

# CHAPTER 22

## Wild salmon strategy

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### Introduction

Three years ago, Gordon Hartman, Cornelius Groot and the Thomas Northcote wrote a marvelous chapter in a book about sustainability in salmon fisheries, entitled *Science and Management in Sustainable Fisheries: The Ball is Not in Our Court* (2000). Taking a bit of a liberty with the point that these three argued was that fisheries scientists, fisheries managers, geneticists, ecologists and other such specialists have practically no influence at all in determining the future of wild salmon anywhere in North America's northwestern quarter.

The ball is simply not in our court, they said. The future of salmon, they argued, lies with the much broader social, cultural and economic forces of the very kind that have formed and shaped the North American landscape over the past five centuries, and which have so utterly obliterated so many of the wild landscapes and the wild rivers that supported salmon in great abundance for ages.

The way they put it was this: "If there is to be a reprieve for Pacific Northwest salmonids, it must come in the form of initiatives that reach into areas of society beyond fisheries science and management."

I agree with this idea; however, I am not so pessimistic as Groot, Hartman and Northcote. They saw a continuation of the most dreary sorts of trends which have put wild salmon at death's door throughout most of the U.S. Pacific northwest states. Instead, I see something completely different, or at least a wholly different possibility, and it involves the profound cultural changes that have taken such deep root in the public consciousness in recent years, especially in British Columbia and the U.S. Northwest. It is something that has come to be called the totemic and iconic role that salmon have taken on in the settler cultures in this part of North America.

### The iconic role of salmon

This is an historic development, and we tend to completely underestimate its significance. The salmon that once swam at the vortex of aboriginal cosmologies have come to occupy a totemic place within settler cultures, throughout the traditional range of Pacific salmon.

In British Columbia, environmental values are deeply entrenched. These values are given expression in the most pronounced ways when it comes to salmon. Recent public opinion polls show an overwhelming majority of British Columbians understand that salmon are worth far more to society, to local landscapes, and to ecological functioning, than their mere commercial value. Salmon are now recognized as a vital

component of the British Columbian landscape itself, and salmon are accepted as the most significant "keystone species" in terrestrial ecosystems west of the Rocky Mountains. Salmon have come to play an irreplaceable role in British Columbia's identity and heritage, and in British Columbians' collective pride of place.

In attempting to answer the question: "How do we value wild salmon?", British Columbians have answers, and they are important and very instructive answers. Every weekend, thousands of British Columbians routinely involve themselves in a variety of salmon-conservation initiatives. The various "non-extractive" values associated with salmon are now being afforded higher public priority than the conventional commercial and extractive values of salmon.

The changed relationship between salmon and people in British Columbia has occurred even though salmon are no longer of any consequence to the provincial wage economy. By 1997, the economic significance of B.C.'s salmon fisheries - commercial fisheries, recreational fisheries, fish processing, and aquaculture – accounted for less than one half of one per cent of British Columbia's gross domestic product. Recreational fishing, and the tourism it attracts, accounts for about a quarter of a billion dollars in value added to the provincial economy. While recreational fishing makes the largest contribution of any of the various sectors within B.C.'s fishing industry, the recreational fishery's contribution represents only about five per cent of the overall contribution the provincial tourism industry makes to B.C.'s economy.

British Columbians appear to have come to value salmon more, not less, as the direct "extractive" value of salmon declines in significance. An exhaustive public opinion survey conducted in April, 2000 by the Department of Fisheries and Oceans' Habitat Conservation and Stewardship Program shows just how deeply British Columbians have come to identify with salmon.

The survey showed:

- A majority of British Columbians say salmon runs should be protected, and salmon habitat should be conserved, even if it means a slowdown in the rate of economic development, or paying higher taxes.
- Support for conserving salmon habitat, even at the expense of economic development, ranged from 61 percent in north coastal B.C., where the economic aspects of salmon-fishing are most important, to 72 percent in the Lower Mainland, where the economic value of salmon is least significant.
- Support for the idea of paying higher taxes if necessary to protect fish and wildlife habitat ranged from 58 percent of respondents in the southern interior to 69 percent in B.C.'s south coast areas.

Most British Columbians rank the commercial value of salmon behind a range of other values. These include the contributions salmon make to ecological health, to the "beauty of the region," to tourism, recreation, and the enhancement of "community involvement." So that is how British Columbians value salmon, quite clearly. And I think the people are right.

But to what extent does the public interest in the conservation of salmon and the public will to conserve salmon influence public policy and restrain those forces that weigh against the diversity and abundance of salmon? Not much.

### **Government policy is out of step with changing conditions**

At the outset of this volume (Chapter 1), the Honorable John Fraser made a very important point about the need to answer the more important questions about threats to salmon in clear and plain language, especially language of the kind that politicians can understand. Here is how I would answer the question

about the single greatest challenge in the relationship between people and salmon at the beginning of the 21<sup>st</sup> century.

I would say it is in the persistence of outmoded government policies that do not accord with the changing conditions that salmon are encountering in the post-industrial era. Neither does government policy accord with the scientific understanding of the necessary elements of salmon conservation. Most importantly, government policy is completely out of step with the cultural changes underway in human communities throughout the range of salmon.

While profound cultural changes are sweeping British Columbian society, institutional cultures within government simply have not kept pace. The various levels of government with jurisdictions that affect the health of salmon runs – particularly Canada's federal government – take an approach to the challenge of salmon conservation that remains deeply entrenched in an era in which the maximum sustainable yield of the great biomass of the most valuable salmon species was all that mattered. It is an approach still largely driven by antiquated economic measurements and outdated fisheries-management objectives.

It is so deliciously easy to heap calumny upon the Department of Fisheries and Oceans. If the department did not exist, I would say it would be necessary to invent it, if only for the purpose of attributing all that ails us to what we so affectionately call DFO mismanagement. I think this is actually somewhat less than fair. The department is not to blame - we all are. City people, farmers, loggers, fishermen, fisheries managers, even environmentalists – none of us are without virtue, and none are without blame.

We heard a most compelling and disquieting presentation by Jeff Hutchings (Chapter 3), about the fate that befell the marine ecosystems of Newfoundland, and the thorough destruction of the great North Atlantic cod stocks. Yes, we should quite properly lay blame at the feet of the individuals responsible for this within government and industry. But where was the environmental movement while this was all happening? Some answer that question by noting that environmentalists were too busy having their photos snapped with Bridgitte Bardot on the ice floes off Gaspé in the Province of Quebec, and were otherwise trotting around Europe convincing rich people not to buy furs from trappers in Canada's far north. Certainly there were some environmentalists who were trying to raise alarms about the overfishing of cod. But clearly, many were not.

### **North Pacific groundfish**

And now, in the first decade of the 21<sup>st</sup> century, environmentalists are finding themselves obliged to turn their attentions to the seaward, Canada's west coast. When we look out to sea, what we soon find is that the North Pacific is now giving up fully one quarter of all the marine fish harvested from the planet's oceans. To the north of us, the Bering Sea is undergoing major ecological transformation in response to large-scale trawling. Severe ecological disruption, foreshadowed by the collapse of seabird and marine mammal populations, appears to be spreading to the waters of Southeast Alaska.

To the south of us, roughly two-thirds of the offshore fishing grounds between the Mexican coast and the Canada-U.S. border were placed off-limits to trawlers in two major decisions, in 2001 and 2002. From Point Reyes in California to Cape Flattery at the tip of Washington state's Olympic Peninsula, "groundfish" fisheries were closed following a rapid series of catastrophes. The closure paralleled what was previously the worst fisheries disaster in American history – the collapse of the cod, haddock and herring fisheries of Georges Bank, on the U.S. East coast, in the early 1990s.

Here on Canada's west coast, under the management authority of the same federal Fisheries and Oceans bureaucracy that oversaw the collapse of the East coast's great cod fishery, several thousand fishing vessels are now removing an amount of fish from British Columbia's waters, every year, that has grown to exceed the weight of British Columbia's human population. By 1997, B.C.'s groundfish catch had

grown to exceed the groundfish catch from California, Oregon and Washington combined. Three years later – before the U.S. trawl fleet was almost completely shut down – B.C.’s trawlers were catching three times as much groundfish as the U.S. fleets.

British Columbia’s total fisheries catch has now reached a phenomenal 225,000 tonnes, enough fish to fill a convoy of pick-up trucks, bumper to bumper, between Vancouver and San Francisco. Long-lived and slow-growing rockfish species are the primary catch of B.C.’s groundfish fleets, which now catch more than half the fish, by species and volume, on Canada’s west coast. Among the rockfish being harvested by B.C.’s trawlers, long-line and cod-trap vessels are catching *boccaccio* and yelloweye rockfish from the same troubled stocks that U.S. fisheries authorities intended to protect two years ago when most of the U.S. groundfish trawl fleet was idled.

The U.S. National Marine Fisheries Service anticipates that it will take between 24 and 106 years, depending on ocean conditions, for the troubled U.S. rockfish stocks – including dark-blotched rockfish, widow rockfish, canary rockfish and cowcod – to recover. Since the U.S. closures, three-quarters of California’s supply of groundfish – rockfish, “red snapper”, Pacific Ocean perch, Pacific cod, and so on – is coming straight from British Columbia’s groundfish fishery.

Pacific hake, a cousin of Atlantic cod, is one of the most ecologically important fish species on North America’s west coast. As recently as the late 1980s, the great hake stock ranged from California to British Columbia’s northern waters in a biomass exceeding six million tonnes. This is an amount of fish that is more than three times the biomass of Newfoundland’s northern cod stocks, which Jeff Hutchings described (Chapter 3), before the chronic overfishing that led to the cod stock’s rapid collapse. A quiet but debilitating “hake war” between Canada and the United States began in the early 1990s, when the two countries could not agree on a catch-share formula. Last year, the hake stock had fallen to its lowest observed levels in 30 years – about 710,000 tonnes. The Canada-U.S. dispute, coupled with decisions by politicians on both sides of the border to ignore the recommendations of a joint panel of Canadian and American hake scientists, is not unrelated to this tragic decline. In the summer of 2003, for the second year in a row, the Minister of Fisheries and Oceans Canada and his American counterparts have authorized fisheries that put the combined Canada-U.S. allowed catch this year at 180,000 tonnes.

The closer you look at B.C.’s groundfish fisheries, the more absurd the picture becomes. To begin with, Canada’s fisheries managers cannot say with any certainty, from year to year, just how many fishing vessels are engaged in fisheries that impact upon groundfish stocks, either directly or indirectly. There are 142 “big boat” trawl licences on B.C.’s coast, along with 410 halibut licences, 191 “outside” rockfish hook-and-line licences, 47 sablefish (black cod) licences and at least 534 active permits for dogfish, sharks and skates, and lingcod. However, many of the larger vessels carry several of the more valuable licences, as is the case with halibut licences and trawl licences. Also, permits to harvest lingcod, dogfish, sharks, skates and other “bottomfish” species are available to salmon-licensed vessels, crab licensed vessels, and so on – potentially, 4,000 other vessels. More importantly, most of the fish species harvested by B.C.’s groundfish vessels are not protected by any catch limits, whatsoever.

Major reforms have been recently imposed on B.C.’s offshore trawlers, such as 100 percent on-board observer coverage, and a system of transferable quotas that tends to keep the trawlers within the quotas they are assigned for “managed” species. But only two dozen of the 75 finfish species B.C.’s trawlers catch are protected by annual quotas. And even for those two dozen “managed” species, the fish that are “dumped” annually are not deducted from the quotas that are supposed to ensure they are properly conserved. For those species not “managed” by quotas at all, it’s a free-for-all. Without adequate stock assessment resources, fisheries scientists remain incapable of assigning quotas for about 50 of the species that routinely come up in trawlers’ nets. In the absence of quotas for these “unmanaged” species, there are simply no catch limits at all.

One of the worst examples of this free-for-all involves Pacific turbot, also known as arrowtooth flounder. The Pacific turbot is a distant flatfish cousin of the Atlantic turbot, also known as Greenland halibut, and Pacific turbot has been rising in value in recent years. Over the past nine months, BC's trawlers caught more than 14 million pounds of turbot – an amount of fish that equals the weight of about half the population of the City of Vancouver - with no catch controls in the fishery whatsoever.

For me, the most disturbing aspect of this free-for-all is the fact that only a dozen offshore rockfish species are nominally protected by quotas that govern the trawl fleet's catch, which means another twelve rockfish species remain unprotected by any catch limits at all. These are sharpchin, longjaw, redbanded and darkblotched rockfish. They are greenstripe, splitnose, rosethorn and harlequin rockfish. They are dusky, chillipepper, aurora and vermilion rockfish. They are beautiful, mysterious creatures, and they are being mined from the sea, along with millions of pounds of soupfin sharks and cat sharks and thresher sharks, scorpionfish and grenadiers, slender soles, flathead soles and deep sea soles, ragfish and shad, poachers, and prowfish, and on and on it goes.

This narrative is not intended to demonize the fishing industry, and it would be wrong not to mention that there are many progressive fishing industry leaders and government scientists who are every bit as concerned about these things as the environmental community of BC is. But this sort of thing clearly cannot last. This is conduct that simply cannot withstand public scrutiny. It is a scandalous state of affairs, and we cannot afford to resign ourselves to cynicism, which is always the easy way out. These things happens not simply as a result of humanity's inherently rapacious nature. These events are not inevitable, especially with the benefit of hindsight, and we are now amply equipped with that hindsight.

#### **Fisheries management and salmon conservation objectives**

I should mention that this slight digression was not wholly unrelated to the subject I am addressing. The point that needs to be taken from all this is that these circumstances are precisely the fisheries-management context within which efforts to conserve salmon are expected to be effective.

I will digress a moment, however, to say how astonished I was with the lucidity and the clear perception of Bob Lackey's paper (Chapter 13). Dr. Lackey touched on what I obviously regard as the very heart of the challenge itself – but I remain a bit suspicious of assumptions about the degree to which what he called, our collective actions, accurately reflect our collective will as citizens. It is a profoundly important question. It gets us into the strangest corners of metaphysics. Dr. Lackey's observations raise the most important questions about the extent to which humanity might determine its own destiny. But I am not a metaphysicist. I claim no special competence here. What I can say is that the tragedies that befall fisheries abundance are the result of identifiable decisions, made by identifiable people, on our behalf, as citizens, the ultimate owners of Canada's marine resources.

So it seems to me that we need to set some rather bold objectives for ourselves to ensure that what has happened to the marine ecosystems elsewhere in the world is not visited upon ourselves here. And these objectives must not be unduly constrained by how difficult and complicated they might make the work of fisheries managers or fishermen.

The conservation objectives that the Sierra Club of BC has identified as necessary for the management of fisheries on Canada's west coast, which we believe are entirely consistent with the public interest and with widely held public expectations, can be expressed in three simple sentences, which the Honorable John Fraser might be happy to know can be written in the language of common speech:

- *Not one fish should be taken from Canada's Pacific waters unless it comes from an identifiable, harvestable surplus of a stock of known abundance, distribution and productivity.*
- *Not one fish should be caught that is not accounted for by scientifically defensible catch-monitoring methods.*
- *No fishery whatsoever should be permitted in Canada's Pacific waters unless its consequences, both for the fish species and for the ecosystems they inhabit, are fully anticipated and accommodated.*

We realize this is asking a lot. We realize that almost all fisheries entail a certain degree of risk, we must be prepared to accept risk and uncertainty and accommodate these things into fisheries management. We also realize that such objectives will oblige fisheries managers to adopt a posture of wholly uncharacteristic humility. We further believe that such standards are necessary, and achievable, and are consistent with the basic expectations of ordinary Canadians. We also fully realize that, in the context of current fisheries management practices, we are a formidable distance from achieving these ends.

Returning to the matter of the conservation of salmon, I would similarly remind everyone that the moral responsibility for conserving salmon falls on all our shoulders, as citizens. But the constitutional and political responsibility for the conservation of salmon rests with the federal government, and with its fisheries department. As citizens, we express our collective will through our governments, and the overwhelming will to conserve and restore salmon in abundance and diversity, it logically follows, must be reflected in the policies, practices, purposes and objectives to which the federal government, through DFO, commits itself.

### **What do we intend to conserve?**

But here is a strange thing. Everybody claims to be in favour of conserving salmon, but to the obvious question, "What do we intend to conserve?" the federal fisheries department has no clear answer. And it is the most important public policy question. Its answer will determine everything that our government agencies do with respect to the objective of salmon conservation.

Conventionally, the federal government has answered this question by identifying salmon as merely a renewable resource that should be managed for raw commodities in ways that provide for the greatest annual economic yield. As the economic significance of wild salmon has declined, there has been a general retreat by the federal government in the exercise of its duty to conserve salmon. To the extent that the primary legal and political responsibility for salmon conservation still rests with the federal government, DFO still sees its duty to conserve mainly through an outmoded and increasingly irrelevant economic-yield prism.

Clearly, government institutions, particularly the Department of Fisheries and Oceans, must break through barriers of their own making in order to conform with the public's reasonable expectations that B.C.'s salmon runs will be protected and conserved, in all their diversity, variety and abundance, for future generations. But this means a wholly new vision must guide government decision-making with respect to salmon conservation. It means that the importance of salmon in British Columbia's cultural consciousness, and the importance of salmon as a keystone species upon which British Columbia's environmental health so deeply depends, must come before any and all other "production" objectives with respect to Pacific salmon.

Scientists, particularly geneticists and conservation biologists, have made tremendous contributions to the public's understanding about the necessary conditions for the long-term survival of salmon. Science must

be credited with developing a broad public awareness that salmon must be protected and conserved in greatest possible natural diversity, over the greatest possible range, if they are to be part of our common future. Similarly, economists have contributed greatly to an emerging realization that the indirect, long-term values associated with healthy salmon runs and a healthy environment far outweigh the direct, short-term extractive values associated with salmon and a healthy environment.

But when it comes to British Columbians and salmon, there is far more at stake than science or economics. Ultimately, although salmon are involved in ancient and specific relationships with aboriginal communities – and salmon are rightly subject to the legally-enforceable fishing rights of B.C.'s First Nations – salmon remain a Crown-owned resource. Salmon are a public resource. They do not “belong” to the government, or to industry. They belong to all Canadians, and all British Columbians, to generations long dead and generations unborn. British Columbians should not be obliged to defend or justify their will to conserve salmon to anyone. British Columbians should not be required to resort to the terminologies of the sciences or economics to defend their desire to persist in their relationships with salmon.

Salmon do not exist simply to be “managed.” Salmon exist because they exist, uniquely and distinctly, wherever they occur, and we are all the richer for it. British Columbians have always been enriched by their presence. British Columbia continues to be enriched by their presence, and British Columbians should not have to make excuses for their desire to see salmon protected and conserved for generations to come. Even the smallest salmon streams, regardless of their economic, genetic or ecological significance, are worthy of protection. The vast majority of British Columbians understand this, and it does not matter that conserving salmon at such local and difficult-to-manage scales presents challenges to fisheries managers. Salmon conservation at the small-stream level also presents enormous challenges to city dwellers, loggers, and farmers. But these are challenges that British Columbians are showing an increasing willingness to face.

The evidence of that willingness can be found in the dedication of thousands of British Columbians organized in "creek watch" committees, streamkeeper groups and watershed stewardship groups all over the province. These people include commercial fishermen, anglers, and members of British Columbia's Indian bands. They also include people with no vested interest at all in the harvest of salmon.

What do we intend to conserve?

How the Sierra Club of British Columbia answers that question is this:

To give the public will to conserve salmon its full expression in government policy, the federal authority over salmon and salmon habitat must be exercised in a way that is consistent with the following principles:

- i) The conservation of British Columbia's salmon populations must take precedence over all other objectives with respect to salmon production, and salmon populations must be conserved, in the greatest biological and genetic diversity and abundance, for their intrinsic values. These values are not exclusively and directly economic in nature. In keeping with the purposes of the U.N. Convention on Biological Diversity, the diversity and abundance of British Columbia's salmon populations must be maintained for economic, ecological, genetic, social, scientific, educational, cultural, recreational and aesthetic values.
- ii) The federal government, through the Department of Fisheries and Oceans, must commit itself to protecting and maintaining salmon habitat on an ecosystem basis. Both the federal and provincial

governments should assume joint responsibility for protecting the health of the ecosystems upon which salmon depend.

- iii) Federal fisheries managers must take into account the role salmon play in ecosystem functioning, and the contributions salmon make to terrestrial ecosystems. Salmon must be conserved from the premise that the diversity and abundance of myriad terrestrial species depends upon the diversity and abundance of salmon across the broadest possible range.
- iv) The federal government must commit itself to a precautionary approach in its decision-making, and must always make efforts to regulate fisheries and protect salmon habitat in a risk-averse manner. This will mean ensuring that, at a minimum, fisheries are managed so that their impacts upon salmon runs are predictable and sustainable and the genetic integrity of salmon populations is protected. It will also mean that, at a minimum, habitat is protected in ways that allow “gene flow” between fragmented populations, and safeguards are established to ensure that hatcheries and other “enhancement” initiatives pose no threat of adverse genetic impact upon unenhanced salmon populations.

These four principles merely reiterate, in summary fashion, what salmon scientists and conservation biologists have long considered to be the necessary conditions for the survival of salmon over the long term. As such, there is nothing necessarily “new” in their articulation. What is new is that the establishment of these necessary conditions for the long-term survival of salmon has at long last become politically achievable in British Columbia

### **Effective decision-making**

I want to return to the importance of effective decision-making processes, which has been the subject of some lively debate. In keeping with the view that public policy must reflect public values, it has long been the view of the Sierra Club that all decision-making with respect to fisheries conservation and conserving marine ecosystems and the diversity and abundance of salmon must be made openly and transparently, and that decision-makers must include many more interests than the conventional stakeholder interests.

If we return to the Convention on Biological Diversity, we find that Canada’s commitment to implement and enforce the principles of this important international instrument oblige us to conserve salmon for a variety of values: for their economic, ecological, genetic, social, scientific, educational, cultural, recreational and aesthetic values. So it seems to me that quite clearly,

*... these values must be directly represented in all decision-making with respect to salmon conservation. At the very least, it will mean affording full stakeholder status, along with First Nations, commercial and recreational interests, to include the full public interest in salmon conservation. At a minimum, this will mean providing formal room at the table for the conservation sector, which includes environmental organizations and the streamkeeper/stewardship constituency.*

And I am happy to report that the Fisheries Minister recently agreed to historic reforms in fisheries decision-making on Canada’s west coast that do just that.

Ken Wilson (Chapter 10) described the daunting challenges facing fisheries managers in conserving the diversity of the Fraser River’s sockeye populations in the context of what are almost exclusively mixed stock fisheries. We know about the rumpus-making that occurred in 2002 after DFO’s fisheries managers actually had the audacity to conduct themselves, for the most part, as though small salmon runs actually mattered, and how they erred on the side of caution, which, by its very definition, means a code of conduct in which one will occasionally err. As a result of all the carry-on during the 2002 salmon fishery,

the minister assembled an unprecedented cross-section of interests in a review committee, whose many recommendations, I am further happy to report, were unequivocally and completely and quite publicly accepted by the minister, who promised to implement each and every one of them.

A key recommendation of the review committee calls for the federal government to develop a scientifically defensible policy that defines conservation objectives for Pacific salmon and addresses concerns about overfishing, habitat loss, aquaculture, and hatcheries. That is the wild salmon policy (Chapter 33), and it is in the business of answering that most important of all policy questions –what is it we are trying to conserve?

Secondly, the Minister announced his concurrence with the recommendation for a new, coast-wide policy committee, involving the B.C. government, conservationists and community organizations along with First Nations, commercial and recreational representatives. The federal government will retain constitutional authority over fisheries management, but the coast-wide committee will provide Ottawa with direction to guide fisheries management and conservation for all fisheries resources—not just salmon—on the coast.

Also, conservationists will participate in two new fisheries-planning bodies to be established, one for the north coast and one for the south coast, which will have direct input into the development of annual salmon fishing plans. The two new committees are expected to ensure that all proposed fisheries are consistent with conservation objectives and Canada's international commitments, including the United Nations' Code of Conduct for Responsible Fishing and Convention on Biological Diversity.

I regret to say that already the DFO bureaucracy is conducting itself as though the minister made no such commitments. But we remain hopeful. We're used to walking three steps forward, then two steps back. Although awkward, this is still forward movement. What we can see in this is an emerging regime in which conservation groups will co-author fisheries management regimes, assuming a new and rather more daunting role in ensuring the conservation of broad-scale ecosystems.

The ball is not at all "in our court." But the court is widening, allowing for many more players. Things will be more complicated. Life is complicated. But this, in our view, is the right direction to take in order to ensure the persistence of salmon in the landscape through the 21<sup>st</sup> century.

## References

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