The 1985 Pacific Salmon Treaty
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The 1985 Pacific Salmon Treaty: Sharing Conservation Burdens and Benefits
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The decade-and-a-half negotiation of the Pacific Salmon Treaty and parallel negotiations on the Atlantic coast and within the United Nations Law of the Sea Convention involved major technical and political efforts by both Canada and the United States.

From the account of the negotiations found in this book, it will be evident that the negotiations involved hundreds of individuals representing governments, fishermen, representatives of Aboriginal groups, processors, and marketers on both sides. All had their own interests to protect and all, at one time or another, had to face the unenviable task of making compromises within the negotiating arena while later having to explain to constituents back home why it was not possible to achieve parochial objectives. The treaty was not perfect, but its benefits to both sides far outweigh its disappointments. All those who participated in its making deserve credit.

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Salmon Migrations, Fisheries, and Problems

Almost from the beginning of the modern commercial fishery for Pacific salmon late in the nineteenth century, the capture of fish bound for rivers of one country by fishermen of the other has created controversy between the United States and Canada. The earliest disputes in the 1890s arose along the Washington state/British Columbia border and focused on US harvesting of sockeye salmon bound for Canada’s Fraser River. For the next three-quarters of a century, the scope of the controversy widened to include problems of harvests (“interceptions”) by Canadian fishermen of salmon bound for rivers in Washington and Oregon; interceptions by Alaskan fishermen of salmon bound for rivers in British Columbia and the Yukon; and interceptions by northern British Columbia fishermen of Alaska-bound salmon (Figure 1.1).

Periodically intergovernmental negotiations led to arrangements aimed at solving parts of the problem (for example, in 1937 and 1957, agreements were concluded for international management of sockeye and pink salmon bound for the Fraser River; see Chapters 2 and 4). Many problems remained unresolved, however, and even in situations where agreements had been reached in earlier years, the terms of the older accords no longer fitted the changing circumstances of the fisheries. In the early 1970s, the two governments entered into negotiations to provide a framework for solving the salmon interception problems on a comprehensive coastwide basis. The negotiations concluded with the exchange of ratification instruments of the Pacific Salmon Treaty by Prime Minister Mulroney and President Reagan in March 1985.

The treaty operated to the general satisfaction of the parties until the early 1990s, when unprecedented declines in a number of stocks, due at least in part to climate change, made the treaty difficult to implement and led to disputes regarding the extent of the obligations that it placed on the parties. In 1999, the seriousness of the resource declines led both parties to
Figure 1.1  The coasts of Southeastern Alaska, British Columbia, Washington, and Oregon showing locations of major fisheries intercepting salmon and places named in the book.
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declare a truce regarding their disputes on treaty interpretation by developing an implementation agreement specifying fishing plans for fisheries subject to the treaty for the next eight to ten years (varying by stocks and fisheries) without prejudice to their respective positions regarding treaty principles (Pacific Salmon Commission 2000).

These arrangements will give the two countries breathing space to consider the long-term requirements for conservation and sharing of the salmon resources. Such considerations will be extremely challenging because there are many uncertainties about trends in resources and in the economic and social circumstances of the fisheries.

Most of the fundamental problems facing the two countries as they consider longer-term arrangements had their origins in earlier times. For this reason, in looking to the future, it would seem desirable to seek an understanding of issues and problems that confronted past attempts to reach solutions. This book is dedicated to providing such an understanding. We hope that it will facilitate the search for effective arrangements in the second and succeeding decades of the twenty-first century.

The Geographic and Biological Context

Geopolitics
Beginning in the eighteenth century, the present land boundaries separating Canada and the United States on the Pacific were established as a result of competitive exploratory activity, wars, and diplomatic manoeuvring among colonizing nations. The competitors included Russia, which occupied Alaska from the late 1700s through 1867; Spain, which maintained claims to the North Pacific shores of the North American continent until the end of the eighteenth century; Great Britain, whose fur traders first occupied the Pacific slope of what is now British Columbia, Washington state, and northern Oregon; and the United States, which succeeded Russia in Alaska and whose settlers and fur traders followed Lewis and Clark's explorations of 1804-1806 to eventually displace the British traders from the Oregon territory.

The resultant boundary settlements created a complex geographic pastiche wherein the United States, as the successor of Russia in Alaska, gained a narrow strip of land a few tens of kilometres wide from Yakutat in the north to Dixon Entrance in the south. This strip, the so-called Alaska Panhandle, cut off marine access to the immense Canadian land mass lying to the east for a length of coast approximately equal to the length of the coast of present-day British Columbia.

In the south, the Oregon Boundary Treaty of 1846 essentially displaced Great Britain’s Hudson’s Bay Company from what is now Washington and Oregon.
Also in the south, as a geographic accident, the decision to establish the mainland boundary along the forty-ninth parallel gave the tip (less than 4 kilometres in length) of a small peninsula (Point Roberts) jutting south from the British Columbia mainland into the Strait of Georgia to the United States, creating strange circumstances for the local community (including many Canadian property owners) and providing the United States with a territorial base on Canada’s doorstep for exploitation of Canada’s most prolific producer of salmon, the Fraser River.

**Biology: Marine Migrations and Interceptions**

From the perspective of salmon ecology, the boundaries made no sense at all. The North Pacific coast from Yakutat at the top of the Alaska Panhandle southward to the Columbia River between the states of Washington and Oregon represents a biological continuum; the coastline’s partition along political lines failed to reflect the realities of nature from the fisheries point of view. Along this stretch of coast, in the spring of each year, young of all five species of salmon and steelhead, spawned in the previous one or two years in fresh water, leave the lakes and rivers of their origin to begin actively feeding in the estuaries and bays. Most move rapidly from the protected inshore waters to the open sea. For those reared in the rivers along the outer coast, the open sea lies at their doorstep. Others, however, must traverse long inside passages and inland seas of both countries before reaching open waters.

Not all salmon seek the open sea; a number of them spend their entire ocean lives in inshore waters. This is especially true of some coho and chinook salmon stocks, which may be found at all stages of their life history in the protected waters of the Strait of Georgia, Puget Sound, and the tortuous inside passages of Southeastern Alaska.

Aside from such stocks, the vast majority of salmon of all five species spawned in rivers tributary to the Gulf of Alaska move quickly to sea and swim northward following the set of the current sweeping along the coast of British Columbia and Alaska (Figure 1.2). This northward migration of young fish resembles an army on the march; as the main phalanx moves northward, it is joined by successive cohorts that swell the ranks as new populations join the stream. Thus, at the mouth of Juan de Fuca Strait, northward-moving elements from rivers of the outside coasts of Washington and Oregon are joined by fish from rivers and streams tributary to the inland sea comprising Puget Sound, Juan de Fuca Strait, and the Strait of Georgia. Large populations of all five species of salmon originating in the Fraser River are included in the latter group. As they move further north, they are joined by salmon from central and northern British Columbia and Southeastern Alaska. Thus, salmon from Alaska, British Columbia, and Washington intermingle extensively in the open ocean.
Figure 1.2  Schematic diagram of surface circulation in the North Pacific Ocean.
Sockeye salmon conduct very long migrations within the Gulf of Alaska. After travelling in a circular route around the rim of the gulf, they return south and spend their first winter in offshore waters south of Kodiak Island (Figure 1.3). Chum salmon also make relatively long migrations to the north and west, but those originating in streams tributary to the Gulf of Alaska and southward do not appear to concentrate as far offshore as do sockeye. Pink salmon, spending only about fifteen months at sea, do not migrate as far as either sockeye or chum, most of which spend more than two years, and commonly three or four years, at sea before returning to spawn.  

Figure 1.3  Hypothetical migration routes of northeastern Pacific sockeye salmon. 
Source: Adapted from French et al. 1976.
Although some coho may conduct long ocean migrations, many others remain close to their home streams throughout their lives. In this respect, coho are the least adventurous of all the salmon species originating in eastern Pacific rivers. Some juveniles undoubtedly join the stream of the five species moving northward along the coasts of British Columbia and Alaska each spring. However, particularly at the southern extremity of coho distribution, south of the influence of the northward-moving branch of the Subarctic Current (Figure 1.2) off southern British Columbia, Washington, and Oregon, migration is much more of a shotgun type of dispersal than a definite northward set. Thus, coho from the British Columbia rivers, such as the Fraser, are only occasionally found as far north as Alaska (Groot and Margolis 1991, 426-28). Coho may be caught throughout the year in coastal waters of British Columbia that include inside passages such as the Strait of Georgia and Juan de Fuca Strait.

In the eastern North Pacific, many chinook salmon from the rivers of California, Oregon, Washington, and British Columbia make long south-north migrations in coastal waters but do not tend to stray very far offshore. Very few have been caught in waters of the Gulf of Alaska beyond fifty miles of the coast. Throughout the year, substantial numbers of chinook can be found, along with coho, in the inside passages of Southeastern Alaska, Dixon Entrance, Hecate Strait, the Strait of Georgia, and Puget Sound. From the waters off the mouth of Juan de Fuca Strait to Southeastern Alaska, stocks of chinook from different river systems mingle extensively. For example, from tagging of chinook in the inside passages of Southeastern Alaska, recoveries have been made in virtually every important spawning stream between Oregon and Southeastern Alaska (Groot and Margolis 1991, 357-67). The extent of intermingling is greater than for coho. The movements of young chinook at sea appear to be much more gradual than those of young sockeye, chum, and pink. For example, whereas young sockeye from southern British Columbia are found in waters of the Western Gulf of Alaska within six months of leaving their natal rivers, it takes many chinook from the same rivers over a year to reach Southeastern Alaska.

Unlike Atlantic salmon (Salmo salar), Pacific salmon almost invariably return to the streams of their origin to spawn and die. In the late spring and summer of their final year at sea, the salmon begin their final migrations, moving rapidly toward their home streams. These migrations are probably more direct than the circuitous movements of the juveniles. With feeding grounds predominantly to the north and west of their natal rivers, the homeward migrations of most salmon spawned in rivers along the eastern shore of the North Pacific Ocean are mainly in a southeastward or eastward direction (see Figure 1.3). In general, the returning salmon do not move directly from the sea to their stream mouths, but instead tend to hit the coast some distance to the north and west of their eventual destinations.
In this way, as will be discussed in more detail later, sockeye, pink, and chum bound for the Skeena and Nass Rivers of northern British Columbia frequently reach inshore waters along the coast of Southeastern Alaska, migrating down the Alaskan shoreline and to some extent through the inside passages of the Alexander Archipelago to enter Dixon Entrance on the way to their spawning rivers. In a similar manner, sockeye and pink bound for the Fraser River reach inshore waters off Vancouver Island, moving southward relatively close to the outer coast of the island to enter Juan de Fuca Strait on the way to their home streams. Variable but often substantial numbers reach the coast even further north, passing through Johnstone Strait at the northern end of Vancouver Island rather than migrating down the west coast of the island (e.g., for sockeye see Figure 1.4).

With respect to such migrations, the man-made boundaries established by diplomats almost two centuries ago have no relevance. Fish bound for Canadian and US rivers intermingle or are present and harvestable off the coasts of both countries.

As a consequence:

1. Southeastern Alaskan fishermen intercept salmon bound for Canadian sections of rivers that flow to the sea through Alaska (e.g., the Taku and Stikine Rivers in the Alaska Panhandle area). Southeastern Alaskan fishermen also intercept southward-moving salmon of all six species of *Oncorhynchus* bound for many British Columbia rivers and chinook salmon bound for US rivers in Washington and Oregon (e.g., the Columbia River).
2. Canadian fishermen in northern British Columbia catch pink, chum, and coho salmon bound for Alaskan rivers, and chinook salmon bound for Washington/Oregon rivers.
3. Canadian fishermen in southern British Columbia harvest pink, chum, chinook, and coho salmon bound for Washington/Oregon rivers.
4. Washington fishermen catch all six species of *Oncorhynchus* bound for southern British Columbia rivers, mainly the Fraser River.

It is the interception of these wandering fish, bound for rivers of one country but taken in the waters of the other country, that has created serious problems for the conduct of fisheries in both countries, which, in turn, led to the conclusion of the 1985 Pacific Salmon Treaty designed to provide for effective management and sharing of the internationally harvested stocks.

**Freshwater Factors**

The remarkable life history of salmon involves existing at different times in their life cycle in two environments: first, in the freshwater rivers and lakes where they are spawned, begin their free-swimming life, and eventually return as adults to procreate and die, and second, in the open seas, where
Figure 1.4  Fraser River sockeye migration routes, the Fraser River Panel area, and adjacent waters.

they range widely and grow to maturity. The two environments are equally important in dictating the abundance and survival of the stocks.

Humans have little ability to exert direct year-to-year control over broadly based ocean events affecting salmon survival in offshore waters. They can, and do, however, have the capability to alter the freshwater and estuarial environments of salmon, impacting, usually adversely, their spawning and juvenile rearing areas and consequently affecting their survival. The encroachment of modern society on natural salmon habitats through the building of cities and industrial development has drastically altered salmon production in many areas. For example, in Japan, by the middle of the twentieth century, virtually all salmon were being produced in artificial propagation facilities (principally hatcheries) because the natural spawning grounds had been become unusable due to poaching, pollution, or diversion of water for agricultural purposes (Sano 1967).

It becomes a choice of society whether to preserve rivers and watersheds for salmon production or to permit their use for other purposes, such as hydroelectric production, logging, and agricultural or urban development. In the northwestern United States, the proliferation of hydroelectric dams, particularly on the Columbia, has drastically altered the natural river environment, and now billions of dollars are being spent in restoration attempts, especially to rebuild wild stocks listed as threatened or endangered under the United States Endangered Species Act.¹⁰

In Canada and Southeastern Alaska, environmental damage has been much less. In British Columbia in the years following the Second World War, mainly to preserve the salmon runs, large-scale development of river basins for power was rejected despite the fact that substantial short-term economic benefits had to be forgone.¹¹

As will be discussed in detail later, the fact that nations such as Canada and the US in whose waters salmon originate must make sacrifices and sustain economic costs to maintain salmon has had an important influence on the negotiation of arrangements for management of salmon resources on both a global and bilateral basis.

**The Management Problem**

Concentrating in dense aggregations on their homeward journey, salmon are susceptible to overfishing. With modern fishing techniques, it is quite possible to take virtually every fish from the run to a particular river. In order to ensure that sufficient mature fish reach the spawning grounds, the fisheries must be tightly restricted. Under these circumstances, fishing in many areas is limited to only a day or two during the fishing season. Were such limitations not in place, the runs would quickly be fished to commercial
extinction. Interceptions, often unpredictable and sometimes substantial, can greatly complicate management and deprive fishermen in one country of harvests of fish originating in their own waters.

Limitations are necessary, but who should do the limiting? Fishermen intercepting salmon bound for the other country find it difficult to accept long-term limitations on their activities aimed at preserving a particular resource that lies within the jurisdiction of another country. On the other hand, it is difficult to convince local fishermen of salmon-producing nations of the need to make conservation sacrifices when their competitors beyond the limits of national jurisdiction are not restrained. Before 1985, governments and fishermen of both intercepting and intercepted nations acknowledged the need to conserve the salmon, but the rights and responsibilities of each nation regarding how to limit their intercepting fisheries remained to be determined.

The practical problems of reaching agreement were well described by US management officials who, in an article written just before the Pacific Salmon Treaty was signed in 1985, noted: “The legal and governmental entities that now have responsibility for the health of [salmon stocks] are essentially asking: ‘Why should I conserve if the other parties won’t?’ One group after another has held back its conservation measures until the ‘other person’ makes the first move. The only important party which lacks representation in this debate are the fish themselves ... each regulatory entity is making its standards conditional on the actions of others, meanwhile continuing to adversely impact the resource ... This type of conditional ethics is simply an example of the tragedy of the commons” (Fraidenburg and Lincoln 1985, 326).

Under these circumstances, without international agreements to control interceptions and with great pressure from their respective fishing industries, fisheries administrations on both sides have often been more concerned with trying to gain an advantage over the competing fisheries across the border than with effective management.

This book outlines how Canada and the United States worked to overcome such managerial inaction and how they proposed to create a positive administrative environment for effective conservation and sharing.

**Approach**

With the foregoing perspective, the rest of this book follows the convoluted path of Canada/US century-long discussions and negotiations that culminated in the conclusion of the 1985 Pacific Salmon Treaty. The coverage follows events on a more or less chronological basis. Chapter 2 covers fishery events, discussions, and negotiations from the 1890s through the early 1960s. During this period, attention was first focused on creation of a framework for management of fisheries targeting Canada’s abundant sockeye
salmon runs to the Fraser River. Later in the period, efforts were con- 
trated on arrangements for limitation of Japanese high seas fisheries that 
were threatening to compete seriously with fisheries of Canada and the US 
for salmon of North American origin.

Chapter 3 switches to the broader international field, when the bilateral 
Pacific salmon problems took a back seat to global events, eventually cul-
This period was characterized by a tug-of-war between coastal states and 
expeditionary fleets of overseas nations regarding the exploitation of re-
sources that both claimed. These global initiatives involving the develop-
ment of international principles for the conduct of fisheries had a profound 
effect on Canada/US approaches to their bilateral salmon problems.

Chapter 4 covers the final decades before the 1985 Pacific Salmon Treaty 
was finally concluded, when severe management problems eventually forced 
Canada and the US to reach a compromise regarding the conduct of their 
competing fisheries. Chapters 5 to 13 provide descriptions of the terms of 
the treaty and the issues that attended the negotiation of each. Chapter 14 
provides concluding remarks commenting briefly on how the complex is-
ues surrounding negotiation of the treaty have affected its implementa-
tion since 1985.