under annual workplans. Strengthening accountability would be a matter of ensuring that individual assignments flowing from annual workplans find their way explicitly into performance agreements and on up to the RDG through accountability accords.

Recommendation 5: Adopt a strategic approach to consultations

DFO, First Nations and stakeholders devoted considerable time and resources to planning and participating in WSP consultations during the formative and implementation stages. While most agree that these consultations were helpful to guide design and implementation and to gain insight into approaches and progress, many inside and outside DFO also expressed the view that this level of consultation took far more time than originally anticipated and would be difficult to sustain in the long run. A more strategic approach is recommended, where DFO relies more heavily on electronic media to disseminate technical information, with the consultation process used in cases where direction and decisions are required on major design and implementation issues.

Recommendation 6: finalize and adopt approaches for key operational matters

Discussion papers and background reports have been prepared and several meetings have been held to address issues that are fundamental to effective implementation of the WSP. As yet, satisfactory approaches have not been adopted. DFO and external partners should act expeditiously to resolve these matters:

- ❑ **Planning scale for CUs.** Adopting the right scale for CU planning (whether IMP or ISP) is critical to the success of the WSP because it would be practically impossible to develop plans for each of the ±450 CUs. A final decision on planning scale should be made and the framework developed and implemented.
- ❑ **Method to compile and integrate ATK.** First Nations representatives stress the importance of taking ATK into consideration in conservation planning, but also believe that it would be more effectively integrated within a co-management framework (a Tier 2 approach). How to develop joint agreements with all the First Nations who would be involved in the various IMP and ISP planning structures represents a key challenge.
- ❑ **Socio-economic impact framework.** Developing a template for assessing the socio-economic impact of management decisions is critical to the success of the ISP process.

1

WSP review – issues and approach

1. Issues for review

This review responds to the commitment in the *Policy* under Strategy 6.2 to conduct “An independent review of the success of the WSP in achieving its broad goals and objectives...”¹

The Statement of Work directs the reviewer to address four main issues:

1. To what extent has progress been made with implementing Strategies 1-5 and the associated action steps?
2. Building on work done with respect to the strategies, to what extent has this work contributed to the WSP goal and objectives?
3. Are there internal/external factors and or general challenges/barriers that influence the success of the WSP?
4. Are there recommendations to further advance implementation of the Wild Salmon Policy in the context of DFO’s existing resources?

The Statement of Work is set out in Appendix 1.

2. WSP logic model

A **Results-based Management and Accountability Framework (RMAF)** for the *Policy* was prepared shortly after it was adopted in June 2005.² An RMAF for federal policies and programs follows guidelines established by federal Treasury Board.³ An RMAF addresses the requirement for both ongoing performance measurement as well as the need for longer-term evaluation planning. In the case of the WSP, the RMAF provides DFO managers and staff with a road map to manage the *Policy*’s complexity. Among the potential benefits listed are:

- A logical design tying resources and activities to expected outputs
- Clear roles and responsibilities for the main partners
- A basis for improving performance
- Demonstrated accountability
- Timely information for managers and partners

The RMAF prepared for the WSP conforms to Treasury Board guidelines and has three main components:

- **Profile** – a brief description of the *Policy*, its context, stakeholders and intended beneficiaries, and resources allocated

¹ Fisheries and Oceans Canada, *Canada’s Policy for Conservation of Wild Pacific Salmon*, 2005, page 34.

² Fisheries and Oceans Canada, *Wild Salmon Policy Implementation Workplan: Results-based Management and Accountability Framework*, September 2005.

³ <http://www.tbs-sct.gc.ca/cee/tools-outils/rmaf-cgrr/guide02-eng.asp>

- ❑ **Expected results** – a description and illustration (logic model) of how the activities are expected to lead to successful implementation of the *Policy* and achievement of its goal and objectives
- ❑ **Monitoring and evaluation** – a description of how ongoing performance will be measured and evaluation activities that will support effective management and accountability.

Central to this review are the expected results and to what extent they have been achieved (issues 1 and 2, above). The relationship of inputs, activities, outputs and expected outcomes are set out in the Logic Model shown in Figure 1.1. Moving from left to right:

- ❑ *Inputs* are provided by DFO (mainly A-base budget), and although not indicated, are also expected of First Nations, stakeholders and other governments
- ❑ *Activities* are the action steps described in Chapter 2 and are listed under each of the four implementation strategies
- ❑ *Outputs* represent the technical information and assessment frameworks these activities are intended to produce
- ❑ *Direct outcomes* represent the first-stage (short term) results of using the information and applying the frameworks
- ❑ *Intermediate outcomes* represent the second-stage (intermediate term) results that flow from the plans and processes achieved by building on the direct outcomes
- ❑ *Final outcomes* represent the WSP objectives and are achieved over the longer term when the direct and intermediate outcomes are produced
- ❑ The final outcomes contribute to the achievement of DFO's *strategic outcomes* and also to achieving the *WSP goal*.

The Logic Model is supported in the RMAF by detailed proposals for each strategy setting out task specifics, proposed deliverables, outcomes, completion dates, any incremental FTE/salary, O&M costs, and managers who are accountable. Of particular note are the target completion dates.

- ❑ A completion date of the end of fiscal 2006/07 is indicated for the substantive work to identify indicators and benchmarks, document status and develop monitoring/assessment frameworks under Strategies 1-3.
- ❑ A completion date of the end of fiscal 2005/06 is indicated for establishing an interim process for managing priority CUs, with the fully integrated planning process to be established by the end of fiscal 2006/07.
- ❑ The role of the WSP implementation coordinator ends at the end of fiscal 2006/07. After this, WSP activities are sufficiently integrated into DFO operations that coordination would not be required.

A discussion of risks that could compromise success is also included for each strategy. In all cases, the major risk identified is the availability of staff and resources in the face of competing priorities and budget constraints.

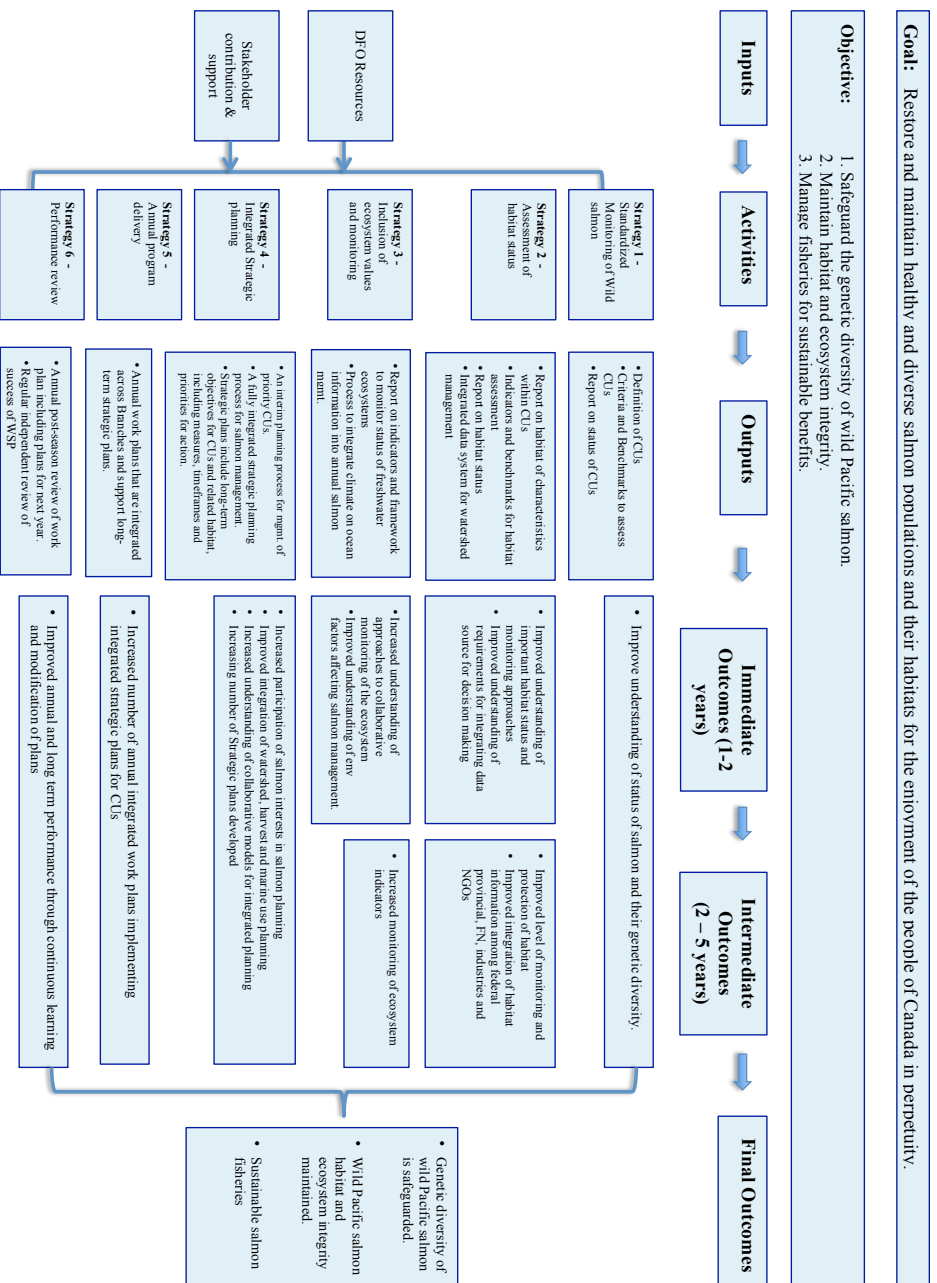


Figure 1.1: WSP logic model

3. Review framework

The review builds on the 2005 logic model by specifying performance measures for the activities under each strategy and identifying the corresponding information required to assess performance. A set of preliminary performance measures was provided by DFO as part of the Statement of Work. The wording has been modified where necessary by the consultant to ensure these measures capture the full range of outputs expected. The review framework, including information sources, is set out in Table 1.1.

It is important to note that the performance measures are specified in relation to *outputs*. In other words, they are framed to determine whether the activities have produced the intended outputs. They are not framed in relation to *outcomes*, since for most activities it would be too early to expect to see outcomes except directionally in relation to the high-level *Policy* goal and objectives.

The information relied on to conduct the review included that found in documentary sources and obtained through interviews with individuals familiar with the *Policy* and its implementation. Documents were obtained mainly from Fisheries and Oceans Canada, and also from ENGOs and individual interviewees. Transcripts of testimony given at the Cohen Commission and materials compiled by the Commission were also relied on. The list of documents and materials used to produce this report is contained in the bibliography. Appendix 2 contains a list of those interviewed. Interviews were conducted in person where possible, and otherwise by telephone.

Table 1.1: Evaluation Framework: Performance Measures, Data Requirements and Sources

Strategies/Action Steps	Performance Measures	Data/Information Required	Data/Information Sources
<p>Strategy 1: Standardized monitoring of wild salmon status</p> <p>1.1 Identify Conservation Units</p> <p>1.2 Develop criteria to assess CUs and identify benchmarks</p> <p>1.3 Monitor and assess CUs</p>	<ul style="list-style-type: none"> Methodology is developed and applied to define CU boundaries to improve understanding of genetic diversity Tools and methodology are developed to define CU benchmarks and assess status as a basis for management actions % of CUs that have been assessed Methods put into place for stakeholder/ partners' engagement on CU assessments 	<ul style="list-style-type: none"> Report(s) specifying CU methodology and defining CUs CUs by species/characteristics Specified criteria Quantitative status indicators & benchmarks for each CU Method to assess/report status Number of CUs assessed Results of assessment against benchmarks Monitoring program & results Stakeholder engagement process 	<ul style="list-style-type: none"> DFO/CSAS First Nations Stakeholders DFO/CSAS First Nations Stakeholders/partners DFO/CSAS First Nations Stakeholders/partners ENGOS
<p>Strategy 2: Assessment of habitat status</p> <p>2.1 Document habitat characteristics</p> <p>2.2 Select indicators and develop benchmarks for habitat</p> <p>2.3 Monitor and assess habitat status</p> <p>2.4 Linkages to develop integrated data system for watershed management</p>	<ul style="list-style-type: none"> Tools are produced to improve understanding of habitat status List of indicators, corresponding benchmarks & data sources Approaches for prioritizing areas for Strategy 2 status reporting and monitoring are established Partnership arrangements are fostered to support monitoring Tools for sharing and displaying CU spatial information including habitat status reports are developed 	<ul style="list-style-type: none"> CU habitat characteristics reports documenting status Documents reporting on indicators, benchmarks & data sources Monitoring system protocol and status reports for priority CUs Documentation on partnerships and nature & scope of involvement Reporting systems for CU habitat status information Stakeholder use of reporting systems 	<ul style="list-style-type: none"> DFO/CSAS First Nations Stakeholders/partners ENGOS

Strategies/Action Steps	Performance Measures	Data/Information Required	Data/Information Sources
<p>Strategy 3: Inclusion of ecosystem values and objectives</p> <p>3.1 Identify indicators to monitor status of freshwater ecosystems</p> <p>3.2 Integrate climate & ocean info into annual salmon management</p>	<ul style="list-style-type: none"> • Tools have been developed and are being applied to improve understanding of environmental factors affecting salmon • # of reports produced with integrated climate and ocean information to inform salmon management • Stakeholder/ partners' satisfaction in ecosystem monitoring engagement 	<ul style="list-style-type: none"> • Methodology to identify ecosystem values and objectives and indicators, Ecosystem monitoring framework, Ecosystem reporting integrated with ongoing salmon status assessments • Evidence that ecosystem information is incorporated into annual salmon management processes • Evidence of stakeholder engagement (participation in planning/execution of monitoring and salmon management) 	<ul style="list-style-type: none"> • DFO/CSAS • First Nations • Stakeholders/partners • ENGOS • Monitoring reports • Management plans
<p>Strategy 4: Integrated strategic planning</p> <p>4.1 Implement an interim process for integrated management of priority CUs</p> <p>4.2 Design & implement integrated strategic planning process</p>	<ul style="list-style-type: none"> • Priority CUs identified • % of priority CUs captured in pilots • Stakeholder satisfaction in pilot engagement • # of strategic plans initiated • Mechanisms developed to implement strategic plans • DFO engagement on other integrated planning processes 	<ul style="list-style-type: none"> • Documentation/commentary on pilot integrated management of priority CUs (e.g., Barkley Sound/FRSSI/Skeena) • Strategic plans initiated/completed • Reports on plan implementation process & experience • Evidence of links to other planning processes 	<ul style="list-style-type: none"> • DFO • First Nations • Stakeholders/partners • ENGOS • Integrated planning reports • Integrated planning process reports

Strategies/Action Steps	Performance Measures	Data/Information Required	Data/Information Sources
<p>Strategy 5: Annual program delivery</p>			
<p>5.1 Assess the status of CUs</p>	<ul style="list-style-type: none"> • # & priority of CUs that have been assessed 	<ul style="list-style-type: none"> • CU assessment reports • Process materials 	
<p>5.2 Plan and implement annual fisheries management activities for CUs</p>	<ul style="list-style-type: none"> • Annual fisheries management measures are identified and documented in IFMPs for CUs • Decision rules are developed in collaboration with First Nations, partners and stakeholders 	<ul style="list-style-type: none"> • Copies of CU IFMPs • IFMP process materials • Copies of decision rules • Consultation process materials/reports 	<ul style="list-style-type: none"> • DFO • First Nations • Stakeholders/partners • CU assessment process managers/staff
<p>5.3 Plan and implement annual habitat management activities for CUs</p>	<ul style="list-style-type: none"> • Priorities for habitat rehabilitation or restoration are identified • Annual reports on regulatory functions related to key habitats, restoration and rehabilitation are prepared • Habitat assessment and monitoring inform the Habitat Management Program 	<ul style="list-style-type: none"> • Documentation on priorities • Annual reports and supporting materials/documents • Documentary evidence of linkages between assessment/monitoring and Habitat Management Program 	<ul style="list-style-type: none"> • Habitat management process managers/staff • IFMP process managers/staff
<p>5.4 Plan and implement annual enhancement activities for CUs</p>	<ul style="list-style-type: none"> • Annual production targets and strategies are documented in IFMPs • Priorities are identified where enhancement can contribute to CUs in the red or amber zone 	<ul style="list-style-type: none"> • Enhancement program/activity reports • Copies of IFMPs • CU assessment reports and linkages with enhancement activities 	

2

About the Wild Salmon Policy

1. Context

Canada's Policy for Conservation of Wild Pacific Salmon (commonly referred to as the Wild Salmon Policy; in this report, WSP or the *Policy*, are used interchangeably) was adopted in June 2005.⁴ Its goal is to restore and maintain healthy and diverse Pacific salmon populations and their habitats for the benefit and enjoyment of the people of Canada. This goal is to be achieved by safeguarding the genetic diversity of wild salmon populations, maintaining habitat and ecosystem integrity, and managing fisheries for sustainable benefits.

DFO bears the broad legislative mandate to develop policies and programs to support "Canada's scientific, ecological, social and economic interests in oceans and fresh waters".⁵ Under the *Fisheries Act*, the Minister is responsible for the management of fisheries, habitat and aquaculture. The Department is also the responsible authority for managing aquatic species listed under the *Species at Risk Act*. These responsibilities are discharged through various policies that guide decision-making; all aimed at achieving specified outcomes including healthy and productive aquatic ecosystems and sustainable fisheries and aquaculture. The WSP forms an integral part of this policy framework.

The impetus for developing the WSP can be traced to several factors, each in its way contributing to the *Policy's* goal and the formulation of its strategic elements:

- ❑ **Iconic species** – salmon holds great cultural and social significance amongst First Nations
- ❑ **Economic importance** – wild salmon provide the basis for a substantial commercial industry, and also of a large recreational sector, both supporting many coastal communities
- ❑ **Declining salmon abundance** – following a period of expansion during the 1980s, salmon spawners, abundance and commercial catch dropped sharply during the 1990s, placing several stocks at risk.
- ❑ **Deteriorating marine and freshwater habitat conditions** – a combination of low ocean productivity and declining freshwater habitat conditions contributed to a challenging environment for stock rebuilding efforts
- ❑ **Non-selective harvesting practices** – weak stocks are threatened by increased harvesting pressure in mixed stock fisheries
- ❑ **Challenging fisheries management environment** – excessive participation in the commercial fisheries, demands for increased access from the recreational sector, coupled the need to meet obligations to First Nations, result in increasing allocation conflict and threats to conservation

⁴ Fisheries and Oceans Canada, *Canada's Policy for Conservation of Wild Pacific Salmon*, 2005.

⁵ <http://www.dfo-mpo.gc.ca/us-nous/vision-eng.htm>

- ❑ **Canada's legal obligations with respect to conservation and biodiversity** – these emerge from federal legislation including the *Fisheries Act*, committing Canada to managing the fishery and represents one of the strongest environmental laws in Canada with respect to protecting fish habitat; the *Oceans Act* (1997), committing Canada to the principles of sustainable development, integrated resource management and the precautionary approach to making decisions affecting marine species; the *Species at Risk Act* (2003), providing a framework for protecting aquatic species at risk and their habitat. Several decisions of Canadian courts have shaped how DFO manages fisheries with respect to obligations to First Nations. Canada is also a signatory to several international agreements, creating obligations and constraints with respect to salmon. Among these are the *Pacific Salmon Treaty* (1985), creating a framework for cooperation in salmon management with the U.S., and the *UN Convention on Biological Diversity* (1992), committing Canada to conserving biodiversity and the sustainable use of the components of biodiversity.⁶
- ❑ **Policies adopted by Fisheries and Oceans Canada to support conservation** – these include the *Policy for Management of Fish Habitat* (1986) providing guidance to developers and the public on habitat conservation, restoration and development; the *Aboriginal Fisheries Strategy* (1992) provides for the effective management and regulation of fishing by Aboriginal communities; *A New Direction for Canada's Pacific Salmon Fisheries* (1998) establishes conservation as the main objective for managing wild salmon and sets out 12 principles to guide conservation, sustainable use and the application of the precautionary approach in decision-making; two specific policies flowing from the *New Direction – An Allocation Policy for Pacific Salmon* (1999) and *A Policy for Selective Fishing in Canada's Pacific Fisheries* (2001) – respectively provide operational guidance in making allocation decisions and an implementation framework for selective harvesting practices.
- ❑ **Advances in marine research and scientific knowledge** – these advances are less about understanding salmon population dynamics in terms of stocks and the diversity amongst populations – these have been well known for decades and form the basis of management units – but rather, they are more about refining the understanding of diversity *within* stocks and building on this information to develop new approaches to protecting this diversity by protecting adaptability. One of the first challenges the WSP seeks to resolve in a practical way is how to organize or delineate this diversity so that it can be addressed in management decisions.⁷

2. Policy development

Though the various threads that shaped the WSP can be traced to the 1980s, the actual development of the *Policy* began with *A New Direction for Canada's Pacific Salmon Fisheries*.⁸ This ministerial statement, produced in response to almost a decade of decline in the salmon resource, set out 12 principles within three components: conservation, sustainable use and improved decision-making. These components, with the addition of honouring obligations to First nations, formed the foundation principles for the WSP.

⁶ For a more detailed description of these various legal obligations and the policy context for the WSP, see *Canada's Policy for Conservation of Wild Pacific Salmon*, Appendix 1.

⁷ For an good discussion of the early development of the WSP and some of the underlying concepts and challenges, see the testimony of Dr. Brian Riddell before the *Commission of Enquiry into the Decline of Sockeye Salmon in the Fraser River*, Panel No. 6, November 29, 2010, pages 6-14.

⁸ Fisheries and Oceans Canada, October 1998.

Actual work on drafting the WSP began in 1999 with a discussion paper, *Wild Salmon Policy: A New Direction*.⁹ This 20-page paper described the approach that DFO would follow to conserve wild Pacific salmon. It was divided into four parts: background on international commitments to conserve diversity; a description of the major factors affecting the viability of wild Pacific salmon; six overarching principles to guide conservation and management; and, the work required to turn principle into practice. The principles were largely science-based, focusing on biodiversity, conservation, conservation units, reference points and strategic interventions. This draft of the *Policy* was confined to a discussion of principles. It was not prescriptive.

Following internal DFO review by the Departmental Management Committee in Ottawa, a slightly modified version of the discussion paper emerged forming the basis for a round of public consultations in early 2000 and parallel consultations with First Nations.¹⁰ These consultations led to a re-drafting of the *Policy* for internal discussion in 2002. This version contained an explicit statement of the WSP goal and reformulated the principles. It also contained general implementation guidelines, addressing resource management, habitat sustainability, enhancement and aquaculture. But this version failed to receive DFO approval, largely because key concepts were not adequately formulated (e.g., conservation unit) and implementation guidelines were expressed ambiguously resulting in unclear implications for fisheries management.¹¹

The *Policy* languished for the next two years due largely to the difficulty of translating principles into practical operational guidelines.¹² But events in 2002 created a renewed interest in completing the *Policy*. The Fraser River sockeye fishery that year had been conducted in an atmosphere of considerable conflict. An external review of the fishery identified several issues including:¹³

- ❑ a lack of agreement on how to define conservation and what degree of risk is acceptable
- ❑ the need to finalize the WSP because fisheries management on the basis of stock aggregates had not addressed the requirements of weaker populations
- ❑ the need for improved consultation processes
- ❑ the need for a transparent and comprehensive approach to making in-season adjustments not provided for in the Integrated Fishery Management Plans (IFMP)
- ❑ ambiguity about how decision rules would be applied
- ❑ an inadequate risk management framework
- ❑ inadequate data to manage Fraser River sockeye (timeliness, accuracy, migration timing, route, stock composition and catch)
- ❑ the need for further development of selective fishing practices.

The report provided recommendations to address each of the issues. Among these was that the WSP should be finalized by the end of 2003. The challenges arising from the conduct of the 2002 Fraser River fishery brought into high relief the need for clear policy guidance on the meaning of conservation and a more refined basis for taking action to advance conservation objectives.

⁹ Fisheries and Oceans Canada, Policy Committee Draft, April 1999.

¹⁰ Fisheries and Oceans Canada, *Wild Salmon Policy, Discussion Paper; A New Direction: The Fifth in a Series of Papers from Fisheries and Oceans Canada*, March 2000.

¹¹ *Commission of Enquiry into the Decline of Sockeye Salmon in the Fraser River*, Summary of anticipated evidence of Pat Chamut, formerly ADM Fisheries Management and Special Advisor, Wild Salmon Policy, 16 November 2010, page 1-2.

¹² Testimony of Pat Chamut before the *Commission of Enquiry into the Decline of Sockeye Salmon in the Fraser River*, 29 November, 2010, pages 19-20.

¹³ Report of the External Steering Committee, *Review of the 2002 Fraser River Sockeye Fishery*, March 2003.

Work to complete the *Policy* resumed in early 2004. How to define conservation and how to deal with sustainable use emerged as the key challenges (fish vs. fisheries). Conservation was the top priority and was defined in terms of protecting and maintaining genetic diversity. Sustainable use was defined separately, in part to highlight the primacy of conservation, and in part to recognize explicitly that the resource offered opportunities for use (provided such use did not compromise conservation). A draft that was much more comprehensive than earlier versions was subject to two rounds of consultation with First Nations and stakeholders in late 2004/early 2005; it was redrafted to incorporate comments and advice received (especially to strengthen ecosystem and habitat considerations), and was formally adopted in June 2005.

3. *WSP overview*

A transformative policy

In his announcement of the adoption of the WSP, the Minister of Fisheries and Oceans stated: “The *Wild Salmon Policy* significantly transforms the management and conservation of wild salmon, their habitats and dependent ecosystems. It provides the foundation of other initiatives currently underway to reform fisheries and habitat management in the Pacific Region.”¹⁴

Goal and guiding principles

The broadly stated goal of the WSP is to restore and maintain healthy and diverse salmon populations and their habitats for the benefit and enjoyment of the people of Canada in perpetuity. Four principles guide the decisions and activities supporting this goal and the intermediate objectives: conservation (the highest priority); honouring obligations to First Nations; sustainable use; and open and transparent decision-making. Figure 2.1 captures the main elements of the WSP in schematic form.

Objectives

The WSP sets out three interdependent objectives:

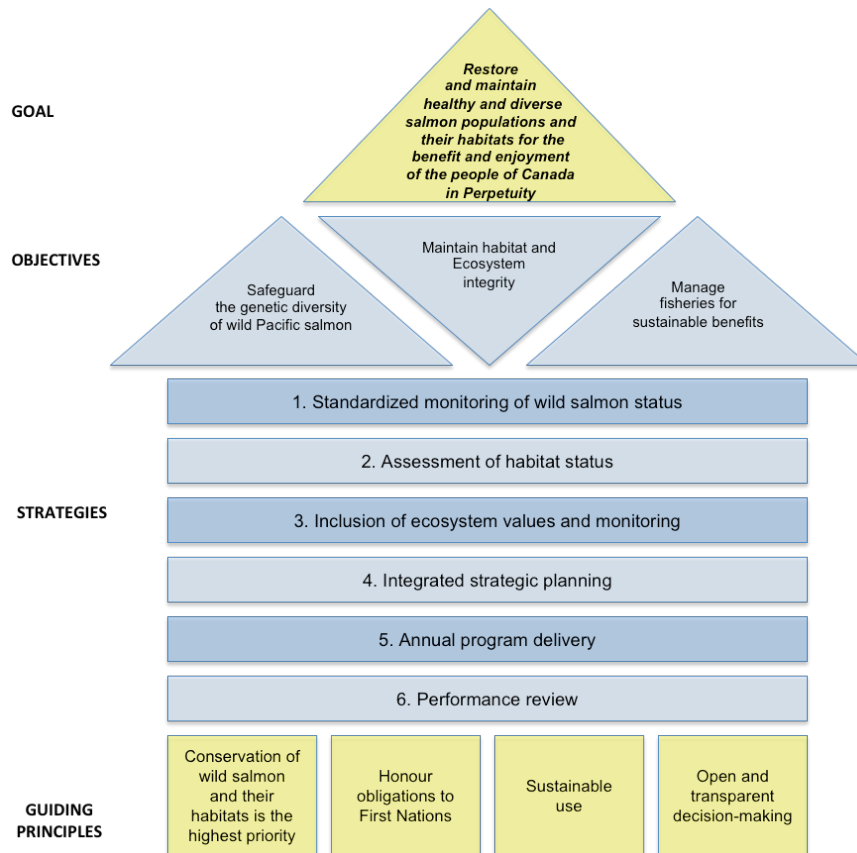
- **Safeguard the genetic diversity of wild Pacific salmon.** This objective captures one of the most challenging issues for the *Policy* – **how much diversity is enough?** This is resolved by taking a precautionary approach and aiming to conserve a wide diversity of populations and habitats. The *Policy* directs DFO to accomplish this through the protection of conservation units, or CUs. The *Policy* gives the CU a precise definition: a group of wild salmon sufficiently isolated from other groups that, if extirpated, is very unlikely to recolonize naturally within an acceptable timeframe. Focusing on the CU essentially protects the adaptability of salmon, which is fundamental to maintaining diversity. At the time the *Policy* was adopted, the CU had been reasonably well defined in conceptual terms,¹⁵ but the scientific work needed to delineate CUs (their number and size) in British Columbia and the Yukon had not been conducted.¹⁶

¹⁴ Fisheries and Oceans Canada, Media release: Adoption of *Wild Salmon Policy* continues reform of Pacific fisheries, June 24, 2005.

¹⁵ Wood and Holtby (1998), *Defining conservation units for Pacific salmon using genetic survey data*.

¹⁶ Figure 2 on page 12 of the *Policy* illustrates the relationship between genetic diversity and CU structure and suggests that BC and the Yukon had a total of about 185 CUs within the five salmon species.

Figure 2.1: Schematic overview of the WSP



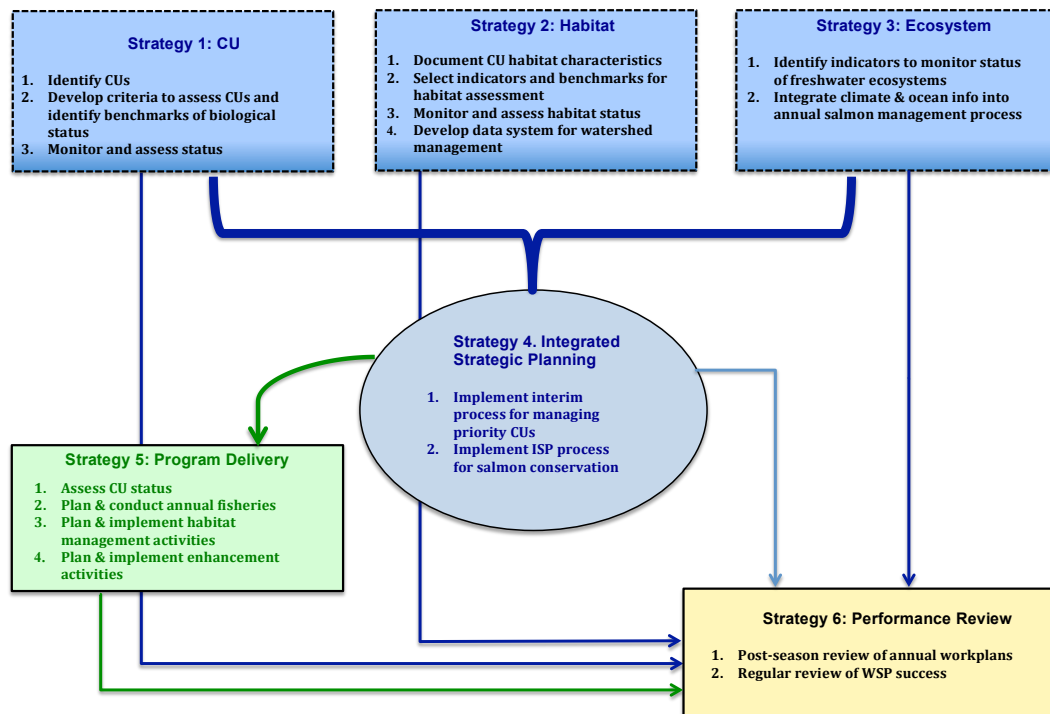
Source: Wild Salmon Policy

- ❑ **Maintain habitat and ecosystem integrity.** As the *Policy* notes, the health and long-term well-being of wild Pacific salmon are tied closely to the availability of diverse and productive habitat (freshwater, coastal and marine). All three habitat areas have been affected to a greater or lesser degree by human activity, thereby compromising their ability to sustain salmon populations at various stages of their life history. The WSP aims to extend DFO's established mandate to prevent habitat loss by taking an integrated approach and assessing and monitoring the importance of habitat on an ecosystem basis. By determining the status of habitat as productive, limiting or at risk, decision-making with respect habitat management and the relationship with salmon harvest and assessment would be clarified and strengthened. Taking action on habitat issues requires the cooperation of the province, other federal agencies, First Nations governments and other stakeholders.
- ❑ **Manage fisheries for sustainable benefits.** This objective recognizes that conservation and use are not mutually exclusive, and that the salmon resource represents a source of social and economic value that can be sustained provided the harvest is carefully managed. The *Policy* goes on to state that in designing any conservation program, the interests of people and communities need to be taken into account through a structured process that establishes specific objectives and priorities, and allows the biological, economic and social consequences of different conservation measures to be considered in an open and transparent way.

Strategies

It is through the successful implementation of the six strategies set out in Figure 2.1 that the WSP objectives and goal would be met. Strategies 1-3 addressing CUs, habitat and ecosystem values provide the scientific and technical underpinning for the *Policy*. It is the information generated through the action steps shown in Figure 2.2 that, coupled with social and economic considerations, is required to develop integrated strategic plans (ISP) under Strategy 4. The *Policy* indicates that a long-term ISP would be developed for each CU. Strategy 5 translates these strategic plans into annual operational plans, which would be reviewed under Strategy 6 to assess their effectiveness in meeting *Policy* objectives.

Figure 2.2: WSP Strategies and Action Steps



Strategy 1: Standardized monitoring of wild salmon status

The *Policy* requires a systematic process to organize all Pacific salmon streams and lakes into geographic units for conservation and specification of the means to monitor abundance and distribution over time.

- **Action Step 1.1 – CUs.** This step delineates the CUs geographically according to genetically similar lineages of fish dependent on a set of habitats. Delineation is based on science and local knowledge (including ATK). CUs are the fundamental building blocks of the *Policy*, identifying the groups of salmon whose status will be assessed and monitored on an on-going basis.

- ❑ **Action Step 1.2 – Develop criteria to assess CUs and identify benchmarks to represent biological status.** The biological status of a CU will be based on indicators of abundance and distribution of spawners in the unit. Status is defined in terms of benchmarks that delimit three zones: green (healthy), amber (caution) and red (risk of extirpation). The extent of management intervention would increase as status moves from the amber to the red zone, and would decrease as status moves to the green zone. The intention is to establish the lower benchmark (delimiting the amber and red zones) at a level of abundance high enough to ensure there is a buffer between it and the level of abundance that could lead to a CU being considered at risk under the *Species at Risk Act*.
- ❑ **Action Step 1.3 – Monitor and assess status of CUs.** Monitoring programs will assess the annual abundance and distribution of spawners in the CU. These programs will build on existing assessment programs and partnerships. When fully operational, each CU will be documented and information reported annually. These assessment results will be compared to the CU benchmarks identified in Action Step 2 in order to determine ongoing biological status and the need for management intervention.

Strategy 2: Assessment of habitat status

The *Policy* recognizes the fundamental importance of productive freshwater and marine habitat to salmon conservation. This strategy is aimed at generating the scientific information needed to document habitat requirements for salmon and to assess habitat status over time.

- ❑ **Action Step 2.1 – Document habitat characteristics within CUs.** This step is intended to identify the habitats that support or limit salmon production in watersheds and CUs, and inform assessment, monitoring and protection activities. Information from multiple sources will be assembled to describe habitat conditions for individual CUs leading to an overview report for each CU that will provide sufficient information (and gaps) on key habitats to identify initial priorities for protection.
- ❑ **Action Step 2.2 – Select indicators and develop benchmarks for habitat assessment.** Indicators for CUs on a watershed scale will be selected to assess the quantity and quality of the habitats identified in Step 2.1. Benchmarks will be developed to reflect the desired values for each indicator (e.g., water temperature, gravel quality).
- ❑ **Action Step 2.3 – Monitor and assess habitat status.** The step builds on steps 2.1 and 2.2 to implement ongoing monitoring to identify changes in habitat conditions over time. This monitoring will be integrated with salmon assessments and ecosystem evaluations. Where changes are detected, causes and response measures would be considered as part of integrated strategic planning for the CU under Strategy 4, as well as for the development of annual workplans under Strategy 5.
- ❑ **Action Step 2.4 – Establish linkages to develop an integrated data system for watershed management.** This is aimed at increasing access to information on fish habitat status. It is envisaged as a collaborative effort with DFO, the provincial government and various stakeholders.

Strategy 3: Inclusion of ecosystem values and monitoring

The actions under this strategy aim to fill a gap in understanding about the interdependence of salmon and freshwater ecosystems, and the influence on salmon production of changes in climate and conditions in the marine environment.

- ❑ **Action Step 3.1 – Identify indicators to monitor status of freshwater ecosystems.** DFO will use existing data and expert advice to identify key indicators of the state of lake and stream ecosystems such as rates of biological production and diversity of organisms. Assessment of status in terms of these indicators will be an ongoing activity and will complement CU status monitoring under Action Step 1.3.
- ❑ **Action Step 3.2 – Integrate climate and ocean information into annual salmon management processes.** Linking variations in salmon returns to changes in marine ecosystems requires large-scale monitoring programs, extensive planning and collaboration with domestic and international organizations. Canada is developing programs to monitor and study these conditions. Information on climate and marine conditions will continue to be provided through DFO’s State of the Ocean reports and will be linked with on-going assessments of the marine survival of Pacific salmon.

Strategy 4: Integrated Strategic Planning

The purpose of Strategy 4 is to integrate the biological, habitat and ecosystem information produced by Strategies 1 to 3 to develop long-term strategic plans for CUs and groups of CUs. These strategic plans are intended to specify: long-term biological targets for CUs and groups of CUs to ensure conservation and sustainable use; recommended resource management actions to protect or restore Pacific salmon, their habitats and ecosystems in order to achieve the biological targets; and timeframes and priorities for action.

- ❑ **Action Step 4.1 – Implement an interim process for management of priority CUs.** In recognition of the complexity of salmon management and the time it would take to fully develop an integrated strategic planning process, the *Policy* includes an action step that establishes an interim approach to improve integration among habitat, enhancement, fisheries and marine area planning, and provide more inclusive input to resource management. Action Step 1.1 will identify priority CUs (those in the red zone), with DFO setting up response teams to make recommendations using a 5-step procedure outlined in the *Policy*.
- ❑ **Action Step 4.2 – Design and implement a fully integrated strategic planning process for salmon conservation.** The *Policy* does not set out a structure or a process, but sets out a framework for designing one with input from First Nations, provincial and territorial governments, communities and stakeholders.¹⁷ The *Policy* indicates that these plans will need to consider long-term biological targets for CUs and for habitat and ecosystem status, and weigh the biological, social and economic impacts of fishing and other activities.

Strategy 5: Annual program delivery

The *Policy* envisages that annual operational and business planning would flow from the context established by the integrated strategic plans. The ISPs will establish overall objectives and set out approaches to be followed to achieve them. The annual plans will identify the activities to be carried out, the short-term operational targets for these activities, and the linkages to longer-term goals and objectives.

¹⁷ Dr. Julie Gardner, *Knowledge Integration in Salmon Conservation and Sustainability Planning: Towards effective implementation of the Wild Salmon Policy Strategy Four*, prepared for Watershed Watch and the David Suzuki Foundation, 2009.

- ❑ **Action Step 5.1 – Assess the status of CUs and populations.** This involves on-going assessments of CU status, building on stock assessment work DFO carries out at a more aggregated level.
- ❑ **Action Step 5.2 – Plan and conduct annual fisheries.** The specific annual fisheries management measures required by the management strategies selected under Strategy 4 will be identified and documented in annual IFMP. The IFMPs will also include explicit agreed-upon rules for in-season decision-making.
- ❑ **Action Step 5.3 – Plan and implement annual habitat management activities.** Under the *Policy*, the Habitat program would shift from being largely reactive to planned and strategically directed in order to protect habitat and to implement management measures that meet the long-term objectives specified by ISPs.
- ❑ **Action Step 5.4 – Plan and implement annual enhancement activities.** The long-term objectives for enhancement projects will be set as part of a planning or recovery process for a CU.

Strategy 6: Performance review

As the *Policy* notes, performance reviews are used to determine what is and is not working in order to encourage continuous improvement over time. The *Policy* establishes two levels of review, annual and periodic.

- ❑ **Action Step 6.1 – Conduct post-season review of annual workplans.** These evaluations are intended to cover workplan implementation for CU assessment, fishing, habitat and enhancement, and also evaluation of operational targets.
- ❑ **Action Step 6.2 – Conduct regular reviews of the success of the WSP.** The *Policy* calls for an independent review of the success of the WSP in achieving its broad goals and objectives to be conducted within five years.

4. WSP Implementation

The *Policy* document concludes with a section on implementation. It offers cautionary advice and several caveats that bear mentioning in this review. These points are presented in summary form:

- ❑ The WSP requires acceptance of new ways of doing business and introduces a number of new programs and obligations.
- ❑ To ensure *Policy* commitments are met, an implementation plan will be prepared after the *Policy*'s finalization. This plan will stipulate what tasks are required, how they will be performed, and when they will be completed. The plan will constitute the Department's commitment to meeting its responsibilities for salmon conservation.
- ❑ The six strategies are mutually dependent activities that must work together for the *Policy*'s goal and objectives to be achieved.
- ❑ The *Policy* embodies a new and complex approach to salmon conservation. The pace and effectiveness of implementation will be influenced by two factors:
 - **first, implementation must be accomplished within DFO's existing resource capability and will be phased in over time;**

- **second, it will depend on the effectiveness of the sharing of responsibilities with First Nations Governments, volunteers, stakeholders and other governments.**
- No matter how strong the Department's commitment to implementing the WSP, success will demand better collaboration with all the groups – First Nations, stakeholders, communities, ENGOs and other governments – with an interest in wild Pacific salmon. Improved cooperation with partners will be an important ingredient for future success.

3

Review findings: administration and action

1. WSP administration

Administration

DFO Pacific Region moved immediately after the *Policy* was adopted to establish an implementation structure and implementation plan. The implementation structure currently operates at three levels:

- ❑ **Operations Committee (OPC)** has overall direction and accountability for implementation and is chaired by the RDG and comprised of the Regional Directors (RD) of Science, Habitat, Fish Management, Treaty and each of the Area Directors.
- ❑ **WSP Implementation Team (IT)** has responsibility to represent and communicate with constituents, communicate with project leaders where Branch has lead. The chair of the IT reports to the RD Policy, who in turn briefs the OPC and other management committees. The IT is chaired by the WSP Coordinator and comprised of representatives from Science, Habitat, Fish Management, Treaty and each of the Areas.
- ❑ **Project Teams** are responsible for managing implementation projects and report to the IT. They are chaired by Project Leaders and composed of staff, consultants and partners engaged in the project.

Within this hierarchy of responsibility, the RDG – the senior executive in the Pacific Region – is ultimately accountable for WSP implementation. Below the RDG, accountability is distributed to each of the RDs whose branches have implementation responsibilities. These levels of accountability would be specified in the annual accountability accords each executive enters into each year (the RDG with the Deputy Minister; the RDs with the RDG). Below the RDs, staff assigned with responsibility for producing specific activity outputs would be accountable under their annual performance agreements. But nowhere in this hierarchy is there someone with direct management authority over, or accountability for, WSP implementation.

With implementation progressing more slowly than anticipated or desired (more on this in Section 2, below), a question naturally arises whether speedier implementation could have been achieved with a different implementation structure and more direct approach to accountability. At the core of this question lie two considerations: a) the diffuse nature of WSP implementation, making it difficult to manage across branches; and b), the lack of an executive whose *main* function is to oversee implementation and integration of WSP results into DFO operations.

Finding: Opinion within DFO is divided about the influence of structure and management on the efficiency of implementation. Some argue that the apparent “drift” in the schedule was primarily attributable to the complexity and newness of what was being implemented and, considering resource constraints, structure and management were minor factors. Possibly; but another perspective is that it was precisely because of these considerations – particularly the prescriptive/programmatic nature of the *Policy* – that it required a manager for whom the WSP was a priority and who could be held directly accountable for results.

Resources

The *Policy* document contains the following caveat regarding WSP implementation:

The new approach to salmon conservation is complex, and the pace and effectiveness of implementation will be influenced by two key factors: **First, implementation must be accomplished within DFO's existing resource capability and will be phased in over time.** Second, it will depend on the effectiveness of our *sharing responsibilities* with First Nations Governments, volunteers, stakeholders and other Governments.¹⁸ (*emphasis added*)

That WSP implementation would be carried out within existing resources appears in all early briefing documents and external communication materials.

In fact, the Pacific Region did receive incremental funding to cover the additional scientific work needed to produce the technical reports and frameworks under Strategies 1-3, and also to cover the costs of the extensive consultation program. In its first two years, an additional \$700,000 was budgeted annually. The budget increased to over \$900,000 in FY 2008/09, and then declined to the \$550,000 range by FY 2010-11. Table 3.1 shows annual budgets for direct WSP activities, as well as dedicated staff (measured in FTE, or full-time equivalent employment units).

Table 3.1:
WSP Annual budgets (\$000)

	Science	Fish management	Habitat	Policy	Total	FTE
2005/2006	400	200	100	0	700	
2006/2007	400	200	100	0	700	
2007/2008	310	200	284	70	864	
2008/2009	300	240	329	55	924	7
2009/2010	245	200	28	55	528	7
2010/2011	222	295	38	0	555	13

Source: DFO, WSP Annual Workplans

Finding: DFO provided funds at the national level to support WSP implementation. This augmented regional resources, providing a “kick-start” to the *Policy*. Whether this financial commitment was adequate to the task of implementing a *Policy* that DFO held up as “transformative” is another matter. **The Ottawa funding in the first two years added 0.2-0.3% to the annual Pacific Region budget, then dropped to the 0.1-0.2% range. It is difficult to escape the conclusion that, given the great significance attached to the goal and objectives, the resources dedicated to implementation were inadequate to achieving these within the timeframe originally envisaged.**

2. Implementation planning

It is the norm for DFO to develop detailed implementation plans for its major initiatives. These plans – usually covering a 5-year horizon – contain specific activities, planned outcomes, notional resource allocations, timeframes, accountabilities and responsibilities for each component consistent with the corresponding RMAF. They provide a framework for annual program

¹⁸ *Policy*, page 35.

adjustments, decision-making, monitoring and reporting on program outputs, outcomes and significant variations. The plan may be adjusted annually through a process consistent with DFO business planning practices.¹⁹

The *Policy* itself called for an implementation plan “To ensure its commitments are met...”²⁰ Supporting documents, including the RMAF, early WSP IT submissions to the Regional Management Committee (RMC), and RMC Record of Decisions, referred to the completion of an Implementation Plan.²¹ In its August and September 2005 submissions to RMC, the WSP Implementation Team indicated that the detailed Implementation Plan would include the assignment of resources to projects by implementation strategy and start-up action steps, determine timelines, and address consultation. The plan was to have been completed by December 2005; completion was then put off to the end of fiscal 2005/06.

In the end, an implementation plan of the type ordinarily prepared for major initiatives was not prepared for the WSP. In his testimony before the Cohen Commission, the then RDG of the Pacific Region explained that the various elements of planning completed by September 2005, in effect, constituted the implementation plan.²² These elements were the August 9 submission to RMC (*WSP Implementation Strategy*), the September 20 submission to RMC (*WSP Implementation Workplan*), and the RMAF. Beyond these documents, WSP implementation would be guided by annual workplans.

Among the difficulties in treating these documents as constituting an implementation plan is that even taken collectively they do not contain the essential elements to guide the Department or to inform partners of what was to be done, by whom, with what resources, and over what timeframe. None of these documents projects activity in any detail beyond 1-2 years (see Table 3.2).

- ❑ The *WSP Implementation Strategy* is just that – a document that addresses strategic issues and recommends in broad terms a phased approach to implementation.
- ❑ The *WSP Implementation Workplan* provides budget detail for immediate planning activities and initial action steps, but does not extend beyond 2006/07.
- ❑ The RMAF provides the kind of project-specific detail expected in an implementation plan. It also extends only to 2006/07, but because the drafters of the RMAF apparently expected the activities to be complete by then. It is not clear what the basis of the RMAF timelines might have been, but at the very least they seem inconsistent with the phased approach recommended by the IT and approved by the RMC at about the same time.

It would appear that the limited incremental resources to implement the WSP and the consequent need to take an adaptive approach, coupled with a sense of urgency to get on with it (after all, the *Policy* had been seven years in the making), might account for the decision to forego a formal implementation plan. But rather than diminish the need for plan, these factors would arguably do just the opposite – heighten that need.

¹⁹ This description of plan purpose is taken from, DFO, *CAPACITY BUILDING 5-YEAR PLAN – Establishing a First Nation Commercial Fishing Enterprises*, 2008.

²⁰ *Policy*, page 35.

²¹ WSP RMAF, page 20; *WSP Implementation Workplan*, RMC presentation, August 9, 2005, page 4; RMC, August 9, 2005, Record of Decisions; *WSP Implementation Strategy*, RMC presentation, September 20, 2005, page 5.

²² Testimony of Paul Sprout before the Cohen Commission, December 9, 2010, pages 42-53.

On the face of it, the challenge facing the Department – how to implement largely with existing resources – would have required considerably *greater* effort than managing a dedicated budget because it meant not only planning WSP activities with that budget, but also planning the adjustment of existing program activities and outcomes to free up the resources for WSP (as limited as they were).

Finding: An implementation plan should have been developed. WSP needed a detailed implementation plan that looked out at least 5 years and expressed a realistic timetable for activities. An implementation plan was essential given: the complexity and interdependence of the Policy activities; the need to provide a coherent basis for establishing resource and budget requirements; the need to have some basis for establishing accountability and measuring progress; and, the need to meet the need to communicate both internally and externally about the nature, scope, timing and relationship of activities in order to promote understanding and collaboration.

Table 3.2:

WSP strategies, action steps and tasks

Strategy 1: Standardized monitoring of wild salmon status

1.1 Identify conservation units (CU)	1.1.1 Preliminary identification and assessment of CU status 1.1.2 Develop multi-attribute approach to CU identification 1.1.3 Develop georeference database linking CU status and habitat info 1.1.4 Genetic analyses to ID CUs 1.1.5 Finalization of CUs
1.2 Develop criteria to assess CUs and identify benchmarks	1.2.1 Study northern coastal sockeye CUs 1.2.2 PSF/Core 1.2.3 Develop assessment criteria and specify benchmarks for each CU 1.2.4 Complete northern coastal sockeye CUs 1.2.5 Complete multi-attribute study
1.3 Monitor and assess CUs	1.3.1 Templates of CU status to WSP website 1.3.2 Complete operational frameworks 1.3.3 Web development and maintenance

Strategy 2: Assessment of habitat status

2.1 Document habitat characteristics	2.1.1 Overview of habitat characteristics and issues for each CU 2.1.2 Complete and refine habitat characteristics and confirm templates
2.2 Select indicators and develop habitat benchmarks	2.2.1 Review literature and conduct workshops on habitat indicators 2.2.2 Finalize selection of indicators 2.2.3 Develop benchmarks for individual CUs
2.3 Monitor and assess habitat status	2.3.1 Pilot monitoring study of habitat restoration & monitoring 2.3.2 Development of on-going operational frameworks
2.4 Develop integrated data system for watershed management	2.4.1 Initiate review of existing data sharing with partners/BC 2.4.2 Review of data availability 2.4.3 Develop linkage between OHEB GIS and CU GIS from 1.1 2.4.4 Link OHEB GIS systems with CU status templates 2.4.5 Continue development of data sharing linkage with partners

Strategy 3: Inclusion of ecosystem values and monitoring

3.1: Identify indicators to monitor status of freshwater systems	3.1.1 Small workshops with ecosystem experts 3.1.2 Expert panel to identify public/professional expectations re ecosystem indicators 3.1.3 DFO to formulate operational framework and consult
3.2: Integrate climate and ocean info into annual salmon mgt	3.2.1 Focus on monitoring framework for salmon management processes

Strategy 4: Integrated strategic planning

4.1 Implement interim process for managing priority CUs	4.1.1 Pilot 5-step planning procedure 4.1.2 Convene response teams for priority CUs 4.1.3 Develop strategic plans for priority CUs
4.2 Design and implement integrated strategic planning process	4.2.1 Establish DFO integrated planning team 4.2.2 DFO workshop to draft integrated planning structure 4.2.3 Review of Strategy 4 Implementation plan 4.2.4 Develop a First Nations advisory structure 4.2.5 Develop a draft planning structure 4.2.6 Hold advisory meetings to develop planning structure 4.2.7 Implement final planning process

Activity planned for 2005/06

Activity planned for 2006/07

Source: WSP Implementation Workplan, September 2005

3. Progress implementing the WSP

Overview

The architects of the WSP – including those who contributed to its design during consultations – created a complex and ambitious set of information and process outputs to meet the *Policy's* conservation goal and supporting objectives. Implementation created challenges at three main levels: establishing frameworks (including indicators, metrics and benchmarks) to determine biological, habitat and ecosystem status for newly defined CUs; designing, funding and implementing data collection systems to quantify status; and, creating the broadly-based planning process that would use the data to develop integrated strategic plans to:

- Specify long-term biological status (targets) for CUs and groups of CUs
- Identify recommended resource management actions to protect or restore salmon, their habitat and ecosystems in order to achieve the targets
- Establish time frames and priorities for action.

A background paper prepared for DFO as part of the process of grappling with information requirements and the scale of planning units succinctly captures the essence of the challenges:²³

- Developing the comprehensive integrated plans called for in the WSP for each of the (±450) CUs individually dramatically exceeds both the short and the long-term capacity of the Department, other government agencies and private sector groups to engage in planning around salmon.
- There are numerous data and information gaps for many of the smaller and less productive CUs that have been identified. Also, the development of consistent methodologies for identifying population, habitat and ecosystem status benchmarks called for in the WSP is still ongoing and these benchmarks are still largely absent for most of the CUs identified.
- The local area multi-stakeholder planning committees and planning infrastructure called for in the *Policy* to undertake this planning do not currently exist in most parts of the Pacific Region.
- The Department lacks direct authority over many areas of land and water use that are important to the health of salmon and has no way of requiring or forcing other agencies and governments to engage in the planning processes.

The *Policy* calls for a phased approach to implementation and this is what the RMC approved at its August 2005 meeting.²⁴

- Phase 1: Scoping – completing a detailed implementation plan and preliminary identification of CUs and their status, to be completed by December 2005 (later revised to end March 2006).

²³ Fraser and Associates, *Prioritizing integrated planning initiatives under the wild salmon policy, 2009.*

²⁴ RMC Meeting August 9, 2005, Record of Decisions. This decision confirmed the approach set out in the *Policy* at page 36: "...it must be emphasized that complete implementation will not happen instantaneously, but will be phased in gradually."

- Phase 2: Interim – provision of advice on CUs of concern for the 2006 fishery and programs for FY 06/07; Completion of start-up actions steps with functioning interim planning process: Jan. 06 – Mar 07
- Phase 3: Final – completion of Action Step process: 2010.

The first Implementation Workplan was presented to RMC in September 2005. The work to the end of FY 05/06 entailed establishing the administrative structure and developing consultation and communications plans, with substantive work also planned for at least some of the Action Steps under each of Strategies 1 to 4.

The Action Steps were broken down into more specific tasks, with these forming the basis of implementation in FY 05/06 and 06/07. This detailed breakdown (shown in Table 3.2) indicates that WSP Implementation Team was clearly thinking through the activities and their more specific components, but it also illustrates a surprising degree of optimism. Notwithstanding the acknowledged complexity of the Policy elements and concerns about inadequate resources, the Team expected much of the substantive work under each of the strategies to be completed by the end of FY 2006/07.

This apparent urgency was attributable at least in part to the Policy emphasis on the need to take action on the so-called Priority CUs (under Action Step 4.1).²⁵ Even before CUs had been formally delineated, the Department knew which salmon populations were in trouble based on on-going stock assessment work that led annually to the identification of stocks of concern. Essentially, what the Policy was aiming to do was develop a more specific focus – the conservation unit – and make this the object of planning and immediate action.

Figure 3.1 provides a general picture of progress in implementing the various Action Steps. It shows that two of the Action Steps have been completed (1.1 and 2.2), while conceptual work or frameworks have been completed in others (1.2, 2.1 and 2.4). Some of the critical work to identify benchmarks and assess biological, habitat and ecosystem status is at an early stage (1.2, 1.3, 2.3, 3.1, 3.2). Developmental work has also occurred to establish pilot projects for interim planning (4.1). Work to establish ISP processes is at an early stage (4.2).

²⁵ The interim planning process is intended to build on and expand the approach used to develop IFMPs, but integrating biological, habitat and ecosystem information to address vulnerable CUs – CUs whose biological benchmark is in the red zone (as determined by Action Step 1.2). The interim planning process would be the responsibility of “response teams” of First Nations and interested parties, who, in collaboration with DFO, would provide recommendations for protection and restoration in accordance with the five-step planning procedure outlined in Appendix 2 of the Policy. (*Policy*, page 26)

Figure 3.1
Progress in implementing WSP Action Steps

Strategy/Activity	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	Status
Strategy 1: Standardized monitoring of wild salmon status							
1.1 Identify conservation units (CU)	Completed identification and consultation on BC CUs					Yukon CUs	Completed
1.2 Develop criteria to assess CUs and identify benchmarks			Develop criteria		Identify benchmarks		Slow to implement
1.3 Monitor and assess CUs					Develop CU assessment software/tools		Slow to implement
Strategy 2: Assessment of habitat status							
2.1 Document habitat characteristics			Developed habitat status reporting framework		Status reports for six watersheds		Slow to implement
2.2 Select indicators and develop habitat benchmarks			Developed stream, lake, estuarine habitat indicators, metrics and benchmarks				Completed
2.3 Monitor and assess habitat status					Monitoring framework in development		Limited progress
2.4 Develop integrated data system for watershed management			Developed and mounted web-based system		Populating the database		Slow to implement
Strategy 3: Inclusion of ecosystem values and monitoring							
3.1: Identify indicators to monitor status of freshwater systems			Paper on objectives/indicators				Slow to implement
3.2: Integrate climate and ocean info into annual salmon mgt				Integrate salmon info into State of Ocean reports			Slow to implement
Strategy 4: Integrated strategic planning							
4.1 Implement interim process for managing priority CUs			Development of Barkley Sound, Fraser and Skeena Pilot planning processes				Slow to implement
4.2 Design and implement integrated strategic planning process			Papers on strategic planning process/planning units.				Limited progress
Strategy 5: Annual program delivery							
5.1 Assess status of CUs						Draft benchmarks	Slow to implement
5.2 Plan annual fisheries management activities (IFMP)							Slow to implement
5.3 Plan and implement annual habitat management activities							Limited progress
5.4 Plan and implement annual enhancement activities							Slow to implement
Strategy 6: Performance review							
6.1 Post season reviews of workplans							Completed
6.2 WSP 5-year review							Completed
Original schedule (in 2005 RMAF):	[Blue bar]						
Completed the activity indicated:	[Light blue bar]						
On-going activity under the action step:	[White bar]						
Status: Completed - achieved outcomes	[Green bar]						
Status: Slow to implement - achieving some outcomes	[Yellow bar]						
Status: Limited progress - not yet achieving outcomes	[Red bar]						

Strategies and action steps

This section contains a brief overview of what has been done and what remains to be done to complete the Action Steps. This overview is summarized in Table 3.3. Using information provided by DFO officials as well as First Nations and stakeholders, it also provides observations about the factors affecting progress.

Strategy 1: Standardized monitoring of salmon status

The work to organize all Pacific salmon streams and lakes into geographic units for conservation and to specify the means to monitor abundance and distribution is well advanced. But identifying benchmarks of biological status and assessing status against those benchmarks is at an early stage of implementation.

Action Step 1.1 – identifying CUs for BC was completed in 2008, following consultations and peer review of the method and final list.²⁶ Delineation of Yukon CUs is expected to be completed in 2011. Completing this foundational Action Step took somewhat longer than initially envisaged largely because the number of CUs exceeded by a factor of three the number expected at the time the *Policy* was written (± 150 vs ± 450). Also, just two scientists conducted the work; a larger team may have been able to complete it in less time. It remains to identify a process for revising CUs (taking new information into consideration) and conducting the on-going revision.

Action Step 1.2 – developing criteria to assess CUs and identify benchmarks is ongoing. Work was completed in 2010 to develop quantifiable metrics of biological status (abundance and distribution) and to develop a method for identifying benchmarks along those metrics to provide a basis for CU assessments.²⁷ Provisional abundance benchmarks have been identified for 26 Fraser River sockeye CUs and for Skeena and Nass sockeye and chum CUs. A method for aggregating information across metrics and assumptions about population dynamics in overall status assessment is in peer review. A research paper on dimensions of distribution has been completed.²⁸ Software to identify benchmarks of abundance status and incorporating dimensions of distribution and fishing mortality has been completed. A working paper on guidelines for processing abundance data prior to estimating benchmarks has been completed. The major work needed to complete Action Step 1.2 is the development of benchmarks for the other 425 or so CUs.

²⁶ CSAS 2007/070 - *Conservation Units for Pacific Salmon under the Wild Salmon Policy*, By L. Blair Holtby and Kristine A. Ciruna, http://www.dfo-mpo.gc.ca/csas-sccs/publications/resdocs-docrech/2007/2007_070-eng.htm

²⁷ CSAS 2009/046 - *Workshop on methods for assessing status and identifying benchmarks for Conservation Units of the Wild Salmon Policy, January 5-6, 2009*, http://www.dfo-mpo.gc.ca/csas-sccs/publications/pro-cr/2009/2009_046-eng.htm; CSAS 2009/055 - *Framework for implementation of the Wild Salmon Policy: Initial lists of Conservation Units for British Columbia*, http://www.dfo-mpo.gc.ca/csas-sccs/publications/sar-as/2009/2009_055-eng.htm; CSAS 2009/058 - Holt, C., Cass, A., Holtby, B., and Riddell, B. 2009. *Indicators of Status and Benchmarks for Conservation Units in Canada's Wild Salmon Policy*, http://www.dfo-mpo.gc.ca/csas-sccs/publications/resdocs-docrech/2009/2009_058-eng.htm; CSAS 2009/059 - Holt, C. 2009. *Evaluation of Benchmarks for Conservation Units in Canada's Wild Salmon Policy: Technical Documentation*, http://www.dfo-mpo.gc.ca/csas-sccs/publications/resdocs-docrech/2009/2009_059-eng.htm; and, Peacock, S., and Holt, C. 2010. *A review of metrics of distribution with application to Conservation Units under Canada's Wild Salmon Policy*.

²⁸ A complete list of tasks completed and planned work may be found in DFO, *WSP Implementation Draft Work Plan 2011-2012*.

Table 3.3: Progress in implementing the WSP

Strategy/Activity	Major tasks completed*	Tasks in progress/to be started*
Strategy 1: Standardized monitoring of wild salmon status		
1.1 Identify conservation units (CU)	<ul style="list-style-type: none"> ■ CSAS Res Doc on method for defining CUs (2007) ■ Consultations on method, peer review, final report (2007) ■ CSAS paper listing defined CUs (2008) ■ CSAS Res Doc on status/benchmark indicators (2009) ■ CSAS Res Doc on evaluation of CU benchmarks (2009) ■ Technical report on metrics of distribution ■ Research paper on dimensions of distribution (2010) ■ Software to identify benchmarks of status ■ Preliminary benchmarks identified for priority CUs: Fraser sockeye (26 CUs), Benchmarks reviewed for Skeena/Nass sockeye/chum (4/5 CUs) ■ Synoptic assessment methodology for CUs peer reviewed ■ Identify preliminary benchmarks for Barkley Sound CUs ■ Working paper on guidelines for processing abundance data prior to estimating benchmarks (2010) ■ Draft stock status reports for Fraser sockeye (26 CUs), and Skeena and Nass sockeye (4 CUs) and chum (5 CUs) ■ Assessment framework for north coast populations 	<ul style="list-style-type: none"> ■ Identify process for revising CUs ■ On-going review and revisions of CUs ■ Finalize Fraser, Skeena, Nass & Barkley Sound CU benchmarks ■ Identifying lower/upper benchmarks for all other CUs ■ Peer review workshop to discuss aggregation of metrics into overall status for Fraser sockeye CUs
1.2 Develop criteria to assess CUs and identify benchmarks		
1.3 Monitor and assess CUs		
Strategy 2: Assessment of habitat status		
2.1 Document habitat characteristics	<ul style="list-style-type: none"> ■ Developed habitat characteristics template and tested on several CUs (2007) ■ Completed six habitat reports for priority CUs (3 in 2010; 3 in 2011) 	<ul style="list-style-type: none"> ■ Develop GIS reporting mechanisms for habitat characteristics ■ Prepare reports on habitat characteristics for other CUs
2.2 Select indicators and develop habitat benchmarks	<ul style="list-style-type: none"> ■ Suite of habitat indicators and their related metrics and benchmarks developed and peer reviewed (2009) 	<ul style="list-style-type: none"> ■ Assess selected CUs or watersheds using indicators and benchmarks
2.3 Monitor and assess habitat status	<ul style="list-style-type: none"> ■ Conceptual habitat health monitoring framework and approach to synoptic identification and assessment of priority CUs/watersheds (2011) 	<ul style="list-style-type: none"> ■ Completing the monitoring framework ■ Conducting habitat assessment reports at the CU/watershed scale
2.4 Develop integrated data system for watershed management	<ul style="list-style-type: none"> ■ WSP web mapping tool developed and GIS info on CUs uploaded; transitioning to user-friendly platform 	<ul style="list-style-type: none"> ■ Collect/obtain habitat data and populate the site

*This list captures the major tasks only, providing an indication of the nature and scope of WSP strategic initiatives. A complete listing may be found on the WSP webpage: <http://www.pac.dfo-mpo.gc.ca/fm-gp/species-especies/salmon-saumon/wsp-pss/strats-eng.htm>

Table 3.3: Progress in implementing the WSP (continued)

Strategy/Activity	Major tasks completed*	Tasks in progress/to be started*
Strategy 3: Inclusion of ecosystem values and monitoring		
3.1: Identify indicators to monitor status of freshwater systems	<ul style="list-style-type: none"> ▪ Discussion paper on ecosystem objectives, indicators and management options in preparation ▪ Various research papers on specific ecosystems ▪ Preliminary research on linkages between salmon marine survival and marine ecology, ocean climate and fisheries. ▪ Various research papers on marine ecosystems 	<ul style="list-style-type: none"> ▪ Develop ecosystem monitoring framework for freshwater systems
3.2: Integrate climate and ocean info into annual salmon management		<ul style="list-style-type: none"> ▪ Need to make more linkages between <i>State of the Ocean</i> reports and IFMP process
Strategy 4: Integrated strategic planning		
4.1 Implement interim process for managing priority CUs	<ul style="list-style-type: none"> ▪ FRSSI: developed advisory body, planning model, escapement strategies, management strategies ▪ Barkley Sound pilot project: conceptual framework to integrate CU, habitat and ecosystem info; assembly of data sets; overview report to support planning process; habitat status reports (Sarita & Somass); draft benchmarks for chinook and sockeye; economic analysis report; terms of reference and Steering Committee set up. ▪ Guidance papers/workshops on planning units and integrated plans (2009) 	<ul style="list-style-type: none"> ▪ Continue testing interim processes for integrated planning through the Barkley Sound WSP initiative, FRSSI, Skeena Watershed Initiative and Cowichan Watershed Board
4.2 Design and implement integrated strategic planning process		<ul style="list-style-type: none"> ▪ Develop framework for and implement long-term integrated planning process
Strategy 5: Annual program delivery		
5.1 Assess status of CUs	<ul style="list-style-type: none"> ▪ Assessed Fraser sockeye, Skeena and Nass sockeye and chin CUs 	<ul style="list-style-type: none"> ▪ Establish priorities for annual SACC assessment
5.2 Plan annual fisheries management activities (IFMP)	<ul style="list-style-type: none"> ▪ Fraser CUs reassessed and adjusted. Priorities set ▪ IFMPs incorporate WSP goal and objectives, socio-economic information, in-season decision rules ▪ CU status beginning to inform annual fishery management in Fraser/Barkley Sound/Skeena/Nass 	<ul style="list-style-type: none"> ▪ Provide open database of CU results ▪ Planning framework for ISP and CU status assessments
5.3 Plan and implement annual habitat management activities		<ul style="list-style-type: none"> ▪ Outputs from Strategy 2 & 3 to inform habitat management program for CUs
5.4 Plan and implement annual enhancement activities	<ul style="list-style-type: none"> ▪ Enhancement integrated with fisheries planning ▪ Framework to assess hatchery impacts on wild salmon 	<ul style="list-style-type: none"> ▪ Outputs from Strategy 1 & 4 to inform enhancement activities

*This list captures the major tasks only, providing an indication of the nature and scope of WSP strategic initiatives. A complete listing may be found on the WSP webpage: <http://www.pac.dfo-mpo.gc.ca/fm-gp/species-especes/salmon-saumon/wsp-pss/strats-eng.htm>

Action Step 1.3 – Monitoring and assessing the status of CUs is at an early stage of development. A draft assessment framework has been developed and applied to Fraser sockeye, regional coho and North Coast populations. A synoptic review methodology that determines the status of CUs where there are data is in preparation. The major gap in completing this Action Step, of course, is the output of Action Step 1.2 – CU status. Once these status data are available, annual assessments (or periodic, as required) will inform the annual Salmon Outlook on a CU rather than stock basis.

Strategy 2: Assessment of habitat status

The program to identify important habitat issues within CUs and assess habitat status using indicators that combine scientific and local knowledge made good progress in the early years, but has slowed considerably, largely due to inadequate resources.

Action Step 2.1 – the work to document habitat characteristics to identify initial priorities for protection, rehabilitation and restoration has produced a reporting template and tested it on several CUs. Status reporting operates at two levels: Tier 1 overview reports provide a coarse filter identifying general information on landscape threats and trends; Tier 2 watershed scale reports provide information on locations and status of highly productive and limiting habitats using available data. Tier 1 reports to test the approach were completed for nine CUs, with Tier 2 reports completed for six watersheds. Tier 2 reports have not yet been completed for CUs/watersheds, partly because priority CUs have not been identified, and partly due to the lack of a framework to select representative watersheds within CUs.

Action Step 2.2 – the work to identify indicators (pressure and state) and their metrics and benchmarks was completed in 2009.²⁹ There remains the substantial task of determining appropriate indicators for CUs or watersheds (for health and status monitoring). This work cannot proceed until CU/watershed habitat overview status reports are completed under Action Step 2.1. Resources and capacity represent the main constraint.

Action Step 2.3 – monitoring and assessing habitat status has not commenced, due mainly to lack of resources within OHEB. Collecting and monitoring habitat status indicator information is not a mandate of the National Fish Habitat Program. A first task under this Action Step – developing a monitoring framework and approach to synoptic identification and assessment of priority CUs and watersheds – was completed in 2011.

Action Step 2.4 – developing an integrated data system (web mapping tool) for watershed management was completed in 2008, with transition to a user-friendly platform completed in 2011. There remain the tasks of populating the site with relevant data and linking it to other sites with relevant habitat information. Considerably more developmental work needs to be carried out before a functional system is in place.

²⁹ Canadian Manuscript Reports of Fisheries and Aquatic Sciences: Stalberg, H.C.; Lauzier, R.B.; MacIsaac, E.A.; Porter, M.; Murray, C. 2009. Canada. Dept. of Fisheries and Oceans. Pacific Region. Oceans, Habitat and Enhancement Branch, *Canada's Policy for Conservation of Wild Pacific Salmon: Stream, Lake, and Estuarine Habitat Indicators*. <http://www.dfo-mpo.gc.ca/Library/338996.pdf>

Strategy 3: Inclusion of ecosystem values and monitoring

Including ecosystem values in salmon management forms an important element of an integrated approach, but developing a conceptual framework and putting it into practice has proven a challenge for the Department.

Action Step 3.1 – identifying indicators to monitor the status of freshwater ecosystems has advanced through the conceptual framework stage. A discussion paper with proposed ecosystem objectives, indicators and benchmarks is in preparation and is expected to be ready for review late in 2011 or early 2012. Actually implementing a monitoring system would pose a challenge for DFO as it is currently resourced. The OHEB, FAM and Science branches lack the capacity to address wild salmon issues in a freshwater ecosystem context (DFO does not collect and analyze information to inform ecosystem-based indicators).

Action Step 3.2 – integration of climate and oceans information into annual salmon management is limited, occurring mainly through informal linkages between scientists responsible for the annual *State of the Ocean* reports and fish managers involved in the IFMP process. More research is needed on the relationship between salmon marine survival and physical and chemical ocean processes.

Strategy 4: Integrated strategic planning

Strategy 4 is intended to broaden the base of planning and decision-making with respect to conservation and management. As envisaged, a fully formed planning process would require the outputs of Strategies 1-3 to meet its objectives.

Action Step 4.1 – DFO has begun to test a process for collaborative planning. One pilot project – **Barkley Sound** – has been established specifically to test the five-step planning process outlined in the *Policy*.³⁰ A discussion paper was prepared for Barkley and formed the basis for several planning workshops.³¹ The process is also being tested by three other planning initiatives (**Fraser River, Cowichan and Skeena**).

Although the Barkley pilot is included in Action Step 4.1, strictly speaking, this Initiative is not what was originally envisaged in the *Policy* under Action Step 4.1, namely, a response team addressing a priority CU. This is where the initial emphasis would lie, but the Initiative would also tackle broader issues affecting salmon in Barkley Sound.³² One of the major challenges facing each of these initiatives is that **priority CUs have not formally been identified and the full range of key outputs of Strategies 1-3 are not yet available.**

³⁰ See also, Fraser, G. Alex, *Interim Guidance for the Development of Strategic Plans under Canada's Policy for the Conservation of Wild Pacific Salmon*, Prepared for Fisheries & Oceans Canada, December 15, 2007. <http://www.pac.dfo-mpo.gc.ca/consultation/wsp-pss/2008/docs-eng/spg.pdf>.

³¹ DFO, 2009, *Sustainable Management of Wild Salmon in Barkley Sound and Alberni Inlet: Challenges, Resources, and Priorities*, Discussion Paper.

³² *Ibid*, page 64.

Action Step 4.2 – DFO has taken the first step in designing and implementing an Integrated Strategic Planning process for salmon conservation with the preparation of a discussion paper on identifying planning units.³³ This paper addresses the challenge of specifying a practical scale for ISP (a planning structure and process for each of the 460 CUs would be practically impossible). Actually creating the structures and implementing ISP processes represents the ongoing challenge, with the underlying assumption that the outputs of Strategies 1-3 will be available to guide decision-making once these structures are in place.

Strategy 5: Annual program delivery

This strategy is intended to capture the outputs of Strategy 4 and deliver them through annual operating plans for ongoing assessment of CUs, fisheries management, habitat management and enhancement.

Action Step 5.1 – assessing status requires carrying out stock assessment work, but at the CU level using established frameworks (indices of abundance and distribution). This requires the completion of Strategy 1, as well as the development of strategies to actually gather the data to carry out the assessment work. Provisional assessments of Fraser sockeye, and Skeena and Nass sockeye and chum CUs have been completed.

Action Step 5.2 – planning and conducting annual fisheries respond to the management strategies contained in IFMPs. These strategies currently rely on CU assessment information (where available) to inform decision-making (Fraser, Skeena, Nass). This approach will be used in all fisheries as CU assessment results become available over the next several years. IFMPs include explicit rules for in-season decision-making.

Action Step 5.3 – planning and implementing annual habitat management activities will respond to long-term objectives specified in ISPs produced under Strategy 4 as these are informed by annual assessments produced under Strategy 2. Taking this approach would represent a fundamental shift in the largely reactive mandate of the Habitat branch to one of being strategically directed.

Action Step 5.4 – planning and implementing annual enhancement activities will be set as part of a recovery process for a CU. This requires the identification of priority CUs. The ongoing enhancement work on such populations as Cultus Lake sockeye, though not the result of a WSP process, are consistent with the *Policy's* objectives and enhancement guidelines. More generally, annual enhancement activities are integrated with fisheries planning and specified in IFMPs.

Strategy 6: Performance review

Action Step 6.1 – conducting post-season review of annual workplans forms an integral part of WSP implementation and management. It follows a standardized process and reporting system, with summary results posted to the WSP webpage.

³³ Fraser and Associates, *Identifying Planning Units and Prioritizing Integrated Strategic Planning Initiatives under the Wild Salmon Policy*, Prepared for Fisheries and Oceans Canada, March 2009.

Finding: Delineating CUs, one of the cornerstones of the *Policy*, was completed in 2008 for BC, with Yukon CUs identified in 2011. The methodological work to develop criteria to assess CU status was completed in 2009, with some provisional abundance benchmarks developed for several Fraser, Skeena and Nass CUs. Similarly, progress has been made documenting habitat characteristics and developing the methodology to establish habitat benchmarks (2008). Also, developmental work has gone into establishing the Barkley Sound pilot project.

Actual progress in implementing the *Policy* has been much slower than indicated in the initial workplan. Six years after implementation began, the critical outputs needed to take action on priority CUs have not yet been completed.

4

Review findings: measuring progress

1. Progress with implementation

Measuring the extent to which progress has been made in implementing Strategies 1-5 and the associated Action Steps may be addressed in one of three ways: by simply chronicling what has been done in relation to what is set out in the *Policy* (with no timeframe); by comparing what has been done against the schedule set out in the 2005 workplan; or, alternatively, against what seems reasonable in the circumstances.

Progress in implementing the Strategies and Action Steps in terms of what is set out in the *Policy* is examined in Chapter 3, and more specifically in Figure 3.1 and Table 3.3. The main findings are:

- Implementation work on all Strategies has commenced, though none of the Strategies has been completely implemented.
- Two of the 15 Action Steps (1.1 Identify CUs and 2.2 Select indicators and develop habitat benchmarks) have been completed. Identifying CUs is crucial to *Policy* success because it specifies clearly what is to be conserved.
- Progress on the other 13 Action Steps may be categorized as:
 - extensive (2.1 Document habitat characteristics)
 - limited (1.2 Identify CU benchmarks; 1.3 monitor and assess CUs; 2.3 Monitor and assess CU habitat status; 2.4 Develop integrated data system; 3.1 Status indicators of freshwater systems; 3.2 Integrate marine ecosystem information into salmon management; 4.1 Interim process for managing priority CUs; 4.2 Implement ISP process; 5.1-5.4 Annual program delivery).

If progress were measured against the 2005 workplan, then implementation is well behind schedule. But this seems an unreasonable standard against which to measure progress. It is not clear who had input into drafting the RMAF from which the schedule was drawn, but it is difficult to believe that this involved anyone knowledgeable about either the technical requirements of the activities set out in Strategies 1-3, or the resource constraints within which the *Policy* was being implemented. This is not a matter of hindsight; the 2005 workplan schedule was simply unrealistic. If nothing else, this underscores the value of working through a formal implementation plan where the implications of complexity and constraints on scheduling would be expected to receive careful consideration.

Assessing progress against what might be considered reasonable in the circumstances is problematic because there is no objective standard of reasonableness. Much of what the *Policy* is attempting to accomplish – both in terms of substance and process – requires the development and implementation of innovative approaches. But even recognizing this, the weight of opinion of those interviewed in the course of this review (DFO officials, First Nations and stakeholders) is that implementation could and should be farther advanced than it is; that six years after the *Policy* was adopted, it would be reasonable to expect that the basic building blocks outlined in Strategies 1 and 2 would be complete, that priority CUs would have been identified, and an interim planning process established under Strategy 4 to develop a management response.

This view was not held unanimously; others made three points to counter this position: that the *Policy* could only be implemented at the pace dictated by the funding made available; that the technical and process outputs required by the *Policy* turned out to be more complex than originally understood; and, the actual number of CUs greatly exceeds the number expected at the time the *Policy* was written (± 150 vs. ± 450).

- The “availability of funding” and DFO capacity arguments are the most common reasons advanced to explain the pace of activity.³⁴ And while a valid constraint for those tasked with carrying out the actual work – those in the Science, OHEB and FAM – this is a less defensible position for those with responsibility for setting priorities and allocating resources. After all, funding decisions reflect Departmental mandate and priorities as implemented through policy and programs. It seems a curious position for the Department on the one hand to spend seven years developing the *Policy* that it characterizes as “transformative”, and then on the other hand to constrain its implementation by failing to make it a priority.
- The “complexity” argument is valid. Much of the technical work is innovative, creating the planning structures is difficult, and the extensive consultations are demanding. But the issue is not simply the nature and scope of the challenges that complexity imposes, it is also a question of how the Department responds. In other words, at its core the issue is one of management – how the Department adapts to challenges in terms of adjusting priorities and re-allocating resources.³⁵
- It is true that the number of CUs exceeds the number expected. But in terms of factors affecting progress *to date*, this is relevant essentially for Action Step 1.1 only – delineating the CUs (it becomes relevant for other action steps, as work on these begins). This had been completed for BC in 2007. Since then, only 35 CUs have had provisional abundance benchmarks identified, well short of even the 150 indicated in the *Policy*.³⁶ In other words, it is not the increase in the number of CUs that has constrained progress, but rather it is the priority assigned to *Policy* and the resources dedicated to the Action Steps.

Finding: to conclude, in the opinion of this reviewer, progress in implementing the WSP has been slow. Part of this can be explained by complexity, but ultimately it comes down to a question of priority and the adequacy of resources. If the *Policy* were of minor significance and DFO were implementing it on its own, the pace of implementation may be a less serious issue. But the Department has gone to great lengths to stress the broad significance of the *Policy* and bring First Nations and stakeholders into the decision-making process. Expectations have been raised. The risk, of course, is that with limited progress in overall implementation, the partners DFO needs to support the process will grow frustrated and withdraw their participation.

³⁴ See testimony of Paul Sprout and Sue Farlinger before the *Commission of Enquiry into the Decline of Sockeye Salmon in the Fraser River*, December 16, 2010.

³⁵ See testimony of Dr. Brian Riddell before the *Commission of Enquiry into the Decline of Sockeye Salmon in the Fraser River*, June 1, 2011, pages 78-80.

³⁶ *Policy*, Figure 2, page 12.

2. Contribution to WSP goal and objectives

Strategies and Action Steps

The WSP goal and objectives may be advanced in two ways: directly, to the extent that work done under the Strategies and Action Steps produces the outcomes expected; and, indirectly, to the extent that day-to-day operations of the Department apply the guiding principles underpinning the *Policy*.

The WSP Logic Model discussed in Chapter 3 provides a useful starting point to track the relationship between activities, outputs and expected outcomes. It shows that it is not enough to conduct activities under each Action Step, but the activities have to actually produce the specified outputs in order to generate the immediate and intermediate results that support WSP objectives.

Work done under the Action Steps is making a positive contribution to the WSP objectives, but the contribution is generally modest to date. This is because key building blocks under Strategies 1 to 3 are not yet sufficiently advanced to produce their expected outputs. Without these outputs, the results needed to support the WSP objectives and goal cannot be realized. This is illustrated in Table 4.1, showing a qualitative assessment of the extent to which each Action Step has produced its expected outcomes, and the relative strength of the contribution to WSP objectives and goal.

- **Strategy 1:** delineating the CUs leads to a greatly improved understanding of genetic diversity, hence the strong contribution rating. On the other hand, though the basis for identifying benchmarks has been developed, limited work has actually been done to assess the status of CUs and apply the results in a management framework.

This limited overall progress results in a limited contribution to safeguarding genetic diversity. Little or no contribution to maintaining habitat and ecosystem integrity has occurred because the limited data on CU and habitat status has as yet been not been integrated to inform any management process. The limited CU status data that has been generated is being used to assist management of some mixed stocks (though not through the formal interim process envisaged under Action Step 4.1), and hence the contribution to managing for sustainable benefits is regarded as limited thus far.

The limited overall contribution to objectives consequently results a limited contribution to advancing the WSP goal.

- **Strategy 2:** understanding of habitat status has improved moderately as a result of the work so far under Actions Steps 2.1 and 2.2. Monitoring and assessment of habitat status has not progressed due to a lack of capacity within OHEB, resulting in little or no improvement in monitoring or protection of habitat. A limited contribution to improving integration of habitat data has occurred as a result of developing a data system; strengthening its contribution will depend on populating the system with habitat data from a range of sources and making the database widely accessible.

The contribution to maintaining habitat and ecosystem integrity is positive, but limited, due to the improvement in understanding habitat status. Little or no contribution to the other two objectives – safeguarding genetic diversity and managing for sustainable benefits – has occurred because systematic monitoring and assessment of habitat has not yet commenced, resulting in the lack of any data that would inform a management process.

The limited overall contribution to objectives results a limited contribution to advancing the WSP goal.

Table 4.1
Relative strength of the contribution of WSP activities to the Policy's objectives and goal

Activities	Outcomes	Extent	Objectives		Goal
			Maintain habitat & ecosystem integrity	Manage for sustainable benefits	
Strategy 1: Standardized monitoring of wild salmon status					
1.1 Identify conservation units (CU)	Improved understanding of genetic diversity				
1.2 Develop criteria to assess CUs and identify benchmarks	Improved understanding of salmon status				
1.3 Monitor and assess CUs					
Strategy 2: Assessment of habitat status					
2.1 Document habitat characteristics	Improved understanding of habitat status				
2.2 Select indicators and develop habitat benchmarks	Improved monitoring/protection of habitat				
2.3 Monitor and assess habitat status	Improved integration of habitat data				
2.4 Develop integrated data system for watershed management					
Strategy 3: Inclusion of ecosystem values and monitoring					
3.1 Identify indicators to monitor status of freshwater systems	Improved understanding of env. factors affecting salmon				
3.2 Integrate climate and ocean info into annual salmon mgt	Increased monitoring of ecosystem indicators				
Strategy 4: Integrated strategic planning					
4.1 Implement interim process for managing priority CUs	Wider participation in salmon management				
4.2 Design and implement integrated strategic planning process	Increased integration of biological/habitat/ecosystem				
	Better understanding of collaborative models				
	Strategic plans developed				
Strategy 5: Annual program delivery					
5.1 Assess status of CUs	Increased number of annual workplans implementing ISPs for CUs				
5.2 Plan annual fisheries management activities (IFMP)					
5.3 Plan and implement annual habitat management activities					
5.4 Plan and implement annual enhancement activities					
	Strong contribution				
	Moderate contribution				
	Limited contribution				
	Little or no contribution				

- ❑ **Strategy 3:** very limited work under WSP has been done in this admittedly complex area, resulting in little or no improvement in understanding of the environmental factors (freshwater) affecting salmon and a limited increase in monitoring of marine ecosystem indicators. Consequently, little or no contribution to WSP objectives and goal can as yet be attributed to Action Steps under this Strategy.
- ❑ **Strategy 4:** the Barkley Sound Salmon Initiative was established in early 2011 with specific terms of reference to further WSP objectives.³⁷ It serves as a pilot project to test approaches to collaborative salmon management resulting from wider participation in planning. A key outcome is determining effective means of integrating biological/habitat/ecosystem information. It should be noted that even though the Alberni-Barkley pilot has been established as an Action Step 4.1 initiative, its terms of reference are consistent with producing an ISP, rather than an Interim Plan.

The Initiative is structured to make a positive contribution to safeguarding genetic diversity and managing for sustainable benefits, but it is too early to draw any meaningful conclusions about its effectiveness in meeting these objectives. The availability of limited input data (biological, habitat and ecosystem from Action Steps 1-3) means there is a limited basis upon which to discuss and assess issues and make recommendations.

The early stage of development means the Initiative has had limited opportunity to advance the WSP goal.

- ❑ **Strategy 5:** WSP implementation is not far enough advanced to be producing annual workplans under ISPs at the CU level. Without the ISPs and workplans that build on annual assessment and management activities, there is little or no contribution to WSP objectives. The positive contribution that is made to objectives and goal is attributed to the incorporation of WSP principles in day-to-day DFO operations.

Day-to-day operations

The WSP is founded on four principles that in one form or another and to varying degrees have guided DFO operations for many years.³⁸ These principles are meant not just to guide WSP activities, but also serve as a guide for all DFO decisions and activities affecting the conservation of wild Pacific salmon. The application of these principles through various initiatives and day-to-day decision-making contributes to achieving the *Policy's* objectives and goal.

Principle 1: Conservation is the highest priority

Conservation has formed a pillar of DFO decision-making for decades. The case for conservation to occupy the highest priority for salmon was forcibly made in 1998 in the *New Directions* statement from which the WSP evolved.³⁹ As expressed in the *Policy*, conservation brings precautionary and ecosystem approaches into fisheries management, and in this respect is consistent with the *Sustainable Fisheries Framework* introduced by the Department in 2009.⁴⁰

³⁷ *Alberni-Barkley Salmon Initiative Terms of Reference*, December 2010.

³⁸ *Commission of Enquiry into the Decline of Sockeye Salmon in the Fraser River*, Summary of anticipated evidence of Sue Farlinger, RDG Pacific Region, page 1.

³⁹ David Anderson, Minister of Fisheries and Oceans, *A New Direction for Canada's Pacific Salmon Fisheries*, 1998, page 5.

⁴⁰ <http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm>

Examples of how this principle is applied operationally include:

- Defining what is to be conserved in clear terms
- Provisional information on CU status informs management decisions (timing, harvest levels, escapement targets) in mixed-stock fisheries
- Use of selective gear to reduce by-catch
- Recovery planning and enhancement programs are implemented to rebuild CUs experiencing low abundance
- Closure of fisheries that have an impact on stocks of concern

The principle is also applied through various initiatives, including:

- Fraser Basin Initiative: with \$10 million in direct and in-kind funding from DFO to match funds from the Living Rivers Trust, the Pacific Salmon Foundation and Fraser Basin Council are sponsoring projects under the Fraser Salmon & Watersheds Program aimed at improving scientific understanding of salmon populations, improving sustainable fisheries management, conserving salmon and their habitat, and enhancing relationships among diverse interests in the Fraser watershed. In its first four years (2006-2009), some 275 projects had been funded, with these carried out mainly by First Nations and community groups. An evaluation conducted in 2010 revealed generally positive outcomes.
- Salmon enhancement management practices: to limit the risks to wild salmon (e.g., altering genetic diversity, competition for food and habitat, harvest overexploitation), the Salmon Enhancement Program (SEP) operates with guidelines to manage spawning and hatchery practices to maintain genetic diversity, monitor and limit broodstock withdrawals, control fish movements, and integrate timing of SEP production and fishery planning.
- Adoption of changes to fisheries management under the salmon IFMP for Northern BC: these changes, affecting several aspects of management including harvest rates and in-season decision rules, resulted from 23 recommendations contained in the *Report of the Skeena Independent Science Review Panel* (2008).⁴¹ The Panel grappled with the task of applying the WSP in the challenging case of the Skeena watershed fisheries, following successive years (2006 and 2007) of difficult circumstances and controversial management decisions.

Principle 2: Honour obligations to First Nations

This principle, an explicit expression of the Supreme Court's 2004 ruling regarding the duty to consult First Nations, confirms DFO's commitment to honour its obligations to First Nations and accommodate their interests when making decisions that could have an adverse effect on Aboriginal rights.⁴²

Examples of how this principle is applied include:

- Bi-lateral (Tier 2) meetings with First Nations and First Nations organizations to discuss WSP implementation and provide updates

⁴¹ Walters, C.J., Lichatowich, J.A., Peterman, R.M., and Reynolds, J.D. 2008. *Report of the Independent Science Review Panel*. A report to the Canadian Department of Fisheries and Oceans and the British Columbia Ministry of the Environment, May, 2008.

⁴² *Haida Nation v. British Columbia (Minister of Forests)*, [2004] 3 S.C.R. 511

- DFO has developed co-management relationships through local roundtables (e.g., Barkley Sound Harvest Roundtable, Somass First Nations Chum and Chinook Conuma Roundtable, Cowichan Stewardship and Water Use Roundtable, Skeena Watershed Initiative), bilateral engagement, and technical working groups (e.g., Fraser Technical Committee and technical collaboration with the Nuu-chah-nulth on warm-water low flow and other climate conditions) where First Nations are represented.
- Establishment of larger forums or groups of Aboriginal communities on harvest and habitat issues (e.g., Interim Fraser River and Approach Working Group, Fraser Forum on Harvest and Conservation Planning, First Nations Fisheries Commission, Fraser River Aboriginal Fisheries Secretariat, and Intertribal Treaty Organization) has enhanced information sharing and collaboration, and contributes to integrated ecosystem/watershed management and planning.
- Fishery timing windows have been adjusted to protect weak stocks and to respond to First Nations concerns with respect to these stocks by ensuring low to moderate fishery exploitation levels, for example harvest on Bulkley River sockeye is timed to avoid harvest of the Namika sockeye CU, to safeguard genetic diversity, manage for long-term sustainable benefits, and address concerns regarding FSC for the Wet'suwet'en.
- Monitoring has been increased on some stocks of concern to First Nations (e.g., an enumeration fence has been built for the Kitwanga sockeye CU due to concern expressed by the Gitanyow).

Among the outstanding issues DFO faces in developing a fully formed basis for consultation and engagement with First Nations are the finalization of an approach to acquiring and applying ATK, and assisting First Nations in developing the technical and scientific skills to participate fully in WSP implementation.

Principle 3: Sustainable use

This principle commits DFO to ensuring that resource management decisions consider biological, social and economic consequences; reflect best science including ATK; and maintain the potential for future generations to meet their needs and aspirations.⁴³

Examples of how this principle is applied under the WSP include:

- The salmon IFMPs advance the WSP goal and objectives through: clear management objectives for stocks of concern that include stock-specific exploitation rates; various approaches to weak stock management including non-retention and time and area closures; and, explicit rules for in-season decision-making. Management decisions include the use of CU status (where available) to assist in-season decision-making regarding escapement and harvest levels to minimize impacts on weak stocks in mixed stock fisheries.⁴⁴

⁴³ *Policy*, page 9.

⁴⁴ DFO, *Pacific Region Integrated Fisheries Management Plan, Salmon, Southern B.C.*, June 1, 2011 to May 31, 2012. See in particular: Section 2.4 regarding the role of CUs in stock assessment; Section 2.6 and the use of CU benchmarks to inform the development of a precautionary approach to management; Section 4.1 sets out the central role of the WSP in shaping the approach to conservation; Section 5 sets out management objectives with respect to stocks of concern; Section 7 contains decision guidelines for each fishery and specific management responses to be invoked under various circumstances.

- West Coast Vancouver Island chinook stock has been identified as a stock of concern. To minimize impacts to this stock and also allow harvesters to continue at least some level of fishing, DFO has reduced the harvest rate and conducts in-season monitoring using DNA analysis of the North Coast commercial troll fisheries.
- Transition away from traditional, large mixed stock fisheries and towards more terminal fisheries that can better target harvesting efforts to avoid the weaker sub-populations within salmon runs, e.g., PICFI salmon licence relinquishment and movement of fish to terminal fisheries on Kamloops Lake.
- PICFI project to develop a biophysical model for the movement of fish from the marine environment to the Fraser River, to enable better prediction of implications of environmental conditions on migrating salmon.
- Assessment of the economics of alternative fishing techniques to identify suitable options for diversification of harvest methods
- Development of socio-economic indicators to assess impacts of management decisions on fishing communities. However, an ongoing concern amongst First Nations and stakeholders is the lack of a generally accepted approach to integrating socio-economic considerations into fisheries management decisions.⁴⁵ Also, DFO continues search for a formal approach for collecting and applying ATK.⁴⁶

Principle 4: Open process

This is not a new principle, but one that is included in the WSP to emphasize the importance of open, transparent and inclusive decision-making. Broadly based integrated planning forms an important aspect of the *Policy's* strategic framework.

Examples of how this principle is applied under the WSP include:

- Extensive consultation with First Nations and stakeholders in developing and implementing the WSP. DFO hosted some 500 meetings of various types, involving First Nations and stakeholder groups in different combinations across British Columbia.⁴⁷ These meetings concerned WSP directly or indirectly.
- The creation of the Barkley Sound Initiative as a pilot project to test approaches to collaborative integrated planning. This included a discussion paper to plan the Initiative, planning workshops, identification of priority CUs, creation of a Chinook production model to evaluate alternative production scenarios, and developed a collaborative integrated planning process.
- Continued a pilot for planning Fraser River CUs (FRSSI). This initiative serves as a test of the five-step procedure for multi-stakeholder planning set out in the WSP.
- WSP scientific reports and manuscripts are subject to peer review in open meetings.

3. Concluding observations

DFO incorporates WSP principles in its day-to-day operations. This is reflected in management frameworks and approaches to decision-making in IFMPs that support conservation and sustainability, particularly in such key watersheds as the Fraser, Skeena and Barkley Sound. It is also reflected in the creation of broadly based structures to test the five-step planning process set out in the WSP. DFO also furthers the WSP goal and objectives through initiatives aimed at strengthening First Nations and community involvement in various sustainability projects and programs.

⁴⁵ DFO, *Wild Salmon Policy Implementation, Draft Work Plan*, 2011-2012, May 26, 2011.

⁴⁶ DFO, *Wild Salmon Policy – Work Planning*, Strategic Directions Committee, May 6, 2010.

⁴⁷ DFO, *Meeting Inventory*, 2005-2010

Within the WSP strategic framework, two key foundational pieces have been completed in the six years since the *Policy* was adopted: delineating CUs for BC and the Yukon; and, identifying freshwater habitat indicators, metrics and benchmarks. Two other foundational pieces are well advanced: developing criteria to assess the status of CUs; and, developing habitat characteristic templates and completing status reports on six watersheds.

While these are clearly fundamental building blocks for a fully realized *Policy*, they are not enough to result in more than modest measurable progress in meeting the stated objectives and goal of the *Policy*. They provide the technical basis – the framework – for implementing the extensive work needed for the *Policy* to succeed. This work requires activity in three essential areas:

- **establishing abundance and distribution benchmarks for each of the CUs and monitoring and assessing their status;**
- **assessing the habitat status of CUs; and,**
- **implementing an interim process for managing priority CUs.**

Until these activities produce their intended outputs and outcomes, the *Policy*'s genetic diversity, habitat integrity and sustainability objectives will remain largely unrealized and the *Policy* goal a worthy, but elusive, target.

5

Challenges and recommendations

1. Factors influencing WSP success

Challenges

Various documents and interviewees identify several challenges associated with the WSP implementation. Many of these were anticipated at the time the *Policy* was adopted (indeed, some are mentioned the *Policy* document itself), while others have arisen during implementation.⁴⁸

- **Complexity and uncertainty:** WSP requires the development and implementation of innovative approaches to safeguarding the genetic diversity of wild Pacific salmon (delineating CUs, identifying benchmarks, conducting status assessments, creating broad-based planning structures), including the integration of biological, habitat and ecosystem information into fisheries management. These various dimensions of complexity and uncertainty have required more time to resolve than originally expected and, combined with the sequential nature of the Action Steps, have contributed to (but do not fully account for) a slower pace of implementation than anticipated.
- **Implementation funding:** *Policy* implementation was to proceed “within the envelope of available funding”. In addition to imposing an overall constraint on implementation, this also added a layer of uncertainty since it effectively limited the horizon to plan activities to a year or so. The lack of committed resources may also have played a role in influencing the decision not to produce a formal implementation plan. Moreover, the available resources actually declined after 2008 (Table 3.1) instead of increasing as activities moved from research and development to extensive implementation of monitoring and assessment.
- **Acceptance within DFO:** While there is some validity to the notion that the WSP was in large part codifying changes that DFO had been making over the last 15-20 years (which would have made acceptance a non-issue), it is also fair to say that the *Policy* was transformational in its approach to conserving diversity (CUs), the use of benchmarks, the integration of habitat and ecosystem information, and the approach to developing ISPs. As such, it would transform the way DFO has to do business. This requires what senior officials describe as a “cultural shift” within DFO, which is likely to present a challenge. Since none of the outputs of the WSP have yet been operationalized, it is too early to tell how great the challenge might be.
- **Consultation:** DFO engaged in extensive consultations during WSP development. These dialogues helped to shape the *Policy* and secure its acceptance by First Nations and stakeholders. Further rounds of consultations and meetings were held during implementation to explain approaches and advise on progress. In all, some 500 consultation meetings that DFO regards as directly or indirectly related to WSP took place

⁴⁸ *Policy*, pages 35-36; Nelitz, M. et al., *Returning Salmon: Integrated Planning and the Wild Salmon Policy in B.C.*, prepared for the David Suzuki Foundation, 2008; DFO, *Wild Salmon Policy – Work Planning*, Strategic Directions Committee, May 6, 2010; Paul Sprout and Sue Farlinger, *Summary of Anticipated Evidence*, Commission of Enquiry on the Decline of Sockeye Salmon in the Fraser River, November 2010.

- between 2005 and 2011. While highly beneficial to *Policy* development and implementation, organizing, conducting and participating in these meetings was also time-consuming and expensive for DFO, First Nations and stakeholders. Some have raised questions about whether this is the most efficient and effective approach to seeking input on technical matters.⁴⁹ The level and cost of consultation can only increase as planning structures for priority CUs and ISPs are formed.
- **First Nations capacity:** The importance of engaging First Nations in WSP implementation is recognized within DFO. But the nature and frequency of consultations, and what is expected of First Nations participants, represents a capacity challenge in three ways.⁵⁰ Many of the consultations are technical in nature, and many First Nations representatives lack the scientific background to participate effectively, leading to a reluctance to participate. The frequency of consultations imposes a burden in terms of time and cost. Also, First Nations representatives often do not have the mandate to agree on a particular outcome.
 - **Collecting and applying ATK:** The importance of incorporating ATK into analysis and decision-making is widely recognized and forms an explicit element in the *Policy* with respect to delineating CUs and assessing habitat status. Background documents have been prepared to address the challenge and offer solutions. DFO has prepared discussion papers on the question of how to compile and apply ATK, but a framework acceptable to First Nations has not yet been prepared and adopted.⁵¹
 - **Data deficiencies:** this refers primarily to the lack of any data on abundance and distribution for as many as 50% of smaller and more remote CUs. This presents a major challenge in identifying benchmarks.⁵²

Barriers

- **Jurisdiction and capacity:** The Province of British Columbia has jurisdiction over land and water use. DFO express the concern that this limits the Department's ability to address habitat issues, other than in a reactive way (in response to potential harm) under Sections 35 and 36 of the *Fisheries Act*. The *Policy* calls for stronger partnerships, and among others, between the federal and provincial governments regarding salmon habitat conservation and restoration. **For the WSP to work effectively, it has to work at the watershed level.** The concern here is that a lack of capacity (human and financial resources) at the provincial level represents a barrier to participation in the form of monitoring, restoration and watershed planning.⁵³

⁴⁹ See for example the testimony of Rob Morley before the Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River, June 3, 2011, pages 48-51.

⁵⁰ See generally the testimony of Dr. Brian Riddell and Jeffrey Young before the Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River June 2, 2011, pages 41-45; Paul Ryall and Mark Saunders, June 3, 2011, pages 11-12; Summary of Anticipated Evidence of Mark Saunders, 16-17 November, 2010.

⁵¹ Strategic Directions Committee, *Wild Salmon Policy – Work Planning*, May 6, 2010, pages 14-16; Testimony of Mark Saunders before the Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River, November 29, 2010, pages 41-42.

⁵² Dr. Carrie Holt, Summary of Anticipated Evidence before the Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River, 17 November 2010; Strategic Directions Committee, *Wild Salmon Policy – Work Planning*, May 6, 2010, page 7.

⁵³ Paul Sprout, former RDG, Pacific Region, Summary of Anticipated Evidence before the Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River, 17 November 2010.

- ❑ **Fear and strategic behaviour:** Fear of outcomes once CU benchmarks and status have been determined could affect support for the IMP/ISP process, resulting in strategic behaviour in planning processes and limiting the effectiveness of CU management. For First Nations, there are two concerns: a) their views would be submerged in a process that gives at least equal weight to other interests, rather than treating First Nations access as a priority making sure that fish are distributed to all nations; b) DFO and commercial and recreational interests will resist using the CU data and continue to manage using stock aggregates. Commercial interests fear that managing on CUs within an IMP process will expose the risk to weak stocks and push fisheries to terminal areas, thereby limiting their access. It is in the interests of both groups to behave strategically with respect to decisions regarding timing of the fishery, gear used and escapement levels.

Internal factors

- ❑ **Resources:** though the Pacific Region received some increased funding to implement the WSP (they amounted to 2.0% of the Regional budget in the early years, dropping to about 1.5% in the past two years), it also found resources from its own budget to support implementation. Nonetheless, the overall level of funding was inadequate to carry out any more than the foundational activities under each of the Action Steps. Inadequate funding slowed down implementation of key activities including developing benchmarks and monitoring under Strategy 1 and habitat status reports under Strategy 2.⁵⁴
- ❑ **Capacity:** the *Policy* envisages the involvement of various partners (First Nations, stakeholders, community groups) to assist DFO in carrying out such work as monitoring, assessment and habitat restoration. But the Department itself lacks the capacity (enough people with the right skills) to conduct activities such as habitat monitoring. There is always concern within DFO whether prospective partners can provide enough volunteers with the right skills and ability to deliver complete and consistent recording and reporting according to established protocols.⁵⁵ Though this is a valid concern, it is something that presumably could be addressed through appropriate training programs.
- ❑ **Horizontal management and integration:** DFO conducts its operations within a vertical structure of specialized branches: Science, FAM, OHEB and *Policy*. Each of the branches is accountable for elements of the WSP: Science for Strategies 1 and 3, OHEB for Strategy 2 and FAM for Strategy 4. *Policy* Branch is responsible for coordinating WSP implementation, while overall accountability for WSP delivery rests with the RDG. Despite the extent to which strategies cut across branches and the extent of integration required, there is no one below the RDG with horizontal management responsibility for implementing the WSP.

⁵⁴ See generally the testimony of Paul Sprout and Sue Farlinger before the Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River December 9, 2010, pages 25-35; Strategic Directions Committee, *Wild Salmon Policy – Work Planning*, May 6, 2010, page ; Operations Committee, June 17, 2010, Record of Decisions, attached presentation, *Wild Salmon Policy – Work Planning*, page 9.

⁵⁵ Testimony of Dr. Brian Riddell before the Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River, June 1, 2011 page 92.

External factors

- **SARA:** Under Canada's *Species at Risk Act* (SARA), DFO is responsible for protecting aquatic species at risk and their habitat. If the federal government accepts a recommendation under SARA to list a species as endangered, then depending on the degree of endangerment (e.g., at risk of extinction), DFO would have the responsibility to develop recovery and action plans (including prohibition on fishing) and implement habitat protection as required. SARA conducts its assessments at the level of a "designatable unit", corresponding to the "conservation unit" under WSP. The lower benchmark under WSP is deliberately set at a level well above the level that would trigger a SARA listing.⁵⁶ So, while WSP operates independently of SARA with its own objectives, it is also in a sense pre-emptive or precautionary in that action under WSP would be taken before a CU reaches a level where there is a risk of a SARA listing.
- **MSC certification:** The conditions set out in the MSC certification of four sockeye fisheries impose a firm timeline on completing key elements of the WSP. Following a 9-year assessment process, four sockeye salmon fisheries (including Fraser River) were certified by MSC in 2010. The certification was subject to 36 conditions that have to be met within five years. The Action Plan adopted by DFO commits the Department to meeting these conditions within the five-year period.⁵⁷ Several conditions are dependent on full implementation of the WSP with respect to defining CUs and associated limit and target reference points for the stocks in question (Strategy 1), and also with respect to developing ISPs (Strategy 4). It is worth noting that there are ongoing discussions to reconcile the MSC concepts of reference points with the WSP concept of benchmarks.

2. Recommendations

The Statement of Work asks for recommendations to further advance implementation in the context of DFO's existing resources. Six recommendations are presented here. The first advertently violates the contextual guideline by recommending that DFO match the significance of the *Policy* goal with the resources needed to realize it. The other recommendations address broad structural and management issues that, if accepted, should accelerate implementation.

Recommendation 1: WSP needs a firm DFO commitment with funding.

One of the lessons to emerge from the WSP implementation experience since 2005 is that a lack of a firm DFO commitment to implement the *Policy* is a key reason it has not progressed. So far, the *Policy* is transformative in principle only. If the Department wants the *Policy* to be transformative in practice, then it should make it so. Essential to this is the allocation of sufficient resources to carry out the activities on the critical path to identifying and addressing priority CUs. Failure to make a clear commitment of resources could result in a public perception that conservation is not the highest priority, causing First Nations and stakeholders to question their own continued support for the *Policy*. The amount required is unknown at this point, but it would become clear with the completion of an implementation plan (Recommendation 3).

⁵⁶ Testimony of Dr. Brian Riddell before the Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River November 29, 2010, pages 40-41; Testimony of Dr. James Irvine before the Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River November 30, 2010, pages 18-21.

⁵⁷ Fisheries and Oceans Canada, *Action plan to address conditions for Marine Stewardship certification of British Columbia sockeye fisheries*, December 2009.

Recommendation 2: Identify priority action steps and target resources strategically.

This recommendation is an attempt to address a commonly expressed concern that the *Policy* may be too ambitious in terms of the range of issues it tries to encompass (particularly given the funding constraints), and with respect to the elaborate planning structures it proposes to create to develop ISPs. The fear, based on experience to date, is that the planning process will be weighed down by the burden of the time and resources needed to gather and integrate all the biological, habitat and ecosystem information required; and that, under the best of circumstances, it will be many years before the process actually produces an ISP. In short, the approach as implemented, could thwart the urgency of achieving the *Policy* objectives, particularly with respect to conservation.

The *Policy* recognized the complexity of the issues and the various challenges of developing ISPs, indicating that the process "...will not be easy or immediate". For this reason, an interim process designed to provide "immediate progress" was to be implemented. But this interim process has not been implemented. Instead, a pilot project (Barkley Sound WSP Initiative) to test approaches to collaborative strategic planning was implemented, following the guidelines set out in the *Policy* (Appendix 2).

The implementation experience since 2005 has reinforced the original rationale for an interim process set out in the *Policy*. For this reason we recommend expeditious completion of technical work and assessments needed to identify priority CUs and the actions needed to address them. This approach is consistent with the top priority assigned to conservation. It gives practical expression to applying the precautionary approach to resource management decisions. It makes it possible to take immediate action to address resource issues through harvest management, recognizing that it may take several more years before habitat and ecosystem information becomes available and structures have been established to develop ISPs.

This approach creates two-track implementation, much along the lines set out in the *Policy*. The tracks would be identified by their main outputs:

- **Interim Management Planning:** this track consists of essential activities to be completed within one year, directed to identifying priority CUs and creating response teams to develop IMPs as envisaged in the *Policy*. The implementation focus is on issues meeting two criteria: they fall within federal jurisdiction and DFO's mandate, and are susceptible to remedial action that can be planned and implemented in the short run. This includes activities under Action Steps 1.2 and 1.3 (benchmarks and status), as well as those under 4.1 (creating response teams). It does not preclude consideration of habitat and ecosystem outputs produced by Strategies 2 and 3; these would be integrated over time as information becomes available. A first step in developing IMPs is to approve an approach for identifying and planning for priority CUs.
- **Integrated Strategic Planning:** this track follows the approach set out in the *Policy* under Action Step 4.2, calling for the creation of new planning structures to develop long-term strategic plans that determine biological targets for CUs and for habitat and ecosystem status, while considering the biological, social and economic impacts of fishing. So, this does not differ from what the *Policy* envisages, but it does recognize that it could be many years before there is sufficient information to integrate. A question to be addressed by DFO and the participants in the Barkley Sound initiative is how a recommendation to proceed with IMP would affect this pilot project. It could carry on under its existing mandate; or alternatively, it could be re-purposed in the short-run as an Action Step 4.1 interim planning group, with a view to evolving into an ISP organization over time.

In short, taking a two-track approach does not mean abandoning the existing pilot planning initiatives. Rather, it recognizes that with the current scope and pace of implementation, it could be many years before WSP activities produce the full range of biological, habitat and ecosystem information needed to prepare ISPs, and many years before the pilot initiatives provide useful lessons on structure and process. The IMP approach responds to the urgency of addressing priority CUs, but could evolve into an ISP process as ongoing work produces habitat and ecosystem information.

Recommendation 3: Develop a formal implementation plan.

WSP implementation would benefit greatly from a road map setting out the nature and scope of the activities required to produce the various outputs, how they will be integrated, and what is required in terms of time and resources to complete each of them. This is particularly the case given Recommendation 2.

In the first six years of implementation, much was learned about salmon diversity, assessment frameworks and the approaches needed to implement the *Policy*. A firm commitment of the resources needed to continue implementation provides an opportunity to build on this experience. An implementation plan would provide insight into the longer term relationship amongst activities and outputs, and give a 5-year timetable for activities, thereby allowing DFO, partners and the public to gain insight into what can be expected and when.

Whether the development of an implementation plan in 2005 would have expedited WSP implementation is moot at this point. But at the very least it would have caused managers and those responsible for conducting the technical work to think through activities very carefully, and arguably could have provided what was missing at the outset: a realistic assessment of complexities, timeframe and costs.

Recommendation 4: Make a senior manager accountable for implementation

This recommendation is aimed at strengthening the accountability framework. At present, responsibility for WSP implementation is spread across branches, with each director accountable for a set of specified activities to be carried out by staff within that branch. Staff are accountable to directors through performance agreements. Directors are accountable to the RDG and the RDG to the Deputy Minister through accountability accords. So, ultimately, accountability rolls up to the RDG, but the RDG's role is to provide strategic guidance rather than operational management.

A potential weakness in this system arises from the absence of an individual with responsibility and accountability for the horizontal aspects of the WSP – those operational activities that cut across branch lines. This is more than a coordinating function, in that it would include the operational authority to ensure staff are doing what they have committed to do under annual workplans. For example, this could be a role assigned to the Associate RDG who would work through Directors to oversee WSP activities. In addition, strengthening accountability would be a matter of ensuring that individual assignments flowing from annual workplans find their way explicitly into performance agreements and on up to the RDG through accountability accords.

Recommendation 5: Adopt a strategic approach to consultations

DFO, First Nations and stakeholders devoted considerable time and resources to planning and participating in WSP consultations during the formative and implementation stages. While most agree that these consultations were helpful to guide design and implementation and to gain insight into approaches and progress, many inside and outside DFO also expressed the view that this level of consultation took far more time than originally anticipated and would be difficult to sustain in the long run. A more strategic approach is recommended, where DFO relies more heavily on electronic media to disseminate technical information, with the consultation process used in cases where direction and decisions are required on major design and implementation issues.

Recommendation 6: finalize and adopt approaches for key operational matters

Discussion papers and background reports have been prepared and several meetings have been held to address issues that are fundamental to effective implementation of the WSP. As yet, satisfactory approaches have not been adopted. DFO and external partners should act expeditiously to resolve these matters:

- ❑ **Planning scale for CUs.** Adopting the right scale for CU planning (whether IMP or ISP) is critical to the success of the WSP because it would be practically impossible to develop plans for each of the ±450 CUs. A final decision on planning scale should be made and the framework developed and implemented.
- ❑ **Method to compile and integrate ATK.** First Nations representatives stress the importance of taking ATK into consideration in conservation planning, but also believe that it would be more effectively integrated within a co-management framework (a Tier 2 approach). How to develop joint agreements with all the First Nations who would be involved in the various IMP and ISP planning structures represents a key challenge.
- ❑ **Socio-economic impact framework.** Developing a template for assessing the socio-economic impact of management decisions is critical to the success of the ISP process.

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APPENDIX 1: Statement of Work

1.0 TITLE

Performance Review of the Wild Salmon Policy

2.0 BACKGROUND

Canada's Policy for Conservation of Wild Pacific Salmon (Wild Salmon Policy - WSP) was announced in 2005, following extensive years of consultations with Canadians concerned about the protection of Pacific salmon. The goal of the Wild Salmon Policy is to restore and maintain healthy and diverse salmon populations and their habitats for the benefit and enjoyment of the people of Canada in perpetuity.

In support of this goal, the Wild Salmon Policy establishes three objectives:

1. Safeguard the genetic diversity of wild salmon,
2. Maintain habitat and ecosystem integrity, and
3. Manage fisheries for sustainable benefits;

The Policy also outlines six distinct but related strategies, with defined action steps, that direct efforts towards meeting the objectives.

The Wild Salmon Policy is intended to influence and shape management of Pacific salmon, their habitat and ecosystems over the long-term. As such, the Department has taken an incremental approach to implementation within DFO's existing resources, as outlined in the Policy.

Additional information on the Wild Salmon Policy is available online at <http://www.pac.dfo-mpo.gc.ca/fm-gp/species-especies/salmon-saumon/wsp-pss/index-eng.htm>.

3.0 PURPOSE AND SCOPE

Under the Wild Salmon Policy, Action Step 6.2 commits that *“an independent review of the success of the WSP in achieving its broad goals and objectives will be conducted within 5 years of its adoption.”* The Policy further states that *“based on the review, DFO may revise the implementation of the policy to address any shortcomings that may be reducing its effectiveness.”*

As such, the review will examine the Department's role in implementing the Wild Salmon Policy in pursuit of the goal and objectives. While the Policy acknowledges that DFO “cannot do it all” and that successful implementation of the policy requires partnerships with First Nations, volunteers, stakeholders and other levels of Government, the focus of the review will be on DFO's actions towards implementation. The contributions of others towards WSP implementation should be acknowledged and considered within the review, however they will not be a focus of the review.

This review is to be undertaken in the context of the implementation approach identified in the policy document, which states that WSP is to be phased in gradually and within DFO's existing resource capability.⁵⁸

⁵⁸ Fisheries & Oceans Canada, *Canada's Policy for Conservation of Wild Pacific Salmon, 2005, pages 35-36.*

The review will address the following Key Issues:

1. To what extent has progress been made with implementing Strategies 1-5 and the associated action steps?
2. Building on work done with respect to the strategies, to what extent has this work contributed to the WSP goal and objectives?
3. Are there internal/external factors and/or general challenges/barriers that influence the success of WSP?
4. Are there recommendations to further advance implementation of the Wild Salmon Policy in the context of DFO's existing resources?

The timeframe covered by the independent review is from June 2005 to March 31, 2011.

4.0 APPROACH AND METHODOLOGY

Bidders are asked to submit proposals for the evaluation approach with associated costs. The proposal should include methodologies relevant for use in this evaluation, such as file review, interviews, focus groups, mail or online surveys.

DFO will provide the following information to support the review:

- a) Performance measurement data in accordance with the preliminary Performance Measurement Framework (attached).
- b) Files and documents for review – DFO will provide the necessary documents to integrate this information into the evaluation, including performance measurement data and indicators.
- c) Key Informants for Interviews or Focus Groups – DFO will provide a list of approximately 25 key external informants including First Nations, partners, and other external experts. DFO will also provide a list of DFO staff who are knowledgeable about WSP implementation.

5.0 DELIVERABLES AND TIMING

Work for the independent review will begin on June 13, 2011 with a final report due on September 30, 2011. The contractor shall produce the following deliverables within the timelines below:

APPENDIX 2: Interviewees

Internal

Name	Affiliation
Management	
Susan Farlinger	Regional Director General
Paul Macgillivray	Associate Regional Director on assignment as Team Lead for the Cohen Team
Laura Richards	Regional Director, Science
Bonnie Antcliffe	Regional Director, Ecosystems Management
Jennifer Nener	A/ Regional Director, Policy
Sarah Murdoch	A/ Regional Director Treaty and Aboriginal Policy
WSP Team Members	
Amy Mar	Manager, Strategic Policy and Planning
Mark Saunders	Head, Stock Assessment and Freshwater Ecosystem Division, former Strategy 1 lead
Neil Schubert	Section Head, Freshwater Ecosystems Section, Science Branch
Melody Farrell	Team Leader, Strategic Initiatives, Ecosystem Management
Kim Hyatt	Ecosystem Research Scientist, Science Branch
Jim Irvine	Research Scientist, Science Branch
Corey Jackson	Senior Advisor, Co-Management, Fisheries Management
Wilf Luedke	Stock Assessment, South Coast
Ann-Mari Huang	Salmon Biologist, Fisheries Management
Other DFO Experts	
Paul Ryall	Lead, Salmon Team, Fisheries Management
Jeff Grout	Resource Manager, Salmon, Fisheries Management
Les Jantz	Area Chief, Fisheries Management, BC Interior
Ron Kadowaki	Cohen Team Member

External

Name	Affiliation
First Nation Consultants	
Mike Staley	Consultant to Fraser River First Nations, IAS Ltd. Fisheries Program Manager, Uu-a-thluk / Nuu-chah-nulth Tribal Council Fisheries
Dr. Don Hall	Council Fisheries
First Nations	
Marcel Shepert	Chairperson and Facilitator, Upper Fraser Fisheries Alliance, Pacific Fisheries Resource Conservation Council Board Member Manager/Senior Fisheries Biologist, Okanagan Nation Alliance
Howie Wright	Fisheries Department
Larry George	Land and Governance Manager, Cowichan Tribal Council
Les Sam	Chief Councillor, Tseshaht First Nation
Teresa Ryan	Tsimshian First Nation Stewardship Council, First Nations Marine Society
Pat Matthew	Shuswap Nation Tribal Council

Name	Affiliation
Neil Todd	Fraser River Aboriginal Fisheries Secretariat
Kim Charlie	Chehalis
Murray Ned	Sto:lo Tribal Council
Cheri Ayers	Cowie Chan Tribes
Non-governmental Organization	
Dr. Brian Riddell	President & CEO, Pacific Salmon Foundation, Commissioner, Pacific Salmon Commission
Mark Duiven	Deputy Commissioner, Skeena Fisheries Commission
Jack Minard	Salmonid Enhancement and Habitat Advisory Board member
Jeff Marliave	Chair, Pacific Fisheries Resource Conservation Council
Marine Conservation Caucus Members	
Craig Orr	Executive Director, Watershed Watch Salmon Society, Co-chair, Marine Conservation Caucus
Greg Knox	Executive Director, Skeena Wild Conservation Trust
Zoanne Morton	Executive Director, Pacific Streamkeepers Federation, Salmonid Enhancement and Habitat Advisory Board Member
Jeffrey Young	Aquatic Biologist, David Suzuki Foundation, Marine Conservation Caucus Member
Craig Orr	Executive Director, Watershed Watch Salmon Society, Co-chair, Marine Conservation Caucus
Commercial Sector - Commercial Salmon Advisory Board Members	
Rob Morley	Vice President, Canadian Fishing Company; Director, BC Salmon Marketing Council; Chairman, Fisheries Council of Canada; Member, Fraser River Panel
Chris Cue	Co-chair, Commercial Salmon Advisory Board, Pacific Salmon Commission Northern Panel Member
Recreational Sector	
Wolf Reidl	Yukon Fish and Game Yukon River Panel Salmon Subcommittee member
Sports Fishery Advisory Board Members	
Gerry Kristianson	Chair, Sports Fishing Advisory Board, Commissioner, Pacific Salmon Commission
Jeremy Maynard	Sports Fishing Advisory Board Member, Pacific Salmon Commission Southern Panel Member
Tom Prothro	Sports Fishing Advisory Board Member, Pacific Salmon Commission Northern Panel Member
Gerry Kristianson	Chair, Sports Fishing Advisory Board, Commissioner, Pacific Salmon Commission