

Response to the Consultations on the

Wild Salmon Policy Discussion Paper
and the
Salmonid Enhancement Program

DRAFT

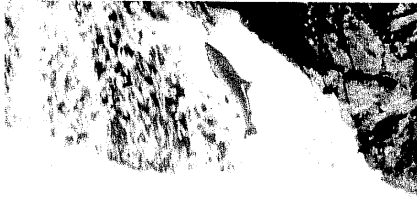
Fisheries and Oceans Canada
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TABLE OF CONTENTS

Acronyms	ii
Executive Summary	iii
Introduction	1
Policy Context	1
Draft Wild Salmon Policy	2
Salmonid Enhancement Program	3
The Consultations and Information Meetings	3
What We Heard	4
Draft Wild Salmon Policy	4
Overview and Management Approaches	4
The Six Principles of the March 2000 Draft WSP	6
Implementation and Other Concerns	8
SEP Review	9
Funding and Priorities	9
Importance of Activities	10
The WSP, Accountability, and Alternative Funding	13
DFO Response	16
Revised Wild Salmon Policy	16
Revision of the Document	16
Operational Guidelines	17
Plans for Implementation	19
Reshaped SEP	21
Habitat and Enhancement Transition Plan	21
Long-term Planning	23
Support for the Wild Salmon Policy	24
Next Steps	25
References	27
Appendix A: Glossary	29
Appendix B: Consultation Questions	33

ACRONYMS

BCAFC	BC Aboriginal Fisheries Commission
CU	Conservation Unit
CWT	Coded Wire Tag
DFO	Fisheries and Oceans Canada
LRP	Limit Reference Point
NGO	Non-government Organization
NTC	Nuu-chah-nulth Tribal Council
PSARC	Pacific Scientific Advice Review Committee
QCC	Queen Charlotte City
SEP	Salmonid Enhancement Program
SFC	Skeena Fisheries Commission
SNFC	Shuswap Nation Fisheries Commission
TEKW	Traditional Ecological Knowledge and Wisdom
WFSP	Watershed-based Fish Sustainability Planning
WSP	Wild Salmon Policy



EXECUTIVE SUMMARY

Between April and November 2000, Fisheries and Oceans Canada (DFO) held joint information and consultation processes on the *Wild Salmon Policy Discussion Paper* (DFO 2000a) and the Salmonid Enhancement Program (SEP). The purpose of these processes was to:

- introduce the Wild Salmon Policy (WSP) to the public, clarify its intent, and explore the implications for fisheries and stock management; and
- review the current scope and objectives of SEP and determine a future program direction in light of evolving policies, budget realities, and public priorities.

The WSP is one of a series of policies to implement the conservation objective of the October 1998 *New Direction for Canada's Pacific Salmon Fisheries* (DFO 1998). The March 2000 draft *Wild Salmon Policy* set out six principles for conserving the genetic diversity of wild salmon and protecting their habitat. These include the aggregation of local stocks into "conservation units" (CUs) and the determination of minimum and target levels of abundance, or biological reference points, for each unit.¹

Since 1977, SEP has operated hatcheries and other facilities, conducted public education, and provided financial and technical support for enhancement, habitat restoration, and community involvement activities throughout the Pacific Region. The program is currently operating with a \$3.5-million funding deficit. Its total budget will fall to \$23.5 million annually in 2003/04.²

Consultations took place with the general public and an information process was held for First Nations. Participants contributed through meetings, community forums, and open houses across the Region, as well as through written submissions and response forms. In total, input was received from 850 individuals, 50 of whom represented First Nations, local/regional governments, or organizations, thus capturing the views of many more people.

What We Heard

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Was
for
copies

During the consultations and information meetings, a number of questions were posed to participants about the draft WSP and SEP.³ Responses and discussion results are reported in separate documents prepared by Dovetail Consulting Inc. et al. (2000), the BC Aboriginal Fisheries Commission (2001), the Nuu-chah-nulth Tribal Council (Watts et al. 2000), the Shuswap Nation Fisheries Commission (Fortier 2000), and the Skeena Fisheries Commission (SFC 2000).

¹ See the Glossary in Appendix A for definitions of terms used throughout this report.

² See Sections 1.2 and 1.3 of the main document for more background on the WSP principles and SEP, respectively.

³ The questions are listed in Appendix B.

DRAFT WILD SALMON POLICY

The following are key messages on the overall approach, principles, and implementation of the WSP for which there was general agreement in the public and First Nations processes⁴:

We recommend that [DFO] policy be clear in identifying, as its primary policy goal, the conservation of the genetically-based adaptations that occur within and among wild Pacific salmon.

Institute of Fisheries Analysis,
Simon Fraser University submission

Are we putting too much attention on genetic diversity rather than habitat conservation?

Abbotsford Community Forum

1. Wild salmon are central to the ecosystems, culture, and economy of British Columbia and the Yukon; a policy to protect them is vital.
2. The WSP must be clearer and more detailed for its implications to be understood.
3. Participants supported a strong scientific basis for managing wild salmon. Many called for more proactive salmon and habitat protection.
4. First Nations demanded that traditional ecological knowledge and wisdom (TEKW) be considered along with science when making conservation and management decisions. They and many participants in the public process advocated a more holistic, ecosystem-based approach to implementing the policy.
5. Support for the conservation of the genetic diversity of wild salmon was widespread, with most debate focused on how much effort to devote to protecting local populations. Habitat protection is critical to the WSP's success.
6. The mechanisms to define conservation units should be specified in the policy. People disagreed on the level of aggregation for determining CUs.
7. The policy must also clearly state how reference points and harvest rules will be determined. Social and economic factors, as well as biological ones, should be considered in implementing the policy.
8. Views differed on the use of strategic intervention and enhancement for production. Strategic intervention should occur only as a temporary, last resort measure for stocks where habitat restoration or harvest management actions would likely not avert extirpation. Enhancement for production provides social and economic benefits, but many people have serious concerns about its impacts on wild salmon.
9. For the WSP to be successfully implemented, DFO must commit resources, expand its scientific and data collection capacity, and establish effective monitoring procedures. Communities, First Nations, and other interests want ongoing involvement in the policy's development and implementation.
10. The policy should be expanded to better address other pressing threats to wild salmon, in particular habitat degradation and aquaculture.

⁴ These key messages and the ones for the SEP Review below are elaborated on in Section 2, along with some differing stakeholder perspectives. Selected quotations from participants are provided in the margin.

*I think we have the best program around.
... It is the best bang for buck that
fisheries can get. And to think that their
budget is being cut back is inconceivable.
It needs to be expanded and supported.*

Port Alberni Community Forum

*They [volunteers] are the eyes, and the
ears of many river systems and are
presently doing work that DFO cannot
nor ever will be capable of doing.*

Oyster River Enhancement Society
submission

SEP REVIEW

Key messages from the consultations and information meetings on SEP's funding, priority activities, and implementation were as follows:

11. There is strong support for the program and widespread opposition to the budget cut. DFO should find a way to restore, and even increase, SEP funding.
12. SEP activities cannot be prioritized because they are all important, many are interdependent, and priorities will differ among regions and watersheds.
13. Where activities were prioritized, however, habitat restoration and strategic enhancement ranked highest among those carried out by SEP. For both of these areas, concerns were raised about their effectiveness and the need to monitor and evaluate activities.
14. Education, awareness building, and public involvement are other priority activities that must be taken into account when evaluating the program. Volunteers make a substantial contribution to SEP and require continuing or increased support.
15. The economic benefits from enhancement facilities are especially important in remote areas and areas where unemployment is high, and in small, coastal, and rural communities. Some participants argued for increased DFO support in these areas, while others called for community economic diversification.
16. Strong arguments were made both for and against enhancement to sustain fisheries. Many participants wanted large-scale production to be eliminated, but some worried about fishery losses if hatcheries are closed.
17. SEP's contribution to other Departmental programs, through stock assessment activities, is essential to better decision-making and management strategies. Volunteers fill gaps in much-needed monitoring and assessment.
18. SEP can help with implementation of the Wild Salmon Policy through stock assessment, habitat restoration, and volunteer stewardship. Other aspects of the program should be reoriented to reduce the risks of enhancement to wild salmon.
19. SEP should be adapted to favour more natural forms of enhancement, with hatcheries shifting from a production emphasis to their role as resource centres for stewardship. More local control and evaluation of activities is needed.
20. While there was some support for "user pay" to fund enhancement, several drawbacks to its application were noted. If user pay is implemented, those who damage habitat should also pay more and all funds should go to fisheries programs.

DFO Response

The results of the two processes and the Department's internal policy review were used to develop strategies for a revised Wild Salmon Policy and a reshaped SEP, as outlined below.⁵

REVISED WILD SALMON POLICY

1. The WSP document will be revised to clarify the policy's objective, strengthen its principles, and distinguish between the general principles and detailed operating guidelines to be subsequently established. The six principles of the March 2000 draft policy will be collapsed into three. The revised WSP will retain the objective of conserving the diversity of salmon in natural habitats, and will explicitly recognize the contribution that wild salmon make to the health and productivity of marine and freshwater ecosystems.

The policy does not protect ecosystem functioning or biological diversity.

Pacific Fisheries Resource
Conservation Council submission

The revised document will also specify that, after conservation needs are met, DFO will manage fisheries such that aboriginal and treaty food, social, and ceremonial fisheries are provided priority. In addition, the Department will seek to develop a process for incorporating TEKW into the policy's broader objectives.

2. Operational guidelines will be developed for resource management, habitat, enhancement, and aquaculture, to be released as stand alone documents following the policy's release. *revisions*
~~Where guidelines already exist (i.e., habitat, enhancement, and aquaculture), they will be reviewed, summarized, and revised and extended as necessary. Where they do not exist (e.g., CUs and reference points for resource management), new guidelines will be developed. These guidelines will include requirements for monitoring and performance assessment.~~

I get nervous when academics sit around the table discussing wild salmon. Will the process be inclusive and allow input from many user groups?

Port Hardy Community Forum

3. DFO will implement the WSP and facilitate its local delivery. DFO stock assessment scientists will continue to lead this policy initiative, with the help of fisheries management, habitat and enhancement, and aquaculture staff. Local delivery will occur through the Department's Area Offices and partnership groups, subject to an agreed framework.

How?
There will be an opportunity for focused First Nations, stakeholder, and public input into the operational guidelines. The precise form of that input will depend on the specific guidelines, but will build on existing and developing structures and processes, rather than creating a distinct new consultative process. Examples of organizations that could be employed for this purpose include the Pacific Scientific Advice Review Committee (PSARC), local area management bodies, and salmon harvest planning committees.

⁵ More detail on the policy responses and what messages they address can be found in Section 3.

RESHAPED SEP

4. DFO will implement a transition plan to complete by April 1, 2003 a reshaped habitat and enhancement program that integrates salmon enhancement, habitat protection and restoration, community involvement, and fish habitat stewardship. With reduced SEP funding and sunset of the Canadian Fisheries Adjustment and Restructuring programs, resources should be better allocated to meet the needs and opportunities of individual watersheds and communities, as well as broader DFO priorities. The transition plan will include a new Area-based decision process to reorient facility operations towards watershed priorities.
- who's needs we trying meet?*

SEP needs to step back, re-assess its priorities and re-invent itself for the 21st century.

Response form

The new four-phased Area decision process will consist of:

- reviews of all DFO-funded enhancement facilities to determine their goals and objectives, current activities and results achieved to date, and opportunities for new or alternative programming;
- watershed profiles describing the status of salmon stocks; the location, quantity, quality, and productivity of habitat; and related activities planned or underway;
- by whom?* ■ watershed reviews that integrate the watershed profile, goals and objectives, performance measures, and strategies, through the preparation of a Salmon Plan or a Watershed-based Fish Sustainability Plan; and
- by whom for whom?* ■ a regional prioritization of watersheds, facilities, and facility operations, based on the results of Phases 1 through 3 above, to develop options and recommendations for delivering the most cost-effective habitat and enhancement program.

[Hatcheries] provide economic opportunities for remote communities and those in need of work, but also a good focal point for education, awareness and understanding of the importance of fish enhancement techniques and management.

Sechelt Community Forum

5. Over the longer term, watershed-based fish sustainability planning (WFSP) will enable the public, First Nations, and stakeholders to have input into priority setting for watersheds. *Guidelines have been issued for WFSP* (DFO et al. 2000) and the Department views this planning process as an umbrella one for coordinating watershed planning throughout the Pacific Region. It will take time to complete the first stage of WFSP – a regional ranking of all watersheds for their importance to salmon conservation. In the meantime, DFO is initiating the process in key watersheds, including those with hatcheries.

*Implications
changes to
existing investment*

*Current 6.
activities?*

SEP activities will be reexamined to ensure consistency with the goal of maintaining the diversity and long-term viability of wild salmon populations in their natural habitat, and with the WSP's implementation. Besides continued stock assessment activity through efforts such as the Coded Wire Tag program, the reshaped SEP will include a focus on strategic enhancement,

more support for sustainable (e.g., selective and terminal) fisheries, and other measures to reduce the risks of enhancement to wild salmon. Hatchery activities will be reoriented using updated performance measures from the Phase 3 watershed reviews.

In addition, a new science-based Enhancement Policy will set principles and objectives for enhancement to support the WSP. This policy will specify requirements for undertaking new or existing enhancement activities, including the documentation of enhancement objectives and monitoring and evaluation procedures.

Next Steps

DFO will continue working to complete the Wild Salmon Policy and its operational guidelines and to finalize the reshaping of the habitat and enhancement program. Key next steps scheduled for 2002 are release of the revised WSP document and the draft Enhancement Policy, as well as the launch of the Area-based decision-making process.



INTRODUCTION

In April 2000, Fisheries and Oceans Canada (DFO) began information and consultation processes on two different but related initiatives: the draft *Wild Salmon Policy Discussion Paper* (DFO 2000a) and the Salmonid Enhancement Program (SEP). The purpose of the processes was to:

- introduce the Wild Salmon Policy (WSP) to the public, clarify its intent, and explore the implications for fisheries and stock management; and
- review the current scope and objectives of SEP and determine a future program direction in light of evolving policies, budget realities, and public priorities.

This report summarizes the results of the information and consultation processes and provides DFO's response in terms of a revised Wild Salmon Policy and a reshaped SEP.

Policy Context

In October 1998, the Minister of Fisheries and Oceans announced a *New Direction for Canada's Pacific Salmon Fisheries* (DFO 1998). This broad policy direction identified three key objectives for salmon management – conservation, sustainable use, and improved decision-making – and twelve principles to guide the future management of the salmon fisheries on the Pacific Coast.

Since *New Directions*, considerable progress has been made in developing and implementing the operational policies to achieve its objectives. After extensive public consultations, DFO released *An Allocation Policy for Pacific Salmon* that confirmed the precedence of conservation over other uses in the distribution of the returning resource (DFO 1999). Following a similar consultative process, a *Policy on Selective Fishing in Canada's Pacific Fisheries* provided direction on the implementation of standards to minimize mortalities and maximize the chances for survival of species and stocks of conservation concern (DFO 2001a).

Input from the public, First Nations, and stakeholders is recognized as essential to designing and carrying out these fundamental changes in salmon management. In June 2000, the Department advanced a comprehensive proposal to improve management of the fishery and reform existing advisory structures. The University of Victoria's Institute for Dispute Resolution facilitated extensive public consultation on the proposal. The stage is now set for changes that will allow all interested parties more substantive input into ongoing policy development and implementation, with a new and better management and advisory board system expected within the next year.

Draft Wild Salmon Policy

The WSP is the most important policy document that Fisheries and Oceans Canada will produce this decade.

Pacific Fisheries Resource
Conservation Council submission

In March 2000, DFO released the draft *Wild Salmon Policy*, another in the series of New Directions policies (see Figure 1). The WSP provides an explicit framework for conserving the genetic diversity of wild Pacific salmon and for protecting their habitat. The primary goal is to promote the long-term viability of salmon populations in natural surroundings and the maintenance of fish habitat for all salmon life stages, for the sustainable benefit of the people of Canada. The policy applies to all Pacific salmon, including those mixed with enhanced populations that are able to reproduce in natural surroundings.

The draft WSP set out six principles to conserve wild stocks:

Principle One: Wild Pacific salmon will be conserved by maintaining diversity of local populations and their habitats.

Principle Two: Wild Pacific salmon will be managed and conserved as aggregates of local populations called "conservation units".

Principle Three: Minimum and target levels of abundance will be determined for each conservation unit.

Principle Four: Fisheries will be managed to conserve wild salmon and optimize sustainable benefits.

Principle Five: Salmon cultivation techniques may be used in strategic intervention to preserve populations at greatest risk of extirpation.

Principle Six: For specified conservation units, when genetic diversity and long-term viability may be affected, conservation of wild salmon populations will take precedence over other production objectives involving cultivated salmon.

Pivotal to the policy is a cautious approach to fisheries and stock management, which requires that operational targets and constraints be expressed in measurable terms: conservation units (CUs) and minimum and target levels of abundance (biological reference points).

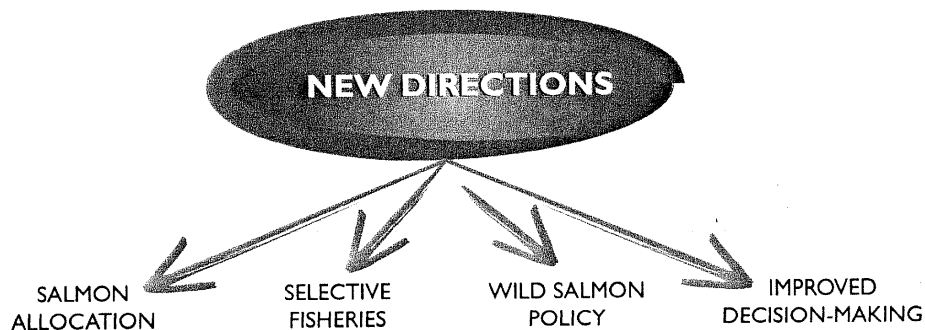


Figure 1: The Wild Salmon Policy is part of the New Directions policy series

Salmonid Enhancement Program

SEP was created in 1977 after public hearings around the Pacific Region showed widespread support for action to rebuild salmon stocks and fisheries. In addition to rebuilding stocks, the program was designed to increase fishing opportunities, involve the public and raise awareness, generate jobs and economic development in coastal and First Nations communities, and improve understanding of salmonid populations.

SEP operates hatcheries, spawning channels, and fishways, as well as contracting community groups to operate hatcheries, several of which are First Nations. Program staff work with First Nations, industry, community groups, and other agencies to implement habitat restoration and stewardship projects, and provide technical and financial support to thousands of volunteers. A public involvement and education program supports community advisors throughout the Pacific Region and the popular Streamkeepers and *Salmonids in a Classroom* programs.

Currently, SEP is operating with a \$3.5-million funding deficit, the result of a deferred budget cut from 1996. This deficit is being eliminated over three years, with the full reduction to be implemented in 2003/04. At that time, SEP's total budget will be \$23.5 million annually.

The Consultations and Information Meetings

The general public consultations for the draft WSP and SEP were held between April and July 2000. Participation took place through stakeholder meetings, community forums and open houses across the province, written submissions, and response forms. On a parallel track, a First Nations information process was also initiated in April 2000 and completed at the end of November. First Nations provided input through three written submissions and ten information meetings facilitated by the BC Aboriginal Fisheries Commission (BCAFC).

Appendix B provides a list of the questions that were posed to participants. In total, input was received from 850 individuals, 50 of whom represented First Nations, local/regional government, or organizations, thus capturing the views of many more people.⁶

The results of the general public process are presented in a *Final Report on Consultations for the Wild Salmon Policy Discussion Paper and the Salmonid Enhancement Program* (Dovetail Consulting et al. 2000). First Nations input is documented in meeting notes, submissions by the Nuuchah-nulth Tribal Council (Watts et al. 2000), Shuswap Nation Fisheries Commission (Fortier 2000), and Skeena Fisheries Commission (SFC 2000), and a report on the information meetings entitled *First Nations Perspectives on Fisheries and Oceans Canada's Wild Salmon Policy and the Salmonid Enhancement Program* (BCAFC 2001).

Do we need more than this?

⁶ For more information on participants in the public and First Nations processes, see the documents listed below.



Draft Wild Salmon Policy

Salmon are a part of the landscape to which we all owe a particularly solemn duty of care and stewardship.

Institute of Fisheries Analysis,
SFU submission

There is sufficient ambiguity that the spirit of the policy could be circumvented.

Shuswap Nation Fisheries Commission
submission

WHAT WE HEARD

The following is a summary of the key messages that emerged from the general public consultations and First Nations information process. In addition, some quotations from the meetings and written input are provided throughout this report to indicate the range of views that were expressed on various issues.

OVERVIEW AND MANAGEMENT APPROACH

Message #1:

Wild salmon are central to the ecosystems, culture, and economy of British Columbia and the Yukon; a policy to protect them is vital.

It was clear from the consultations and information meetings that wild salmon are dear to British Columbians and Yukoners, and more than just food to many people. As a result, most participants saw the WSP as being an important policy that should be carefully designed and implemented.

Written response forms showed a high level of support (80%) for the draft policy. However, environmental groups and other conservation interests tempered or, in some cases, withdrew their support on the grounds that the WSP does not sufficiently protect wild salmon stocks, especially from the impacts of cultivation, including aquaculture. Many commercial and sport harvesters were skeptical that cultivated salmon poses a serious threat to wild salmon or maintained that cultivated fish are no less valuable than wild fish. There was concern that the policy would lead to a loss of social and economic benefits from fisheries, whether due to reductions in enhancement or to constraints on fishing opportunities.

Message #2:

The WSP must be clearer and more detailed for its implications to be understood.

When asked how they would be affected by the policy, most respondents said that they did not know enough to make a proper assessment. They wanted more information on the policy's implementation and opportunities for more input once this information is available. Even though DFO staff explained that the WSP is meant to be a framework document, participants at virtually all community forums asked for further details. Many found the policy difficult to understand and in need of better grounding in examples.

The overall impression from the public process was that the intent of the WSP is appropriate, but that the draft policy is so lacking in clarity and detail that it risks being ineffective, or worse, misinterpreted and implemented in ways that would circumvent its intent. In particular, some participants worried that conservation priorities will be watered down, and others that fishing will be severely constrained, in the implementation phase.

Several First Nations representatives spoke of their knowledge, language, and traditions associated with local salmon populations. Nonetheless, many needed more information on the policy's implications, particularly in terms of its human impacts. Generally, there was less support for the WSP from First Nations than from other participants.

Message #3:

Participants supported a strong scientific basis for managing wild salmon. Many called for more proactive salmon and habitat protection.

During the consultations and meetings, DFO staff described how the policy is not prescriptive, representing instead a framework to manage the risks to wild salmon. They also explained that the WSP follows a precautionary approach, as specified in the New Directions policy, and is science-based. Some participants readily grasped the risk management concept, deeming it appropriate given the degraded state of some salmon stocks and their habitat, as well as the uncertainties surrounding management impacts. Others were unfamiliar with the precautionary approach, or judged it too conceptual and confusing.

There was broad agreement that the WSP and its implementation should continue to be based in science, in order to reduce political interference in salmon management. This view was shared by harvesters who considered that political decisions favour conservation and conservationists who argued that political pressure keeps fisheries open when they should be closed to protect stocks. Both groups called for rigor and scientific defensibility in the determination of conservation units and reference points, without which the policy might not work effectively to prevent the extirpation of salmon populations. For many participants, the WSP needed to be more proactive than past DFO policies in protecting wild stocks and habitat.

It was widely acknowledged that additional information is required to implement the policy. A number of comments favoured expanding the Department's scientific and data collection (research, monitoring, and assessment) capacity. The general perception was that, to cut down on political influence, greater credence should be given to the advice of DFO scientists and staff or managers outside of Ottawa and Vancouver, with support from senior management.

Message #4:

First Nations demanded that traditional ecological knowledge and wisdom (TEKW) be considered along with science when making conservation and management decisions. They and many participants in the public process advocated a more holistic, ecosystem-based approach to implementing the policy.

First Nations participants spelled out the need to incorporate traditional and cultural values in defining and prioritizing salmon populations. They described how First Nations culture – notably traditional practices of harvesting, processing, and use – plays a key role in the protection of local salmon stocks and habitat. From their perspective, knowledge of local populations and traditional practices should be incorporated as much as possible into the WSP's design and implementation. In fact,

You need to keep biology and politics separate.

Commercial Fishing Organizations
Meeting

We insist that social, economic, and cultural values (including aesthetic and heritage, aboriginal and non-aboriginal) be recognized in the definition of CUs ... [This] will ensure that the Wild Salmon Policy provides the most benefits to all people who use salmon resources or value their existence.

Nuu-chah-nulth Tribal Council
submission

For too long in BC the "escapement" levels haven't even let enough fish get back to spawning rivers to maintain healthy runs, let alone maintain the ecosystem functions depending on the salmon.

Response form

We strongly endorse the genetic biodiversity principles underlying the Wild Salmon Policy...

BC Federation of Fly Fishers

I was very concerned that the conservation unit would be very large. I have a strong passion for small populations of fish.

Terrace Community Forum

they suggested that TEKW and science should be given equal weight in conservation and management decisions.

Few participants in the broader public process put forward the concept of placing more emphasis on local knowledge and cultural values and less on science. However, many did recommend that the policy adopt a stronger watershed or ecosystem-based approach, looking beyond fisheries to the various functions of salmon in the ecosystem. It was argued that escapements should be larger to provide nutrients for other ecosystem species. Some harvesters, on the other hand, proposed a cull on predators of salmon – predominantly seals and sea lions.

THE SIX PRINCIPLES OF THE MARCH 2000 DRAFT WSP

Message #5:

Support for the conservation of the genetic diversity of wild salmon was widespread, with most debate focused on how much effort to devote to protecting local populations (Principle 1). Habitat protection is critical to the WSP's success.

It was suggested that the first principle should be explicitly stated as the policy's overarching goal. Several groups (First Nations, NGOs, and academics) called for a clear commitment by DFO to conserve all genetic adaptations and to restore genetic and habitat diversity. They argued for making the policy stronger – clearer, less qualified, and more prescriptive – on the protection of genetic diversity. In contrast, some harvester groups contended that DFO is going to extreme lengths in its quest for biodiversity.

At every community forum, participants highlighted the importance of habitat conservation to implementation of the WSP. Many felt that the habitat aspect of Principle 1 is not sufficiently developed. Participants were generally critical of the Department's record in habitat protection, with some recommending a more precautionary and proactive approach, especially with respect to forestry impacts. Overall, the input called for more detail on how the policy will improve the protection and restoration of habitat to help conserve genetic diversity.

Message #6:

The mechanisms to define conservation units should be specified in the policy (Principle 2). People disagreed on the level of aggregation for determining CUs.

A number of questions were raised about how conservation units will be defined and refined over time. Participants demanded to be included in this process, rather than leaving it up to scientists, and wanted more detail on the means for their input, as well as on the procedures and criteria for defining CUs. It was recognized that the definition of these units involves technical challenges and substantial costs, and that supporting information is inadequate. There were requests for CUs to be flexible and to change as information improves.

Many participants recommended that conservation units be defined so that stocks would be prevented from becoming locally extinct, or extirpated. They cautioned that salmon populations must not be aggregated in such a way as to compromise genetic diversity.

The potential is that the CUs will be so small as to prevent any enhancement or fishing from taking place. That is a serious concern.

Port Alberni Community Forum

Conservationists and others argued for CUs to be as small as possible to protect all populations, while recognizing that the management resources for doing so are currently not available. Harvesters advocated a higher level of aggregation, fearing that the protection of every little population would lead to no fishing.

First Nations representatives discussed the importance of individual populations of fish to their communities, and the need to consider not just biology but cultural, aesthetic, and heritage values. Written input emphasized that CUs must not result in the loss of salmon resources critical to First Nations by allowing the extirpation of particular stocks. The Pacific Fisheries Resource Conservation Council supported this view.



Message #7:

The policy must also clearly state how reference points and harvest rules will be determined (Principles 3 and 4). Social and economic factors, as well as biological ones, should be considered in implementing the policy.

As in the case of CUs, the consultations and meetings revealed a lot of uncertainty concerning the determination of reference points and harvest rules and their implications for both the protection of genetic diversity and fishing. Most input focused on the level of the limit reference point (LRP) and when corrective action should be taken in terms of fisheries management. The majority of participants wanted LRPs to be higher and more conservative, in keeping with the precautionary approach, but harvesters maintained that this would lead to fishery closures.

Conservationists and First Nations worried that, with LRPs, closures would come too late to protect populations. They recommended including a buffer zone to avoid approaching the LRP.

Harvesters were particularly concerned about the potential for closures in mixed stock fisheries. The issue was to what extent fishing opportunities would be limited when weaker stocks were mixed with healthy ones. Some participants feared that the WSP would mean the end of mixed stock fishing, while others supported a move away from mixed stock fisheries and towards terminal fisheries.

First Nations voiced strong concerns over the implications of reference points for native fisheries and aboriginal rights, especially regarding food, social, and ceremonial fisheries under section 35.1 of the *Constitution Act*. They felt that attention to sustainable fisheries has favoured commercial and sport fisheries over native fisheries. It was asserted that this was contrary to aboriginal rights and title, which should be addressed by the WSP. Generally, First Nations believed that the policy neglects the essential consideration of aboriginal rights and title, and that it needs to be amended accordingly.

Why do they (reference points) have to drop so low before the alarm bells go off? Why is there not an intermediate reference point before they drop to those low levels?

Prince Rupert Community Forum

Protecting all stocks on the verge of extinction could mean elimination of virtually all fishing in rivers and tidal waters throughout the Province.

BC Federation of Fly Fishers
submission

Some of the facilities have to remain as mitigation facilities. A whole host of different things have affected salmon production. We don't have a lot of choices in some areas. In the Lower Mainland we're stuck with fish hatcheries being the way fish are produced.

Terrace Community Forum

Those hatcheries that do produce fish should continue but we should not create new ones. Our priority should be to sustain wild fish. Those are the only fish that will continue to sustain Haida Gwaii. We should be very careful in proceeding down the path of cultivation.

Queen Charlottes/Haida Gwaii
Community Forum

How will we begin to manage every single population of fish? Humanly and financially it is nearly impossible.

Terrace Community Forum

Message #8:

Views differed on the use of strategic intervention and enhancement for production (Principles 5 and 6). Strategic intervention should occur only as a temporary, last resort measure for stocks where habitat restoration or harvest management actions would likely not avert extirpation. Enhancement for production provides social and economic benefits, but many people have serious concerns about its impacts on wild salmon. Principles 5 and 6 were criticized both for overly constraining the use of hatcheries and for opening the door too wide to the negative effects of cultivation on wild salmon. According to many, the sixth principle had been watered down by its opening clauses and should simply read: "Conservation of wild salmon populations will take precedence over other production objectives involving cultivated salmon."

Many participants stated that enhancement poses a serious threat to wild salmon, so that it should be reduced or eliminated. Others pointed out that there are areas of the province that depend totally on hatchery production, where enhancement is needed to "mitigate" against the effects of habitat degradation. Hatcheries were acknowledged to have other important social and economic benefits, such as providing centres for volunteer stewardship.

Concerns were expressed that strategic enhancement risks excessive impacts on wild salmon, that production is hard to stop once begun, and that the result is an over-reliance on hatcheries. Participants were skeptical that strategic intervention would work, as low abundance, habitat damage, and other factors could prevent stocks from recovering. Despite these reservations, people generally agreed that there is a role for this intervention as a temporary, last resort measure for stocks where habitat restoration or harvest management actions would likely not be effective in preventing extirpation.

IMPLEMENTATION AND OTHER CONCERNS

Message #9:

For the WSP to be successfully implemented, the Department must commit resources, expand its scientific and data collection capacity, and establish effective monitoring procedures. Communities, First Nations, and other interests want ongoing involvement in the policy's development and implementation.

Across stakeholder groups, people expressed doubt that DFO would have the willingness, the resources, the science, or the data to implement the Wild Salmon Policy. Participants widely recognized that implementation might not be feasible because of the high cost of managing salmon stocks at the appropriate level. There was agreement that the federal government has to provide the necessary resources, which could be supplemented by volunteer stewardship and cooperation with communities, First Nations, and other programs and agencies. In particular, it was seen as imperative that the Department work with the provincial government and other federal agencies in the protection of salmon habitat.

Many participants stated that their support for the WSP depends on further involvement in its design and implementation. Ongoing

DFO would benefit from seeking and gaining managerial support from aboriginal groups with interest in the resource.

Skeena Fisheries Commission
submission

Without a strong and visible commitment from the Department to preserve and protect freshwater and estuarine habitat of our salmon species, wild salmon in British Columbia are doomed.

BC Wildlife Federation submission

monitoring during the implementation phase, especially for defining conservation units and reference points, was identified as essential. People asked for evaluation procedures to measure the policy's success, with indicators other than economic value to reflect a broader ecosystem focus. Some participants suggested that responsibility for implementation should be delegated to local management boards or related bodies, with First Nations recommending co-management of wild salmon.

Message #10:

The policy should be expanded to better address other pressing threats to wild salmon, in particular habitat degradation and aquaculture.

Much input was received on issues besides enhancement that have serious implications for the conservation of wild salmon. The main ones identified were habitat degradation, enforcement of the Fisheries Act, fishing impacts on wild salmon, aquaculture, low ocean survival rates, and predators. While some of these issues were acknowledged in the draft WSP, participants felt that they deserved further attention relative to other factors, including enhancement, that are more fully addressed in the policy principles.

Habitat loss was believed to pose the greatest risk to wild salmon. People cited logging, urban development, agricultural pollution, hydroelectric dams, and water extraction among the common causes of this loss. Although numerous agencies and levels of government have responsibilities related to habitat, participants called on DFO to play a stronger role in habitat protection. From their perspective, the policy will be ineffective unless it deals with restoring and protecting salmon habitat.

Many participants expressed concern over the impacts of aquaculture on wild salmon and felt that these have not been adequately dealt with in the WSP. Perceived problems from aquaculture included escaping farmed Atlantic salmon, ecological risks, preying of farmed fish on young wild salmon, the amount of food taken from the ocean to feed farmed fish, and disease transfer. At some meetings, there was considerable support for discontinuing aquaculture, in its current form, because of the risk to wild salmon.

SEP Review

FUNDING AND PRIORITIES

Message #11:

There is strong support for SEP and widespread opposition to the budget cut. DFO should find a way to restore, and even increase, program funding. The overall impression from participants was that SEP is a popular, highly effective program that does not deserve to have its funding cut. People wanted to know why the budget has been reduced and what program areas will be affected. Many indicated that cuts have been rejected before and will be protested again. It was asserted that the federal government should be able to find the funding necessary to maintain or even increase SEP activities.

Another opinion that was voiced in relation to the budget cuts was mistrust of the consultations themselves. Participants in the public process questioned why they were being asked about future priorities for SEP while, at the same time, being told that the cuts were final and that the WSP would affect enhancement programs. According to some, DFO was simply going through the motions of public input when decisions had already been made. In the First Nations process, comments focused on the lack of consultation in past decisions about specific project cutbacks, as well as on the economic impacts of funding cuts on First Nations communities.

Message #12:

SEP activities cannot be prioritized because they are all important, many are interdependent, and priorities will differ between regions or watersheds. The response forms requested a ranking both of program activities and of the benefits from enhancement facilities. From these and other sources of input, it was apparent that people were reluctant to assign priorities to activities for fear that the results would be used to rationalize cuts to program areas that were rated as less important. The main argument against prioritization was that all SEP activities are important, with some (e.g., education, public involvement, stewardship) providing overlapping benefits. Several participants contended that priorities could not be set "across the board" because they vary across regions or watersheds, according to the specific needs of each community.

Largely for the reasons above, participants in the public process rejected the setting of priorities on principle. First Nations representatives asserted, as well, that they could not set priorities due to a lack of detailed information. They called for a project-by-project review of SEP activities, including First Nations involvement, once the WSP has been finalized.

IMPORTANCE OF ACTIVITIES

Message #13:

Where activities were prioritized, habitat restoration and strategic enhancement ranked the highest among those conducted by SEP. For both of these areas, concerns were raised about their effectiveness and the need to monitor and evaluate activities.

While conservation was seen as a key benefit of enhancement facilities, the comment was made that it cannot make up for other threats to salmon, such as poor marine survival, over-fishing, and habitat loss. Habitat restoration was widely recognized as SEP's most important activity on the grounds that the long-term success of enhancement depends on improved habitat. Many participants emphasized that habitat needs to be conserved, or protected from destruction, in addition to being restored. It was acknowledged that the importance of restoration and its potential effectiveness varies from region to region.

Strategic enhancement was rated as a high priority for SEP facilities on the basis that human impacts on salmon need to be corrected, salmon play an ecological role, genetic diversity should be conserved, and endangered stocks will not recover on their own. First Nations participants placed considerably less value on this activity than on habitat

Find out what the watershed needs and then focus on the SEP activities that meet the needs of the watershed.

Abbotsford Community Forum

Properly restored, our streams can produce better, stronger fish than any hatchery.

Response form

When we are all the reason for putting species in jeopardy, it's our responsibility to help them to come back to sustainability.

Response form

restoration. In both processes, there were concerns about the risk of over-dependence on hatchery production to save salmon stocks rather than focusing on habitat rehabilitation. As in the WSP input, many people cautioned that salmon should be cultured only when a run is threatened with extirpation and only as a temporary measure until the run is secure.

Despite the general support for strategic intervention, much skepticism was expressed about its potential effectiveness. Several factors were cited that could restrict this potential, including scientific uncertainty, the risk of long-term dependence on enhancement, and the lack of remediation for habitat loss. Participants were also doubtful of the likelihood of effective habitat restoration, and critical of the quality of restoration work that has been done to date. They wanted evaluation, audits, and ongoing review of restoration projects.



Message #14:

Education, awareness building, and public involvement are other key activities that must be taken into account when evaluating the program. ~~Volunteers~~ make an important contribution to SEP and require continuing or increased support.

The response forms ranked education, awareness, and public involvement as the third most important program area. These activities were deemed crucial to motivating the public and political support required to maintain salmon and their habitat, and to ensuring buy-in from future generations. Many participants praised SEP's education program, in particular Salmonids in the Classroom, as providing both immediate and long-term benefits. Some advocated less focus on enhancement and more emphasis on the natural environment and habitat in education efforts. In general, First Nations showed little interest in the education program, while some commercial harvesters felt that it mainly benefits city-dwellers and should be de-emphasized.

Public involvement was considered important because it brings communities together, helps with education and awareness raising, and supports volunteers who provide hands-on support as well as a resource of information. SEP's Community Advisors were widely appreciated in both the public and First Nations processes. Participants urged that these educational and other benefits be taken into account when evaluating hatcheries that are the hub of public involvement.

People in the general public consultations were passionate about the role of volunteer stewardship. They stated that the contributions of volunteers are immense, and that the success of SEP and other DFO work depends on ongoing budgeting and staffing support for stewardship. Cutting funding to volunteers after all their achievements would be unfair. The Streamkeepers program was highlighted as a fundamental underpinning of SEP.

The magical effects [of SEP education] are seen beyond the classroom as students become involved in supporting the resource after leaving the school system.

Superintendent of Schools, Haida
Gwaii/Queen Charlotte submission

The combination of the volunteers, who are enthusiastic and hardworking, together with professionals providing guidance, has achieved a great deal.

Written submission

It has gotten to the point where small communities cannot survive without the sustained fisheries in their areas. Not every community can benefit from the "New Economy" created by the computer age.

Response form

It was clear that SEP activities were generally perceived to provide First Nation benefits and that this focus should be continued and even expanded [particularly on the coast].

BCAFC report

Hatchery-built populations contribute to artificially high abundance and corresponding fisheries. These fisheries create a high harvest of un-enhanced wild salmon stocks that cannot bear the pressure. The result is that hatcheries, while maintaining fishing opportunities in the short term, reduce the genetic variability of our salmon stocks and create an ever-increasing reliance on more hatchery output in the long term.

Response form

Message #15:

The economic benefits from enhancement facilities are especially important in remote areas and areas where unemployment is high, and in small, coastal, and rural communities. Some participants argued for increased DFO support in these areas, while others called for community economic diversification. Respondents were asked to rank the economic, regional, and First Nations benefits of SEP facilities. Overall, economic benefits were rated fairly low, with the rationale that many facility benefits are intangible (e.g., sense of pride from involvement in enhancement) or immeasurable (e.g., rebuilding stocks at risk).

On a regional basis, the economic returns from fish production were frequently cited as being most important to remote or coastal communities. The sports fishery, in particular, depends heavily on hatchery production and provides substantial benefits to these communities. Some participants suggested that, in areas reliant on hatcheries for fish, people would be disproportionately affected by hatchery closures, so that DFO should maintain or even increase its local investment. Others contended that regional development should not be a priority for SEP and that communities should diversify their economies.

In terms of the program's First Nations benefits, coastal representatives mentioned employment in hatcheries, enhancement of specific salmon runs of traditional significance, capacity-building, and access to returning fish for food, social, and ceremonial purposes. First Nations participants called for a more strategic approach to the enhancement of section 35.1 fisheries and more consideration of ways to increase their benefits from SEP, such as allowing sales of smoked fish (see Message 20). Support for these and other First Nations benefits was low overall in the general public input. However, several participants urged others to recognize the traditional importance of salmon to First Nations and the legal rights of First Nations.

Message #16:

Strong arguments were made both for and against enhancement to sustain fisheries. Many participants wanted large-scale production to be eliminated, but some worried about fishing losses if hatcheries are closed.

Conservationists and others argued that enhancement for sustaining fisheries poses risks to wild salmon, leads to an over-reliance on hatcheries, and masks factors causing declines in stocks, such as over-fishing and habitat damage. In their view, fish production should no longer be a priority of SEP, but rather efforts should turn toward restoring natural runs and protecting genetic diversity.

Harvesters, on the other hand, maintained that production for fisheries should be a high priority during the current industry crisis, especially in areas that rely on hatcheries. If certain hatcheries were shut down, they would be sorely missed.

Many participants felt that large-scale production should be discontinued. Instead, enhancement for fisheries should focus on small facilities and on systems or specific streams experiencing critically low returns. Opposition to hatchery production was strong among some First Nations. Representatives from the Interior felt that recreational

I'm well aware of the perils of hatcheries and enhanced fish; still, it is necessary if we are to keep runs alive in urban areas like Victoria; we can't keep smaller creeks alive without the SEP program.

Victoria Community Forum

If we use information wisely we improve ourselves continuously. Monitoring of projects and accumulating knowledge helps us make better decisions.

Smithers Community Forum

Members of the Comox Valley Watershed Assembly, Focus Group on the DFO Wild Salmon Policy expressed concerns about this policy detracting from the current Salmonid Enhancement Programs. Their concern regarding the apparent move away from SEP was the severing of valuable community enhancement groups that nurture human-watershed connections, and cultural bonds with water, streams and fish.

Response form

fisheries developed as a result of enhancement have had a negative impact on stocks of interest to First Nations. Coastal First Nations tended to be more supportive of enhancement.

Message #17:

SEP's contribution to other DFO programs, through stock assessment activities, is essential to better decision-making and management strategies. Volunteers fill gaps in much-needed monitoring and assessment.

The response form results showed contribution to other DFO programs as another major benefit from enhancement facilities besides conservation, public involvement, and education. Respondents identified the need for good stock data and feedback on how systems are working to make informed decisions about fisheries management and conservation. Some commented that SEP is effective in stock assessment because of the ongoing presence of volunteers on streams and rivers. Several respondents described the information provided by SEP and its facilities as being part of a larger mix of mutually supportive initiatives in which people and programs are all working towards the same end.

The Coded Wire Tag program was singled out by a number of participants for its role in stock assessment. Some First Nations and other input requested additional support for the program. First Nations representatives also recommended the inclusion of TEKW (see Message 4) in data collection.

THE WSP, ACCOUNTABILITY, AND ALTERNATIVE FUNDING

Message #18:

SEP can help with implementation of the WSP through stock assessment, habitat restoration, and volunteer stewardship. Other program aspects should be reoriented to reduce the risks of enhancement to wild salmon. Participants were queried about how they thought the Wild Salmon Policy would affect SEP programs. Many comments in the public process focused on a complementary relationship between the two, including the role of SEP's stock assessment and volunteer stewardship activities in the WSP's successful implementation. The strongest connection made was that wild salmon need habitat and SEP programs can help provide it.

There were frequent calls for reorienting SEP to take into account risks to wild stocks. In particular, people wanted to see increased use of fish marking, a focus on strategic enhancement in cultivation, and more terminal fisheries to reduce the impact of fish production on wild salmon.

Concerns were often expressed that the WSP would lead to the closure of facilities and an erosion of community-based programs. First Nations input advocated an examination of the impacts of individual SEP programs and prioritization of them after the policy's implications have been detailed. In its report on the information meetings, the BCAFC stressed the need to consider SEP's impact on aboriginal fishing rights.

Utilization of hatcheries as resource and stewardship centres should be encouraged ... Technical support for watershed management plans, priority setting for enhancement projects and ongoing monitoring of habitat parameters would only be an extensions of existing skills found within hatchery facilities.

Mayor of the District of
Campbell River submission

I'm a sport fisher. I buy fishing licences, but I also buy gas and pay taxes via GST on everything. I stay and pay taxes in hotels, camping. My whole life is fishing. Half of it goes to Ottawa.

Nanaimo Community Forum

People would pay more if they knew that 85% of the money they are paying would go back into the resource.

Richmond Community Forum

Message #19:

SEP should be adapted to favour more natural forms of enhancement, with hatcheries shifting from a production emphasis to their role as resource centres for stewardship. More local control and evaluation of activities are needed.

Participants in both processes recommended increased support for the non-facility aspects of SEP and a move away from "steel and concrete" to "softer" ways of enhancing wild salmon – for example, simple egg takes and outplanting in baskets, smooth imprinting ponds, and habitat complexing. It was suggested that public involvement and volunteer momentum should be concentrated on activities such as habitat restoration and protection and stock assessment rather than on enhancement. Hatcheries and their staff could continue to support SEP activities by focusing less on production and instead providing a base for stewardship activities, as resource centres. Smaller, satellite facilities should be emphasized over larger production facilities.

There was a sense that not enough is known about the effectiveness of SEP activities, especially habitat restoration. Participants agreed that more monitoring and evaluation is critical to the wise use of SEP resources, but warned that economic indicators of success should not be over-valued relative to factors such as ecological impacts.

Another strong message from the consultations and meetings was that responsibility for SEP's operation, the implementation of the WSP, and fisheries management in general should be devolved to communities. Advisory committees, regional management bodies, and co-management were proposed as ways to achieve greater local control. Participants also supported a watershed or regional approach to SEP planning.

Message #20:

While there was much support for "user pay" to fund enhancement, several drawbacks to its application were noted. If it is implemented, those who damage habitat should also pay more and all funds should go to fisheries programs.

Many participants felt that asking harvesters to contribute to the costs of running SEP facilities is justified on the grounds that those who benefit from the resource should help pay for it. However, there were a number of problems and drawbacks identified with a user pay approach. Commercial harvesters pointed out that they already pay heavily for fishing and are not in a financial position to do more. It would be difficult to determine benefits among user groups, and those who were required to pay more might expect an entitlement to greater benefits. First Nations participants were concerned that the notion of someone paying towards enhancement could interfere with aboriginal rights to the salmon resource.

Participants were in agreement that the users causing damage to salmon habitat (e.g., farmers, developers, logging companies) should bear the costs of restoration. In addition, all sources of input strongly asserted that funds collected from harvesters should be invested back into the resource, rather than going to general revenue.

Even though ocean ranching was not on the consultation and meeting agenda, many participants proposed the Alaska model as a good example of how user pay could work. Some commented that DFO should partner more with other federal agencies, the Province, local and regional governments, foundations, and corporations to fund enhancement. Other alternative funding sources cited included tapping into lotteries, a consumer price premium, and low-interest loans for hatchery improvement. First Nations suggested sales of fish to help pay for enhancement.



Revised Wild Salmon Policy

The language should clearly and unequivocally state the primary objective ... to sustain wild salmon and to prevent extirpation and extinction.

Response form

Live up to the department's commitment to an ecosystem approach.

Sierra Club British Columbia

DFO RESPONSE

The results of the public and First Nations processes and DFO's internal policy review have been used to develop strategies for a revised Wild Salmon Policy and a reshaped SEP. These have been condensed into the six responses that are outlined below. For each response, we indicate the key message(s) targeted from the consultations and information meetings.

REVISION OF THE DOCUMENT

Response #1:

The WSP document will be revised to clarify the policy's objective, strengthen its principles, and distinguish between the more general principles and detailed operating guidelines to be subsequently established. The consultations and meetings indicated that the draft WSP needs clarification, with less ambiguous wording, stronger principles, an ecosystem perspective, and greater practical detail on how the policy will be implemented (Messages 2 and 4). In response to these concerns, the Department will release a revised document incorporating some significant changes.

The revised WSP will confirm its primary goal to "promote the long-term viability of Pacific salmon populations in natural surroundings and the maintenance of fish habitat for all life stages, for the sustainable benefit of the people of Canada." The importance of sustainable habitat, as emphasized in the consultations and meetings (Message 5), is captured in the goal's wording.

A major change is that the six principles of the draft policy will be collapsed into three general, overarching ones. These principles will be distinguished from detailed operational guidelines that will be developed later with a consultative process (see Section 3.1.2). While it is acknowledged that operational guidelines are essential, their development will take time. The WSP document remains a general policy framework and is not the appropriate place for detailed operating procedures. However, the revised policy will provide an overview of the guidelines to be developed.

The first principle will remain essentially unchanged, with its goal to conserve the diversity of salmon in their natural habitats. The revised WSP will explicitly recognize the important contribution that wild salmon make to the health and productivity of marine and freshwater ecosystems. It will also stipulate that operational guidelines will be developed so that fisheries, habitat management, and cultivation (aquaculture and enhancement) activities will be carried out in ways that do not compromise the primary goal of the WSP.

For further clarification, the revised policy will address TEKW and aboriginal rights and access, as requested by First Nations (Messages 4 and 7). The document will be amended to specify that, after

Operational Guidelines

You have to look at human costs in your calculations. We have gone through five years on the coast where the human cost is high. We need clear and understandable rules.

Port Hardy Community Forum

The question is, at what level of diversity is Fisheries and Oceans committed to conserving wild salmon?

Pacific Fisheries Resource
Conservation Council submission

conservation needs are met, DFO will manage fisheries such that aboriginal and treaty food, social, and ceremonial fisheries are provided priority. The policy is intended to conserve fish and provide sustainable fisheries for the future. As such, it is without prejudice to any existing First Nations rights or claims of rights or title.

The Department recognizes that local groups possess knowledge of their local salmon populations and environments, and that these groups can contribute to the policy's implementation. DFO is already committed to including TEKW of First Nations in annual stock assessments submitted to and reviewed by the Pacific Scientific Advice Review Committee (PSARC). The Department will seek to develop a process that takes into account this local knowledge and works to further incorporate it along with the broader objectives of the Wild Salmon Policy.

Response #2:

Operational guidelines will be developed for resource management, habitat, enhancement, and aquaculture. They will be published separately after the policy's release, including guidelines for monitoring and performance assessment.

Participants in the processes stated that there is a lot of work to do in translating conservation units, reference points, and other elements of the draft WSP principles into effective management rules (Messages 6 and 7). People were worried about how the principles would be translated, yet too uncertain from the information provided in the draft policy to be clear about their concerns (Message 2). Effective procedures for monitoring and evaluating the WSP's implementation were requested (Message 10).

To make sure that fisheries, habitat management, enhancement, and aquaculture activities are carried out in ways that do not compromise the WSP goals, operational guidelines will be developed where they do not already exist, or reviewed and revised as necessary where they do exist. These guidelines will allow managers some flexibility, while at the same time ensuring that decisions are made in an open, transparent, and consistent manner.

Operational guidelines will be provided in each of the following areas, as distinct stand-alone documents to be published following the policy's release (see Figure 2):

- **Resource Management** – DFO scientific staff conduct stock assessments and provide advice to fishery managers who make decisions about harvesting strategies. Since management and assessment activities are closely linked with respect to wild salmon, operational guidelines for them will be developed jointly. Fishery management guidelines will cover the definition of conservation units and reference points and guidelines for the determination of harvest rules, including the management of in-season activities. Assessment guidelines will describe how to monitor and assess the long-term viability of salmon populations at the CU level, as well as at the local level.

We simply request that habitat be truly conserved and that the Fisheries Act be enforced...

Trout Unlimited Canada submission

- **Habitat** – Habitat managers work to protect, restore, and develop healthy fish habitat to achieve a net gain in productive capacity, as outlined in the Department's Policy for the Management of Fish Habitat (DFO 1986). Habitat management is conducted by DFO, other government agencies, public organizations, industry, and First Nations. Numerous habitat-related guidelines already exist and others must be prepared. A priority will be to review and update existing guidelines and develop new ones as required. This work will be done cooperatively with other government agencies and industries and, where appropriate, in consultation with NGOs and the public.

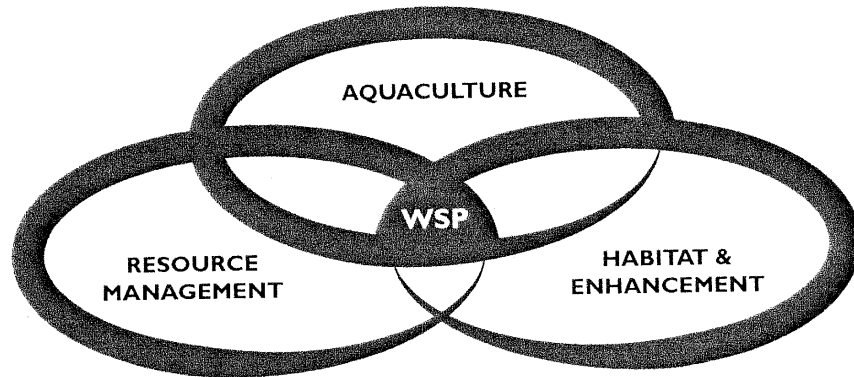


Figure 2: Major DFO disciplines are linked by the WSP. Operational guidelines will be prepared for resource management, habitat and enhancement, and aquaculture

The wild salmon policy is silent on the future of high-capacity hatcheries, which have been important for maintaining large-volume, mixed-stock fisheries that have been so destructive to individual runs. The policy seems to merge Salmonid enhancement and fish farming together as "salmon cultivation."

David Suzuki Foundation submission

- **Enhancement** – The enhancement program uses guidelines and protocols to reduce the risks that wild salmon that may be associated with enhancement. For example, guidelines that are designed to maximize genetic variability of populations and minimize ecological impacts are in use for collecting broodstock, spawning, and releasing juvenile salmon. To protect genetic diversity and the long-term viability of wild salmon stocks, an Enhancement Policy (see Section 3.2.3) will be developed, encompassing existing and new operational guidelines, to define how enhancement projects should be planned, executed, and evaluated under the WSP.

- **Aquaculture** – The Department's Aquaculture Program includes guidelines and operational policies to control the risks that farmed salmon pose to wild salmon and their habitat. These include siting guidelines, fish health certification, and regulations and technologies to limit escapes. The federal and provincial governments are currently evaluating the future direction of salmon farming based on environmental standards, technological development, and local consultation, with a policy anticipated within the year. Guidelines relevant to the conservation of wild salmon will be reviewed and summarized.

Where guidelines already exist, these will first be reviewed to identify gaps that must be filled. Then, new guidelines will be developed as needed with the appropriate involvement of the public, First Nations, and stakeholders (see Section 3.1.3). The guidelines document will summarize existing guidelines, detail new ones, and outline monitoring and evaluation procedures to track and assess performance.

PLANS FOR IMPLEMENTATION

Response #3:

DFO will implement the Wild Salmon Policy and will facilitate its local delivery through partnerships and shared accountability. There will be an opportunity for focused First Nations, stakeholder, and public input into the operational guidelines.

From the general public process, it was apparent that people want the WSP to be firmly based in science, with rigorously determined conservation units and reference points (Message 3). To support this focus and the extensive analysis required, DFO may have to expand its scientific and data collection capacity (Message 9). It was recommended that the Department enlist the financial and technical support of the Pacific Region's extensive volunteer force, First Nations, communities, the Province, and other groups to help with delivery. The public felt that the policy should do more to address other threats to wild salmon besides enhancement, especially habitat degradation and aquaculture (Message 10).

The WSP initiative has been led by DFO stock assessment scientists, who authored the policy with other Department staff and presented it during consultations and meetings. This lead role will continue, although several key operational areas – fisheries management, habitat and enhancement, and aquaculture – will share in responsibility and accountability for the WSP's implementation.

Recently, DFO has taken some steps that will assist in implementing the policy. Science is being reorganized to provide a focus for initiatives such as the precautionary approach and ways to strengthen quantitative assessment abilities, including risk management and local field delivery. There will be more autonomy to implement these policies at the local level through watershed-based fish sustainability planning (see Section 3.2.2) and other vehicles.

The WSP will be implemented in a phased manner consistent with available resources. Resource management costs will depend, in part, on the number and size of conservation units and fishing intensity.

The Department will facilitate local delivery of the policy through Area Offices and partnerships. However, that delivery must occur within an agreed framework of performance standards and accountability. There are already various precedents for external assistance with delivering federal policies and programs. For example, First Nations contribute treaty and Aboriginal Fisheries Strategy funding towards enhancement, and local governments hire stewards to help deliver the Habitat Conservation and Stewardship Program.

Along with other federal, provincial, and municipal agencies, DFO has developed a comprehensive program for habitat management in the

DFO must be given adequate resources for in-season management, test fishing and fisheries monitoring on all fisheries to ensure a comprehensive and integrated approach to the protection of wild salmon biodiversity.

T. Buck Suzuki Environmental
Foundation submission

The governments need to sit down and figure out how to protect wild environments.

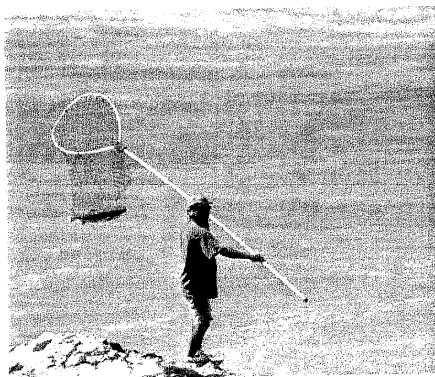
Victoria Community Forum

Pacific Region. This program includes an extensive set of policies and guidelines, as well as federal-provincial coordination of habitat protection activities under the *Canada-BC Fish Habitat Management Agreement*. Despite these efforts, participants were critical of DFO's record in habitat protection and urged the Department to work more closely with the Province and other federal agencies (Messages 5 and 9). Lately, DFO has been acting to strengthen activities in habitat management. For example, as part of the National Habitat Blueprint Initiative, the Department is streamlining referrals, reviewing guidelines, and increasing deterrence, monitoring, and enforcement. Under the Canada-BC Agreement, joint guidelines have been developed, such as those for watershed-based fish sustainability planning (DFO et al. 2001). DFO has also undertaken, either independently or in cooperation with the Province and industry, a number of monitoring initiatives on Crown and private forest lands that include examination of the impact of forest harvesting and stream crossings. These and other improvements in habitat management will continue as the WSP is implemented.

Likewise, the federal and provincial governments are working together to address the impacts of salmon aquaculture on wild salmon. Efforts include stronger regulations to prevent escapes of farmed salmon, fish health management guidelines, and the establishment of performance-based standards for fish wastes.

An overwhelming conclusion from the consultations and meetings was that participants expect further involvement in the WSP's development and implementation (Messages 2 and 9). This would include an ongoing role in the determination of CUs and reference points, local delivery of the policy, and monitoring and evaluation of its implementation (Messages 6, 7, and 9).

The preparation of operational guidelines will include First Nations, stakeholder, and public input. The precise form of that input will depend on the particular guidelines, but will build on existing and developing structures and processes, such as PSARC, objective-based fisheries management, salmon harvest planning committees, local area management bodies, and watershed-based fish sustainability plans. A separate new consultative structure and process will not be initiated for the operational guidelines.



RESHAPED SEP

HABITAT AND ENHANCEMENT TRANSITION PLAN

Response #4:

DFO will implement a three-year transition plan to complete a reshaped habitat and enhancement program that integrates salmon enhancement, habitat protection and restoration, community outreach, and fish habitat stewardship. A new Area-based decision process will reorient facility operations towards watershed and local area priorities.

Participants in the consultations and meetings called on the Department to restore and even increase SEP funding (Message 11). There was interest in cost recovery and alternative funding options, but questions about their practicality (Message 20). Many people recognized that hatcheries could be more than production facilities, serving as centres for community involvement and stewardship (Messages 16 and 19). It was suggested that SEP priorities should be determined on a watershed basis and activities be better evaluated (Messages 12 and 19).

Despite public concerns, the \$3.5-million funding cut is a reality. As the Canadian Fisheries Adjustment and Restructuring program sunsets over the next two years, it will be very difficult to maintain existing levels of enhancement, habitat protection and restoration, community outreach, and fish habitat stewardship. SEP activities must match current resources and be integrated into the larger Departmental program and Area management structure. In addition, scarce resources should be allocated to meet the needs and opportunities of individual watersheds and communities, as well as WSP and other New Directions priorities.

The results of the consultations and meetings have been used to prepare a transition plan that will result in a fully reshaped habitat and enhancement program by April 1, 2003. Key features of the plan are:

- A new Area-based decision-making process will be implemented, including facility and watershed reviews, to determine regional objectives for enhancement and other activities and to allocate resources across Areas and activities.
- The public, First Nations, and Area stakeholders will continue to be involved in determining program priorities through the above process and watershed-based fish sustainability planning (see Section 3.2.2).
- An Enhancement Policy based on science will be developed to guide enhancement consistent with the WSP (see Section 3.2.3).
- DFO will work with the Province to rationalize and coordinate BC's many funding programs for habitat restoration and salmon enhancement.
- The SEP review will link with the regional stewardship and outreach review to investigate the potential for rationalizing activities and positions.
- The Department will investigate opportunities for funding partnerships with interested parties.

The integration of habitat and enhancement activities will be implemented through a new Area-based decision process that will provide a consistent method for deciding on future activities and for allocating resources accordingly. The four-phase decision process will consist of:

Bring management, networking and information down to a more regional level.

Queen Charlottes/Haida Gwaii
Community Forum Response form

Phase 1: Facility Reviews

All DFO-funded enhancement facilities, including government, First Nations, and community facilities, will be reviewed to determine their specific goals and objectives, current activities and results achieved to date, and opportunities for new or alternative programming.

Phase 2: Watershed Profiles

A detailed profile will be developed for each watershed providing information on the status of all salmon stocks; the location, quantity, quality, and productivity of salmon habitat; and salmon-related activities planned or underway for the area.

Phase 3: Watershed Reviews

A Salmon Plan will be prepared for each watershed describing the watershed profile, goals and objectives, performance measures, and strategies. This phase will integrate the results of Phases 1 and 2 in terms of how enhancement facilities are contributing or could contribute to watershed needs while at the same time complying with Regional requirements, including the Wild Salmon Policy.

Phase 4: Regional Prioritization

The results of Phase 3 will be compiled and assessed to determine a ranking of watersheds, facilities, and facility operations for the Pacific Region as a whole. This Regional prioritization will be used to develop options and recommendations to deliver the most cost-effective habitat and enhancement program.

Until recently, the framework used for evaluating SEP activities has emphasized economic benefits (benefit-cost ratio). This has tended to favour enhancement facilities that maximize fish production over those that provide Area-level benefits, such as stock rebuilding or support for fish habitat stewardship. In the new decision-making process, the determination of watershed objectives (Phase 2) will include a review of appropriate corresponding performance measures. Facility operations will then be assessed against these revised measures to see whether activities should be reoriented to better meet watershed needs and opportunities.

The Phase 3 watershed reviews may be done as part of a watershed-based fish sustainability plan (see Section 3.2.2) or, in the absence of such a plan, may be used to initiate one later. At any time, changes may be made to facility operations and other activities in response to the information on stock and habitat status and watershed objectives. More substantial changes, such as the reorientation of facility activities (e.g., shifting from fish production to stewardship support), will be determined later in the process based on Regional priorities.

The decision-making process will be implemented by DFO Regional staff and Area-based Planning Teams, with outside support as needed. The public, First Nations, and Area stakeholders will have input into the watershed reviews. DFO Region and the Area Planning Teams will determine the form, scope, and timing of that input.

Performance indicators and targets to evaluate DFO's progress need to be established.

Sustainable Fisheries Foundation
submission

Facility and watershed reviews are already underway, for example, in Bella Coola on the Central Coast and the Squamish River in the Lower Mainland. Similarly, planning teams already exist in some areas, comprising hatchery managers, operators, support biologists, Community Advisors, and fish management and stock assessment staff. This structure will be formalized at the Area level to ensure consistency in the determination of hatchery objectives across facilities.



LONG-TERM PLANNING

Response #5:

Over the long term, watershed-based fish sustainability plans will enable the public, First Nations, and stakeholders to have input into priority-setting for watersheds. Plans are being initiated for key watersheds.

People supported more local control over SEP activities and a watershed planning approach (Message 19). Under the new Area-based decision process, there will be opportunities for public, First Nations, and stakeholder input into the watershed reviews. Over the longer term, watershed-based fish sustainability planning (WFSP) offers a useful vehicle to obtain local input and assess enhancement and other watershed objectives.

The Department views WFSP as the umbrella process for coordinating watershed planning throughout the Pacific Region. Watershed-based fish sustainability plans (WFSPs) have a broader focus than the watershed reviews proposed for the Area-based decision process. Specifically, they consider more than just salmon: the watershed's ecosystems, including other fish, wildlife, and vegetation, and their interaction. Ideally, the watershed reviews should take the form of WFSPs, but initiating these plans will require considerable time and resources.

The intent will be to build on existing capabilities and structures for involving stakeholders in watershed planning. In some Areas, there are already watershed councils or other mechanisms established for this purpose. For example, in BC's southern Interior, the Salmon and Nicola rivers both have functioning multi-stakeholder roundtables that deal with a variety of fish and non-fish issues (mainly agricultural).

Once complete, WFSPs will act as the overarching plans that provide guidance and input into other integrated planning processes, such as provincial LRMPs and BC Hydro water use plans. It will take time to complete the regional rankings of all watersheds based on their importance to salmon conservation (Stage I of WFSP). In the meantime, there are many watersheds that require immediate intervention, so that planning should begin at the individual watershed level (Stage II). The Department is initiating the process in key watersheds, including those with hatcheries.

West coast marine resources should be managed by those residing on the west coast ... Activities within a watershed have to be decided on by people living adjacent to that watershed.

Response form

SUPPORT FOR THE WILD SALMON POLICY

Response #6:

SEP activities will be reexamined to ensure consistency with the goal of maintaining the diversity and long-term viability of wild salmon populations in their natural habitat. An Enhancement Policy will support this and other New Directions priorities.

The consultations and meetings revealed that SEP has an ongoing role to play through stock assessment and community involvement in helping to implement the Wild Salmon Policy (Message 18). Activities should be reoriented to reduce the risks to wild stocks. At the same time, coastal First Nations and other communities want facilities to remain open for their economic and social benefits.

The Department recognizes that a reshaped habitat and enhancement program must participate actively in implementation of the WSP, as the policy's operational guidelines and other practical requirements are rolled out. Consistent with the consultation and meeting results, the program will include a focus on strategic enhancement, more support for sustainable (e.g., selective and terminal) fisheries, and other measures to reduce the risks of enhancement to wild salmon. Hatchery activities will be reoriented through the new Area-based decision making process and the updating of performance measures as part of that process (see Section 3.2.1). In addition, support will continue for the Coded Wire Tag program, escapement sampling programs, and other stock assessment activities that benefit wild salmon. The WSP does not preclude salmon enhancement, but does require that activities be managed to protect the diversity and long-term viability of natural populations. An Enhancement Policy will be prepared that will establish overarching principles and objectives for enhancement to reflect these goals. The policy will specify requirements for undertaking new or existing enhancement activities, including the documentation of enhancement objectives and monitoring and evaluation procedures. Development of the policy will require input from DFO scientists to ensure that it has a strong scientific basis and incorporates best practices related to genetic interactions, fish health and ecological effects, and other impacts on wild salmon.

The Enhancement Policy cannot be completed until the WSP has been finalized. Work will continue on its development, with a draft Enhancement Policy scheduled for 2002. Until then, facility and watershed reviews will proceed under the Area-based decision process with the condition that they must be consistent with the evolving Wild Salmon Policy.

Polices should encourage conservation-based community fisheries that create local economic benefits by harvesting only strong stocks within the area.

David Suzuki Foundation

We suggest that it would be far better to amend existing enhancement techniques than to, quite literally, "throw the babies out with the bath water." We must find ways of maintaining both enhancement and wild fish stocks on northern Vancouver Island.

Chairman of the Regional District of Mount Waddington submission



Kids see the [salmon] life cycle. The best part was seeing the lifecycle and how they swim and how their body works. Now we know how to keep salmon living and we care more about them so kids won't pollute.

9-year-old Emily quoted in private written submission

NEXT STEPS

This report has presented an overview of the results of the public consultations and First Nations information meetings on the Wild Salmon Policy and the Salmonid Enhancement Program, together with policy responses by DFO. The Department will continue working to complete the WSP and its operational guidelines and to finalize the reshaping of the habitat and enhancement program. Key next steps scheduled for 2002 are:

- release of the revised Wild Salmon Policy;
- release of the draft Enhancement Policy Framework; and
- launch of the Area-based decision-making process for habitat and enhancement.

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APPENDIX A: GLOSSARY

Aquaculture ¹	The cultivation of aquatic species (animals or plants), generally for commercial purposes.
Biological diversity ²	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.
Broodstock ¹	Mature salmon from which milt and roe are extracted to produce the next generation of cultivated fish raised and spawned in captivity.
Coded wire tag ³	Microscopic metal tag with a code etched into it. The tags are inserted into the nose cartilage of salmon smolts to identify them.
Conservation ⁴	Managing fish and habitat to ensure sustainability and biodiversity.
Conservation unit (CU) ⁵	A group of one or more local populations that share a common genetic lineage and can be managed effectively as a unit by virtue of their common productivity and vulnerability to existing fisheries.
Ecosystem ⁶	A community of organisms and their physical environment interacting as an ecological unit.
Enhancement ⁵	The application of biological and technical knowledge and capabilities to increase the productivity of fish stocks. Enhancement is defined here to cover fish culture techniques, such as hatcheries or production spawning channels.
Escapement ⁷	The number of mature salmon that pass through (or escape) the fisheries and return to their rivers of origin to spawn.
Extirpation ⁵	The extermination of a population of a species from a given area.
Fish habitat ⁸	Spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes.
Fish habitat stewardship ⁹	Acting responsibility to conserve fish habitat for present and future generations.
Genetic diversity ¹⁰	A property of a species, in which members vary in their heritable genetic content among individuals and among populations. This property allows the species to adapt over time to changing environmental conditions. (Sometimes the term is also used to describe genetic differences between species.)
Habitat protection ¹¹	Prescribing guidelines and conditions, and enforcing laws for the purpose of preventing the harmful alteration, destruction, or disruption of fish habitat.
Habitat restoration ¹¹	The treatment or clean-up of fish habitat that has been altered, disrupted, or degraded for the purpose of increasing its capability to sustain a productive fisheries resource.

Intervention ⁵	The application of technology to the objective of artificially increasing salmon survival and abundance.
Local population ¹²	A group of one or more subpopulations that are relatively isolated (i.e., demographically uncoupled) from other such groups and are likely adapted to the local habitat.
Mixed stock fishery ¹³	A harvest management technique by which different species, strains, races or stocks are harvested together.
Mortality ⁷	The number of fish killed through harvest or through the act of releasing species that cannot be retained in a fishery.
Ocean ranching ⁵	The artificial propagation of a fish stock by a private group with the expectation of some limited privilege to access increased production to cover operating and harvest costs.
Precautionary approach ¹⁴	A concept that was enshrined in Principle 15 of the Rio Declaration of the UN Conference on Environment and Development which states: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."
Reference point ¹⁴	An estimated value derived from an agreed scientific procedure or model that corresponds to a state of the resource and/or fishery and that can be used as a guide for fisheries management. Some reference points are general and applicable to many fish stocks, while others should be stock-specific. A distinction should be made between target reference points and limit reference points, or thresholds, the latter representing low states of the stock to be avoided.
Run ³	One or more stocks of the same species that return to a river over a particular time period.
Salmon plan ¹⁵	A plan describing the status of salmon stocks and habitat in a watershed, salmon-related watershed goals and objectives, and strategies for achieving them. Some useful prototypes of these plans already exist (e.g., see Foy 2001). A Salmon Plan differs from a Salmon Recovery Plan in that it covers all salmon stocks and not just those that are in crisis. Unlike a watershed-based fish sustainability plan, it does not consider the interaction of salmon with other species in the ecosystem.
Salmonid ³	Chum, coho, sockeye, pink, chinook and steelhead salmon; cutthroat and rainbow trout.
Selective fishery ⁷	A conservation-based management approach which allows for the harvest of surplus target species or stocks while aiming to minimize or avoid the harvest of species or stocks of conservation concern, or to release bycatch unharmed.
Stock ¹⁶	The part of a fish population that is under consideration from the point of view of actual or potential utilization.
Stock assessment ¹⁷	The use of various statistical and mathematical calculations to make quantitative predictions about the reactions of fish populations to alternative management choices.

Strategic enhancement ¹⁵	The use of enhancement facilities and technology to help rebuild salmon stocks of conservation concerns, especially threatened populations.
Sustainable use ⁵	The use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. Sustainable is not meant to imply that abundance is constant.
Terminal ⁷	A fishery in a river or near the mouth of a river where returning salmon pass through or congregate near to an prior to spawning, and where stocks are relatively unmixed.
Traditional ecological knowledge and wisdom (TEKW) ¹⁶	Knowledge that derives from, or is rooted in the traditional way of life of aboriginal people. Traditional knowledge is the accumulated knowledge and understanding of the human place in relation to the universe. This encompasses spiritual relationships, relationships with the natural environment and the use of natural resources, relationships between people, and is reflected in language, social organization, values, institutions, and laws.
Watershed-based fish sustainability planning (WFSP) ¹⁵	A comprehensive four-stage watershed planning process designed to allow parties with an interest in fish conservation to work together to ensure the long-term sustainability of fish and fish habitat.
Wild salmon ⁵	A salmon produced by natural spawning in fish habitat from parents that were spawned and reared in fish habitat.
Wild salmon population ⁵	A local population comprising naturally spawning and rearing wild salmon.

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APPENDIX B: CONSULTATION QUESTIONS

B.1 Wild Salmon Policy Questions

1. Are the goal and the principles of the WSP clearly understandable to you?
2. The WSP provides a framework for conserving the genetic diversity of wild Pacific salmon and protecting their habitat, while recognizing the sustainable use of the resource. Do you support this approach to the management of wild Pacific salmon in British Columbia?
3. How will the WSP benefit you/your area? Do you have any concerns? Please explain.
4. What suggestions do you have regarding implementation of the WSP?
5. Do you have any other comments or suggestions concerning the WSP?

B.2 SEP Review Questions

6. Should the following activities be a priority for SEP (rate "high", "medium", "low", or "not a priority"):
 - strategic enhancement;
 - habitat restoration;
 - fish production;
 - public involvement;
 - education/awareness; and
 - stewardship?
7. Of the activities listed, which are the three most important to you? Why?
8. Are there any activities listed above that SEP should NOT be involved in? Why?
9. Are there other, new activities that SEP should be involved in? Why?
10. In your opinion, which of the following potential benefits are most important (rate "very", "somewhat", "neutral", "somewhat", or "not at all important"):
 - conservation;
 - sustaining fisheries;
 - economic benefit;
 - regional benefits;
 - First Nations benefits;
 - public involvement and education; and
 - contribution to other DFO programs?
11. Of the benefits listed, which are the three most important to you? Why?

12. Are there any benefits of SEP's enhancement facilities other than these seven (listed above) that should also be considered when deciding to provide funding for a facility? Which benefits and why?
13. Are there benefits of SEP's enhancement facilities that should NOT be considered when deciding to provide funding for a facility? Which benefits and why?
14. Do you agree with the following statement: Fish harvesters who benefit from SEP fish production should help to pay the costs of running the enhancement facility (strongly agree, agree, neutral, disagree, strongly disagree)? Explain your choice.