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TRUCE IN THE SALMON WAR: ALTERNATIVES FOR THE PACIFIC SALMON TREATY*

Karol de Zwager Brown

Abstract: The 1985 Pacific Salmon Treaty was heralded as an end to the ongoing international dispute between the United States and Canada over Pacific salmon fishing rights. The Treaty, however, failed to define adequately the principles and processes for allocating salmon harvests between the two countries. The parties to the Treaty have been unable to reach consensus on annual salmon harvests since 1992, fueling a growing conflict which has threatened to spill over to issues beyond the fishery dispute. This Article examines the historical context of the "salmon war," highlighting changes in international law and domestic politics that affected the formation of the Treaty. The Pacific Salmon Treaty established a framework for the parties to cooperate in the management of salmon stocks, but did not define several key principles and created a cumbersome voting mechanism. These deficiencies have resulted in annual negotiations that are fraught with conflict, leading to a breakdown in the Treaty process. This Article analyzes several alternatives for solving this current crisis. The parties could submit the annual allocation decisions to an international arbitration board that would have the power to bind both sides. Each country could agree to compensate the other country monetarily for interceptions of the other's salmon stocks. The Treaty could also be revised to provide for a default allocation scheme if the parties fail to reach agreement on annual fishery regulations. Finally, the United States and Canada could create an international market of individual salmon quotas. As this Article was being revised for publication, the United States and Canada entered into an historic agreement designed to end the Pacific salmon war. The Epilogue at Part VI of this Article discusses the new agreement and its future implications for Pacific salmon.

For several years, a quiet war has been waged between the western states of the United States and Canada's westernmost province. This simmering dispute between these essentially friendly neighbors is over the conservation and allocation of a precious resource—the Pacific salmon. Battles have been fought in the media, in the courts, and on the water, with each side claiming hollow victories. The casualties in this war, however, have been the salmon.

Although Pacific salmon originate in the Northwest's freshwater rivers, they spend most of their lives swimming in the North Pacific Ocean off the Alaskan and Canadian coasts. Many species of salmon must run the gauntlet of three distinct fisheries—Alaska, British Columbia, and Washington/Oregon—throughout their long migration cycle. During their ocean voyage, the salmon from different localities intermingle. For example, sockeye and pink salmon from British

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Columbia's Fraser River, chinook and coho from Washington's Columbia River, and chum from the transboundary rivers such as the Stikine all migrate through the Gulf of Alaska.¹ Because salmon from various regions intermingle across political jurisdictions during their ocean migration, fishermen cannot easily target fish of a particular species or national origin.² American fishermen inevitably catch salmon originating in Canadian rivers and Canadian fishermen likewise take American fish.³ A catch of another country's fish is called an "interception."⁴

Due to the transboundary nature of their respective salmon resources, the United States and Canada have always had a common interest in the management of Pacific salmon.⁵ Salmon interceptions have been the subject of discussion between the United States and Canada since the early part of the century.⁶ If one country harvests too much of the other country's stocks, the home country's management plans may be frustrated.⁷ Uncontrolled interceptions may also jeopardize the support needed for salmon enhancement programs, because nations are less likely to fund investments in habitat protection and restoration if the fish produced by such programs will ultimately be caught by fishermen of other nations.⁸ Interceptions encourage overharvesting and discourage investment in conservation.⁹ To prevent conflict and enhance resource management, countries should coordinate their fishery management and conservation plans to discourage interceptions.

1. The Pacific Salmon Treaty defines "transboundary river" as "a river that rises in Canada and flows to the sea through the United States." Treaty with Canada Concerning Pacific Salmon, Jan. 28, 1985, U.S.-Can., art. I, para. 7, T.I.A.S. No. 11,091 (entered into force Mar. 18, 1985) [hereinafter Pacific Salmon Treaty]. These rivers include the Stikine, Taku, and Alsek, which originate in northwestern Canada and flow through Alaskan territory before entering the ocean. *See id.*

2. *See* Daniel D. Huppert, *U.S./Canada Salmon Wars: Why the Pacific Salmon Treaty Has Not Brought Peace*, *New Directions in Marine Affairs* (Univ. of Wash. Sch. of Marine Affairs ed.), Jan. 1996, at 2.

3. *See id.*

4. *See* Pacific Salmon Comm'n, *Pacific Salmon Commission 5* (1988) [hereinafter *PSC Brochure*].

5. *See* Sen. Don Young, *U.S. House Subcommittee Focuses on Pacific Salmon Dispute* (Sept. 18, 1997) (press release) (on file with author) [hereinafter *Young Press Release*].

6. *See PSC Brochure, supra* note 4, at xi.

7. *See id.* at 5.

8. *See id.*

9. *See id.*

International conservation and management of fisheries is difficult because of the escapable nature of the resource and the lack of tangible, divisible property rights.¹⁰ Under the current Olympic system¹¹ of national fisheries management and the “rule of capture,”¹² a fisherman has no property rights in a fish until it is in the fisherman’s boat. Fish not caught by one fisherman will be taken by another. In response, fishermen seek new ways to seize fish more quickly than their competitors do.¹³ This results in a race to the resource and creates incentives for overcapitalization of the fishery.¹⁴

Conflicts over salmon are inextricably linked to their complex life cycles. Salmon are anadromous fish whose life cycle begins in fresh water rivers as eggs. After hatching, they develop into fry and then become smolts. These juvenile salmon then swim downriver to spend the majority of their adult lives in the ocean. The salmon’s ocean migration path covers thousands of miles and crosses international borders without regard for nationalistic concerns of fishermen who seek to capture them. Those salmon that escape the fishermen’s nets and other predators return to the rivers of their birth to spawn, thereby renewing the cycle. Because Pacific salmon return to their streams of origin, each stock is genetically adapted to its environment and shares discernible biological characteristics.¹⁵

There are five species of Pacific salmon, each with distinct characteristics. These species have different migration patterns, varying

10. See Carrie A. Tipton, Note, *Protecting Tomorrow’s Harvest: Developing a National System of Individual Transferable Quotas to Conserve Ocean Resources*, 14 Va. Envtl. L.J. 381, 382 (1995).

11. The Olympic system refers to derby-style fishing practices where regional management bodies establish yearly catch quotas to regulate the harvesting of major fishery stocks. Under these rules, each fisherman enters fishing grounds during a specific time window and removes as many fish as possible. See *id.* at 383.

12. The rule of capture is a legal principle for determining when a wild animal becomes the possession of its pursuer. See *Pierson v. Post*, 3 Cai. R. 175, 2 Am. Dec. 264 (N.Y. Sup. Ct. 1805) (stating that individual who mortally wounds or captures wild animal gains property rights in animal).

13. See Tipton, *supra* note 10, at 383.

14. Overcapitalization is the unnecessary diversion of capital into developing new technologies in an industry. In a fleet of fishing boats already capable of catching the allowable harvest, reinvesting fishing profits into new technology to catch fish more quickly is inefficient and a waste of resources that could be better used in other industries in the national economy. See *id.* at 382 n.6 (citing Seth Mackinko, *Public or Private?: United States Commercial Fisheries Management and the Public Trust Doctrine: Reciprocal Challenges*, 33 Nat. Resources J. 919, 921 (1993)).

15. See *PSC Brochure*, *supra* note 4, at 6. These genetic characteristics allow scientists to identify not only the species, but also the river of origin of salmon tested. See *id.*

levels of abundance, and substantially different economic value. The chinook salmon is the largest of the five species, averaging fifteen to twenty pounds and maturing in three to six years.¹⁶ Chum salmon average eight pounds and mature in three or four years.¹⁷ Coho or silver salmon average eight pounds, but can weigh over thirty pounds. These salmon rear from one to two years in freshwater and mature in the fall of their second year at sea.¹⁸ The sockeye salmon is a smaller species, weighing an average of six pounds. These fish spend one to two years in freshwater lakes prior to migrating to the ocean and mature after two or three years at sea.¹⁹ The smallest and most abundant salmon species is the pink or humpback salmon, averaging three to five pounds.²⁰ This species migrates directly to estuaries without rearing in freshwater and matures after two years.²¹ Chinook, coho, and sockeye salmon are preferred species and command prices of between \$1.00 and \$2.25 per pound.²² Pink and chum salmon earn lower prices in the market, worth between \$0.15 and \$0.60 per pound.²³

The goal of fishery management is to manage annual harvests to ensure the continued migration of these species. To accomplish this goal, fishery managers must ensure that sufficient numbers of fish return each year to their native rivers to spawn. This optimal “escapement”²⁴ is achieved by managing harvests through catch quotas or ceilings, limited fishing seasons and areas, regulated fishing gear, minimum size limits, and limits on the numbers of licensed commercial fishermen. Managing the fisheries to provide for optimal escapement in the current year—and maximum sustainable yields in the future—requires the cooperation and mutual assurances of each region in the salmon’s range.²⁵

Fisheries management is further complicated by changes in both ocean and freshwater environmental variables. Ocean conditions such as

16. *See id.* at 8.

17. *See id.* at 8–9.

18. *See id.* at 9.

19. *See id.*

20. *See id.*

21. *See id.*

22. *See* Huppert, *supra* note 2, at 1.

23. *See id.*

24. *See id.* “Escapement” refers to the number of mature salmon that “escape” fisheries and return to rivers and lakes to spawn. *See id.* at 2.

25. *See* Daniel D. Huppert, *Why the Pacific Salmon Treaty Failed to End the Salmon Wars* 5–6 (Univ. of Wash. Sch. of Marine Affairs SMA 95-1, 1995), as support for this paragraph.

water temperature, coastal upwelling, and prey populations affect the abundance of adult salmon. Freshwater environmental conditions such as river flow, gravel condition, and snowpack impact the spawning rates and survival of young salmon. Furthermore, escapement rates of previous years have a cyclical effect as these salmon mature and return to their river of origin to spawn. Each of these variables fluctuates widely from year to year and is extremely difficult to predict. Thus, fishery managers must establish annual catch limits using forecasts of salmon populations based on insufficient data derived from a highly variable environment.²⁶

Fish managers must also resolve the competing claims of commercial, recreational, and native fisheries. In Washington and Oregon, Native American treaty tribes exercise harvest rights for both ceremonial purposes and commercial sale.²⁷ British Columbia's native tribes (called First Nations) are negotiating similar fishing rights in Canada.²⁸ Recreational fishing interests compete with commercial fishing interests for shares of the harvest. These diverse groups rely on Pacific salmon for sustenance, pleasure, and profit.²⁹ For these stakeholders, salmon fishing has social and political significance, as well as economic value.³⁰ Success requires meeting the scientific needs of conservation, while gaining political approval in a highly divisive public forum.

The goal of international fishery management is to develop a process that maximizes the production of salmon for all, while equitably balancing the claims of each stakeholder in the process. Effective management, however, requires international cooperation to assure that each party competing for the resource gets its "fair share." Untangling stakeholders' competing claims is difficult even within one jurisdiction. With the added complication of an international arena and three rival regions, fishery management has proved to be a daunting task. It is in the collective interest of both the United States and Canada to manage the annual take of this renewable resource to assure continued rich harvests in the future.

26. *See id.*

27. *See Huppert, supra* note 2, at 1.

28. *See id.*

29. *See 1995–1996 Pac. Salmon Commission Ann. Rep.* at xii [hereinafter *PSC 95/96 Annual Report*].

30. *See Huppert, supra* note 2, at 1.

After years of conflict and negotiation between the United States and Canada, the parties signed the Pacific Salmon Treaty in 1985 to put an end to the salmon war. This Treaty proposed two fundamental principles to guide the parties in managing this common resource. The first is conservation, to “prevent overfishing and provide for optimum production” of salmon in the region;³¹ the second is equity, to “provide for each Party to receive benefits equivalent to the production of salmon originating in its waters.”³²

These two principles are interdependent: the conservation principle ensures that the salmon resource remains abundant, while the equity principle establishes a framework for allocating this resource, which is essential to achieving conservation.³³ Without a provision for equitable sharing, there is little incentive for a country to conserve, protect, and enhance its salmon habitat because the benefits of its actions will flow to the other country.³⁴ Full and effective implementation of the Treaty depends on a commitment to both principles.

Although both parties have agreed to these principles, in practice it has been exceedingly difficult to implement them. The most divisive issue is the salmon allocation problem—the distribution of annual harvests between countries and among competing interests within countries.³⁵ Salmon allocation is contentious primarily because salmon is a valuable resource. From 1990 to 1994, the commercial harvest of the five major salmon species in the region averaged 466 million pounds with a landed value of around \$300 million.³⁶ Recreational fisheries take about three million fish per year, predominately chinook, coho, and steelhead.³⁷ The economic value of recreational salmon fishing was recently estimated to be between \$108 million and \$396 million per year,

31. See Pacific Salmon Treaty, *supra* note 1, art. III, para. 1(a).

32. See Pacific Salmon Treaty, *supra* note 1, art. III, para. 1(b).

33. See Canada Dep't of Fisheries & Oceans, *The Pacific Salmon Treaty* (last modified May 1996) <<http://www.dfait-maeci.gc.ca/english/foreignp/environ/salmon.htm>> [hereinafter *Canada Dep't of Fisheries*].

34. International salmon harvests are a classic example of the “tragedy of the commons,” in which a common resource is ruined through the unrestrained actions of all, each pursuing an unregulated and narrow self-interest. See Ralph Townsend & James A. Wilson, *An Economic View of the Tragedy of the Commons*, in *The Question of the Commons* (Bonnie J. McCay & James M. Acheson eds., 1987).

35. See Huppert, *supra* note 2, at 1.

36. See Huppert, *supra* note 25, at 4.

37. See *id.* at 5 (quoting 1992 *Pac. States Marine Fisheries Comm'n Ann. Rep.*).

roughly equal to that of the commercial fishing industry.³⁸ Beyond economic value, the cultural and historical value of salmon is intricately woven into the fabric of Pacific Northwest society.³⁹

The Treaty's negotiation mechanism has made solving the allocation problem exceedingly difficult. The Treaty calls for decisions to be made by consensus, giving each party a veto power. Because each of the constituencies refuses to accept reductions in its own fishing harvests, a consensus is nearly impossible to reach. This cumbersome process has prevented the parties from agreeing on the allocation of salmon since 1993.⁴⁰ Recent efforts to reach a negotiated settlement have included nonbinding mediation, stakeholder negotiations, and high-level appointments of envoys.⁴¹ Each of these processes failed to resolve the fundamental disagreements between the parties.⁴² The lack of an acceptable agreement created incentives for each party to aggressively fish its neighbors' salmon stock to reap short-term benefits, exact concessions, or revive negotiations.⁴³ These tactics are ultimately counterproductive, as depleted salmon stocks injure both nations' collective interests in the long run.⁴⁴

The Treaty's failure to end the salmon war calls for a fresh look at the Treaty principles and the mechanisms for implementing those principles. It is in both countries' best interests to develop a process that encourages good faith negotiations, maximum production of salmon, and a fair and equitable allocation of that resource. The Treaty needs an additional mechanism for encouraging a negotiated settlement and avoiding the "prisoner's dilemma"⁴⁵ of the current system. In 1995, a Washington

38. See Huppert, *supra* note 2, at 5 (quoting Daryll Olsen et al., *Existence and Sport Values for Doubling the Size of Columbia River Basin Salmon and Steelhead Runs*, 2 Rivers 44 (1991)).

39. See *PSC Brochure*, *supra* note 4, at 11.

40. See *Young Press Release*, *supra* note 5. In some recent years, however, the parties have made interim agreements covering specific species originating from certain rivers. See, e.g., *PSC 95/96 Annual Report*, *supra* note 29, at iii (explaining 1995 interim fishing arrangements for Fraser River sockeye and pink salmon, as well as commitments for southern coho and chum fisheries).

41. See *Pacific Salmon Treaty: Hearings on the U.S.-Canada Pacific Salmon Treaty Before the Subcomm. on Fishery Conservation, Wildlife and Oceans of the House Comm. on Resources*, 105th Cong. (1997) (statement of Rep. Jim Saxton, Chairman).

42. See *id.*

43. See Huppert, *supra* note 2, at 1.

44. See *id.*

45. A prisoner's dilemma is a situation where the parties would benefit if all chose to cooperate, but each has an incentive to defect (or not cooperate) because each cannot be assured of cooperation

court enforced a requirement that each party negotiate in "good faith." The judge also enjoined fish management programs that violated the principles of the Treaty.⁴⁶ Although this decision represents a step in the right direction, the salmon war has continued unabated.

Part I of this Article gives a brief overview of the history of the salmon war between the United States and Canada, highlighting the major skirmishes and settlements in the dispute. Part II examines the Pacific Salmon Treaty and the framework it establishes for the parties to cooperate in the management of salmon stocks. Part III discusses problems with this Treaty process and the parties' responses. Finally, Part IV proposes possible solutions to the current crisis and assesses alternatives to the allocation mechanism. In an Epilogue, this Article describes the recent agreement on salmon allocation, conservation, and management.

I. HISTORY OF THE SALMON WAR

Disputes over the allocation of fishing rights in the Northwest are not new. Throughout much of this century, the United States and Canada have alternated between conflict and cooperation in their management of Pacific salmon.⁴⁷ During times of conflict, each country denounced the other with threatening rhetoric while allowing its own fishing fleets to harvest aggressively its neighbor's salmon stocks.⁴⁸ When cooperating, each nation shared responsibility for conserving salmon stocks and dealt constructively with its numerous, competing interest groups.⁴⁹ These two nations have negotiated several agreements and treaties that have enhanced cooperation in fishery management. None of these agreements, however, have succeeded in completely resolving the issues over the long term.

from other parties. See Morton D. Davis, *Game Theory: A Nontechnical Introduction* 108-13 (rev. ed. 1983).

46. See *Confederated Tribes & Bands of the Yakima Indian Nation v. Baldrige*, 898 F. Supp. 1477 (W.D. Wash. 1995).

47. See Huppert, *supra* note 2, at 1.

48. See *id.*

49. See *id.*

A. *Early Bilateral Agreements*

1. *Blockage of the Fraser River Leads to Treaty*

Since the first settlement of the Pacific Northwest, Canadian and American fisherman trawled the waters of the Pacific Ocean for the seemingly abundant stocks of salmon. But early in the twentieth century, development began to take its toll on the fragile natural habitat of the salmon, causing both countries to focus attention on the need to protect the salmon's habitat. In 1913, railroad construction in British Columbia generated debris and created rockslides that blocked salmon passage through Hell's Gate along the Fraser River.⁵⁰ This blockage of the Fraser River reduced salmon runs of pink and sockeye salmon not only for Canadian fisheries, but also for American harvests in Washington and Oregon.⁵¹

This incident sparked the two countries to begin negotiating the coordination of sockeye salmon conservation and management. Canada wanted an assurance of a fair share of the harvest before it would invest millions of dollars to improve salmon passage along the Fraser River.⁵² Negotiations continued from 1914 through 1929,⁵³ culminating in 1930 with the signing of the Convention for the Protection, Preservation and Extension of the Sockeye Salmon Fisheries of the Fraser River System.⁵⁴ However, the United States never ratified the Treaty. In 1937, a renegotiated Treaty was finally ratified.⁵⁵

The Fraser River Salmon Convention covered only a narrow range of species—sockeye salmon originating in the Fraser River. The convention designated a strict fifty-fifty allocation of the shared salmon resource between the United States and Canada.⁵⁶ The simplicity of this fixed rule

50. See Huppert, *supra* note 25, at 6.

51. See *id.*

52. See *id.*

53. See *id.* at 21.

54. See Convention for the Protection, Preservation and Extension of the Sockeye Salmon Fishery of the Fraser River System, May 26, 1930, U.S.-Can., 50 Stat. 1355, *as amended by* Dec. 28, 1956, 8 U.S.T. 1057, and Feb. 24, 1977, 32 U.S.T. 2475 [hereinafter *Fraser River Salmon Convention*]. The Convention was terminated March 18, 1985, by the Pacific Salmon Treaty, but a savings clause continued operation of the International Pacific Salmon Fisheries Commission for a transition period of about a year. See *Pacific Salmon Treaty*, *supra* note 1, art. XV, para. 2.

55. See Huppert, *supra* note 25, at 7.

56. See *id.*

resolved the problem for decades.⁵⁷ In 1944, the United States and Canada agreed to cooperate in the repair of the Fraser River to allow for greater salmon passage.⁵⁸ The United States agreed to pay two million dollars towards the cost of the restoration of the Fraser River.⁵⁹

The Treaty also created the International Pacific Salmon Fisheries Commission (IPSFC) to monitor and enforce the convention.⁶⁰ The IPSFC began exercising regulatory control over the sockeye salmon fishery in the Convention area in 1946.⁶¹ In 1956, Fraser River pink salmon were added to the IPSFC agreement.⁶²

2. *Breakdown in Consensus on the Fraser River Treaty*

Although the Fraser River Salmon Treaty settled the salmon allocation issue for a narrow range of species in a limited geographic area, the consensus behind the Treaty gradually eroded. Canada became increasingly dissatisfied with its fifty-percent share of Fraser River fish. Canada bore the vast majority of the costs in maintaining salmon habitat and water quality for these salmon stocks.⁶³

Activities outside the scope of the agreement also undermined the Treaty. Canadians were concerned about increasing interceptions of their fish in Alaska. There was no sharing arrangement for these fisheries because Alaska was outside of the Convention's territory. In response, Canada intentionally expanded the fishery north of Vancouver Island to increase its share of Fraser River harvests outside of Convention waters. This expansion of Canadian fisheries was also designed to pressure the United States to negotiate a revised salmon treaty. These negotiations would eventually lead to the Pacific Salmon Treaty.⁶⁴

57. *See id.*

58. *See id.* at 21.

59. *See* Pacific Salmon Treaty, *supra* note 1.

60. *See* Huppert, *supra* note 25, at 21.

61. *See id.*

62. *See id.*

63. *See id.* at 7.

64. *See id.* as support for this paragraph.

3. *Surf Line Agreement*

Growing concern over the impact of net fishing on the escapement of salmon caused both the United States and Canada to ban the practice in the offshore waters of the Pacific Ocean. This prohibition was accomplished through the "Surf Line Agreement" signed in 1957.⁶⁵

4. *Reciprocal Fishing Accord*

In 1964, Canada announced that its jurisdiction over fisheries extended to waters within a twelve-mile zone of its coastline.⁶⁶ The United States expanded its fishing jurisdiction to the twelve-mile limit in 1966.⁶⁷ This expansion of jurisdiction infringed on both countries' traditional fishing patterns. After years of discussions and negotiations, the United States and Canada agreed to a "Reciprocal Fishing Accord" in 1970.⁶⁸ This accord permitted U.S. trollers to fish salmon within three to twelve miles of Vancouver Island and Canadian trollers to fish off the coast of Washington State.⁶⁹ The accord also called for consultations "regarding all matters of mutual concern related to the fisheries for Pacific salmon."⁷⁰ The aim of these consultations was to replace the Fraser River Convention with a more comprehensive agreement.⁷¹ In 1977, both the United States and Canada declared 200-mile fishery zones.⁷²

B. *International Agreements*

1. *International North Pacific Fishery Convention*

The United States and Canada were not the only nations harvesting North Pacific salmon in the first half of the twentieth century; Japanese fishing interests also fished those same waters. In 1953, the three

65. *See id.* at 21.

66. *See id.*

67. *See* Act Establishing 12-Mile Limit, Oct. 14, 1966, 5 LL.M. 1103.

68. *See* Huppert, *supra* note 25, at 21 (quoting Reciprocal Fisheries Agreement, Feb. 24, 1977, 16 LL.M. 590).

69. *See id.*

70. *Id.*

71. *See id.* at 7.

72. *See id.* at 21. The extension of U.S. jurisdiction was accomplished as part of the Magnuson Fishery and Conservation Act, 16 U.S.C. § 1811 (1994).

countries signed the International North Pacific Fishery Convention.⁷³ That convention forced Japan to abstain from fishing east of 175 degrees west.⁷⁴ In 1977, the boundary for Japanese high seas salmon fisheries was moved westward to 175 degrees east.⁷⁵ This agreement prevented Japan from competing for Pacific salmon, leaving only the United States and Canada to fish in the salmon's primary migration path.

2. *Law of the Sea Convention*

In 1982, the United Nations held a conference to create an international legal framework to govern regulation of the world's oceans. The third Law of the Sea Convention established a 200-mile Exclusive Economic Zone (EEZ) for every coastal state.⁷⁶ The Convention gives coastal states exclusive rights to manage fisheries within their EEZs, sets limits on the ability of states to fish on the high seas, and creates an obligation to conserve marine resources.⁷⁷ Furthermore, Article 64 of the Law of the Sea Convention directs states to cooperate in the entire region in which fish migrate, including the high seas and the EEZs, with respect to highly migratory fish stocks.⁷⁸

Article 66(1) of the Law of the Sea Convention also established the "river of origin" principle for anadromous fish.⁷⁹ Both the United States and Canada promoted this principle during negotiations for the

73. See International Convention for the High Seas Fisheries of the North Pacific Ocean, May 9, 1952, U.S.-Can.-Japan, T.I.A.S. No. 2786 [hereinafter International Convention for the High Seas].

74. See International Convention for the High Seas, *supra* note 73, Annex, para. 2.

75. See International Convention for the High Seas, *supra* note 73, as amended, Protocol of Apr. 25, 1978, Apr. 25, 1978, T.I.A.S. No. 9242.

76. See 1982 U.N. Convention on the Law of the Sea, opened for signature Dec. 10, 1982, U.N. Doc. A/CONF.62/122 (1982), reprinted in *Official Text of the United Nations Convention on the Law of the Sea with Annexes and Index*, U.N. Sales No. E.83.V.5 (1983) [hereinafter Law of the Sea Convention].

77. See Bryan Walters, *ASIL Briefing Discusses UN Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks* (Am. Soc'y of Int'l L. Newsletter, Washington, D.C.) Sept.-Oct. 1994, at 20.

78. See Law of the Sea Convention, *supra* note 76, art. 64; see also Walters, *supra* note 77 (discussing comments of David Balton).

79. See Law of the Sea Convention, *supra* note 76, art. 66, para. 1. Anadromous fish are those species whose life cycle begins when they hatch from eggs in fresh water, develop into smolts, then migrate to ocean water to mature before returning to the rivers of their birth to spawn. See *supra* notes 15-23 and accompanying text for a discussion of the life cycle of salmon.

Convention.⁸⁰ Under the “river of origin” principle, states of origin have primary authority to regulate fishing for fish that spawn in their rivers, both within their 200-mile EEZ and on the high seas. This principle gives the nation of origin increased incentives to protect critical salmon habitat because that country receives the consequent rewards for those investments.

The 1982 Law of the Sea Convention gave states legal authority to manage their fishing resources even when their fish migrate beyond their jurisdiction. For fish such as salmon that migrate through the waters of neighboring states, the Convention imposed a duty to cooperate with the state of origin in conservation and management of the fish stocks.⁸¹

The Convention called for other states to cooperate in the management of these resources, but it did not give states of origin the means to ensure the compliance of neighboring states. While the Convention established the sovereign rights of coastal states over their salmon, it also imposed on them a series of duties regarding the conservation and utilization of these stocks. Coastal states must maintain or restore populations of harvested species to produce the maximum sustainable yield, qualified by certain environmental and economic factors.⁸² These states must also promote the “optimum utilization” of these resources.⁸³ Both the United States and Canada promoted these principles and submitted several additional proposals to clarify the implementation of the Convention. However, the Convention failed to establish international guidelines or enforcement mechanisms.⁸⁴ Finally, while the Law of the Sea Convention gave the United States and Canada additional rights and duties with respect to salmon management, the Convention did not define sufficiently clear standards or provide effective sanctions for noncompliance.⁸⁵

80. See *Law of the Sea: Conservation and Utilization of the Living Resources of the Exclusive Economic Zone*, U.N. Division for Ocean Affairs & the Law of the Sea, Office of Legal Affairs, at 23–29, U.N. Doc. E.95.V.21 (1995) [hereinafter *Law of the Sea in the EEZ*] (indicating Canadian position); *id.* at 29–31 (indicating American position).

81. See *Law of the Sea Convention*, *supra* note 76, art. 66, para. 1.

82. See *Law of the Sea Convention*, *supra* note 76, art. 61, para. 3. The factors to be considered by a state include the economic needs of coastal fishing communities, fishing patterns, and the interdependence of stocks. See *id.*

83. See *id.*

84. Julie R. Mack, *International Fisheries Management: How the U.N. Conference on Straddling and Highly Migratory Fish Stocks Changes the Law of Fishing on the High Seas*, 26 Cal. W. Int'l L.J. 313, 322 (1996).

85. See *id.*

3. *Rio Conference Fails to Address Problem of Fish Stock Depletion*

In 1992, delegates from around the world met in Rio de Janeiro for a Conference on Environment and Development, labeled the Earth Summit.⁸⁶ One topic of discussion was the growing global crisis of rapidly diminishing fish stocks in the world's oceans.⁸⁷ Although many of the conference participants acknowledged the problem of global fishery depletion, the international community was unable to agree on effective fishery management techniques or standards.⁸⁸ The committee ultimately decided to hold a United Nations conference on the fisheries issue alone.⁸⁹

4. *Migratory Fish Stock Conference Strengthens Rights and Duties of States*

The Conference on Straddling Stocks and Highly Migratory Fish Stocks was held in 1993.⁹⁰ The goals of the conference were to assess current conservation and management of fish stocks, improve cooperation among states, and formulate appropriate recommendations.⁹¹ At this Conference, the United States lobbied for the creation of a resolution or declaration rather than a binding agreement.⁹² Canada, along with other coastal states, insisted that the results of the Conference needed to be binding to be effective.⁹³ The Canadian position won in the end, and

86. *See id.* at 324.

87. *See* Tipton, *supra* note 10, at 388.

88. *See Report of the United Nations Conference on Environment and Development*, at 145–46, U.N. Doc. A/CONF.151/26 (vol. II) (1992); *see also* Mack, *supra* note 84, at 324.

89. The resolution to hold the conference was adopted January 29, 1993. *See* Mack, *supra* note 84, at 324 (citing G.A. Res. 47/192, U.N. GAOR, 47th Sess., 93d mtg., U.N. Doc. A/RES/47/192 (1993)).

90. *See id.* at 324 n.88.

91. *See A Guide to the Issues Before the Conference Prepared by the Chairman*, at 1, U.N. Doc. A/CONF.164/10 (1993).

92. *See* Mack, *supra* note 84, at 325 n.92 (citing *Letter Dated 26 May 1993 from the Director, Office of Fisheries Affairs, Bureau of Oceans, International Environmental and Scientific Affairs, U.S. Dep't of State*, at 1, U.N. Doc. A/CONF.164/L.3 (1993)).

93. *See id.* at 325 (citing *Letter Dated 28 May 1993 from the Chairman of the Delegation of Canada to the Conference Addressed to the Chairman of the Conference*, at 1, U.N. Doc. A/CONF.164/L.5 (1993)).

the conference resulted in a binding treaty called the Fish Stock Agreement.⁹⁴

The Fish Stock Agreement strengthens the rights of states to exploit their fishing resources⁹⁵ and clarifies the obligation of states to cooperate in conservation and enforcement efforts.⁹⁶ The Agreement commands that states conduct scientific assessments of the regulated stocks, cooperate in monitoring and surveillance of regulated areas, agree on catch allocations, and promote peaceful dispute settlements.⁹⁷

The Agreement fortifies conservation mechanisms from prior international legal instruments⁹⁸ and may provide the means for enhancing cooperation between the United States and Canada over salmon. Although both Canada and the United States have signed the Fish Stock Agreement,⁹⁹ the U.S. Congress has not yet ratified the treaty.

C. Tribal Fishing Rights

1. Boldt Decision Upholds Tribal Fishing Rights

In 1974, the “Boldt decision” disrupted salmon management in Washington State. In the case of *United States v. Washington*,¹⁰⁰ twenty-four Indian tribes¹⁰¹ in the Pacific Northwest sought to enforce the treaty

94. See *id.*; see also *The Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, art. 33, para. 2, U.N. Doc. A/CONF.164/37 (1995) [hereinafter *Implementation of Law of the Sea Convention*].

95. See *A Guide to the Issues Before the Conference Prepared by the Chairman*, *supra* note 91, at 1–4. This was recognized as a general right, but not a guarantee of the ability to fish in all areas of the sea at any time. See *id.* at 12–13; see also Mack, *supra* note 84, at 326.

96. See *The Law of the Sea: The Regime for High-Seas Fisheries: Status and Prospects*, at 10–11, U.N. Sales No. E.92.V.12 (1992); see also Mack, *supra* note 84, at 326.

97. See *Implementation of Law of the Sea Convention*, *supra* note 94, art. 10.

98. See Mack, *supra* note 84, at 332.

99. Twenty-six countries have signed the treaty: Argentina, Australia, Bangladesh, Belize, Brazil, Canada, Fiji, Guinea Bisseau, Iceland, Indonesia, Israel, Jamaica, Marshall Islands, Micronesia, Morocco, New Zealand, Niue, Pakistan, Papua New Guinea, Russia, Samoa, Senegal, Tonga, Ukraine, the United States, and the 10 British-ruled territories. See *U.N. Opens Treaty to Regulate Fishing on High Seas*, Agence France Presse, Dec. 4, 1995; see also *Fisheries: 26 Nations Sign U.N. Straddling-Stock Treaty*, Greenwire, Dec. 5, 1995.

100. 384 F. Supp. 312 (W.D. Wash. 1974); see also *United States v. Washington*, 626 F. Supp. 1405 (W.D. Wash. 1985) (compiling major post-trial substantive orders).

101. The represented Indian tribes included the Muckleshoot, Squaxin Island Tribe, Sauk-Suiattle, Skokomish, Stillaguamish, Makah, Lummi, Quileute, Quinault, Queets Band, Yakima, Hoh, and Upper Skagit River Tribes. See *United States v. Washington*, 384 F. Supp. at 325.

obligations secured by the Stevens and Palmer Treaties in the mid-1850s.¹⁰² United States Indian tribes had been given the right to fish their usual and accustomed fishing grounds “in common with all citizens of the territory.”¹⁰³ Judge Boldt’s landmark decision reaffirmed these Indian treaty rights and granted tribal fishermen fifty percent of the harvestable surplus of salmon runs in Washington state and the Columbia River basin.¹⁰⁴ The grant of an “equal share” increased harvest rates for U.S. treaty Indians from a mere two percent of the U.S. catch to fifty percent.¹⁰⁵

The dramatic increase in Indian harvest rights provoked the hostility of non-Indian interests.¹⁰⁶ Nontribal fishermen and state entities actively opposed implementation of the decision, attacking the federal court rulings collaterally in state court.¹⁰⁷ In 1977, the Washington Supreme Court rejected the federal court’s view that the Stevens and Palmer Treaties gave the Indians fifty percent of the salmon runs. The court also held that the Washington Department of Fisheries could not comply with the federal injunction because the Department did not have the statutory authority to do so under Washington law.¹⁰⁸ One court characterized the resistance as one of “the most concerted official and private efforts to frustrate a decree of a federal court witnessed in this century.”¹⁰⁹

The federal court reacted to this defiance by undertaking the direct supervision of Washington fisheries insofar as necessary to preserve

102. The Stevens and Palmer Treaties are a series of treaties negotiated in 1854–1855 by Governor Stevens of the Territory of Washington and Governor Palmer of the Oregon Territory. *See id.* at 349.

103. The pertinent provision of the Stevens and Palmer treaties provides in part: “The right of taking fish, at all usual and accustomed grounds and stations, is further secured to said Indians, in common with all citizens of the territory.” *Id.* at 331.

104. *See United States v. Washington*, 626 F. Supp. at 1459.

105. Historically, the average Indian share was about 2% overall and 1.4% of the Fraser River sockeye fishery. *See United States v. Washington*, 459 F. Supp. 1020, 1032 (W.D. Wash. 1978) (overall); *id.* at 1051 (sockeye). The new allocation was deemed to be about 45–55% of qualifying runs. *See Washington v. Washington State Comm. Passenger Fishing Vessel Ass’n*, 443 U.S. 658, 685 (1979).

106. *See Joy A. Yanagida, The Pacific Salmon Treaty*, 81 Am. J. Int’l L. 577, 580 (1987).

107. *See United States v. Washington*, 459 F. Supp. at 1028–35.

108. *See Puget Sound Gillnetters Ass’n v. Moos*, 88 Wash. 2d 677, 689, 565 P.2d 1151, 1157 (1977) (“[T]he Department of Fisheries is authorized only to promulgate regulations for conservation purposes. It cannot act to comply with a federal court order which imposes upon it a duty outside its statutory authority.”).

109. *Puget Sound Gillnetters Ass’n v. United States Dist. Court*, 573 F.2d 1123, 1126 (9th Cir. 1978).

Indian treaty fishing rights.¹¹⁰ The federal Departments of Commerce and the Interior stepped in and adopted emergency regulations specifically for tribal fisheries.¹¹¹

Salmon stocks covered by these Indian treaties, such as Columbia River chinook salmon, migrate through Canadian and Alaskan waters.¹¹² Courts have yet to resolve whether to include Alaskan salmon harvests in calculating the fifty-percent Indian share.¹¹³ Disputes over harvest allocation prevented agreement on a new treaty regime until treaty Indians agreed not to press their claims against Alaska's chinook harvests in the Baldrige Stipulation.¹¹⁴

2. *Baldrige Stipulation*

Although the Boldt decision improved tribal access to salmon in Washington, the treaty tribes were growing increasingly dissatisfied with the allocation and conservation of salmon in the region, particularly of chinook.¹¹⁵ The treaty tribes filed a lawsuit against Secretary of the Interior Malcolm Baldrige and the States of Alaska, Oregon, and Washington in 1984.¹¹⁶ The tribes claimed that the U.S. government and the states had failed to abide by the Stevens and Palmer treaties and had unfairly allocated chinook salmon resources.¹¹⁷ This new lawsuit sought to include Alaskan interceptions of Northwest-origin salmon in calculating the fifty-percent harvest allocated to non-Indian fishermen.¹¹⁸

The lawsuit impeded a resolution of the Pacific Salmon Treaty negotiations because each party was reluctant to reach a final agreement while the lawsuit was pending. For the Indian tribes, a victory in the *Confederated Tribes* lawsuit would have been hollow without an

110. See *United States v. Washington*, 459 F. Supp. 1020; see also *Puget Sound Gillnetters Ass'n*, 573 F.2d 1123.

111. See 42 Fed. Reg. 30,842 (1977) (Commerce); 42 Fed. Reg. 31,450 (1977) (Interior).

112. See Huppert, *supra* note 25, at 7.

113. See *id.*

114. See *id.* at 8.

115. See Thomas C. Jensen, *The United States-Canada Pacific Salmon Interception Treaty: An Historical and Legal Overview*, 16 *Envtl. L.* 363, 389 (1986).

116. See *Confederated Tribes & Bands of the Yakima Indian Nation v. Baldrige*, 605 F. Supp. 833 (W.D. Wash. 1985).

117. See *id.* at 834.

118. See Jensen, *supra* note 115, at 398.

allocation agreement with Canada.¹¹⁹ Any reduction in Alaskan salmon harvests would not have increased the tribal salmon take because Canadian, rather than Indian, fishermen would harvest the forgone Alaskan catch.¹²⁰ Alaska refused to commit itself to the constraints of an international Treaty as long as the tribal lawsuit threatened further reductions in Alaskan harvest ceilings.¹²¹ Canada refused to reduce its harvests unless Alaska agreed to be bound by the new Treaty.¹²²

This vicious circle was ultimately broken by a delicate agreement between the twenty-four tribes, Alaska, the United States, Oregon, and Washington.¹²³ The agreement, entered as a stipulation during the *Confederated Tribes* litigation, establishes standards and a mechanism for allocating Pacific Northwest chinook stocks that migrate to waters off Alaska.¹²⁴ The Baldrige Stipulation provides that the tribes have veto power over salmon allocations but cannot litigate their legality.¹²⁵

The stipulation was to be given effect through the Pacific Salmon Treaty. Each of the parties agreed to give the Pacific Salmon Commission the power to decide salmon allocation. This Commission, created by the Pacific Salmon Treaty, could make decisions based only on the unanimous vote of all represented parties. The stipulation also provided a mechanism to ensure that the parties reached a timely settlement. If the U.S. Section of the Commission failed to make the necessary determinations of chinook allocation by February 1st of each year, there would be no chinook fishery or retention of any chinook caught. Without an agreement, chinook could be fished only if the U.S. Section of the Commission authorized the catch or if chinook were caught incidentally in net fisheries for other species. Several specific fisheries were exempted from the closure provision, including noncommercial tribal fisheries and specific geographical locations.¹²⁶ This threat of fishery closure, however, has never been imposed. The entry of this

119. See Yanagida, *supra* note 106, at 584.

120. See *id.*

121. See *id.*

122. See *id.*

123. See Jensen, *supra* note 115, at 416-17.

124. See *Confederated Tribes & Bands of the Yakima Indian Nation v. Baldrige*, 605 F. Supp. 833, 834 (W.D. Wash. 1985).

125. See *id.* at 835-36.

126. See *id.* as support for this paragraph.

stipulation and the end to tribal lawsuits removed a major obstacle to the ratification of the Pacific Salmon Treaty.¹²⁷

D. Incentives for a New Regime

As stocks other than those covered under the Fraser River Treaty experienced a marked decline, the need for a more comprehensive treaty framework became apparent.¹²⁸ Fluctuations in salmon abundance and harvest rates caused one country or the other to feel aggrieved.¹²⁹ Chinook salmon stocks had declined throughout their range, and coho stocks in Oregon and Washington were also seriously threatened.¹³⁰ Both countries recognized the need to invest in enhancement and conservation efforts to protect waning fish resources.¹³¹ Without an international agreement on allocation, however, there was “no assurance that the benefits of enhancement and conservation would accrue to the country or state” making these investments.¹³²

E. Difficulties in Reaching Agreement

Between 1970 and 1985, Canada and the United States attempted to negotiate a regime that would balance interceptions with secure compensation when one side disproportionately intercepted the other’s salmon. Complications plagued the negotiations between the two countries for some fourteen years. Negotiators were frustrated by problems with inadequate catch data, fluctuations in abundance and ocean distribution of salmon stocks, and interest groups that used political maneuvers and public relations campaigns to influence the outcome of international negotiations.¹³³

127. See Huppert, *supra* note 25, at 8. If the Treaty were terminated, the Confederated Tribes stipulation would be void. See *Confederated Tribes*, 605 F. Supp. at 837; see also Yanagida, *supra* note 106, at 584.

128. See *Young Press Release*, *supra* note 5.

129. See generally *Pacific Salmon Treaty: Hearings on the U.S.-Canada Pacific Salmon Treaty Before the Subcomm. on Fishery Conservation, Wildlife and Oceans of the House Comm. on Resources*, 104th Cong. 52–54 (1997) (testimony of James Pipkin, U.S. Special Negotiator for Pacific Salmon and Acting U.S. Federal Commissioner of Pacific Salmon Commission) [hereinafter *Pipkin Testimony*].

130. See Jensen, *supra* note 115, at 387.

131. See *id.* at 393.

132. *Young Press Release*, *supra* note 5.

133. See Huppert, *supra* note 2, at 1.

The decentralized nature of fisheries decisionmaking in the United States made the task of negotiating a new agreement between the United States and Canada difficult. Responsibility for fisheries management is dispersed among federal, state, tribal, and even judicial authorities.¹³⁴ The U.S. federal government has authority for the territorial sea,¹³⁵ but states have jurisdiction over internal waters, including rivers and the territorial sea.¹³⁶ The federal government can preempt state fishery plans only if the state undercuts a federal fishery management plan.¹³⁷ Native American tribes have regulatory authority within their usual and accustomed fishing grounds, although the federal government can preempt tribal jurisdiction for conservation purposes.¹³⁸ Finally, the federal district court retained continuing jurisdiction over certain U.S. fisheries until 1985 because state and federal authorities had failed to protect Indian treaty fishing rights.¹³⁹ These groups jealously guard their authority and compete fiercely to retain their jurisdiction over fishery decisions. By contrast, Canadian fisheries management is an exclusively federal prerogative.¹⁴⁰

Another difficulty in reaching agreement was the internal contradictions in the American negotiating team.¹⁴¹ Because of salmon migratory patterns, the interests of fishermen in Alaska are notably different from those of their counterparts in Washington and Oregon. The salmon from the continental United States migrate north to Alaskan waters before returning to their spawning grounds. Washington and Oregon sought to formulate a treaty that would restrain Alaskan harvests, to ensure replenishment of the stocks and to give a fair share of the catch to

134. See Yanagida, *supra* note 106, at 577.

135. See Magnuson Fishery Conservation and Management Act §§ 101–102, 16 U.S.C. §§ 1811–1812 (1994).

136. See 16 U.S.C. §§ 1854–1856 (1994). Generally, the territorial sea of the United States extends three nautical miles from U.S. coasts. See Submerged Lands Act § 4, 43 U.S.C. § 1312 (1994).

137. See Magnuson Fishery Conservation and Management Act §§ 304–306, 16 U.S.C. §§ 1854–1856 (1994).

138. See *Sohappy v. Smith*, 529 F.2d 570, 572–73 (9th Cir. 1976). Such measures must be the least restrictive of Indian treaty rights necessary to satisfy conservation requirements. See also *United States v. Washington*, 384 F. Supp. 312, 333, 345–47 (W.D. Wash. 1974), *aff'd*, 520 F.2d 676 (9th Cir. 1975).

139. See *United States v. Washington*, 459 F. Supp. 1020 (W.D. Wash. 1978).

140. See Yanagida, *supra* note 106, at 578.

141. See *id.* at 577.

southern fishermen.¹⁴² Alaskan interests resisted the constraints on their harvests and pressed for better management and conservation in the south.¹⁴³ These policy differences within the American negotiating team had to be reconciled before the United States could negotiate effectively with Canada.

During this time, the salmon wars flared up intermittently between the United States and Canada. American and Canadian fishermen frequently came to blows on the open sea, and even exchanged occasional gunfire across the bows of their boats.¹⁴⁴ As the negotiations for a comprehensive salmon accord proceeded slowly, each country sought to gain strategic advantages by threatening to deplete the other's fish stocks to force concessions. The result was further endangerment of several salmon runs and the worsening of relations between the two countries.

II. PACIFIC SALMON TREATY

Fourteen years of negotiation between Canadian and American fishing interests finally culminated in the signing of the Pacific Salmon Treaty in 1985. The Treaty represents a balance of the fishing and conservation interests of three U.S. states, twenty-four U.S. treaty Indian tribes, one Canadian province, and the Canadian federal government.¹⁴⁵ In March 1985, American President Ronald Reagan and Canadian Prime Minister Brian Mulroney signed the Treaty in Quebec City.¹⁴⁶ The Director of Washington State's Department of Fisheries called it "the best news in decades for the salmon."¹⁴⁷ Others hailed the Treaty as "more than a fisheries agreement; in many respects it is a peace treaty memorializing the end of the Pacific salmon war."¹⁴⁸ Despite this enthusiastic rhetoric, the Treaty has not effectively ended the salmon war, although it did allow for several years of an uneasy truce.

142. *See id.* at 577.

143. *See id.*

144. *See* Marla Williams & Susan Gilmore, *Questions & Answers/Salmon War—Sockeye Catch off Alaska Is Key in U.S.-Canada Salmon Dispute*, *Seattle Times*, July 22, 1997, at A12.

145. The parties are the States of Alaska, Washington, Oregon; the treaty tribes covered by the decisions in *United States v. Washington* and *Confederated Tribes*; the Canadian province of British Columbia; and the Canadian federal government. *See* Yanagida, *supra* note 106, at 577.

146. *See It's Over! Senate Gives the Salmon Treaty a 96-0 "Yes"*, *Seattle Post-Intelligencer*, Mar. 8, 1985, at A11.

147. *Id.*

148. Jensen, *supra* note 115, at 372.

The Treaty governs the management of six distinct fisheries: (1) salmon that spawn in the transboundary rivers of British Columbia and the Alaskan panhandle;¹⁴⁹ (2) salmon from areas around the disputed maritime boundary between Alaska and British Columbia;¹⁵⁰ (3) Fraser River sockeye and pink salmon of exclusively Canadian origin;¹⁵¹ (4) chinook salmon;¹⁵² (5) coho salmon;¹⁵³ (6) and chum salmon.¹⁵⁴ Each of these fisheries is governed by specific restrictions on harvest, gear, and fishing areas.¹⁵⁵ These restrictions are established in Annex IV of the Treaty.

The United States implemented the provisions of the Treaty with the Pacific Salmon Treaty Act of 1985.¹⁵⁶ The Act carefully balanced U.S. decisionmaking authority among federal, state, Indian, and commercial interests.¹⁵⁷ This balance was necessary to give each party a voice in Treaty decisions. The Act also prescribed the principles, institutions, and rules of fishery management corresponding to the bilateral institutions of the Treaty.¹⁵⁸

A. *Principles of the Treaty*

The Treaty established two primary principles to guide the parties in their management of Pacific salmon as a shared resource. The first of these principles is called the conservation principle, which states that each party shall “prevent overfishing and provide for the optimum production” of salmon.¹⁵⁹ The second principle is frequently called the equity principle, which declares that “each Party [shall] receive benefits equivalent to the production of salmon originating in its waters.”¹⁶⁰

149. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 1.

150. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 2.

151. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 4.

152. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 3.

153. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 5.

154. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 6.

155. See Yanagida, *supra* note 106, at 578.

156. Pub. L. No. 99-5, 99 Stat. 7 (codified at 16 U.S.C. §§ 3631–3644 (1994)).

157. See Yanagida, *supra* note 106, at 579.

158. See *id.*

159. Pacific Salmon Treaty, *supra* note 1, art. III, para. 1(a).

160. Pacific Salmon Treaty, *supra* note 1, art. III, para. 1(b).

The equity principle recognizes that downstream fishermen depend critically on the country with jurisdiction over the spawning grounds. Conservation and enhancement of salmon stocks must begin upstream. The country of origin must make significant investments to ensure that salmon have unimpeded access to upriver spawning grounds by removing natural obstructions, building fish passes, forgoing hydroelectric development, and controlling pollution.¹⁶¹ The equity principle gives incentives to the country of origin to undertake these responsibilities by assuring that its benefits are equal to the production of salmon in its waters. Thus, Canada should be compensated for salmon spawned in Canadian rivers but harvested by U.S. fishermen, and vice versa.¹⁶²

When the parties signed the Treaty, they attached a Memorandum of Understanding acknowledging that the countries did not have sufficient data on their salmon stocks or the economic value of those salmon to implement the equity principle in 1985.¹⁶³ The Memorandum specified that the parties should account for “changes in the benefits flowing to each of the parties through alteration in fishing patterns, conservation actions, or as the result of changes in the abundance of the runs.”¹⁶⁴ If one country derived benefits disproportionate to the value of the salmon originating in its rivers, the parties were required to develop a program to eliminate the inequity within a specified time frame.¹⁶⁵

The conservation and equity principles are interdependent. The conservation principle commits both parties to assuring the continued abundance of salmon, while the equity principle establishes a framework for allocating this resource, which is essential to achieving conservation.¹⁶⁶ The provision for equitable sharing ensures that each country has an incentive to conserve, protect, and enhance its salmon habitat, because the benefits of its actions will flow to that country’s fishermen. Full and effective implementation of the Treaty depends on a commitment to both principles.

161. See Pacific Salmon Treaty, *supra* note 1.

162. See Yanagida, *supra* note 106, at 589.

163. See Memorandum of Understanding Regarding Implementation of Pacific Salmon Treaty, art. III, para. 1(b) (Jan. 28, 1985) [hereinafter Memorandum of Understanding for Pacific Salmon Treaty].

164. Memorandum of Understanding for Pacific Salmon Treaty, *supra* note 163, sec. A, para. 2.

165. See Memorandum of Understanding for Pacific Salmon Treaty, *supra* note 163, sec. A, para. 3.

166. See *Canada Dep’t of Fisheries & Oceans*, *supra* note 33.

1. *Factors for International Fishery Management*

Beyond the equity and conservation principles, the Treaty requires that fishery managers take into account several factors in their decisions, such as the desirability of reducing interceptions, the need to avoid undue disruption of fisheries, and annual variations in abundance of the stocks.¹⁶⁷ These factors are important to consider for both conservation and equity purposes. Unfortunately, these factors often conflict. For instance, reducing interceptions could disrupt an existing fishery and an abundance of fish stocks can lead to increased harvests, which would also increase interceptions. The parties have relied on these factors to justify refusing to reduce their salmon harvests. They claim that reductions would disrupt their fishery, or that their increased harvests are a response to the abundance of salmon.¹⁶⁸ The Treaty does not specify how these competing concerns among the factors should be resolved.

2. *Annexes to the Pacific Salmon Treaty*

Four Annexes supplement the general guidelines and principles established by the Treaty. These annexes are negotiated on a rotating schedule. Annex IV is the most contentious of these documents.¹⁶⁹ It deals with specific salmon stock management objectives and procedures, such as catch allocations and escapement goals for the Transboundary rivers;¹⁷⁰ regulations to limit sockeye salmon catches in Southeast Alaska;¹⁷¹ limits on Northern British Columbia's pink salmon fishery;¹⁷² overall harvest levels and U.S. interception levels for the Fraser River sockeye salmon;¹⁷³ and programs to rebuild depleted chinook salmon stocks throughout the region, primarily through temporary harvest reductions.¹⁷⁴ Although the Pacific Salmon Treaty specifies the overriding principles to be used to guide fishery management decisions, Annex IV is the practical document that details specific numbers of salmon that can be harvested by each of the parties.

167. See Pacific Salmon Treaty, *supra* note 1, art. III, para. 3.

168. See Huppert, *supra* note 25, at 11.

169. See Young Press Release, *supra* note 5.

170. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 1.

171. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 2(2).

172. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 2(3).

173. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 4.

174. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 3.

The provisions of Annex IV are short-term by design. To reach agreement on fishing limits, the parties traded concessions in one region for gains in another.¹⁷⁵ These politically sensitive and uncertain bargains were easier to reach if the parties did not have to forecast too far into the future.¹⁷⁶ Because harvest levels fluctuate dramatically, neither party wanted to be locked into a potentially losing position.¹⁷⁷ For these reasons, the parties have had the most difficulty reaching the annual agreement required by Annex IV. Since 1993, the parties have failed to agree on a revised framework for Annex IV.¹⁷⁸ Without an agreement on this Annex, many of the major decisions regarding conservation and allocation of salmon have been left unresolved.

B. *Pacific Salmon Commission*

The Treaty created the Pacific Salmon Commission (PSC) to oversee and enforce the Treaty's provisions.¹⁷⁹ The principal job of the Commission is to negotiate new terms for Annex IV each fishing season, when the old harvest limits lapse.¹⁸⁰ The PSC "establishes general fishery management regimes for international conservation and harvest sharing of intermingling salmon stocks."¹⁸¹ While each country retains jurisdictional authority to manage its fisheries, the Commission ensures that the parties do so in a manner consistent with the provisions of the Treaty.¹⁸² The PSC is also a "forum for consultation" on salmon enhancement programs and research efforts.¹⁸³ The Commission, headquartered in Vancouver, British Columbia, meets annually to review fishery plans and to make changes to international fishery management.¹⁸⁴

175. See Yanagida, *supra* note 106, at 578.

176. See *id.*

177. See *id.* at 578–79.

178. See *Pacific Salmon Treaty: Hearings on the U.S.–Canada Pacific Salmon Treaty Before the Subcomm. on Fishery Conservation, Wildlife and Oceans of the House Comm. on Resources*, 105th Cong. (1997) (testimony of David Benton, Pacific Salmon Commissioner for Alaska).

179. See *Pacific Salmon Treaty*, *supra* note 1, art. II.

180. See Yanagida, *supra* note 106, at 578–79.

181. *PSC 95/96 Annual Report*, *supra* note 29, at xi.

182. See *id.*

183. See *id.*

184. See *id.* at 17–19.

1. *Commission Members*

The Canadian Section of the Commission is headed by the federal Department of Fisheries and Oceans.¹⁸⁵ The Canadian Section also contains representatives from recreational and commercial fisheries, the British Columbia provincial government, and First Nations (Canadian Indian tribes).¹⁸⁶ Because the federal government retains ultimate control of fishery decisions in Canada, these representatives may influence their country's decisions, but cannot unilaterally block them.¹⁸⁷

In contrast, the U.S. Section of the Commission consists of one member each for Alaska, Washington, the federal government, and the treaty tribes.¹⁸⁸ Each Commissioner represents a distinct group of stakeholders that have divergent economic and political interests.¹⁸⁹ Often these economic concerns conflict directly with salmon conservation efforts.¹⁹⁰ Because each vote of the U.S. Section must be made by consensus, each member of the Commission has a veto power.¹⁹¹ Other than a limited mechanism for resolving technical disputes, there is no formal mechanism in the Treaty for forcing decisions or resolving differences.¹⁹²

Much of the difficulty concerning the Treaty derives from the different perspectives of the participants.¹⁹³ Canadian officials complain frequently that they must negotiate with three nations (Alaska, Washington, and the treaty tribes) rather than only with the United States.¹⁹⁴ The United States views the stakeholder process as the best

185. See *Canada Dep't of Fisheries & Oceans*, *supra* note 33.

186. *See id.*

187. See Yanagida, *supra* note 106, at 586.

188. *See id.*

189. *See id.*

190. See Huppert, *supra* note 25, at 10.

191. See Yanagida, *supra* note 106, at 586.

192. *See id.* Article XII of the Treaty states that either party may refer to the Technical Dispute Board any dispute concerning estimates of salmon interceptions and data related to overfishing. *See Pacific Salmon Treaty*, *supra* note 1, art. XII.

193. "While Canada negotiates with one voice, the United States must contend with fractious states and a multitude of bureaucratic jurisdictions." Richard Louv, *Canada, U.S. Fight as Salmon Dwindle*, San Diego Union-Trib., Sept. 25, 1997, at A3.

194. *See Huppert*, *supra* note 25, at 14.

means to resolve salmon issues; Canada believes that government-to-government negotiation is the more appropriate forum.¹⁹⁵

The Commission must decide each season how to apportion the salmon harvests between British Columbia, Alaska, Washington, and Oregon. These salmon harvests must also be divided between Indians and non-Indians, and between professional and recreational fishermen. Agreement is difficult when the parties' interests are as divergent as those of Alaskan commercial fishermen, Canadian recreational sport fishermen, and Washington Indian tribes.¹⁹⁶ The participants share a common interest in the long-term health of the region's salmon runs, but this long-term goal is often sacrificed in battles over short-term gains.

2. *Consensus Decision Rule in Treaty Institutions*

The Pacific Salmon Commission is the principal decisionmaking body of the Treaty. The Commission is composed of two national sections: the Canadian Section and the U.S. Section, with four commissioners appointed by each party.¹⁹⁷ Each section has one vote in the Commission and every decision or recommendation of the Commission requires the approval of both sections.¹⁹⁸ The recommendation of the Commission is then presented to the parties for approval.¹⁹⁹

The U.S. Section of the Commission also relies on consensus as a rule of decisionmaking.²⁰⁰ All decisions within the U.S. Section must be made by consensus, with the federal representative having no vote,²⁰¹ before the section can vote on it in the bilateral forum.²⁰² The vote of the Treaty Indian commissioner is determined by the consensus of four Columbia

195. See *Pacific Salmon Treaty: Hearings on the U.S.-Canada Pacific Salmon Treaty Before the Subcomm. on Fishery Conservation, Wildlife and Oceans of the House Comm. on Resources*, 105th Cong. (1997) (testimony of Mary Beth West, chief negotiator for United States in Pacific Salmon Treaty and Deputy Assistant Secretary of State for Oceans, Science & Technology) [hereinafter *West Testimony*].

196. See Huppert, *supra* note 25, at 10.

197. See Pacific Salmon Treaty, *supra* note 1, art. II, paras. 1-3.

198. See Pacific Salmon Treaty, *supra* note 1, art. II, para. 6.

199. See Yanagida, *supra* note 106, at 585.

200. See *id.*

201. See Pacific Salmon Treaty Act of 1985 § 3(a), 16 U.S.C. § 3632(a) (1994).

202. See Huppert, *supra* note 25, at 14. This consensus arrangement is not specified by the Treaty, but is a feature of the U.S. implementing legislation. See 16 U.S.C. § 3632(a). This voting structure was also agreed to by each region in the Baldrige Stipulation. See *Confederated Tribes & Bands of the Yakima Indian Nation v. Baldrige*, 605 F. Supp. 833 (W.D. Wash. 1985).

River tribes and three Quinault treaty tribes, in consultation with the Makah tribe.²⁰³ Thus, any decision by the Commission must have the approval of both countries and all U.S. stakeholders.

The Commission is assisted by three panels, for Northern, Southern, and Fraser River issues.²⁰⁴ These panels provide information and make recommendations to the Commission. The decisions of the panels must also have a consensus of the parties.²⁰⁵ If the actions of one panel are likely to affect fisheries subject to the jurisdiction of one or more other panels, joint panel meetings are convened.²⁰⁶ These decisions are also made by consensus.²⁰⁷ Joint Technical Committees develop the scientific data for all decisions by the Commission.²⁰⁸ These Technical Committees also strive for consensus by seeking to develop common databases on complex and contentious issues like run size, escapement, and catch origin.²⁰⁹

3. *Problems with Consensus-Based Decisions*

The consensus requirement helped reconcile the range of competing U.S. interests that had frustrated negotiations for over a decade: Indian and non-Indian, northern Alaskan and continental United States, state and federal, commercial and sport. Though the consensus voting process was tedious, the support of all U.S. constituents on U.S. negotiating positions was instrumental in securing Senate ratification. The consensus requirement was also effective in promoting a unified negotiating position, and the U.S. delegation sought the same mode of decision-making for Treaty implementation.²¹⁰

203. This rule of decisionmaking was agreed to in the federal court decision on Indian fishing rights under treaty. *See* *Confederated Tribes & Bands of the Yakima Indian Nation v. Baldrige*, 898 F. Supp. 1477, 1484 (W.D. Wash. 1995); *see also* Yanagida, *supra* note 106, at 585.

204. *See PSC 95/96 Annual Report*, *supra* note 29, at xi.

205. The Treaty permits the Commission to establish panels specified in Annex I of the Treaty. *See Pacific Salmon Treaty*, *supra* note 1, art. 2, para. 18. Regulatory authority for all fisheries is reserved for the parties, except for the Fraser River Panel, which has direct management authority. *See Pacific Salmon Treaty*, *supra* note 1, art. 4, para. 7; *Pacific Salmon Treaty*, *supra* note 1, art. 6.

206. *See Yanagida*, *supra* note 106, at 585.

207. *See id.*

208. The current Joint Technical Committees are Chinook, Chum, Coho, Northern Boundary, Transboundary, Data Sharing, and Interceptions. *See PSC 95/96 Annual Report*, *supra* note 29, at ix.

209. *See Yanagida*, *supra* note 106, at 585.

210. *See id.* at 585–86 as support for this paragraph.

However, the consensus decisionmaking process can be a “double-edged sword; the divisions that make it necessary can also make it ineffective.”²¹¹ Consensus voting requires political momentum, giving both Canadians and Americans any number of opportunities to thwart decisions. Apart from a limited mechanism for resolving technical disputes, the Treaty has no formal machinery for forcing decisions. Each year, the Commission must resolve the many differences that treaty negotiators chose to disguise or ignore when the Treaty was first implemented. The Commission must also make these decisions in a timely manner each fishing season to enable fishermen to pursue their livelihood.²¹² The decision rule of the Commission creates a huge potential for stalemate.

The consensus voting scheme gives each Commissioner a veto power over every decision of the Commission. This type of voting structure is particularly ineffective when the interests of the parties are essentially opposed, as they are with salmon allocation. Fishing resources apportioned to one party inevitably reduce the resources available to all other parties.²¹³ Furthermore, salmon intermingle during their ocean migration, so efforts to reduce the harvest of a specific stock may involve restrictions on fisheries throughout the region.²¹⁴ Because none of the parties will voluntarily vote to reduce its share, it is exceedingly difficult for the Commission to forge agreement among the stakeholders.

Fish management responsibility is distributed among federal,²¹⁵ state,²¹⁶ and tribal²¹⁷ authorities. Courts have even played a significant role in fishery management in the United States, further complicating decision-making. In 1978, a federal district court retained jurisdiction over U.S. fishery management for certain Fraser River fisheries when state and

211. *Id.* at 586.

212. *See id.* as support for this paragraph.

213. *See* Huppert, *supra* note 25, at 6.

214. *See id.*

215. Federal authority extends seaward of the territorial sea. *See* 16 U.S.C. §§ 1811–1812 (1994).

216. State jurisdiction covers internal waters, including rivers and the territorial sea, subject to federal preemption if state action is deemed to undercut a federal fishery management plan. *See* 16 U.S.C. §§ 1854–1856 (1994). Generally, the territorial sea of the United States extends three miles from U.S. coasts. *See* 43 U.S.C. § 1312 (1994).

217. American treaty tribes have regulatory authority within their usual and accustomed fishing grounds, subject to state preemption for purposes of conservation. *See* *Sohappy v. Smith*, 529 F.2d 570, 572–73 (9th Cir. 1976). Such measures must be the least restrictive of Indian treaty rights necessary to satisfy conservation requirements. *See* *United States v. Washington*, 384 F. Supp. 312, 333, 345–47 (W.D. Wash. 1974), *aff'd*, 520 F.2d 676 (9th Cir. 1975).

federal authorities failed to protect Indian treaty fishing rights.²¹⁸ The court retained jurisdiction until 1985. Relations among U.S. stakeholders are characterized by vigorous competition.²¹⁹

The Treaty's framework gives the U.S. government little opportunity to force a resolution of interregional conflict. The U.S. federal government has been reluctant to usurp local authority in fishery management, and efforts to do so have met with fierce resistance.²²⁰ Without the ability to override state fishery plans, federal agencies have little influence to resolve differences among the various constituencies.²²¹ The consensus voting structure of the Treaty regime impedes the ability of the United States to promote its national interests in bilateral negotiations with Canada.²²²

C. *Successes and Failures of the Treaty*

The United States and Canada had many reasons to agree to the Treaty. The United States had three primary motivations. First, U.S. negotiators sought to retain a consistent level of American fishing of Fraser River sockeye and pink salmon.²²³ Second, the United States wanted to conserve salmon from the transboundary rivers for Alaskan fisheries.²²⁴ Third, American officials needed to gain Canadian cooperation to rebuild and conserve depleted chinook and coho stocks in Washington and Oregon.²²⁵ Canada had its own reasons for signing the Treaty. Canadian negotiators wanted to retain more of the Fraser River salmon runs than the fifty-percent share designated in the Fraser River Convention.²²⁶ Canada also sought to ensure a portion of the transboundary salmon runs for its own fisheries. Finally, Canada wanted to develop a mechanism for equitably balancing salmon interceptions between the two countries.²²⁷

218. See *United States v. Washington*, 459 F. Supp. 1020 (W.D. Wash. 1978).

219. See Yanagida, *supra* note 106, at 577-78.

220. See Huppert, *supra* note 25, at 14.

221. See *id.*

222. See Yanagida, *supra* note 106, at 586.

223. See Huppert, *supra* note 25, at 9.

224. See *id.*

225. See *id.*

226. See *id.* at 7.

227. See *id.*

The Treaty has been largely successful for both parties at managing the Fraser River runs and enhancing salmon production in the transboundary rivers. The process has been less successful at rebuilding southern chinook runs and balancing salmon interceptions. Each of these areas will be examined to assess how the Treaty has affected the management of salmon between these two countries.

1. *Fraser River Salmon*

The Treaty can be considered a success for both sides in the Fraser River region. The Fraser River produces more sockeye salmon than any other river in the world, supporting 100 distinct stocks.²²⁸ Once the allocation issue was settled by the Treaty, Canada initiated a major rebuilding program for Fraser River sockeye salmon.²²⁹ Sockeye runs have increased from about five million in the early 1980s to over fifteen million in the 1990s.²³⁰

The Treaty mechanism gave Canada a larger harvest share of the resulting enhanced salmon runs.²³¹ Canadian harvests of Fraser River sockeye salmon rose from about four million fish in 1984 to about fifteen million in 1993, equivalent to eighty percent of the total harvest.²³² Although the United States had relinquished its fifty-percent share of sockeye guaranteed by the Fraser River Convention,²³³ the Treaty allowed American fisheries a total allowable catch between 1,060,000 and 3,000,000 sockeye salmon for the first four years.²³⁴ The United States was able to retain a twenty-percent share of this lucrative salmon harvest, far better than it would have been granted under a strict interpretation of the “nation of origin” principle²³⁵ in the Law of the Sea Convention. Thus, this agreement protected American fisheries—particularly in Washington State—from significant and immediate disruption.

228. See Canada Dep't of Fisheries & Oceans, *supra* note 33.

229. See Huppert, *supra* note 25, at 9.

230. See Canada Dep't of Fisheries & Oceans, *supra* note 33.

231. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 4.

232. See Huppert, *supra* note 25, at 9.

233. See *id.*

234. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 4, para. 1(b).

235. See Huppert, *supra* note 25, at 9.

2. *Transboundary Rivers*

The Treaty was also successful in improving salmon runs in the transboundary rivers.²³⁶ Transboundary rivers such as the Stikine, Taku, and Alsek Rivers originate in Northwestern Canada and flow to the sea through the Alaskan panhandle.²³⁷ During the years of negotiation and conflict leading up to the Treaty, Canada had significantly increased the catch of these stock to press its claim to fish spawned in the Canadian portion of these rivers.²³⁸ This aggressive fishing strategy reduced the numbers of salmon returning to spawn in these rivers and threatened Alaskan fisheries that relied on these runs.²³⁹ The Treaty regime specified that proportions of each river be allocated to each party, and it defined shared conservation responsibilities.²⁴⁰ The agreement also encouraged fish stock enhancement and scientific research that aided the rebuilding efforts.²⁴¹ The ultimate result of the Treaty was to improve fisheries for both the United States and Canada in the transboundary areas.

3. *Chinook Rebuilding*

The Treaty was less successful in its efforts to rebuild the threatened chinook stocks of Washington and Oregon.²⁴² Chinook salmon migrate near the coasts of Oregon, Washington, British Columbia, and Alaska, unlike other species of salmon that swim farther out in the North Pacific Ocean.²⁴³ The chinook's migration route passes through a sequence of fisheries in these regions,²⁴⁴ which caused overharvesting of many

236. *See id.* at 10.

237. *See Pacific Salmon Treaty, supra* note 1, Annex IV, ch. 1, paras. 3, 5.

238. *See Pacific Salmon Treaty: Hearings on the U.S.-Canada Pacific Salmon Treaty Before the Subcomm. on Fishery Conservation, Wildlife and Oceans of the House Comm. on Resources*, 105th Cong. 57 (1997) (testimony of Jev Shelton, Alternate Commissioner for Alaska, Pacific Salmon Commission) [hereinafter *Shelton Testimony*].

239. *See id.*

240. *See Pacific Salmon Treaty, supra* note 1, Annex IV, ch. 1, para. 3.

241. *See Pacific Salmon Treaty, supra* note 1, Annex IV, ch. 1, para. 1.

242. *See Huppert, supra* note 25, at 10.

243. *See Canada Dep't of Fisheries & Oceans, supra* note 33.

244. For example, the Snake River fall chinook are caught in the southeast Alaska troll fishery, the commercial salmon fishery in north-central British Columbia, the troll and sport fisheries on the west coast of Vancouver Island and off the coast of Washington and Oregon, the commercial gillnet fishery on the lower Columbia, and the treaty Indian fishery on the Columbia between the Bonneville and McNary dams. *See Huppert, supra* note 25, at 10.

species of salmon before the signing of the Pacific Salmon Treaty.²⁴⁵ Furthermore, the salmon's habitat on the Columbia and Snake Rivers has been hurt critically by the building of eight hydroelectric dams along the 350-mile stretch.²⁴⁶

The Pacific Salmon Commission recognized that stocks had declined significantly and established a rebuilding program designed to achieve spawning escapement goals by 1998.²⁴⁷ The Treaty established harvest ceilings on fisheries in Alaska and British Columbia and called for reduced harvest rates in the Puget Sound and coastal fisheries off Washington and Oregon.²⁴⁸ After years of these restrictions, however, only thirty-nine percent of the specific stocks were classified as above their escapement goals in 1995 or were in the process of rebuilding.²⁴⁹

The Treaty stakeholders disagree about the need for reducing harvest rates to achieve chinook conservation goals. One of the difficulties in forging an agreement on chinook salmon is that the species is not uniformly abundant throughout the region.²⁵⁰ In March 1999, the U.S. government listed several types of salmon in Washington and Oregon as either threatened or endangered under the Endangered Species Act.²⁵¹ British Columbia's chinook stocks are abundant in some rivers, less so in others.²⁵² Most of the Alaskan chinook stocks have already achieved their 1998 escapement goals or are in the process of rebuilding.²⁵³

These regional differences in abundance create major differences in attitudes toward conservation measures. Columbia River fisheries have severely curtailed their harvests of chinook salmon in response to low

245. See *Canada Dep't of Fisheries & Oceans*, *supra* note 33.

246. See *New Plan for Rescuing the Salmon*, N.Y. Times, Apr. 21, 1997, at B8.

247. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 3, para. 1.

248. See Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 3, para. 1(d).

249. See *PSC 95/96 Annual Report*, *supra* note 29, at 67 (citing 1994 *Joint Chinook Technical Committee Ann. Rep.*).

250. See Huppert, *supra* note 25, at 10.

251. The salmon runs listed as endangered are the upper Columbia River and spring-run chinook. See Sam Howe, *An Expensive Fish*, N.Y. Times, Mar. 17, 1999, at A14. The runs listed as threatened are the Ozette Lake sockeye, Hood Canal summer-run chum, Columbia River chum, lower Columbia River chinook, upper Willamette River chinook, upper Willamette River steelhead, middle Columbia River steelhead, and Puget Sound chinook. See *id.* "Endangered" species are species that are likely to become extinct; "threatened" species are species likely to become endangered in the future. See *id.*

252. See Huppert, *supra* note 25, at 10–11.

253. See *id.* at 10.

abundance of the species in their waters.²⁵⁴ Due to the listing of several species of chinook under the Endangered Species Act,²⁵⁵ fishermen fear further cutbacks. In 1995, Canada attempted to conserve chinook stocks by reducing its fishing effort by fifty percent.²⁵⁶ However, Canada has been reluctant to further reduce its harvest of chinook unless it receives compensation. This compensation could take the form of reduced interceptions in Southeast Alaska or a lower Fraser River sockeye and pink salmon harvest in Washington.²⁵⁷ Alaska, on the other hand, sees little reason to reduce its chinook harvest under the state's "abundance-based management."²⁵⁸ Alaska claims that a reduction in its fishery would violate the Treaty's mandate against unduly disrupting an existing fishery.²⁵⁹ These conflicting views came to a head in 1995 when the treaty tribes and the fish management departments of Washington and British Columbia sought to enjoin Alaska's chinook fishery.²⁶⁰

The conservation and allocation of chinook salmon remains a hotly debated and contentious issue between the parties. The Treaty principles and processes have been unable thus far to resolve the issues surrounding chinook salmon.

4. *Salmon Interceptions*

The Treaty's greatest failure is that it has been unable to balance salmon interceptions equitably between the United States and Canada.²⁶¹ This failure is primarily responsible for the breakdown in the Pacific Salmon Commission process since 1993.²⁶² Several years ago, a distinguished panel of experts convened by the National Academy of Sciences found that international interceptions of salmon would undermine even the most successful habitat restoration efforts unless fisheries were more carefully managed.²⁶³

254. *See id.* at 11.

255. 16 U.S.C. §§ 1531–1544 (1994).

256. *See Canada Dep't of Fisheries & Oceans, supra* note 33.

257. *See Huppert, supra* note 25, at 11.

258. *Id.*

259. *See Pacific Salmon Treaty, supra* note 1, art. III, para. 3(b).

260. *See Huppert, supra* note 25, at 11.

261. *See id.* at 10.

262. *See Shelton Testimony, supra* note 238, at 60–62.

263. *See Charles F. Gauvin, Viewpoint: If Trend Continues, Canada, U.S. Won't Have Fish to Fight Over*, News Trib. (Tacoma), Nov. 23, 1997, at B11.

Figure 1: Commercial Fishery Catch by Weight, Value, Species, and Region²⁶⁴

		Commercial Fishery Catch			Interceptions	
		Total Catch (1000 lbs.)	Avg. Price Per Pound 1990-91 ²⁶⁵	Landed Value (\$1000)	As Percent of Species Catch in Area	As Percent of All Species' Landed Value
Southeast Alaska	Chinook	5,183	\$ 2.26	11,702	54.8%	7.2%
	Coho	15,720	\$ 1.13	17,717	13.7%	2.7%
	Sockeye	12,901	\$ 1.23	15,822	43.1%	7.7%
	Chum	21,643	\$ 0.50	10,713	4.0%	0.5%
	Pink	131,370	\$ 0.25	32,843	6.3%	2.3%
	All Species	186,817	\$ 0.48	88,797	10.5%	20.4%
British Columbia	Chinook	10,696	\$ 1.51	16,162	51.9%	5.3%
	Coho	21,042	\$ 0.98	20,569	31.8%	4.1%
	Sockeye	66,278	\$ 1.31	86,728	0.3%	0.2%
	Chum	29,272	\$ 0.49	14,364	3.5%	0.3%
	Pink	66,189	\$ 0.33	21,911	17.6%	2.4%
	All Species	193,477	\$ 0.83	159,734	13.0%	12.3%
Washington and Oregon	Chinook	8,484	\$ 1.83	15,527	7.1%	2.0%
	Coho	9,886	\$ 0.94	9,292	7.5%	1.3%
	Sockeye	12,123	\$ 1.80	21,822	101.1%*	40.1%
	Chum	8,232	\$ 0.62	5,104	19.8%	1.8%
	Pink	7,065	\$ 0.46	3,250	84.0%	5.0%
	All Species	45,790	\$ 1.20	54,994	46.3%	50.2%
Totals for Treaty Area	Chinook	24,363	\$ 1.78	43,366	36.2%	5.2%
	Coho	46,647	\$ 1.02	47,580	21.0%	3.3%
	Sockeye	91,302	\$ 1.36	124,171	18.2%	7.5%
	Chum	59,148	\$ 0.51	30,165	5.9%	0.6%
	Pink	204,624	\$ 0.28	57,295	11.5%	2.2%
	All Species	426,084	\$ 0.71	302,578	14.6%	18.7%

* The percent of interceptions for Washington and Oregon sockeye of over 100% may be due to discrepancies in interception estimates versus official landing records. See Huppert, *supra* note 25, at 20 n.4.

264. This table is a reproduction of a table that originally appeared in Huppert, *supra* note 25, at 20 tbl.1 (footnotes omitted).

265. See *id.* "Average Price Per Pound" is also known as the "ex vessel value," meaning the amount paid to the fishing vessel operator at dockside.

American interceptions have steadily increased due to expanded harvests in Southeast Alaska, while Canadian interceptions have declined due to decreased abundance of salmon from Washington and Oregon.²⁶⁶ In 1985, the United States intercepted 2.4 million more salmon than did Canada, according to Canadian sources.²⁶⁷ By 1996, the net interception by U.S. fisheries more than doubled to 5.3 million salmon, which Canada estimates to have an annual wholesale value of about C\$70 million.²⁶⁸ The accumulated imbalance since 1985 is approximately 35 million fish worth approximately C\$500 million.²⁶⁹

A “bubble” chart depicts the above information more concisely.²⁷⁰ Figure 2 shows three different variables: size of the catch, percent of interceptions, and value of the salmon. The size of the “bubble” represents the overall size of the harvest in pounds. Large harvests like the Alaska pink and B.C. sockeye appear as large circles, while smaller runs such as the Washington pink and the Alaska chinook are smaller circles. The percentage of interceptions is graphed on the left-right axis. Most of the salmon caught are not interceptions, and therefore appear on the left side of the chart. Washington sockeye and pink salmon harvests contain high numbers of intercepted fish, and are located on the right side of the chart. The value of the salmon is graphed on the vertical axis, with the most valuable types of salmon placed near the top of the graph. Chinook and sockeye are worth more per pound and are higher on the chart than the less-valued coho, chum, and pink salmon catch.²⁷¹

There are vast differences among the three Treaty regions in interception levels. In the 1990–91 fishing season for the entire Treaty region, almost fifteen percent of the catch by landed weight were interceptions. The intercept rate was almost nineteen percent, if measured by landed price value. Washington and Oregon are the most dependent on interceptions with over forty-six percent of its catch measured by weight and over fifty percent of its catch measured by value consisting of Canadian fish.²⁷² These interceptions are primarily Fraser

266. *See id.* at 11–12.

267. *See Canada Dep't of Fisheries & Oceans, supra* note 33.

268. *See id.* At the exchange rate of 1.407 (as of June 24, 1999), the U.S. equivalent is \$47.6 million.

269. *See id.* At the exchange rate listed above, the U.S. equivalent is \$340 million.

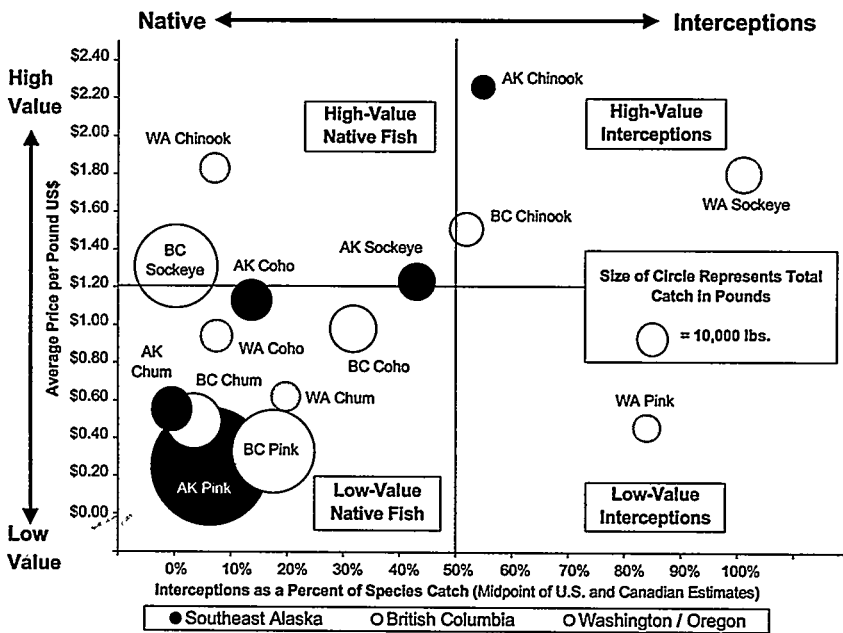
270. *See infra* Figure 2.

271. Washington and Oregon's pink salmon harvests are primarily interceptions from British Columbia. These low value interceptions are located in the bottom right hand corner of the graph.

272. *See id.*

River sockeye and pink salmon.²⁷³ Southeast Alaska is the next most dependent on interceptions, representing only 10.5% of its total catch but over 20% of the total value. Interceptions of chinook and sockeye salmon from Washington and British Columbia are a highly valuable share of Alaska's fishery. British Columbia is the least dependent on interceptions, with only thirteen percent of its catch and just over twelve percent of its value deriving from interceptions. However, the province's fisheries off Vancouver Island take a large portion of Washington's threatened chinook and coho stocks.

Figure 2: Commercial Catch Value and Interception Rates of Pacific Salmon Treaty Regions by Species, 1990–91²⁷⁴



The areas of the chart are divided into four major categories: low-value native fish, high-value native fish, high-value interceptions, and low-value interceptions.²⁷⁵ Most of the commercial catches are of low-value native fish, in the bottom left corner of the chart. These catches include the Alaska pink, British Columbia pink, and all coho and chum

273. See *id.*

274. Sources for data are the same as for Figure 1. See *supra* notes 264–65.

275. Sources for this paragraph are the same as for Figure 1. See *supra* notes 264–65.

harvests. Higher-value harvests of predominately native-origin salmon are located in the upper left quadrant of the graph and include the British Columbia sockeye, the Washington chinook, and the Alaska sockeye fisheries. The upper right corner of the graph represents harvests of highly valued fish that contain over fifty percent interceptions, such as the British Columbia chinook, Alaska chinook,²⁷⁶ and the Washington sockeye runs. The final category is the low-value interceptions. The only harvest in this category is the Washington pink salmon fishery. The diagram suggests that higher-valued salmon species tend to be more frequently intercepted.

The balance of interceptions has been exacerbated by diverging trends in salmon abundance among the regions. Alaskan and Washington fisheries intercept Canadian salmon, but Canada intercepts significant amounts of salmon from Washington and Oregon chinook and coho stocks only. As salmon populations have declined in Washington and Oregon, Canadians have intercepted fewer American fish. During this time, salmon populations in Southeast Alaska and British Columbia have been very abundant, leading to increased American interceptions of Canadian stocks. If the Alaskan stocks remain abundant while the Washington and Oregon runs remain depressed, there will be a continuing imbalance in interceptions unless fishing practices change dramatically.²⁷⁷

Canada has become increasingly dissatisfied with this growing inequity in interceptions. In the annual Pacific Salmon Commission negotiations, Canada has insisted that the imbalance in interceptions be remedied soon.²⁷⁸ Although the southern fisheries have been willing to reduce their harvests of Canadian stocks to conserve their depleted runs, Alaskan fish managers have shown little desire to reduce harvest rates. Alaska gains very little from the Treaty, because salmon from all regions migrate through Alaskan waters, while Canadian fisheries do not intercept Alaskan salmon. In the absence of a negotiated treaty, Alaska has the opportunity to fish both Canadian and other regions' salmon stocks with relative impunity.²⁷⁹

276. Alaska's troll fishery for chinook is one of the most contentious fisheries because it is composed predominately of interceptions. Over half of the harvested chinook is from British Columbia and another 30% is from Washington and Oregon. *See* Huppert, *supra* note 25, at 14.

277. *See id.* at 11–12, 15 as support for this paragraph.

278. *See id.*

279. *See id.* at 14–15 as support for this paragraph.

Both countries agree that interceptions are a problem, but they disagree on the number and value of salmon intercepted by each country. Calculating interceptions is not an exact science. Interceptions are estimated from the proportion of tagged fish recovered from each fishery,²⁸⁰ and from biological studies of scale patterns and parasites in the salmon's brain.²⁸¹ These statistical samples are then combined with knowledge of the abundance of stocks during the fishing season to calculate interceptions.²⁸² Experts can reasonably differ on these statistical extrapolations, and the two countries have widely divergent interception estimates. Although the Pacific Salmon Commission's Joint Committee on Interceptions attempts to resolve these differences, these disagreements over the level of interceptions detract from negotiations on how to correct the imbalance.²⁸³

Voluminous and detailed data exist on salmon catches and escapements, but the two sides see entirely different numbers.²⁸⁴ Each country can point to statistics supporting its viewpoint, and each side has clung tenaciously to its interpretation of the equity principle.²⁸⁵ Canadian negotiators display complicated charts of "total salmon interceptions" and demand that the United States acknowledge the imbalance between the two nations.²⁸⁶ American negotiators dispute the Canadian figures and claim that U.S. interceptions are much lower and are the result of the abundance of certain salmon stocks.²⁸⁷

280. *See id.* at 12.

281. *See Williams & Gilmore, supra* note 144.

282. *See id.*

283. *See id.*

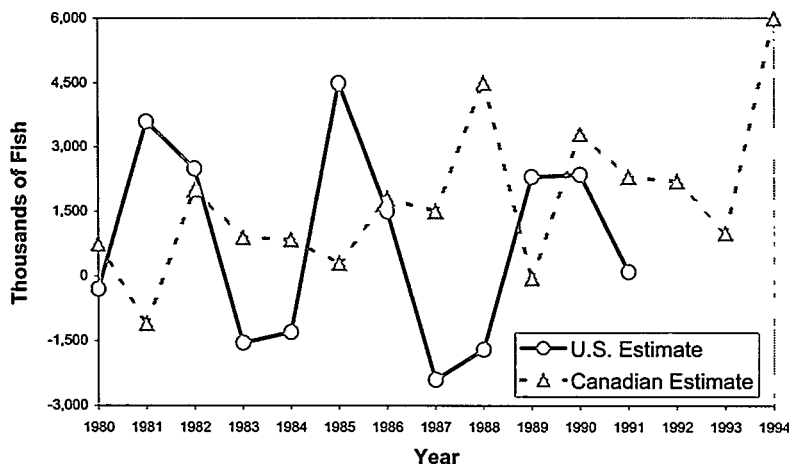
284. *See Louv, supra* note 193.

285. *See West Testimony, supra* note 195.

286. *See Louv, supra* note 193.

287. *See Shelton Testimony, supra* note 238.

Figure 3: Canadian and American Estimates of Net U.S. Salmon Interceptions²⁸⁸



The Native American representatives on both sides of the border are frustrated by the conflict over interceptions, claiming that these debates are unproductive and divert attention away from efforts to increase salmon runs for all of the parties. As Fred Fortier, chair of the British Columbia Aboriginal Fish Commission, said, “If we get caught up in trying to count fish as they run over the border, we’ll never resolve this.”²⁸⁹ The tribes have focused instead on improving salmon habitat. These efforts, however, would force changes in urban development, commercial agriculture, hydroelectric dams, and the timber industries.²⁹⁰

D. Conclusions About the Treaty

The Pacific Salmon Treaty made possible eight years in which both countries agreed on fishing regimes and undertook efforts to address mutual conservation problems. The Treaty established two basic principles—conservation and equity—and several key factors to guide international fishery decisions. Although the Treaty was successful in rebuilding Fraser River and transboundary river salmon runs, it failed to

288. This figure is a reproduction of a figure that originally appeared in Huppert, *supra* note 25, at 27 fig.6.

289. Louv, *supra* note 193.

290. *See id.*

enhance the depleted southern chinook stocks and balance interceptions between the two countries.

III. PROBLEMS WITH THE PACIFIC SALMON TREATY

Despite the high hopes that accompanied the Pacific Salmon Treaty's signing, the Treaty failed to end the salmon war. The Treaty did establish the basic framework for coordinating salmon management between the United States and Canada. However, the Treaty failed to define adequately the principles of conservation and equity and did not specify how those principles would be implemented to allocate salmon harvests. Furthermore, the process for reaching agreements within the Pacific Salmon Commission was fatally flawed in that a single party could unilaterally undermine progress on negotiated settlements.

These flaws in the Treaty's structure resulted in the breakdown of salmon coordination between the parties. Once the initial term of the Treaty's Annex IV expired, the Pacific Salmon Commission was charged with renegotiating annual catch limits and fishery management guidelines for each party.²⁹¹ However, the Commission could not agree on an international salmon management plan due to problems with the Treaty's consensus-based negotiation process and the lack of an effective dispute resolution mechanism. Since 1993, American and Canadian interests have repeatedly failed to develop a comprehensive agreement on salmon management under the Pacific Salmon Treaty.

The lack of a negotiated salmon allocation has led to increasing frustration and discord between the parties. Some regions such as Alaska took advantage of the failed negotiations by increasing their harvests of Canadian salmon. Canada sought to pressure American negotiators back to the table by overfishing U.S. stocks. As frustrations mounted, the salmon war spilled over to other aspects of the countries' relationship.²⁹² The impasse has led to several international incidents such as the imposition of transit fees, the detention of American fishing vessels, and the blockade of an Alaskan ferry. British Columbia's Premier Glen Clark threatened to close a base important to the U.S. Navy. There has also been a spate of lawsuits in this most recent flare-up of the salmon war, alleging violations of the Treaty and overfishing. Thus, the Pacific

291. See *PSC 95/96 Annual Report*, *supra* note 29, at xi–xii.

292. See Joel Connelly, *Salmon Envoys Push for Deal Now; 'The Fish Are Losing,' Ruckelshaus Says*, *Seattle Post-Intelligencer*, Jan. 13, 1998, at A1.

Salmon Treaty did not settle the salmon wars, but rather enabled intermittent cease-fires interspersed with intense flare-ups.²⁹³

A. *No Clear Definition of Treaty Principles*

Although the Pacific Salmon Treaty enshrined the conservation and equity principles to be used in resolving the salmon dispute, the Treaty did not adequately define these principles. A former Canadian commissioner described the Treaty as a “bare-boned document with no agreement on even simple concepts.”²⁹⁴ Treaty negotiators left it to the Pacific Salmon Commission to work out how to apply these principles. In recent years, that has not proved possible. Each country has its own interpretation of the equity and conservation principles, and each believes strongly that the other country’s interpretation is wrong. This lack of agreement on the Treaty’s fundamental principles has derailed the process.

1. *Conservation Principle*

Both countries generally agree on the concept of conservation, but have approached conservation issues in very different ways. These regional differences in conservation approaches have led to wide regional variances in salmon abundance.

For example, Washington has placed several dams along the Columbia River and its tributaries. These dams have impeded salmon migration and damaged critical salmon habitat, leading to an overall decline in the abundance of salmon from these waters.²⁹⁵ Several salmon species from Washington and Oregon have been listed as endangered or threatened.²⁹⁶ Washington’s Department of Fisheries has responded with enhanced hatchery programs.²⁹⁷ Canada, however, has resisted efforts to

293. See Huppert, *supra* note 25, at 1.

294. *Pipkin Testimony*, *supra* note 129.

295. See Jonathan Brinckman, *Attempts to Save Salmon Turn into Upstream Battle*, Plain Dealer (Cleveland), Aug. 13, 1997, at 17A.

296. See *supra* note 251.

297. See Brinckman, *supra* note 295.

put dams in its rivers.²⁹⁸ This restraint has been rewarded with increased abundance of salmon.²⁹⁹

One of the major stumbling blocks for salmon conservation efforts is the failure to resolve issues of equity. Some regions have refused to restrict their harvest of salmon in order to conserve the stocks of other areas.³⁰⁰ Conservation measures have often been subordinated to issues of allocation, as regions refuse to cooperate on conservation unless they receive compensation in return.³⁰¹

2. *Equity Principle*

The Treaty's equity principle states that each party should reap benefits proportionate to the salmon that originate in its waters.³⁰² However, the parties fundamentally disagree on how to implement that principle. The parties have not reached a consensus on how to calculate the benefits of the salmon.³⁰³ As shown in Figure 3, the parties disagree even on how many interceptions are currently being taken by their respective fisheries.

Each country has its own interpretation of the equity principle. Canadians argue that the country of origin should receive more than credit for its conservation costs. They believe that they have rights to compensation for all U.S. interceptions of Canadian fish.³⁰⁴ This concept has been likened to state ownership of salmon spawned in the state's waters.³⁰⁵ The Canadian government sought a complicated "accounting"

298. See Kim Murphy, *Fish Wars Have Created a Real Stink Between the U.S. and Canada; While Negotiations for a New Salmon Treaty Are Underway, Americans Are Catching Flak for Their Latest Harvest*, L.A. Times, July 30, 1997, at A5.

299. See *id.*

300. See Huppert, *supra* note 25, at 11.

301. See *id.*

302. See Pacific Salmon Treaty, *supra* note 1, art. III, para. 1(b).

303. See Huppert, *supra* note 25, at 12–13.

304. Canada argued in the Law of the Sea Convention that "[o]nly the State of origin can protect and culture salmon and effectively manage the fishery. [Habitat maintenance, enhancement and management] can be carried out only by the State in whose rivers the salmon breed—the State of origin." *Canada: Working Paper on the Special Case of Salmon—The Most Important Anadromous Species*, U.N. Doc. A/CONF.62/ C.2/L.81 (1974), reprinted in 3 Third U.N. Conference on the Law of the Sea, Official Records 240 (1975) ("submitted to provide the basis in fact and in equity for the development of an appropriate regime" on salmon conservation and management).

305. See Yanagida, *supra* note 106, at 589.

formula to quantify the value of interceptions.³⁰⁶ This type of formula could be used to restrict American fisheries that harvest Canadian origin fish, such as the lucrative Fraser River fisheries.³⁰⁷

Brian Tobin, Canada's Minister of Fisheries, has stated that equity means each nation should have "the opportunity to harvest the fish produced in its rivers, or failing that, to harvest an equal amount of the other nation's fish."³⁰⁸ However, assuring that each country receives the same number of intercepted fish would ignore species, size, scarcity, and market price. Thus, the Canadian interpretation of equity would count a two-pound pink salmon as equivalent to a twenty-pound chinook salmon, even though the chinook is fifty times more valuable.³⁰⁹

The United States has rejected the Canadian accounting process, dismissing this interpretation of equity as simplistic "bean-counting."³¹⁰ The Americans argue that the equity formulation establishes no exclusive rights for compensation in the country of origin.³¹¹ The United States believes that the equity principle should recognize the contributions of all states in maintaining salmon habitat.³¹² Furthermore, the rights of states whose fishermen historically have depended on the resource also constrain the equity principle.³¹³ Because of this fundamental difference in interpretation, the equity principle has yet to be implemented in practice.

International legal principles support a more collective approach to equity in fisheries allocation.³¹⁴ The 1982 Convention on the Law of the Sea recognized that both the country of origin and coastal states have interests in conserving anadromous species like salmon.³¹⁵ The country of origin has "the primary interest in and responsibility for such

306. *See id.*

307. *See id.*

308. Huppert, *supra* note 25, at 12.

309. *See id.*

310. 1992-1993 *Pacific Salmon Comm'n Ann. Rep.* 16 (1993) (stating United States' position at post-1992 fishing season meeting of Commission).

311. *See Yanagida, supra* note 106, at 589.

312. *See id.*

313. *See id.*

314. These principles emerged during the Third U.N. Convention on the Law of the Sea, which occurred at the same time as the Treaty negotiations. The Law of the Sea Convention was concluded in 1982, before the 1985 Pacific Salmon Treaty was signed.

315. *See* Law of the Sea Convention, *supra* note 76, art. 63, para. 1.

stocks,³¹⁶ but the state shares this interest when salmon enter the internal waters, territorial sea, or Exclusive Economic Zone (EEZ) of coastal states.³¹⁷ If fish stocks intermingle in the EEZs of two states, international law directs both states to seek agreement on “the measures necessary to co-ordinate and ensure the conservation and development of such stocks.”³¹⁸ In attempting to catch fish that originated in its own waters, each nation will incidentally harvest some salmon that originated in the waters of the other.³¹⁹ With intermingled stocks, conservation is possible only if both states accept that a certain level of interceptions is inevitable. International law recognizes that both upstream and coastal states contribute to the maturation of fish.³²⁰ The equity principle should provide incentives for both the country of origin and neighboring states to invest in habitat maintenance and conservation.³²¹

The need to prevent the disruption of existing fisheries also limits the equity principle. Both the Treaty and the Law of the Sea Convention express this limitation. The Treaty required the Commission to recognize “the desirability in most cases of avoiding undue disruption of existing fisheries,”³²² some with long-settled expectations and historic claims. The Law of the Sea requires the country of origin to “co-operate in minimizing economic dislocation in such other States fishing these stocks, taking into account the normal catch and the mode of operations of such States, and all the areas in which such fishing has occurred.”³²³ The equity principle, therefore, cannot be interpreted to require the closing of a state’s historic fisheries.

A more-nuanced version of interception accounting requires agreement on the value of an intercepted fish. However, the value of a

316. Law of the Sea Convention, *supra* note 76, art. 66, para. 1.

317. *See* Law of the Sea Convention, *supra* note 76, art. 66, para. 4.

318. Law of the Sea Convention, *supra* note 76, art. 63, para. 1.

319. This approach to interceptions is adopted in the Treaty itself for the boundary area fisheries off southeast Alaska. *See* Pacific Salmon Treaty, *supra* note 1, Annex IV, ch. 1.

320. *See* Yanagida, *supra* note 106, at 590.

321. *See id.*

322. Pacific Salmon Treaty, *supra* note 1, art. III, para. 3(b).

323. Law of the Sea Convention, *supra* note 76, art. 66, para. 3(b). *See also* Law of the Sea Convention, *supra* note 76, art. 66, para. 3(a), which prohibits high seas salmon fishing seaward of the exclusive economic zone, “except in cases where this provision would result in economic dislocation.” This provision was adopted to accommodate the interests of states like Japan, whose fishermen harvest salmon on the high seas. *See Japan: Draft Article on Anadromous Species*, U.N. Doc. A/CONF.62/C.2/L.46 (1974), *reprinted in* 3 Third United Nations Conference on the Law of the Sea, Official Records 221 (1975).

captured salmon varies “by species, quality of meat, time of the year, stage in its life cycle when caught, type of gear used to catch it, market demand and currency fluctuations.”³²⁴ So far, Commissioners have been unable to agree on the proper scientific and economic means for estimating these biological and economic variables.

One promising approach for resolving the equity issue is the “singular pricing” approach.³²⁵ Under this system, each nation uses common economic methodologies to assign economic values to salmon caught in its fisheries. The parties could use these estimates of value to track changes in equity balance over time. Changes in the balance of economic value in favor of one nation could prompt changes in fishing regimes or compensation to bring about the desired equity. Although this approach would specify the value of salmon caught by each country, the two nations would still have to agree on a level of interception values that it considers equitable.³²⁶ A strict interpretation of the equity principle would mean that interceptions must be balanced numerically and would require the United States to significantly reduce its interceptions of Canadian fish or compensate Canada monetarily for the excess salmon harvested by American fisheries.³²⁷

A resolution of the equity principle issue could guide the allocation of salmon harvests, which would in turn guide annual fishery negotiations.³²⁸ An agreement on the meaning of the principle would allow both countries to realize the full potential of the Treaty, helping to conserve salmon and enhance production in both countries.³²⁹ It would also enable the development of long-term fishing regimes to conserve and rebuild stocks to optimum production levels.³³⁰

324. Yanagida, *supra* note 106, at 591.

325. See Huppert, *supra* note 25, at 13 n.16.

326. See *id.*

327. See *id.* at 13 as support for this paragraph.

328. See *id.*

329. See *id.*

330. See *id.*

B. *Failure to Agree on Allocation*

The last comprehensive fishing arrangement negotiated through the Pacific Salmon Commission occurred in 1992.³³¹ Since then, the parties to the Treaty have been unable to reach a long-term agreement on disputed fisheries issues; there have been only interim agreements covering specific species or limited geographic areas.³³² The lack of a comprehensive agreement on salmon management forced Canadian and American fish management agencies to manage catches in their jurisdictions with limited international cooperation. This lack of agreement led to a free-for-all by each of the parties, as each sought to catch as many fish as possible to prevent the other side from benefiting from the breakdown in talks. Each side has accused the other of violating the principles of the Treaty, overfishing, and jeopardizing future salmon runs.³³³

Because of frustration with the process, the Canadians have refused to participate in the Commission process established by the Treaty. Instead, negotiations have taken place through the use of special negotiators in 1994, nonbinding mediation in 1995, stakeholder negotiations in the spring of 1996, and the appointment of high-level envoys in 1997.³³⁴ All of these forums failed to achieve consensus on a comprehensive fishery regime.³³⁵

1. *Canadian-Imposed Fines on Inside Passage, and Canadian Fish War in 1994*

After the breakdown of talks before the 1994 fishing season, Canadian authorities attempted to increase the pressure on U.S. fishing interests through two distinct strategies. The first involved imposing a transit fee on American ships traveling through Canadian waters on their way to

331. See Dee Norton, *Canadian Calls for Harmony on Salmon*, Seattle Times, Jan. 22, 1998, at B3.

332. See *Young Press Release*, *supra* note 5. The parties have made interim agreements in some fishing seasons, covering only specific species originating from certain rivers. See, e.g., *PSC 95/96 Annual Report*, *supra* note 29, at iii (explaining 1995 interim fishing arrangements for Fraser River sockeye and pink salmon and commitments for southern coho and chum fisheries).

333. See, e.g., *Benton Testimony*, *supra* note 178. British Columbia Premier Glen Clark charged that the United States has "been overfishing with impunity." Louv, *supra* note 193.

334. See *Young Press Release*, *supra* note 5.

335. See *id.*

Alaskan fishing grounds.³³⁶ The second strategy was to wage a Canadian fish war against U.S. salmon stocks to force the Americans to negotiate.³³⁷

In 1994, Canada imposed a "transit fee" of C\$1500 (US\$1050) on all fishing vessels moving up the Inside Passage to Alaska, a 750-mile route between Vancouver Island and the Canadian mainland.³³⁸ Prior to that regulation, American fishing boats had an explicit exemption under Canadian law permitting travel through the Inside Passage without a license or permission to enter Canadian waters.³³⁹ This waterway provides a vital route for U.S. fishing boats traveling between Alaska and the lower forty-eight states.³⁴⁰ Avoiding the Inside Passage would involve sailing west of Vancouver Island on the dangerous heavy seas of the Pacific Ocean.³⁴¹

The United States protested the fee as violating the International Law of the Sea guaranteeing the innocent right of passage to vessels through a country's territorial waters.³⁴² The Law of the Sea Convention defines territorial waters as those extending twelve miles off a nation's coast.³⁴³

336. "A United States fishing vessel may, without the authority of a license, pass through the Canadian fisheries waters known as the 'Inside Passage' on the west coast of Canada if it complies with the conditions described in subsection 15(2)." Coastal Fisheries Protection Regulations, C.R.C. ch. 413, § 17 (1978), amended by SOR/85-527, 1985 C. Gaz. 2719, 2725 § 13 (Can.). The primary condition in section 15(2) is to have a fishing vessel stow its gear below deck or otherwise restrict the gear's availability for fishing. See C.R.C. ch. 413, § 15(2) (1978).

337. In 1994, Fisheries Minister Brian Tobin announced that Canada would fish aggressively in order to "maximize disruption" to U.S. fisheries. Canada relentlessly pursued an aggressive fishing regime in its West Coast of Vancouver Island (WCVI) coho and chinook fisheries with the publicly stated purpose of increasing pressure on the United States to resolve the "equity" issue. Canada's aggressive fishing policy in WCVI and Georgia Straits fisheries came at the expense of its own chinook and coho stocks. See, e.g., *Benton Testimony*, supra note 178.

338. See David Crary, *U.S.-Canada Squabble Erupts over Usage of the Inside Passage*, Seattle Post-Intelligencer, Mar. 8, 1996, at A6.

339. See C.R.C. ch. 413, § 17, amended by SOR/85-257, 1985 C. Gaz. 2719, 2725 § 13 (Can.).

340. See Sandi Doughton, *The View from the Boats: Issues in the U.S.-Canada Salmon War; A Fine Kettle of Fish; International Fight Also Has Aspects of Interstate Battle*, News Trib. (Tacoma), July 3, 1994, at A1.

341. See *id.*

342. See Law of the Sea Convention, supra note 76, art. 17; see also *United States: President's Transmittal of the United Nations Convention on the Law of the Sea and the Agreement Relating to the Implementation of Part XI to the U.S. Senate with Commentary*, 34 I.L.M. 1393, 1396 (1995) (explaining that Law of the Sea Convention sets forth "navigation regimes of innocent passage in the territorial sea, transit passage in straits used for international navigation, and archipelagic sea lanes passage").

343. See Law of the Sea Convention, supra note 76, art. 2. Article 2 describes the territorial sea as "a belt of ocean which is measured seaward from the baseline of the coastal State and subject to its

Canada argued that the Inside Passage is not part of Canada's territorial waters but is an internal waterway.³⁴⁴ The right of innocent passage does not extend to a country's internal waters.³⁴⁵ Canadian officials held that the fines were legal under Article 26 of the Law of the Sea Convention.³⁴⁶ Canada viewed the U.S. protest as an affront to Canada's sovereign right to control access to its own waters.³⁴⁷ Canada eventually suspended the transit fee after Vice President Gore promised further high-level negotiations on the salmon allocation issue.³⁴⁸

This transit fee cost American fishermen a total of about \$300,000, which the U.S. government reimbursed.³⁴⁹ Congress passed an amendment to the Fisherman's Protection Act in 1995 urging the State Department to recover the fines collected by Canada.³⁵⁰ The bill also warned that the United States will not tolerate any future action that would "impede or otherwise restrict" U.S. boats' right to use the passage.³⁵¹ Thus far, Canada has refused to compensate the United States for the fees collected during this period.

sovereignty. This sovereignty is exercised subject to the Convention and other rules of international law relating to innocent passage, transit passage, archipelagic sea lanes passage and protection of the marine environment." *United States: President's Transmittal of the United Nations Convention on the Law of the Sea and the Agreement Relating to the Implementation of Part XI to the U.S. Senate with Commentary*, 34 I.L.M. at 1401.

344. See Law of the Sea Convention, *supra* note 76, art. 8, para. 1. Article 8 defines internal waters as "the waters on the landward side of the baseline from which the breadth of the territorial sea is measured." *United States: President's Transmittal of the United Nations Convention on the Law of the Sea and the Agreement Relating to the Implementation of Part XI to the U.S. Senate with Commentary*, 34 I.L.M. at 1401.

345. See Law of the Sea Convention, *supra* note 76, art. 52.

346. See Law of the Sea Convention, *supra* note 76, art. 26.

347. Dennis Brown, a Canadian Commissioner with the Pacific Salmon Commission stated, "[W]e really have to stand up for ourselves as a country, or we are going to lose it all. We are taking on the world's most powerful country—you have to be realistic here. But dammit somebody's got to take a tough line." Colin Nickerson, *Canada-U.S. Fight Looms over Salmon*, Boston Globe, July 9, 1995, at 2.

348. See *Canada and U.S. to Resume Stalled Salmon Talks*, Reuters World Serv., July 2, 1994 (crediting telephone talks on Saturday, July 2, 1994 between Al Gore and Canadian Fisheries Minister Brian Tobin with causing return to negotiations).

349. See Carey Goldberg, *U.S. and Canada Baiting Each Other over Pacific Salmon Catches*, Pittsburgh Post-Gazette, June 8, 1997, at A6.

350. See S. 2243, 103d Cong. (1994); H.R. 3817, 103d Cong. (1994). Both bills were passed to amend the Fisherman's Protective Act of 1967, 22 U.S.C. §§ 1971–1977 (1994). See also Dave Birkland et al., *Canadian Toll Imposes "Quiet Time" on U.S. Fishermen*, Seattle Times, June 16, 1994, at A1.

351. Cary, *supra* note 338.

Also in 1994, Canada's Minister of Fisheries, Brian Tobin, announced a fish war to "cause maximum disruption to the U.S. fleet"³⁵² and force the Americans back to the bargaining table. Canada increased its salmon harvests off Vancouver Island in an attempt to preempt the Washington State sockeye salmon fishery in the Puget Sound.³⁵³ Many observers felt the aggressive fishing strategy eventually harmed Canada's critical Fraser River salmon conservation program.³⁵⁴

2. *Interim Agreement for 1995*

The 1995 fishing season began without an Annex IV agreement. Commission officials reached an interim arrangement for Fraser River sockeye and pink salmon in July of that year. The parties also agreed to conduct fisheries for southern chum and coho "in a manner that reflects past Treaty arrangements."³⁵⁵ Chinook fisheries, however, remained "an unresolved and contentious issue" as both Washington State and British Columbia sought to reduce Alaska's harvest of this species.³⁵⁶

The Endangered Species Act severely constrained fishing for Columbia and Snake River spring chinook in 1995. The Act closed Columbia River sport fishery and all nontribal commercial fisheries, except for two twelve-hour periods in mid-October to target relatively healthy runs of late coho. Low forecasts for spring chinook caused reductions even in tribal ceremonial and subsistence fishing. Despite these reductions and closures, the numbers of fish returning to spawn were the lowest on record for some species.³⁵⁷

Alaska, however, refused to cooperate with the other regions in their management of chinook fisheries.³⁵⁸ Alaskan fishermen continued to harvest chinook salmon in large numbers, the vast majority of which originated in other regions.³⁵⁹ Rather than reduce its chinook salmon

352. Gerry Merrigan, *Medred Fishing Wrong Side of Border for Villain*, Anchorage Daily News, Sept. 25, 1997, at B8.

353. See Huppert, *supra* note 25, at 4.

354. See *id.*

355. *PSC 95/96 Annual Report*, *supra* note 29, at xii.

356. *Id.*

357. See *id.* at 36 as support for this paragraph.

358. See *Confederated Tribes & Bands of the Yakima Indian Nation v. Baldrige*, 898 F. Supp. 1477, 1483-85 (W.D. Wash. 1995).

359. It is estimated that almost 55% of the chinook caught in these fisheries are interceptions from Canada, Washington, and Oregon. See Huppert, *supra* note 25, at 20 tbl.1. This estimate is based on

harvest, Alaska announced the opening of a third fishery to target these stocks.³⁶⁰ Alaska justified its salmon management plan as “abundance-based management.”³⁶¹ This fish management strategy adjusts the catch of fish in response to the strength of their runs.³⁶² Alaska claimed that because the number of chinook in its waters had increased, it should be able to increase its harvest of these salmon. Canada’s Minister of Fisheries Brian Tobin disagreed, calling Alaska’s chinook fishery a “frenzy of greed” designed by “shortsighted and self-interested fishery managers.”³⁶³ This flagrant disregard for the principles of the Treaty and the conservation requirements of these stocks led to a lawsuit in U.S. federal courts.

3. Confederated Tribes v. Baldrige II: *Good Faith Requirement*

In September 1995, Northwest Indians sought a preliminary injunction prohibiting Alaska from authorizing fishing of chinook salmon runs for the remainder of the year.³⁶⁴ Washington State’s Department of Fish and Wildlife and Canada’s Department of Fisheries and Oceans joined the tribes’ suit.³⁶⁵ Alaska’s Department of Fish and Wildlife planned to harvest what the tribes considered an excessive amount of chinook salmon, the majority of which were fish from Washington, Oregon, and British Columbia. Indian tribes asked the court to enjoin Alaska from continuing this chinook fishery.³⁶⁶

Judge Rothstein of the Western District of Washington granted the injunction, holding that Alaska had not implemented its new plan in good faith and had violated the principles of the Pacific Salmon Treaty and the

the midpoint of U.S. and Canadian interception estimates published by the Pacific Salmon Commission. *See id.*

360. *See Confederated Tribes*, 898 F. Supp. at 1483.

361. *See id.* at 1484–85.

362. Alaska’s 1995 proposal relied upon an in-season abundance index, rather than the pre-season estimates used by the model developed by the Commission’s Chinook Technical Committee (CTC). Alaska developed this in-season abundance-based model because it believes that the CTC’s model underestimates actual abundance, resulting in catch ceilings that were lower than necessary. Alaska’s proposed 1995 Plan would have allowed a catch of 230,000 chinook salmon, rather than the 140,000 allowable catch under the CTC model. *See id.* at 1485.

363. Lisa Busch, *Scientific Dispute at Center of Legal Battle over Salmon Catch: Chinook Salmon Catch in Alaska*, 269 *Science* 1507 (1995).

364. *Confederated Tribes*, 898 F. Supp. at 1479.

365. *See id.*

366. *See id.*

Baldrige Stipulation.³⁶⁷ The court had jurisdiction over the matter because the district court in the previous Baldrige decision explicitly retained jurisdiction to enforce the stipulation, which obligated the parties to work in furtherance of its purposes.³⁶⁸

Under the Treaty, the United States and Canada agreed to implement a rebuilding program for chinook salmon fisheries based on a catch ceiling approach.³⁶⁹ Under this approach, a catch ceiling would be maintained while rebuilding the stock of chinook salmon.³⁷⁰ Thus the percentage of available fish caught—the stock exploitation rate—would decline as stocks were rebuilt.³⁷¹ The parties had expressly rejected a harvest rate alternative that called for lower catches early in the program but would have permitted catches to increase as stocks increased.³⁷² Although Alaska's fishery department had moved to a harvest rate method, the state was still obliged to follow the Treaty principles in its chinook harvest.³⁷³ Thus, the Treaty required the state to restrain its harvest of chinook even though the parties had not reached a negotiated agreement.³⁷⁴

The Chinook Technical Committee of the Pacific Salmon Commission estimated the allowable catch of chinook for Alaska would total 140,000 chinook in 1995.³⁷⁵ At the time of the injunction hearing, Alaska had already caught approximately 175,000 chinook salmon.³⁷⁶ Because the court order occurred late in the 1995 fishing season, the decision had only a small impact on Alaska's chinook harvest.³⁷⁷ However, the action signals a more active role for the courts in arbitrating disputes among the Treaty parties in requiring that the parties work in good faith toward resolving their differences.

367. *See id.* at 1488–89.

368. *See id.* at 1484.

369. *See id.*

370. *See id.*

371. *See id.*

372. *See id.*

373. *See id.* at 1490.

374. *See id.* at 1489.

375. *See id.* at 1485.

376. *See id.* at 1484.

377. On August 11, 1995, Judge Barbara Rothstein issued a temporary injunction that halted further chinook fishing in Alaska. The injunction was sustained on September 7, and the chinook fishery did not reopen for the remainder of the summer season, except for a recreational exemption of 2000 chinook salmon. *See PSC 95/96 Annual Report, supra* note 29, at 33.

4. *Third Party Mediation Fails in 1996*

In October 1995, Canada and the United States entered into mediation, led by former Ambassador Chris Beeby of New Zealand.³⁷⁸ After working with both parties for several months, Ambassador Beeby proposed an accounting formula that would implement the equity obligations of the Treaty and balance the interests of the United States and Canada. One of the major difficulties in resolving the equity dispute was establishing a value for intercepted salmon. Beeby proposed a formula using the domestic wholesale value of fish (in price per pound) to establish the value of the catch by each country.³⁷⁹ Once the value of each sides' salmon catch was determined accurately, the equity principle could be implemented to require a balance in these values.

This formula would have likely forced the United States to curtail its fishing dramatically or pay Canada cash as compensation. Canada welcomed Beeby's proposal as "a vindication of what we've always been saying, and it comes from a third party, which carries a certain moral weight."³⁸⁰ The United States, however, rejected the recommendations and refused to comment on any aspect of Beeby's report.³⁸¹ American negotiators dismissed the idea of using a formula to calculate the dollar value of salmon as an irrelevant "bean-counting exercise" that has no relationship to the real world.³⁸² American experts claimed that a political negotiation rather than an independent analysis or scientific formula represented the only chance for a resolution to the Treaty impasse.³⁸³

5. *Stakeholder Discussions Fail in 1996–1997*

In February of 1997, the parties tried to resolve salmon management issues through stakeholder talks.³⁸⁴ In these discussions, the parties

378. Mr. Beeby, a career diplomat for 30 years, is a judge with the World Trade Organization. See Danny Westneat, *Secret Fishing Report Sides with Canada*, Seattle Times, May 31, 1997, at A1.

379. *See id.*

380. *Id.* (quoting Geoff Meggs, spokesman for British Columbia Premier Glen Clark).

381. *See id.*

382. *See id.*

383. Beeby's recommendations were supposed to be released to the public only if all sides agreed. *See id.*

384. *See Opinion, Arbitration the Best Way to Settle Fish Tiff*, Fin. Post (Toronto), July 12, 1997, at 14.

affected by the Pacific Salmon Treaty in the North and South regions sought to negotiate the management and allocation of salmon.³⁸⁵

These stakeholder negotiations failed. None of the parties would agree to reduce significantly its own share of salmon.³⁸⁶ With the consensus-style voting process of the Commission, and without agreement on a formula to implement the equity principle, these stakeholder discussions eventually dissolved into finger pointing and frustration.³⁸⁷

C. *The Salmon War Erupts in 1997*

In 1997, the simmering dispute between the United States and Canada over fishing rights erupted into a full-scale "salmon war."³⁸⁸ As talks between the parties broke down for the fourth straight year, both countries escalated the level of fishing interceptions while accusing the other side of failing to negotiate.³⁸⁹ The salmon dispute eventually spilled over to unrelated areas of the U.S.-Canada relationship, affecting passenger ferries, threatening military base closures, and generating a spate of lawsuits.³⁹⁰

1. *Stakeholder Negotiation with Government Oversight*

In 1997, U.S. negotiators presented a proposal to Canada for a stakeholder process that both governments would oversee. The proposal called for fishermen in the region to hammer out an agreement on issues that affected them directly and to make recommendations to the chief negotiators. Canada accepted this proposal, but only if government-to-government negotiations settled issues not resolved by the stakeholders.³⁹¹

385. See Kathleen Kenna, *Canada-U.S. Salmon War Gets Uglier: Barbs Fly Across the Border as Both Sides Accuse Each Other of Lying on the Issue*, *Toronto Star*, July 11, 1997, at A16 (estimating that there are about 32 distinct U.S. stakeholders).

386. See Editorial, *Letting Cooler Heads Prevail in Salmon Talks*, *Seattle Times*, July 27, 1997, at B6 (stating that 1997 talks broke down for lack of senior decisionmaking power by U.S. negotiator and "unwillingness by Alaskans to negotiate away a sockeye catch they could grab by default").

387. See *West Testimony*, *supra* note 195, at 57.

388. See Brandt, *supra* note 385.

389. See *West Testimony*, *supra* note 195, at 57.

390. See *infra* notes 411-55 and accompanying text.

391. See *West Testimony*, *supra* note 195, at 55.

This stakeholder process did result in several creative and far-reaching proposals, including a reduction in the U.S. nontribal commercial sockeye fishery through a voluntary buy-out of forty percent of the fishery, subject to congressional appropriation of the necessary funding. However, the governments could not agree on allocation and conservation of the sockeye and coho fisheries. One of the major stumbling blocks in the negotiation was protection for declining coho stocks, which was one of the major objectives for the United States in the negotiation. Canada refused to agree to U.S. proposals for long-term conservation and rebuilding of coho stocks, and the talks broke down.³⁹²

The two sides proposed a framework for future talks on chinook and agreed to exercise coordinated management on other stocks similar to the 1996 arrangements. During the government-to-government talks, the two sides began to discuss arrangements to bridge the countries' differences on equity. The parties also sought to establish conservation and allocation systems for individual fisheries, which could resolve these issues for a relatively long time period.³⁹³

2. "Canada First" Fishing Strategy

As the 1997 fishing season again started without agreement, Canada began a new strategy to force the Americans back to the negotiating table. This plan, dubbed "Canada First," attempted to win the fish war by catching large numbers of Fraser River sockeye salmon before they reached U.S. waters.³⁹⁴ This policy was an effort to force the U.S. government to come to terms on Treaty agreements by exerting heavy pressure on "American fish."³⁹⁵ As British Columbia Premier Clark explained, the fishing plan represented a means "to ensure that the Americans are worse off this year than they would be without a treaty."³⁹⁶

One can see the impact of this strategy by assessing the Fraser River salmon runs. The parties had failed to reach an allocation agreement with respect to the Fraser River sockeye. When treaty negotiations broke down, Canada offered the United States about seventeen percent of the

392. See *id.* as support for this paragraph.

393. See *id.* as support for this paragraph.

394. See *Benton Testimony*, *supra* note 178.

395. See *Merrigan*, *supra* note 352.

396. *Connelly*, *supra* note 292.

Fraser River salmon catch. American negotiators held out for 21.1%. Under the Canada First policy, Canadian fishermen caught more than three million of the Fraser-bound sockeye salmon, about ten times more than their American counterparts. Thus, by holding out for an additional four percent of this lucrative run, American fishermen received only nine percent of the total harvest.³⁹⁷

Alaska did not reduce its harvest of Canadian stocks in response to Canada's increase in fishing catches. Instead, Alaskans netted 315,000 Canadian sockeye along with the 2,000,000 pinks and other species caught during its pink harvest season. The Alaskan sockeye harvest in 1997 represented a threefold increase from the average of 120,000 Canadian sockeye intercepted by Alaskan fishermen in the previous three years.³⁹⁸

United States fishing officials claimed that their fisheries targeted Alaska's abundant stocks of pink salmon and not Canadian sockeyes. Alaska's Pacific Salmon Commissioner David Benton claimed that the increase in interceptions was due to the higher levels of pink salmon rather than an intentional targeting of Canadian stocks. But the Canadians doubted that the increased number of interceptions was an accident. "When a sockeye is six times more valuable than the pink, you'd have to believe the sun comes up in the West to believe they're not targeting those fish for their nets," said David Anderson, the Fisheries Minister of Canada.³⁹⁹

The fishing strategies of Canada and Alaska, combined with natural conditions, severely limited the number of sockeye salmon returning to the Fraser River. Canadian fishery officials had calculated the catch to allow 500,000 sockeye to escape upstream to spawn, but high water levels in the Fraser River allowed only about 100,000 to reach the spawning grounds in the Stuart River. Some experts believe that these policies threatened critical salmon stocks in both Canada and Washington. David Ellis, a Canadian fisheries analyst, wrote that "the Canada-first fishing plan . . . is actually a 'scorched earth' fishing policy because although it will kill many American coho, it will also kill many coho of Canadian origin." Coho are endangered in both U.S. and Canadian rivers.⁴⁰⁰

397. See *id.* as support for this paragraph.

398. See *id.* as support for this paragraph.

399. See *id.* as support for this paragraph.

400. See *id.* as support for this paragraph.

3. *Canada Tightens Maritime Enforcement*

To increase pressure on American fishermen to settle the Treaty impasse, Canadian officials tightened enforcement of maritime regulations.⁴⁰¹ In 1997, Canada passed a law that requires all boats traveling through Canadian waters to check in by radio with the Canadian Coast Guard and stow their fishing gear below decks.⁴⁰² Strict enforcement of this “hail-in” rule began shortly after the collapse of the salmon negotiations.⁴⁰³ Canadian authorities detained four American boats traveling through the Inner Passage from Washington to Alaska for violating this law.⁴⁰⁴ The skippers were each fined C\$300 (US\$215) and allowed to continue.⁴⁰⁵

Canadian authorities also arrested two tribal fishermen from Washington on illegal fishing charges. Canadian officials seized their boats, nets, and catch near Victoria, British Columbia, claiming the men were illegally fishing sockeye salmon. The two men from the Makah tribe were fined \$4000 each and were released.⁴⁰⁶

The seizure of U.S. vessels angered American officials, who characterized the actions of the Canadian as “gunboat diplomacy.”⁴⁰⁷ A State Department spokesman said the detention of American fishermen “created an atmosphere inimical to progress in these talks and is

401. See Jane Hadley & Jack Hopkins, *Seized Boats Could Go Free Today; Some U.S. Fishermen See a Power Play by Canada*, Seattle Post-Intelligencer, May 27, 1997, at A1.

402. See Coastal Fisheries Protection Act, R.S.C. 1985, ch. C-33, § 4 (forbidding fishing by foreign vessels in Canadian waters), §§ 7–16 (authorizing inspections, arrests, seizures, and forfeitures) (Can.); see also Coastal Fisheries Protection Regulations, C.R.C. ch. 413, § 12, *amended by SOR/96-390*, s. 1(F), s. 2 (Can.). Those regulations state, in part, that “the master of a foreign fishing vessel entering Canadian fisheries waters shall . . . notify a protection officer or Regional Director-General of the name, flag state, location, route and destination of the vessel and of the circumstances under which it entered Canadian fisheries waters [and] shall, while in those waters, ensure that all fishing gear on board the vessel is stowed below deck . . . placed where it is not readily available for fishing; and at the request of a protection officer, proceed to a location indicated by the officer for the purpose of carrying out an inspection of the vessel.” Coastal Fisheries Protection Regulations, C.R.C. ch. 413, § 12, *amended by SOR/96-390*, s. 1(F), s. 2 (Can.).

403. See Tim Klass, “*Salmon War*” *Blamed on Election*, Columbian, May 28, 1997.

404. See Goldberg, *supra* note 349.

405. See Carey Goldberg, *Fishing Talks and Fighting Words*, N.Y. Times, June 5, 1997, at A16.

406. See *Men Fined for Fishing Canadian Waters*, States News Briefs, July 22, 1997, as support for this paragraph.

407. Helen Jung, *U.S. Cuts Fish Talks with Canada*, Anchorage Daily News, May 28, 1997, at 1A (quoting Alaska Gov. Tony Knowles: “What the Canadian federal government has chosen to do is to utilize the Alaska fishermen as political hostages Alaskans will not stand for gunboat diplomacy.”).

unhelpful to efforts to find a solution to the Pacific salmon dispute."⁴⁰⁸ Senator Frank Murkowski, suggested a Coast Guard or Navy escort for other fishing vessels.⁴⁰⁹ The Canadian strategy backfired, however, when U.S. negotiators refused to resume scheduled salmon talks.⁴¹⁰

4. *British Columbia Threatens to Close U.S. Base*

Canadian authorities searched for additional leverage to force the Americans back to the negotiating table for the 1997 fishing season. British Columbia Premier Clark threatened to evict the United States from a submarine testing facility and torpedo range at Nanoose Bay. Unfortunately for Premier Clark, both the U.S. and Canadian governments reacted strongly against his threat.⁴¹¹ This expansion of the scope of the dispute to nonfishing areas poses a greater risk to Canada, as Canada depends more on the United States than the United States depends on Canada.

The Canadian Forces Maritime Experimental and Test Ranges (CFMETR) at Nanoose Bay is located on Winchelsea Island in Georgia Strait, just north of the city of Nanaimo. Although owned and operated by the Canadian military, the U.S. Navy uses CFMETR as a testing ground for torpedoes, sonar, and other high-tech naval equipment used in anti-submarine warfare. The onshore buildings sit on federal property, but the torpedo testing range occupies seabed owned by the province and leased to the Canadian military. Clark threatened to cancel the seabed lease, which would have rendered the facility essentially useless.⁴¹²

The Canadian federal government intervened to prevent the closure of the base.⁴¹³ The federal government sought an injunction from the B.C.

408. Tim Klass, *U.S. Puts off Salmon Talks with Canada over Seizures/4th American Vessel Is Detained as B.C. Premier, Gov. Locke Meet*, News Trib. (Tacoma), May 28, 1997, at B1 (quoting Nicholas Burns).

409. See Timothy Egan, *Fish War Divides Cascadia: Fight over Salmon Incites Nationalism*, Anchorage Daily News, Sept. 14, 1997, at B1.

410. See Jung, *supra* note 407.

411. The Canadian government sued the province of British Columbia for breach of contract involving the lease for the base. Alaska Senator Ted Stevens, Chair of the Appropriations Committee, demanded a review of all U.S. funding for joint defense programs because Canada threatened to renege on its NATO obligations. See Kathleen Kenna, *B.C. Premier's Salmon Threat Creates Diplomatic Tidal Wave; His Ultimatum Embarrasses U.S., Canadian Officials*, Toronto Star, June 28, 1997, at A14.

412. See *id.* as support for this paragraph.

413. See *id.*

Supreme Court to block the cancellation of the seabed lease agreement.⁴¹⁴ Canadian government officials claimed that Premier Clark overstepped his authority because foreign policy and national security fall under federal jurisdiction.⁴¹⁵ If the Premier persists in his efforts to close the facility, federal officials could expropriate the range due to the critical role the base plays in Canadian and American national security.⁴¹⁶ It is unlikely that Premier Clark will follow through on his threat, and has said privately to his aide that he regrets bringing up the issue.⁴¹⁷

5. *Canadian Fishermen Blockade Alaskan Ferry*

The salmon war flared again in July 1997 when Canadian fishermen blockaded the Alaskan ferry *Malaspina* in British Columbia's Prince Rupert Sound for three days.⁴¹⁸ Canadian fishermen surrounded the ferry, seeking to draw attention to their assertion that Alaskan fishermen were catching too many "Canadian" salmon.⁴¹⁹ Specifically, Canada accused Alaska of overfishing, maximizing catches unwarranted by the current abundance of pink and red salmon, and instituting a new intercept fishery in violation of the Pacific Salmon Treaty.⁴²⁰

The stunt succeeded in drawing media attention as the newspapers and television crews focused on the plight of 328 stranded tourists and travelers.⁴²¹ The burning of an American flag—replayed repeatedly by major news programs—inflamed passions on both sides of the border.⁴²²

414. See *Ottawa Looks to End Torpedo Base Threat*, United Press Int'l, Aug. 14, 1997.

415. See *id.*

416. See Anderson, *supra* note 412.

417. See *id.*

418. See Darcy Henton, *Salmon Stakes: B.C. Fishermen, Fearing for the Survival of Their Livelihood in the Face of an Ambitious U.S. Fishing Fleet, Are Proving a Powder Keg in International Salmon Fishing*, Toronto Star, July 27, 1997, at F1; see also *Blockade Ends; Ferry Sails; Fishermen Quit Prince Rupert Protest*, Seattle Post-Intelligencer, July 22, 1997, at A1.

419. See *id.*

420. See Merrigan, *supra* note 352.

421. See, e.g., *Alaska Retaliates in Salmon Conflict*, San Diego Union-Trib., July 24, 1997, at A16; Timothy Egan, *Salmon War in Northwest Spurs Wish for Good Fences*, N.Y. Times, Sept. 12, 1997, at A1; Henton, *supra* note 418; *U.S.-Canada Conflict Takes Another Turn*, Fort Worth Star-Telegram, July 24, 1997, at 4.

422. Ironically, the fisherman who initiated the flag burning had both Canadian and American citizenship. See Egan, *supra* note 421.

The blockade drew immediate protests from the United States.⁴²³ The State Department lodged an official complaint with the Canadian government, asking them to control the actions of the fishermen.⁴²⁴ In addition, the U.S. Senate voted eighty-one to nineteen to condemn Canada for failing to bring a swift end to the blockade.⁴²⁵ The nonbinding resolution urges sanctions against Canada in the event of a recurrence.⁴²⁶

A British Columbia provincial court ordered the fishing boats to dissolve the blockade, and Royal Canadian Mounted Police told the fishermen to leave or face penalties.⁴²⁷ The blockade finally ended after the Canadian Minister of Fisheries, David Anderson, called for the release of the ferry. The Fishery Minister urged the fishermen to give up the blockade so that the Pacific salmon negotiations could continue.⁴²⁸ A judge in Vancouver, British Columbia, has barred further blockades.⁴²⁹

After the release of the *Malaspina*, the Alaskan ferry system canceled remaining ferry service to Prince Rupert and rerouted its ferries to avoid this town in northern British Columbia.⁴³⁰ In turn, this cutoff of transportation caused the city's tourism trade to suffer.⁴³¹ Ferry service resumed only after high-level talks between Canadian federal officials and Alaska.⁴³²

Alaska sued 200 Canadian boat owners who participated in the blockade for C\$2.8 million compensation for the disruption of service in British Columbia.⁴³³ The controversial Premier of British Columbia, Glen

423. See *Senate Condemns Canada over Blockade*, *Columbian*, July 24, 1997.

424. See *id.*

425. See *id.*

426. See Rob Taylor, *Canada and U.S. Take Steps to Resolve the "Salmon War"*, *Seattle Post-Intelligencer*, July 24, 1997, at A1.

427. See *id.*

428. See *Blockade Ends; Ferry Sails; Fishermen Quit Prince Rupert Protest*, *Seattle Post-Intelligencer*, July 22, 1997, at A1.

429. See Stephen Ward, *American Court Action Heats up Salmon War: Alaska Wins Injunction Against Further Ferry Blockades*, *Toronto Star*, July 29, 1997, at A1.

430. See Larry Bleiberg, *Casualty of War; Salmon Battle Has Put Prince Rupert's Charms in the Shade*, *Anchorage Daily News*, Sept. 21, 1997, at K1.

431. See *id.*

432. British Columbia Premier Clark was conspicuously excluded from these international negotiations.

433. See *Threat Stirs Salmon Row: Alaska Seeks Seizure of Vessels in Ferry Blockade*, *Toronto Star*, Aug. 28, 1997, at A1 (noting that defendants also received notice of possible seizures of their vessels); see also Maureen Clark, *Salmon Agreement by March; Knowles Upbeat on Fish, Not Prince Rupert Ferry*, *Anchorage Daily News*, Aug. 1, 1997, at B7.

Clark, offered to pay the legal costs of the fishermen.⁴³⁴ Clark's support earned him the respect and loyalty of Canadian fishermen, but also the increased ire of Canadian federal officials. The Canadian national government refused to intervene on the fishermen's behalf, stating that the government will not "support them financially for illegal acts of civil disobedience."⁴³⁵

Alaska dropped the suit against the roughly 200 fishermen after reaching an agreement with the Canadian government and the City of Prince Rupert. In that agreement, the Canadian government agreed to pay nearly C\$3 million⁴³⁶ for marketing campaigns to encourage tourism in Alaska and British Columbia and to reduce docking fees for Alaska ferries. The Canadian government did not admit liability in the matter. Canadian fishermen must agree to comply with a permanent court injunction barring similar actions and will drop counterclaims against Alaska totaling about C\$15 million.⁴³⁷

6. *Suits and Countersuits*

British Columbia's Premier Clark filed a lawsuit on September 8, 1997, in U.S. District Court in Seattle seeking damages for American overfishing of salmon. Others joined the suit, including the United Fishermen and Allied Workers Union, a branch of the Canadian Auto Workers, and individuals from British Columbia's commercial, recreational, and Indian fisheries. The named defendants included the U.S. federal government, Washington, Alaska, U.S. Secretary of State Madeleine Albright, and Commerce Secretary William Daley. The suit alleged that the U.S. federal government has failed to curb fishing by Alaskan fisherman in excess of the Treaty limits and in violation of Treaty principles. The lawsuit sought damages estimated at C\$325 million to compensate fishermen who could not harvest their share of salmon.⁴³⁸

434. See Ward, *supra* note 429.

435. *British Columbia Considers Court Action over Fish Treaty*, Anchorage Daily News, Sept. 4, 1997 (quoting David Anderson, Canadian Federal Fisheries Minister).

436. The U.S. equivalent was approximately \$2 million.

437. See Melissa Moore, *Ferry Deal Requires OK of Fishermen*, Anchorage Daily News, Jan. 23, 1998, at B1.

438. See Tim Klass, *Court Throws out B.C. Salmon Suit*, Anchorage Daily News, Jan. 31, 1998, at D8, as support for this paragraph.

The suit was founded on the alleged disproportionate catch by Alaskan fishermen, in violation of the Magnuson Fishery Conservation and Management Act⁴³⁹ and statutes implementing the Pacific Salmon Treaty in 1985.⁴⁴⁰ Clark claimed that Alaskans caught 572,000 Canadian sockeye, four times the limit established by the Treaty.⁴⁴¹ Alaskan officials responded that Alaskan fishermen only incidentally intercepted Canadian fish while fishing for Alaskan pink salmon.⁴⁴² They also noted that the agreement limiting Alaska's Canadian sockeye catch had expired.⁴⁴³

Premier Clark stated that he hoped the lawsuit would provide leverage to force the United States into serious treaty talks.⁴⁴⁴ The Canadian federal government did not support Clark in his efforts.⁴⁴⁵ Clark responded by calling Canada's federal government "treasonous" for failing to support his efforts on behalf of Canadian fishermen.⁴⁴⁶ Clark has even created an extraordinary advertising campaign in which he accused Americans of trying to kill the great salmon bounty.⁴⁴⁷ Gary Locke, Washington's governor and a target of Clark's ads, retorted that Clark is "willing to grandstand this issue and fish the salmon to extinction if that's what it takes . . . That won't save a single fish."⁴⁴⁸

Judge John Coughenour dismissed the case on January 30, 1998.⁴⁴⁹ The judge stated that a demanding corrective action on the fishery "would impose a foreign policy decision on the executive branch."⁴⁵⁰ The judge held that damage claims against the United States are based on Treaty provisions that expired years ago, and those against Washington

439. 16 U.S.C. §§ 1801–1883 (1994).

440. See Klass, *supra* note 438.

441. See Rob Taylor, *B.C. Leader Sues U.S., State, over Salmon Pact: Clark Alleges Violations, Hopes to Spur Treaty Talks*, Seattle Post-Intelligencer, Sept. 9, 1997, at A1.

442. See *id.* It should be noted, however, that sockeye salmon are much more valuable than pink salmon. For instance, in 1990–1991 the average "ex vessel" price per pound of pink salmon in southeast Alaska was \$0.25, while the price per pound of sockeye was \$1.23. See Huppert, *supra* note 25, at 20.

443. See Taylor, *supra* note 441.

444. See *id.*

445. See Joel Connelly, *Salmon War Sees Flip-Flop in Roles*, Oregonian, Sept. 21, 1997, at A27.

446. See *id.*

447. See Egan, *supra* note 409.

448. *Id.*

449. See Klass, *supra* note 438.

450. *Id.*

and Alaska are barred by the Eleventh Amendment to the Constitution.⁴⁵¹ The opinion stated that the Treaty “is only a framework” for negotiating harvest allocations and fishing regimes that might have the force of law.⁴⁵² Coughenour noted that initial Treaty catch allocations have expired and the so-called “equity principle” remains undefined and subject to further negotiations.⁴⁵³ Thus, the Treaty merely represents “an agreement to agree,” and is thereby unenforceable without a negotiated annual settlement.⁴⁵⁴ “The court cannot apply principles of statutory construction to a statute that has not been finished.”⁴⁵⁵

7. *High-Level Envoys Seek Solution*

United States and Canadian officials appointed a special team of envoys to discuss restarting talks between the two countries.⁴⁵⁶ President Clinton appointed William Ruckelshaus, former head of the Environmental Protection Agency, to assess the issue and reinvigorate the talks.⁴⁵⁷ Canadian Prime Minister Jean Chretien appointed Dr. David Strangway, former B.C. University President, to serve as the Canadian facilitator in this process.⁴⁵⁸

These high-level appointees issued a report on January 12, 1998.⁴⁵⁹ During the press conference announcing their findings, U.S. envoy William Ruckelshaus explained the need for dramatic change. “Right now, with no rules, the fish are losing,” he said.⁴⁶⁰ The report gave four recommendations for resolving the Treaty impasse:

451. *See id.*

452. *Id.*

453. *See id.*

454. *Id.*

455. *Id.*

456. *See Ruckelshaus to Work on Fishing Dispute*, United Press Int'l, July 25, 1997.

457. *See id.*; *see also* Ross Anderson, *B.C. Premier Predicts Fish Talks Will Fail—Ruckelshaus Will Represent U.S.*, Seattle Times, July 25, 1997, at B1.

458. *See Ruckelshaus to Work on Fishing Dispute*, *supra* note 456; *see also West Testimony*, *supra* note 195, at 54.

459. *See Envoys: Governments Must Settle Fish Wars*, News Trib. (Tacoma), Jan. 13, 1998, at B3.

460. Connelly, *supra* note 292.

1. The stakeholder process should not be reconvened.⁴⁶¹ This process—where commercial, tribal, and recreational fisheries interests negotiated—was broken beyond repair.⁴⁶²
2. The governments should adopt interim measures for two years through direct government-to-government talks.⁴⁶³
3. During the two-year period, the governments should develop a practical framework for Article III.⁴⁶⁴
4. Governments should review the Pacific Salmon Commission and dedicate themselves to making it functional.⁴⁶⁵

While these recommendations are a step toward a solution, the report does not provide the means for effectively resolving the salmon crisis. The failure of the two representatives to come up with a solution left officials in both countries wondering whether the Treaty would have to be jettisoned altogether, leaving the two nations to start from scratch.⁴⁶⁶

D. Negotiating Positions of Each Side

1. Abundance-Based Management or Equity First

The American position places conservation as the first priority. American fish management officials believe that harvests in each fishery should reflect abundance of the fish stocks. This principle of adjusting annual harvests to account for the abundance of the predominant stock is a well-established practice in salmon management. With this approach, annual harvest levels respond to variations in abundance of the targeted stocks in order to achieve a maximum sustainable yield. Because Canadian and American salmon intermingle in ocean fisheries, a higher harvest rate due to abundant stocks would probably result in more interceptions of the less abundant stocks as well.⁴⁶⁷

461. See Rep. Don Young, *Congressman Young Reacts to Ruckelshaus-Strangway Report on Pacific Salmon* (Jan. 12, 1998) (press release) (on file with author).

462. See Editorial, *Moving Stalled Fish Talks*, *Seattle Times*, Jan. 13, 1998, at B4.

463. See *id.*; Young, *supra* note 461.

464. See Young, *supra* note 461.

465. See *id.*

466. See Carole Landry, *U.S., Canada Fail in Latest Bid to Settle Pacific Salmon Dispute*, *Agence France-Presse*, Jan. 12, 1998.

467. See Huppert, *supra* note 25, at 15 as support for this paragraph.

Alaskan officials, in particular, have argued that abundance-based management not only achieves conservation, but also works equitably in the long run. For this claim to be valid, however, there must be some means of balancing the interception deficits and surpluses over time. When excess interceptions occur, the harvest regime must be modified to permit excess interceptions by the other party. This method would achieve a balance of interceptions over the long run. The Pacific Salmon Treaty recognizes the need to accommodate annual fluctuations by establishing five-year catch objectives and requiring “pay-backs” when harvests exceed agreed levels. However, the parties have not yet worked out a comprehensive rule for achieving this interception balance.⁴⁶⁸

Canada also places a high priority on conservation, but it views the “abundance-based” approach as avoiding direct discussion of the equity issue.⁴⁶⁹ Washington has offered to reduce its catch of Fraser River salmon in return for reduced Canadian catch of coho and chinook off Vancouver Island.⁴⁷⁰ In contrast, Alaska stubbornly refused to reduce its harvest rates, and Canada refused to make a deal involving only the southern fisheries.⁴⁷¹

Canada reasonably argues that it should reap the benefits of taking good care of fish habitat.⁴⁷² John Radisovic, British Columbia’s leader of the fishermen’s union, stated that Canada “didn’t put power dams on our rivers. The Americans chose to put dams from stem to stern, and now they’re looking toward us and saying, ‘Well, we dammed up our rivers, but now we’d like your fish.’”⁴⁷³

2. *Stakeholder Decisionmaking or Government-to-Government Negotiation*

The United States has insisted on stakeholder-based negotiations to resolve the impasse over the Pacific Salmon Treaty.⁴⁷⁴ However, the parties have employed this type of negotiation several times and it has

468. See *id.* as support for this paragraph.

469. See *id.*

470. See *id.* at 16.

471. See *id.*

472. See Kim Murphy, *Canadians Steam About U.S. “Salmon War”*, *Oregonian*, Aug. 3, 1997, at A22.

473. *Id.*

474. See *West Testimony*, *supra* note 195, at 56–57.

consistently failed to resolve the underlying issues involved in the Treaty.⁴⁷⁵

Political infighting between the various factions in the U.S. fishery often gets very heated. During the recent stakeholder negotiations, some representatives expressed fear for their personal safety.⁴⁷⁶ They claimed that their homes and cars were in danger of being firebombed if they were perceived as having "given in" to Canada.⁴⁷⁷ Several also noted that they would be able to reap greater immediate benefits in the absence of a Treaty than with a negotiated peace.⁴⁷⁸ Canada has grown frustrated with the stakeholder talks, arguing that these negotiations with the United States were like debating with several different countries.⁴⁷⁹

E. Conclusions About Treaty Problems

Problems with the Treaty's process have resulted in years of frustration and fury over salmon allocation. This frustration has erupted recently into a full-scale salmon war between the United States and Canada, with battles fought in fishing boats, in blockades, and in courtrooms. The war has escalated to the point that it has jeopardized other areas of the U.S.-Canada relationship.

The United States and Canada may scrap the Treaty altogether unless new long-term solutions are developed. Policy makers have hinted that the Treaty process itself may be in jeopardy if the current problems are not resolved soon.⁴⁸⁰ The chief negotiator for the United States, Mary Beth West,⁴⁸¹ told a Congressional subcommittee that a failure in the talks could cause some to question "whether the Treaty is still useful."⁴⁸² The parties must work to resolve the problems with the Pacific Salmon Treaty, such as the definition of equity and the means for allocating salmon, before breaking the Treaty process irretrievably. Alternatively,

475. See Editorial, *Moving Stalled Fish Talks*, Seattle Times, Jan. 13, 1998, at B4.

476. See Gerry Kristianson, Editorial, *U.S.-Canada Salmon Treaty Negotiations Tread Rough Waters*, Seattle Post-Intelligencer, June 5, 1997, at A15. Mr. Kristianson represented sport fishermen in the 1997 Pacific Salmon Treaty stakeholder negotiations.

477. See *id.*

478. See *id.*

479. See Huppert, *supra* note 25, at 14.

480. See West Testimony, *supra* note 195, at 57.

481. See *id.* at 55.

482. *Id.*

the parties can devise a new Treaty mechanism that fixes the problems with the current Treaty.

IV. POSSIBLE SOLUTIONS TO THE SALMON WAR

*There is nothing more dangerous to manage than the creation of a new order of things. . . . [T]he initiator has the enmity of all who would profit by the preservation of the old institution, and mere lukewarm defenders of those who would gain by the new ones.*⁴⁸³

Continued international confrontation will inevitably lead to the extinction of several species of Pacific salmon. Without an enduring and equitable solution to issues of salmon conservation and allocation, each side will continue to harvest more than the resource can sustain. All parties must work together and develop lasting compromises to assure that salmon continue to swim the waters of the North Pacific Ocean.

The causes of the Pacific salmon war are complex, and will require solutions that recognize the various interrelationships between politics, economics, and biology. Any settlement in the dispute must give priority to conservation needs while also resolving allocation issues for fisheries with dissimilar characteristics and disparate management opportunities.⁴⁸⁴ The solution must also account for salmon's economic, cultural, and social implications, and recognize the legal rights of Indian tribes on both sides of the border.⁴⁸⁵ Furthermore, Canadians have insisted that a solution must address not only future allocations but also allegations of past "equity imbalances."⁴⁸⁶ Effectively solving the problem of Treaty implementation will require a system for long-term cooperation between the parties, moving away from annual negotiations and disputes.

Any solution to this most recent crisis over salmon must meet some basic criteria. The first priority must be to assure the continued abundance of salmon. Both nations must make conservation paramount, with a particular focus on preventing further declines in the overfished coho and chinook salmon runs.⁴⁸⁷ Any fishing agreement must limit the harvests of depleted runs, particularly endangered runs such as the Snake

483. Tipton, *supra* note 10, at 380 (quoting Niccolo Machiavelli).

484. See *Pipkin Testimony*, *supra* note 129.

485. See *id.*

486. See *id.*

487. See Gauvin, *supra* note 263.

River chinook.⁴⁸⁸ Furthermore, an agreement should provide each country with incentives for preserving the critical habitat that salmon require for their continued vitality.

Accepting conservation as a paramount goal, scientists must set the optimal limits on the annual harvest to create a sustainable population. Harvest limits must be grounded in science, not politics. Once both nations accept conservation as a paramount goal, the nations must agree to respect the best available scientific information in setting harvest levels.⁴⁸⁹ Fishery managers must be isolated from political pressures that have driven them to allow rampant overfishing.⁴⁹⁰

Allocation between competing regions must be equitable. Any solution must devise a means for equitably allocating the salmon catch in a way agreeable to the various parties. Given the equity principle established in the Treaty, the catch allocated to each country should be based solely on the health of its rivers' salmon population, and not on the party's negotiating strength. It may be possible, however, to remove the domestic allocation squabbles from the international negotiating table. International agreements could determine the division of the harvest between the two countries based on scientific and legal principles. Only then should West Coast fishery "stakeholders" have a role in deciding who gets to catch how many fish.⁴⁹¹ Once the allocation is made between Canadian and American interests, the American team would determine the allotment of salmon to be caught by each of the regions—Alaska, Washington, and Oregon—and by each of the stakeholders—commercial, recreational, and tribal fisherman.

Any solution must resolve issues for the long term. The controversy between the United States and Canada has lurched from crisis to crisis in recent years, because of the dispute over fundamental principles enshrined in the Pacific Salmon Treaty. The controversy with Canada "requires a solution that puts in place a system for long-term cooperation."⁴⁹² To achieve a long-term cooperative solution, both parties must agree on a clear definition of the principles governing their fishery decisions. A longer-term solution should also solve the problem of annual negotiation gamesmanship that has held up recent fishing

488. *See id.*

489. *See id.*

490. *See id.*

491. *See Connelly, supra* note 445.

492. *Pipkin Testimony, supra* note 129.

seasons. It is extraordinarily difficult to negotiate all of the intricate details involved in international salmon management. It is even more difficult to negotiate these issues each year within the tight time frame required by the beginning of fishing season.⁴⁹³ The special envoys' recommendation for a two-year interim agreement may be a step in the right direction.

A. Model of Salmon Allocation

To better understand the underlying dynamics of international salmon management, this Article sets forth a simple two-country model. By examining the workings of this model, one can see that resolving problems of interceptions and salmon allocation depends critically on the nature of the intermingling stocks. This model demonstrates that the management of fisheries in one region dramatically influences the availability of fish in other regions. One can also explore how different solutions may result in different outcomes for conservation and allocation of the salmon resource.

This paper examines three different variations in the basic two-country model. The first variation involves two countries whose fish stocks stay within the country of origin's Exclusive Economic Zone (EEZ). The second variation examines the problems that result when one country's fish stocks swim exclusively in the other country's EEZ. The third model—the one most relevant to the North Pacific fishery—explores the issues arising from the intermingling of fish stocks in both countries' EEZs.

1. Fish Swim Only in One Country's EEZ

In the first simple two-country model, fish swim only within the country of origin's EEZ. In this situation, there is little need for international coordination and management, because each country has the incentive to harvest its fish resources at a rate that maximizes the sustainable yield into the future. Domestic management could devise means for allocating the resource among fishermen without the need for international coordination and cooperation. Furthermore, each country will make the optimal investment in conservation for its own rivers, because it will receive all of the benefits of this investment.

493. See *West Testimony*, *supra* note 195.

2. *Fish Swim Only in Another Country's EEZ*

In the second model, the fish have distinctly different migration patterns. The fish in this example swim only in the neighboring country's EEZ, returning to their country of origin only to spawn. With this type of migration pattern, each country would still have incentives to harvest at maximum sustainable yields because the fish return to the harvest grounds each year. However, the countries have no incentives to conserve fish habitat on land, because these benefits accrue only to one's neighbor and not to the conserving country. Under the optimal solution in this situation, the two nations would agree to a desired level of conservation, perhaps with one nation paying the other to conserve fish-spawning habitat.

3. *Fish Intermingle in Two Countries' EEZs*

In the third model, the fish intermingle in the two countries' EEZs before returning to spawn in their country of origin. This type of migration pattern would reduce incentives for conservation because those who sacrifice to conserve would not reap the benefits of such conservation. Furthermore, neither party would have incentives to limit its harvest to maximum sustainable yields without assurances from the other party that it would also restrict its harvests. Without agreement between the two countries, the resulting "race to the resource"⁴⁹⁴ would lead to overfishing and overutilization of the fishery. This type of situation requires an international cooperative solution. For instance, each country could compensate the other for catches of its neighbor's fish.

B. *Possible Solutions*

At least four different approaches could resolve the current salmon dispute between the United States and Canada. These include binding arbitration, an "or else" provision in the Treaty, compensation for interceptions, and individual transferable quotas (ITQs).

494. Tipton, *supra* note 10, at 382.

1. *Binding Arbitration*

As one possible solution to the current impasse, the parties could submit the issues to an international dispute resolution or arbitration board. The Treaty could be revised to create an arbitration process for issues not resolved through the Pacific Salmon Commission each year. This process should bind each party to assure that at every harvest season there are effective limitations on each country's salmon harvest.

Canada has repeatedly sought to have the allocation and equity issues of the Treaty resolved by binding arbitration.⁴⁹⁵ The parties did attempt to use a mediator in 1996, but that effort was unsuccessful and the mediator's report was sealed.⁴⁹⁶ The Americans resisted the efforts at binding arbitration, arguing that such a process would exclude U.S. state governments and stakeholders from any agreement.⁴⁹⁷ Furthermore, American officials claim that the Treaty would have to be changed, or a vote of Congress taken, to allow for any agreement not obtained through consensus of the U.S. Section of the Pacific Salmon Commission.⁴⁹⁸ According to James Pipkin, U.S. special negotiator and federal Commissioner on the Pacific Salmon Commission, any arbitration would essentially amend the Treaty and would require approval of two-thirds of the U.S. Senate.⁴⁹⁹

If the parties add an arbitration clause to the Pacific Salmon Treaty, it should further clarify and define the means for allocating salmon between the parties. To avoid the exclusion of U.S. stakeholders from the process, an arbitrator could have the authority to determine only the harvest limits for each nation. Once the arbitrator determined the allocation between Canadian and American interests, the American team would have to determine the allotment between each of the many U.S.

495. See, e.g., Thomas Walkom, *Net Loss: More Than Livelihoods Are at Stake in the Salmon War; We Could Lose Our Sovereignty*, Toronto Star, Dec. 21, 1997, at F1; Anthony Willson-Smith et al., *Under Friendly Fire: Land Mines and Fish Test Canada-U.S. Relations*, Maclean's, Sept. 29, 1997, at 24.

496. See *Salmon War Spills out of Hearing: Canadian Wants Binding Arbitration; Alaskan Wants No Politicians*, Anchorage Daily News, Sept. 18, 1997, at F1.

497. See Adam Zagorin & Dianne Rinehart, *Kettle of Fish: The Drawn-Out Salmon Dispute Turns into a Standoff That Leaves Ottawa and Washington Scrambling for Ways to Keep a Bad Situation from Getting Worse*, Time (Canadian Edition), Aug. 4, 1997, at 20.

498. See Willson-Smith et al., *supra* note 495, at 24.

499. See *No Treaty Likely This Summer in U.S.-Canada Salmon War, Negotiator Says*, Columbian, June 27, 1997.

stakeholders—the three states, Indian tribes, and professional and sport fisherman.

2. *“Or Else” Provision to Encourage Negotiation*

Under another alternative, the Treaty could establish a default mechanism that would go into effect in the absence of a negotiated agreement. The parties would implement this default rule only if the parties could not agree on annual allocation. To provide an incentive to reach a negotiated settlement, this default rule could specify a more limited catch than the parties would likely reach in negotiations. The prospect of this reduced catch would spur the stakeholders to negotiate and it would prevent them from benefiting from the collapse of negotiations.

3. *Compensation for Interceptions*

Another solution requires one country to compensate the other for interceptions of salmon. According to Canadian officials, the United States has caught \$650 million more in salmon than has Canada since the countries signed the Pacific Salmon Treaty in 1985.⁵⁰⁰ To remedy this imbalance, the United States considered establishing a fund to compensate Canadian fishermen for overfishing, but British Columbia Premier Clark opposed such a proposal, describing the fund as “a dangerous concept” if the United States could continue to intercept Canadian fish.⁵⁰¹ Canadians argue that they expect economic benefits from the salmon fishery in return for their efforts to preserve salmon habitats, such as restricting logging and limiting urban development.⁵⁰²

However, a tax on one country’s interceptions of the other’s fish could provide the basis for a long-term allocation of salmon resources between the two countries. Each country could adjust an interception tax by species, abundance, and market value, as well as by the type of fisherman: recreational, commercial, or tribal. The taxation of interceptions would create real incentives for reducing interceptions by both parties. Both fishing regulators and fishermen would take into account the impact of this tax when deciding their annual goals.

500. See Editorial, *Stuck in the Same Boat*, Fin. Post (Toronto), Nov. 4, 1997, at 22.

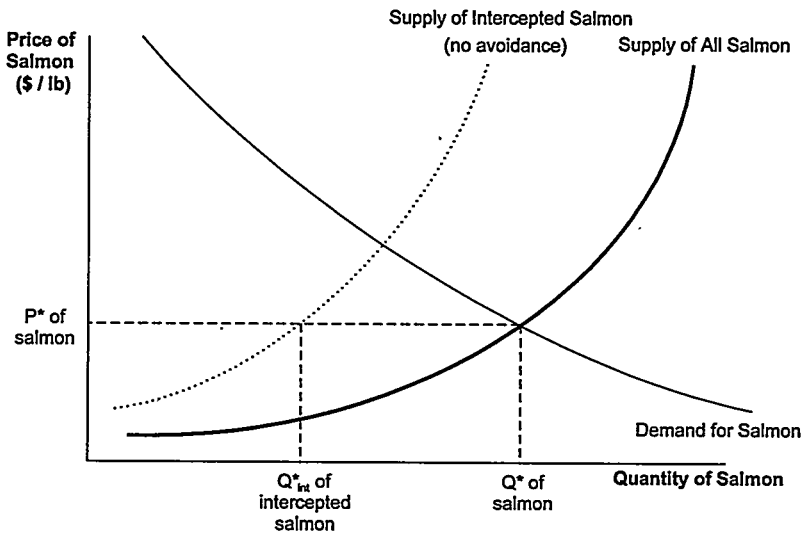
501. *Id.*

502. See *id.*

Furthermore, this type of taxation policy would create a fund that the countries could use to enhance future salmon runs. Proceeds from this fund would go to the country of origin to compensate for efforts to conserve fragile salmon habitat. In addition, this type of tax on interception would make the equity principle a practical reality rather than just a theoretical goal.

To see how an interception tax would effect the supply and demand of salmon—and the level of interceptions—this Article examines a simple model of the market for salmon. Figure 4 shows that the supply and demand of salmon leads to a market clearing price at P^* , with the quantity of salmon caught and sold at Q^* . The supply of intercepted salmon—a component in the total supply of salmon—also responds to price of salmon. The market clearing price leads to a level of interceptions of Q^*_{int} .

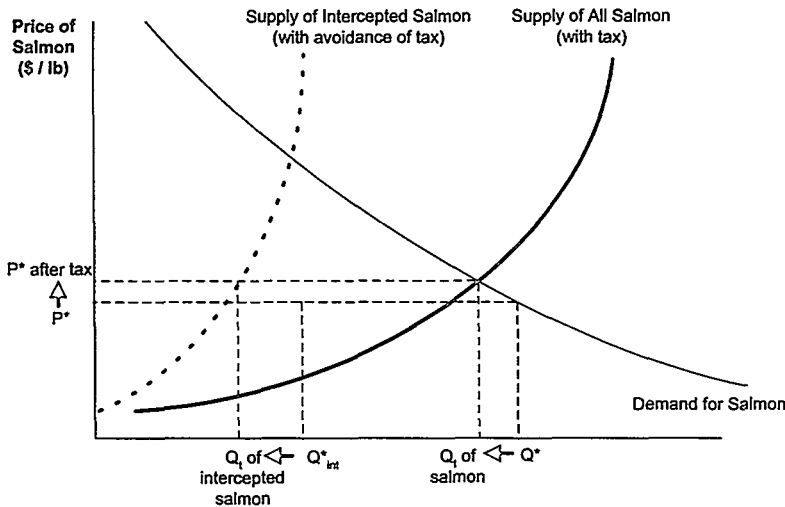
Figure 4: Market for Salmon Without Tax



If an interception tax is imposed on the suppliers (the fishermen), the shape of the supply curve for intercepted salmon changes, shifting the overall supply curve. Figure 5 demonstrates how such a tax would increase the price of all salmon and decrease the amount sold in the market. Notice how the supply of intercepted salmon reacts more strongly to the tax on interceptions than does the supply of all salmon. Thus, number of salmon intercepted drops more than does the total catch

of salmon. This reflects the likely result that some fishermen can avoid interceptions. However, not all interceptions can be avoided because the salmon stocks intermingle in the ocean. As fishermen and fish regulators seek to avoid the tax, they will change their fishing habits and seek to substitute their own salmon stocks for those of another country.

Figure 5: Market for Salmon with Tax on Interceptions



This type of tax would likely be imposed at the point where fishermen sell their catch to wholesale fish buyers.⁵⁰³ The difficult issue is how to determine the amount of tax to impose. Estimating interceptions is part science and part art. But this type of estimation provides an inadequate basis for a tax-based regime. A more concrete method—perhaps one based on random sampling of fish catches or on tagging of fish—could determine the amount of tax each fishermen must pay.

4. Individual Tradable Fishing Rights

Finally, the last solution involves creating an international market-based system of individual transferable quotas (ITQ). An ITQ system

503. A major issue is whether the United States or Canada has the authority to impose taxes on Indian fishermen. This question depends on where the "incidence" of the taxation falls. However, it is beyond the scope of this paper to discuss this issue.

would assign each market participant a defined share of the total allowable catch of available fish, generally based on the fishermen's or boat's historical participation in the industry. Each market participant would own these quotas in perpetuity, or until sold.⁵⁰⁴ ITQs would become an asset that the parties could sell, lease, or give away.⁵⁰⁵ The value of the quota would vary depending on the market value of the species, the total allowable catch established by fishery managers, the health of the fish stock in the future, and the demand for that type of quota.⁵⁰⁶ An ITQ program would allow fishing industry participants to earn a reasonable profit, while conserving oceanic species for future generations of both fishermen and consumers.⁵⁰⁷

This system of transferable fishing rights currently exists in several U.S. fisheries, including North Pacific halibut and sablefish, Mid-Atlantic surf clams and ocean quahogs, and South Atlantic wreckfish.⁵⁰⁸ Several other nations have implemented successful ITQ programs, such as New Zealand,⁵⁰⁹ Australia, and Iceland.⁵¹⁰ Experts at a 1994 fisheries conference held at the University of Washington generally supported the transition of American fishery management to an ITQ system from the current Olympic system.⁵¹¹ Furthermore, environmental organizations such as the Environmental Defense Fund support the use of ITQs as a "promising fishery management tool."⁵¹² Although Congress has established a moratorium on this type of fish management scheme

504. See, e.g., New Zealand Seafood Indus., *Introduction to the Quota Management System (QMS)* (visited July 31, 1999) <<http://www.seafood.co.nz/qmsintro.html>> (explaining that New Zealand's quotas were allocated to individuals with commercial fishing permits and were valid until sold).

505. See *id.*

506. See *id.*

507. See Tipton, *supra* note 10, at 385.

508. See At-Sea Processors Ass'n, *Individual Transferable Quota Programs: Using Market-Based Solutions to Solve Fisheries Management Problems* (visited July 31, 1999) <<http://www.atsea.org/issues/itqpaper.html>>.

509. See New Zealand Seafood Indus., *supra* note 504.

510. See At-Sea Processors Ass'n, *supra* note 508; Tipton, *supra* note 10, at 399–402.

511. See Tipton, *supra* note 10, at 398 (citing Ross Anderson, *Annual Derby Day for Halibut: Madness in the North Pacific*, *Seattle Times*, July 10, 1994, at B5).

512. *Individual Transferable Quotas for Fish Harvest Privileges: Hearing Before the U.S. House of Representatives Comm. on Merchant Marine and Fisheries, Subcomm. on Fisheries Management*, 103d Cong. (1994) (statement of Rodney M. Fujita, Ph.D., and D. Douglas Hopkins, J.D., of the Environmental Defense Fund) [hereinafter *EDF Testimony on ITQs*]. But see *Individual Transferable Quotas for Fish Harvest Privileges: Hearing Before the U.S. House of Representatives Comm. on Merchant Marine and Fisheries, Subcomm. on Fisheries Management*, 103d Cong. (1994) (statement of Greenpeace expressing concerns with ITQs).

through October 2000, this waiting period would give fishery managers the opportunity to carefully craft an international ITQ system to meet the particular needs of the North Pacific salmon fishery.⁵¹³

An ITQ market scheme would shift the focus from a fishery “free-for-all” to a system of allocating individual, definable property rights in fishing resources.⁵¹⁴ Fishermen would no longer feel driven to catch as many fish as possible in an ever-shorter fishing season. Fishermen would have the opportunity to catch their allowed share in the safest, most efficient, and most cost-effective means possible.⁵¹⁵ ITQs provide for the “enclosure and privatization of the common resources of the ocean” by granting fishermen a defined share of the harvest.⁵¹⁶

In the North Pacific salmon fishery, tradable quota rights could be issued to both the United States and Canada in proportion to the fish that originate in their waters, minus the escapements required to sustain a maximum yield in the future. When calculating the total allowable catch for each of the species, fishery managers would consider empirical biological data and consider the specific requirements for maintaining sustainable fish stocks, rather than the preferences of politicians or commercial interest groups.⁵¹⁷ Each country’s total allowable catch would be divided between each of the regions or states, and divided further between all fishery participants—commercial, recreational, and tribal—based on historical catch data. Tribal fishermen could be given the rights to harvest salmon equal to their Treaty rights.

The nature of the property right—its duration, exclusivity, divisibility, and transferability—directly affects the success of a market-based system for allocating fishing resources.⁵¹⁸ The initial quota can be allocated as a set quantity of stock or as a percentage of the determined total allowable catch.⁵¹⁹ A percentage system would be less susceptible to legal challenges if quota numbers decreased in future years, since tangible numerical loss can more easily support a claim of a governmental taking

513. See Magnuson Fishery Conservation and Management Act, 16 U.S.C.A. § 1853(D)(1)(a) (West Supp. 1998); see also Environmental Defense Fund, *EDF Urges Nat’l Committee to Endorse Use of Individual Fishing Quotas to Help the Environment and Fishing Communities* (last modified Jan. 26, 1998) <<http://www.edf.org/pubs/newsreleases/1998/jan/e%5Fredsnapper.html>>.

514. See Tipton, *supra* note 10, at 397.

515. See *id.*

516. *Id.* (quoting *Rights Based Fishing* 3 (Philip A. Neher et al. eds., 1989)).

517. See *id.* at 385.

518. See *id.* at 411.

519. See *id.* at 410.

under the Fifth Amendment. A percentage system would also give government regulators greater flexibility to adjust quotas to accommodate the scientific and biological needs of the salmon.⁵²⁰

Individual transferable rights could initially be allocated to boat owners or fishermen based on their past catch histories.⁵²¹ These quotas could either be given to industry participants or purchased for a fee. Although the Magnuson Act prohibits the United States from charging American fishermen for the right to harvest fish, the Act does permit charging fees to cover administrative costs.⁵²² American officials could charge quota recipients rental rates that reflect the costs of administration and enforcement and still stay within the requirements of the Magnuson Act.⁵²³ This would pass the costs of the program to the industry participants who benefit from the system.

The participants could then freely transfer quota rights in the market, either by selling the rights outright or leasing them for a season. This type of market approach would, in theory, allocate rights to those individuals who value them most. Once allocated, the rights should be renewable for each subsequent year or directly transferable to immediate family members. The transferability of quota shares is important for several reasons. First, a quota market allows new individuals to enter into a fishery without increasing the total fishing effort.⁵²⁴ Second, transferability allows fishermen to adjust their fishing effort to changing circumstances, providing greater flexibility.⁵²⁵ Individuals can enter or leave the fishery, or adjust their harvests by buying and selling shares.⁵²⁶ Third, the sale of quota shares provides a rational method for retiring excess capacity in a fishery by compensating a person for leaving the fishery.⁵²⁷

An ITQ system for Pacific salmon must regulate on a multi-species basis to prevent fishermen from migrating away from regulated fisheries

520. *See id.*

521. In the United States, the Magnuson Act requires that all limited entry devices must take historical participation of a vessel into account, usually by examining past catch history. *See* 16 U.S.C. § 1853(b)(6) (1994).

522. *See* 16 U.S.C. § 1854(d)(1) (1994).

523. *See* Tipton, *supra* note 10, at 407.

524. *See* At-Sea Processors Ass'n, *supra* note 508.

525. *See id.*

526. *See* Environmental Defense Fund, *supra* note 513.

527. *See* At-Sea Processors Ass'n, *supra* note 508.

to other species.⁵²⁸ If “lesser valued fish species are not covered in a protective ITQ scheme at the outset, industry participants driven from the higher valued fishery may move into the lesser valued fishery, thereby bringing the problems of the first fishery into the second.”⁵²⁹ This would create a domino effect on the fisheries,⁵³⁰ and could potentially harm currently healthy fish populations in the North Pacific.⁵³¹

Enforcement would require analyzing records from both fishing vessels and processors.⁵³² A ticket system could help achieve compliance with the ITQ quota rules. Tickets would be assigned to the owner of the initial quota allocations, and new tickets would be passed out each year.⁵³³ The tickets would be transferable from owner to lessee and from fishermen to processor.⁵³⁴ Each ticket should display the history of the quota it represents: the original assignee, lessee if applicable, salmon catch, and market destination.⁵³⁵ Fishermen would have to present their quota licenses and turn over the necessary number of quota tickets at the dockside before the processors could buy their captured fish. Recreational and commercial fishermen could even purchase additional shares at the dockside if their catch differed from their share allocation. Under a ticket system, each onshore processor would have a file of tickets for all the fish processed at that site. Enforcement officials could check the ticket files against the records of the processor to prevent processors from illegally accepting fish without quotas.⁵³⁶

An ITQ system should also harness the quota holders’ own self-interest and use basic deterrence to make the new system almost self-regulating.⁵³⁷ ITQ shareholders would have incentives to report illegal harvesting because poaching would result in depleted stocks, which would in turn reduce the value of their ITQ permits. Poaching or misuse of quotas must result in penalties severe enough to deter cheating. Furthermore, enforcement officials should have the power to reduce the

528. See Tipton, *supra* note 10, at 411.

529. *Id.* at 414.

530. See *id.* at 414–15.

531. See *id.* at 414.

532. See *id.* at 404.

533. See *id.* at 418.

534. See *id.*

535. See *id.*

536. See *id.* at 419.

537. See *id.* at 407 n.178.

quota allocations of individuals who violate the rules of the ITQ system. These forfeited quota rights could be sold, held as conservation covenants by the government, or distributed by lottery to qualified applicants.⁵³⁸ Multiple infractions could result in banishment from the fishery altogether.⁵³⁹ This would encourage individuals to report “illegal activities in order to maintain the benefits of safer and more relaxed fishing periods, higher market prices and the profitability of share transfers.”⁵⁴⁰

The benefits of an ITQ system include eliminating incentives to overcapitalize, ending the “race for fish,” enhancing crew and vessel safety, increasing profits, and reducing pressure on managers to set unsustainable harvest limits.⁵⁴¹ ITQs can also reduce waste from the dumping of incidental nontarget species.⁵⁴² By eliminating the “race for fish” caused by increasingly shorter fishing seasons, fishermen can take measures to avoid incidental catches without being penalized.⁵⁴³ An ITQ system may also improve the survival rates for discarded fish.⁵⁴⁴ Fishermen would have time to handle “by-catch” more carefully,⁵⁴⁵ because fishing seasons would be longer.

ITQs could also quell much of the contentious debate about the allocation of salmon-fishing privileges between the United States and Canada. Although the initial allocation of salmon-fishing quotas would inevitably present an arduous and difficult task, market forces and the exchange of quotas between fishermen would take over much of this process.⁵⁴⁶ This international market in fishing quota rights could also resolve interception issues. American fishermen would have to buy rights to Canadian fish in order to intercept salmon, and Canadian fishermen would have to buy the rights to catch American salmon. Of course, it

538. *See id.* at 420.

539. *See id.*

540. Gloria Godsell & Mary Penny Thompson, *Issues Surrounding the Gulf of Mexico Red Snapper Fishery and the Impact of the Magnuson Act Reauthorization*, 9 Tul. Envtl. L.J. 267, 277 (1996).

541. *See At-Sea Processors Ass'n, supra* note 508.

542. *See id.*

543. *See id.*

544. *See EDF Testimony on ITQs, supra* note 512.

545. “By-catch” is the unintended harvest of nontarget species. For instance, a fisherman may net turtles, sea mammals, pink salmon and other species when fishing for sockeye salmon. These other species are considered “by-catch.” *See id.*

546. *See id.*

would be necessary to devise a means for salmon wholesalers and enforcement officials to distinguish easily between American and Canadian fish to implement an ITQ system.

This type of quota system could also contribute to international conservation of salmon. An ITQ system gives fishermen an added incentive to protect the continued viability of the resource because the value of their quotas in the future depends on the level of the fish stock in future seasons.⁵⁴⁷ Quota shares for a percentage of the harvest command much higher sale prices than do one-year leases, indicating that quota holders attach real value to their stakes in future harvests.⁵⁴⁸ As a result of this economic incentive, conservation efforts should also increase. For example, under New Zealand's ITQ program fishing firms have realized that the value of their ITQs depends on the health of the fishery stock, and they have begun investing in voluntary efforts to protect and conserve the fisheries.⁵⁴⁹

An ITQ system could also diminish the pressure placed on fishery managers to raise the total allowable catches beyond sustainable limits. If fishery managers did not protect the stocks in the current year, future harvests would be reduced. This reduction in fish stocks would lower the value of the quota owners' "property," which depends on future harvest levels.⁵⁵⁰ As the salmon stocks begin to rebuild, the value of the individual quotas would rise. Harnessing market forces for conservation purposes could reverse the depletion of scarce salmon resources and allow the rebuilding of salmon stocks.

The implementation of an ITQ system will likely cause a consolidation in the commercial fishing fleet, as marginal fishermen sell their allocation shares to those who value them more.⁵⁵¹ In Iceland, for instance, the proportion of quota shares held by the largest fishing firms increased from 27.9% to 49.7% in ten years (between 1984 and 1994)

547. Incentives work to support the future viability of the stock if shares are granted for a long period of time or are renewable each year, and if the shares are expressed as percentages of the total allowable catch rather than as fixed numbers. See Tipton, *supra* note 10, at 397-98.

548. See *EDF Testimony on ITQs*, *supra* note 512.

549. See Daniel J. Dudek et al., *Environmental Policy for Eastern Europe: Technology-Based Versus Market-Based Approaches*, 17 Colum. J. Envtl. L. 1, 45 (1992).

550. This theory is sometimes called "free-market environmentalism," which emphasizes the importance of well-defined property rights in private hands to prevent overuse of a natural public resource. See Terry L. Anderson & Donald R. Leal, *Free Market Versus Political Environmentalism*, 15 Harv. J.L. & Pub. Pol'y 297, 303-04 (1992).

551. See Tipton, *supra* note 10, at 397.

after the imposition of a fishing quota system.⁵⁵² If individual fishermen decided to sell out to large firms, ITQs could change the character of a fishing community and increase market concentration.⁵⁵³ This consolidation would help to streamline an industry that many believe to be overcapitalized and inefficient, with too large a fleet chasing too small a fish population.⁵⁵⁴ Unlike other approaches, a quota system would compensate those fishermen who wish to exit the industry, because they could sell their quota shares on the market.⁵⁵⁵ The ITQ quota system could also be combined with a buy-back program in which individuals looking to get out of fishing would receive compensation in excess of the quota price.⁵⁵⁶ Fishery negotiators are already considering such a voluntary buy-back (or “buy-out”) program to reduce fishing capacity in the Northwest salmon fleet.⁵⁵⁷

Although fishermen in both the United States and Canada may object to an ITQ system for fear of being forced out of the industry, no one would be forced to sell his or her quota share. Furthermore, nations could design the ITQ program to prevent excessive concentration of market power by establishing quota percentage caps, setting aside quotas for recreational and tribal fishermen, and imposing other restrictions on quota trading.⁵⁵⁸ Fishermen who remain in the industry could enjoy higher returns on their investments under an ITQ system.⁵⁵⁹ Thus, this type of system could give fishermen and fishing communities greater job

552. See Gísli Pálsson, *Learning by Fishing: Practice Science and Scientific Practice*, in *Property Rights in a Social and Ecological Context: Case Studies and Design Applications* 91 (Susan Hanna & Mohen Manasinghe eds., 1995).

553. See *EDF Testimony on ITQs*, *supra* note 512.

554. See Tipton, *supra* note 10, at 408.

555. See *EDF Testimony on ITQs*, *supra* note 512.

556. New Zealand implemented a buy-back program during the adoption of its ITQ program in 1986 because the nation's fleet capacity was large in relation to the available catch. The program also compensated the entire industry if the value of the quotas declined due to a severe drop in fish stocks in any given season. See Tipton, *supra* note 10, at 400–01.

557. See *Pipkán Testimony*, *supra* note 129.

558. See *EDF Testimony on ITQs*, *supra* note 512. For example, New Zealand's Fisheries Act limits the quota that can be held by any one person or company. For main commercial species such as Orange Roughy, Ling, and Hake, the limit is 45% of the quota in each area; for Rock Lobster the limits are 10% of a management area, and for most other fish the limit is 20% of the fish stock. See *New Zealand Seafood Indus.*, *supra* note 504.

559. Australian fishermen experienced a rise in the average rates of return in one important fishery, from 10.7% in 1992 to 16.5% in 1993. See Mark Lawson, *Australia: Fishermen Net Good Catches*, *Austl. Fin. Rev.*, Jan 12, 1994, at 7, *quoted in* Tipton, *supra* note 10, at 401.

stability.⁵⁶⁰ ITQs would likely lengthen job terms, as boats could spend more days fishing than under derby-style fishery management.⁵⁶¹ As salmon populations recovered and the allowable catches increased, the system might even create more jobs as boats increase crew sizes.⁵⁶²

Critics of an ITQ system in the United States have raised concerns that an ITQ system would violate the public trust doctrine by conveying property interests in a public resource—wild salmon.⁵⁶³ The public trust doctrine is not an issue, however, if the ITQs are expressed as harvest privileges rather than property rights.⁵⁶⁴ A well-designed ITQ system should not create property rights that could form the basis for a takings claim under the Fifth Amendment of the U.S. Constitution.⁵⁶⁵ These claims could arise if a decrease in the total allowable catch reduced quota values, or if the ITQ programs were dismantled.⁵⁶⁶ To avoid these concerns, quotas should be expressed as a percentage of a variable allowable catch, with full disclosure to quota holders of the risks of quota ownership.⁵⁶⁷

Another potential problem with a quota system is “high grading,” defined as “landing only the fish with the highest market value or grade and throwing the rest overboard, dead or dying, so that it does not count against the enterprise’s quota.”⁵⁶⁸ Generally, fisherman discard small, immature, or low-value fish,⁵⁶⁹ which causes immense waste and diminishes future stock runs. The ITQ system can be designed to limit this problem, but likely could not eliminate high grading completely. First, quotas should be specified by salmon species. Salmon prices depend significantly on the species, with sockeye salmon the most valuable and pink salmon the least valuable.⁵⁷⁰ Issuing quotas based on

560. See *EDF Testimony on ITQs*, *supra* note 512.

561. See *id.*

562. See *id.*

563. See *id.*

564. See *id.*

565. See Tipton, *supra* note 10, at 410.

566. See *id.*

567. See *id.* at 410 (citing James Geoffrey Durham, *Efficient Just Compensation as a Limit on Eminent Domain*, 69 Minn. L. Rev. 1277 (1985)); see also *EDF Testimony on ITQs*, *supra* note 512; Frank I. Michelman, *Property, Utility, and Fairness: Comments on the Ethical Foundations of “Just Compensation” Law*, 80 Harv. L. Rev. 1165 (1967).

568. Townsend & Wilson, *supra* note 34.

569. See Pálsson, *supra* note 552, at 94.

570. See Huppert, *supra* note 2, at 1.

salmon species would reduce the dumping of low-value species in order to fill the quota with higher-valued fish. Second, quotas should be expressed in terms of total weight or even total value.⁵⁷¹ One study found that although some ITQ programs can induce dumping, quota systems that regulate the value of a harvest would not induce discarding.⁵⁷² Properly structuring the quota measures would reduce incentives to catch only the most lucrative fish to fulfill the quota.

V. CONCLUSION

The dispute between the United States and Canada over North Pacific salmon has raged on and off for many years. As the region grew and placed more demands on the salmon stocks, the parties developed new methods for protecting and sharing the resource. The 1985 Pacific Salmon Treaty attempted to resolve many of the contentious issues over conservation and allocation of salmon. However, the Treaty failed to define adequately some of its most basic principles, and the Treaty's mechanism for allocating salmon has broken down.

The salmon war has now reached a critical juncture. For several years, the United States and Canada have been unwilling to work together to conserve salmon because of disagreements over allocation. Resolving this problem will require each of the parties to make a good faith effort to address the underlying issues of equity and conservation. New negotiations may be necessary to define more carefully the principles of the Treaty and to rectify problems of the Treaty mechanism. Alternatively, the parties could try new methods such as a tax on interceptions or a quota system that could more effectively allocate salmon resources between the two countries.

The Pacific Northwest salmon war involves a complex interaction of biology, economics, and law. To create a long and lasting truce in the salmon war, these three areas must be resolved in a mutually supportive fashion.

571. Although a quota specifying the total value to be caught would effectively solve the high grading problem, it could create difficulties in other areas. Specifically, total allowable catches are generally expressed in volume (weight) terms. Establishing the total value of the allowable catch by predicting the market price of salmon would add additional uncertainty to an already uncertain and difficult scientific measure.

572. See Matthew A. Turner, *Economics Without Free-Disposal: Quota-Induced Discardings in Heterogeneous Fisheries* (visited July 31, 1999) <<http://ideas.uqam.ca/ideas/data/papers/tortecipamturner-95-02.html>>.

VI. EPILOGUE

As this article was in the editing process, the United States and Canada reached a comprehensive agreement on salmon management. The U.S. negotiating team was led by James Pipkin, in coordination with Senior White House Representative Lloyd Cutler, and included representatives of the Governors of Alaska, Washington, Oregon, and twenty-four Indian tribes.⁵⁷³ The Canadian negotiating team was led by Donald McRae and included Canadian Minister of Fisheries and Oceans, David Anderson.⁵⁷⁴

On June 30, 1999, Acting Secretary of State Thomas R. Pickering and Canadian Ambassador to the United States, Raymond A.J. Chretien, signed the new Pacific Salmon Agreement.⁵⁷⁵ The United States and Canada exchanged diplomatic notes⁵⁷⁶ to bring into force a comprehensive accord ending their dispute over Pacific salmon management. The agreement replaces key provisions of the Pacific Salmon Treaty,⁵⁷⁷ addressing the conservation and equity issues that have plagued the 1985 Treaty.⁵⁷⁸ By providing long-range harvest agreements, the revised Treaty increases stability and predictability in salmon management.⁵⁷⁹ The agreement also funds measures to restore depleted stocks of salmon and to enhance salmon production.⁵⁸⁰ This epilogue outlines key elements of the revised Treaty.

573. See Office of the Spokesman, U.S. Dep't of State, *U.S. and Canada to Sign Pacific Salmon Agreement* (last modified June 29, 1999) <<http://secretary.state.gov/www/briefings/statements/1999/ps990629c.html>>.

574. See Office of the Spokesman, U.S. Dep't of State, *Secretary of State Madeleine K. Albright & Canadian Foreign Minister Lloyd Axworthy, Joint Statement on the Pacific Salmon Agreement* (last modified June 3, 1999) <<http://secretary.state.gov/www/statements/1999/990603.html>>.

575. See Office of the Spokesman, U.S. Dep't of State, *supra* note 573.

576. See Bureau of Oceans & Int'l Envtl. & Scientific Affairs, *Diplomatic Note, Canada* (last modified June 30, 1999) <http://www.state.gov/www/global/oes/oceans/990630_salmon_can_en.pdf> [hereinafter *Canada Diplomatic Note*]; Bureau of Oceans & Int'l. Envtl. & Scientific Affairs, *Diplomatic Note, United States* (last modified June 30, 1999) <http://www.state.gov/www/global/oes/oceans/990630_salmon_usa_en.pdf> [hereinafter *United States Diplomatic Note*].

577. Annex I is amended, and Annex IV is replaced in its entirety. See *United States Diplomatic Note, supra* note 576. Additional attachments to the Treaty detail other aspects of the agreement, such as the regional funds, scientific cooperation, and habitat restoration. See *id.*

578. See Bureau of Oceans & Int'l Envtl. & Scientific Affairs, *Summary of the Pacific Salmon Agreement* (last modified June 30, 1999) <http://www.state.gov/www/global/oes/oceans/fs_990603_salmon.html> [hereinafter *Bureau of Oceans Summary*].

579. See *id.*

580. See *id.*

A. *Fishery Management*

The revised Treaty creates abundance-based fishing regimes for salmon fisheries, allowing catches to vary from year to year.⁵⁸¹ The Treaty allows relatively large harvests when salmon runs are strong, but parties must reduce their harvests in years when abundance is low.⁵⁸² Abundance-based fishery management should be more responsive to salmon conservation than the fixed harvest ceilings of the original Treaty.⁵⁸³

The agreement replaces expired provisions of Annex IV of the 1985 Pacific Salmon Treaty with several new “chapters.”⁵⁸⁴ The new accord establishes criteria for managing the fisheries covered under the Pacific Salmon Treaty, and also includes management of some northern coho fisheries that were not covered in the old Treaty.⁵⁸⁵ The agreement on the Fraser River sockeye fishery will last for twelve years, beginning in 1999. All other fishery arrangements will be in effect for ten years.⁵⁸⁶ Both governments have agreed that compliance with the revised fishery regimes satisfies the principles of the Pacific Salmon Treaty.⁵⁸⁷

I. *Transboundary Rivers*

Chapter 1 of the new Treaty addresses management of sockeye, coho, chinook, and pink salmon in several rivers that flow from Canada through the Alaskan panhandle, such as the Stikine, Taku, and Alsek rivers.⁵⁸⁸ Canadian harvests would likely increase under these new arrangements. If the new agreement had been in effect from 1985–1998, Canadian fishermen could have harvested 16,400 additional sockeye on the Taku River, 80,800 additional coho on the Taku River, and 7000 additional coho on the Stikine River.⁵⁸⁹

581. *See id.*

582. *See id.*

583. *See id.*

584. *See id.*

585. *See id.*

586. *See id.*

587. *See Canada Diplomatic Note, supra note 576; United States Diplomatic Note, supra note 576.*

588. *See Bureau of Oceans Summary, supra note 578.*

589. *See Canada Dep't of Fisheries, Transboundary Rivers* (last modified June 3, 1999) <[http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/hq29\(109\)_e.htm](http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/hq29(109)_e.htm)>.

2. *Northern British Columbia and Southeast Alaska*

Chapter 2 deals with sockeye and pink salmon fisheries in southeast Alaska and northern British Columbia.⁵⁹⁰ The agreement establishes abundance-based fishery management regimes to achieve conservation and equitable sharing of intermingled salmon stocks.⁵⁹¹ The new provisions resolve long-contentious issues surrounding Alaska's Noyes Island purse seine fisheries and the Tree Point gillnet fishery, as well as Canada's marine net and troll fisheries for pink salmon in Canadian Area 1.⁵⁹² According to Canadian estimates, these changes could substantially reduce Alaska's catch while increasing Canada's catch. If the new arrangements had been in place from 1985–1997, Alaskan fishermen would have caught 465,000 fewer sockeye at Noyes Island while Canadian troll fishermen in Area 1 would have caught more than 3,000,000 additional pink salmon.⁵⁹³

3. *Chinook Salmon*

Chapter 3 governs management of both ocean and freshwater chinook fisheries in Alaska, Canada, Washington, and Oregon.⁵⁹⁴ The agreement divides these fisheries into two categories: (1) aggregate abundance-based management (AABM fisheries),⁵⁹⁵ and (2) individual stocks based management (ISBM fisheries).⁵⁹⁶ The harvest rate of AABM fisheries will vary each year depending on the abundance of different salmon stocks present in that particular fishery.⁵⁹⁷ For ISBM fisheries, both

590. See *Bureau of Oceans Summary*, *supra* note 578.

591. See *id.*

592. See *id.*

593. See Canada Dep't of Fisheries, *Northern Boundary Sockeye and Pink Fisheries* (last modified June 3, 1999) <[http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/q29\(105\)_e.htm](http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/q29(105)_e.htm)>.

594. See *Bureau of Oceans Summary*, *supra* note 578.

595. These ocean fisheries occur in large areas and affect a complex aggregation of many stocks, such as the Southeast Alaska troll, net, and sport fishery; the northern British Columbia troll and Queen Charlotte Islands sport fishery; and the West Coast Vancouver Island troll and outside sport fishery. See *id.*

596. These ISBM fisheries include the troll, net, and sport fisheries in central and southern British Columbia, Washington, and Oregon. They also encompass the freshwater fisheries of Washington, Oregon, and Idaho. They do not cover the troll and sport fisheries of the west coast of Vancouver Island. See *id.*

597. Each fishery has different types of salmon stocks with different survival rates. Thus, the allowable harvest will vary by fishery and from year to year. See *id.*

countries must reduce exploitation rates relative to the base period of 1979–82.⁵⁹⁸ Canada must reduce its harvests of certain depressed chinook stocks by 36.5% and the United States must reduce its harvests by 40%.⁵⁹⁹ Canada has already reduced its harvest rates to near the targeted level in recent years, but the United States must significantly reduce its current catch levels to reach the specified target.⁶⁰⁰

Additional reductions are specified if these reductions are insufficient to achieve escapement objectives.⁶⁰¹ Within those catch limits, each country may decide how to distribute the harvest across different fisheries and competing interests.⁶⁰² The new Treaty would also credit countries for reducing fishing mortalities.⁶⁰³ This provision would encourage more selective fisheries, reduce incidental mortality, and improve spawning levels for chinook salmon stocks.⁶⁰⁴

4. *Fraser River Sockeye and Pink Salmon*

The revised agreement requires a substantial reduction in the American share of Fraser River sockeye.⁶⁰⁵ These reductions will be phased in between the 1999 and 2002 fishing seasons.⁶⁰⁶ The U.S. share of this harvest will fall from 26% (as specified in the first four years of the 1985 Pacific Salmon Treaty) to 16.5% of the total allowable catch by 2002.⁶⁰⁷ Each percentage point increases the Canadian catch by nearly 300,000 sockeye over the next four years.⁶⁰⁸ The U.S. share of Fraser pink salmon will be 25.7% of the total allowable catch.

Washington and the U.S. federal government will try to mitigate the impact of this reduction by creating a license buy-back program for

598. See Canada Dep't of Fisheries, *Coastwide Chinook* (last modified June 3, 1999) <[http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/hq29\(104\)_e.htm](http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/hq29(104)_e.htm)>.

599. See *Bureau of Oceans Summary*, *supra* note 578.

600. See *id.*

601. See *id.*

602. See *id.*

603. See Canada Dep't of Fisheries, *supra* note 598.

604. See *id.*

605. See *Bureau of Oceans Summary*, *supra* note 578.

606. See *id.*

607. See *id.*

608. See Canada Dep't of Fisheries, *Fraser River Sockeye and Pink Salmon* (last modified June 3, 1999) <[http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/hq29\(103\)_e.htm](http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/hq29(103)_e.htm)>.

commercial fishermen.⁶⁰⁹ This program will pay non-Indian fishermen to stop fishing, reducing Washington's sockeye harvest.⁶¹⁰ This removal of non-Indian fishermen will also skew the fifty-fifty sharing rule between Indians and non-Indians.⁶¹¹ Treaty tribes will have a sixty-eight-percent share of the Fraser sockeye harvest, and nontreaty fishermen will have thirty-two percent of that catch.⁶¹²

5. *Coho Salmon*

Chapter 5 addresses management of coho stocks in both the Northern and Southern regions. In the Northern region, the agreement restricts Alaska's troll fisheries to satisfy Canada's conservation concerns.⁶¹³ The revised provisions call for Alaska to shut down fisheries if Canada's early season catch indicators show a low abundance of coho returning to spawn.⁶¹⁴ These restrictions on Alaskan fishing will assist Canada in conserving threatened coho stocks.⁶¹⁵

For southern coho salmon, the agreement provides a guideline for a conservation-based regime in southern British Columbia and Washington.⁶¹⁶ These guidelines seek to limit harvest rates on coho stocks to sustainable levels, taking into account all fisheries affecting the stocks.⁶¹⁷ Reducing harvest rates will enhance the long-term production of salmon in both countries.⁶¹⁸ The parties will develop detailed management plans for coho salmon over the next year, in time for the 2000 fishery season.⁶¹⁹ For 1999, both countries will manage their coho fisheries consistent with their 1998 regimes.⁶²⁰

The revised Treaty also alters the way each country's fishing limits are counted. Fishery limits under the new agreement will be based on

609. See *Bureau of Oceans Summary*, *supra* note 578.

610. See *id.*

611. See *id.*

612. See *id.*

613. See Canada Dep't of Fisheries, *Northern Coho* (last modified June 3, 1999) <[http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/hq29\(106\)_e.htm](http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/hq29(106)_e.htm)>.

614. See *id.*

615. See *id.*

616. See *Bureau of Oceans Summary*, *supra* note 578.

617. See *id.*

618. See *id.*

619. See *id.*

620. See *id.*

mortality (the number of coho killed), rather than the landed catch.⁶²¹ These mortality limits on coho salmon stocks will be calculated based on the expected abundance of coho runs in each country.⁶²² This change in counting method should encourage more-targeted fisheries and less wasteful fishing methods.

6. *Southern British Columbia and Washington Chum Salmon*

The new agreement revises provisions affecting chum salmon fisheries in the Strait of Georgia and Puget Sound.⁶²³ Catch allocations will not be greatly affected.⁶²⁴ However, Canada did agree to require fishermen to release live chum caught in certain net fisheries.⁶²⁵ This provision will improve the survival rates of summer chum stocks, which the United States recently listed as threatened under the Endangered Species Act.⁶²⁶

B. *Regional Funds*

The new agreement also creates two regional funds to address salmon restoration and enhancement needs.⁶²⁷ The Northern Boundary and Transboundary Rivers Restoration and Enhancement Fund (“Northern Fund”) provides for northern and central British Columbia, southeast Alaska, and the Alsek, Taku, and Stikine rivers.⁶²⁸ The Southern Boundary Restoration and Enhancement Fund (“Southern Fund”) will fund improvements in southern British Columbia, Washington, Oregon, and the Snake River basin in Idaho.⁶²⁹ The United States will contribute seventy-five million dollars to the Northern Fund, and sixty-five million dollars to the Southern Fund over a four-year period.⁶³⁰

621. See Canada Dep’t of Fisheries, *Southern Coho* (last modified June 3, 1999) <[http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/hq29\(107\)_e.htm](http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/hq29(107)_e.htm)>.

622. See *id.*

623. See *Bureau of Oceans Summary*, *supra* note 578.

624. See *id.*

625. See *id.*

626. See *id.*

627. See *id.*

628. See *id.*

629. See *id.*

630. See *id.*

The United States and Canada will manage each of the regional funds bilaterally through a committee composed of three representatives from each country.⁶³¹ This money can be spent to improve resource management information, improve salmon habitat, and enhance wild stock production.⁶³² The bilateral committee may spend only the interest earned by the funds.⁶³³ Expenditures will be suspended if the harvest agreement of Annex IV expires and will resume only after the Parties agree to a new fishing arrangement.⁶³⁴

C. *Institutional and Scientific Changes*

The new agreement also seeks to improve bilateral cooperation, enhance scientific information about salmon management, and change the procedures of the Pacific Salmon Commission.⁶³⁵ Both countries will improve the collection, sharing, and application of scientific data concerning salmon, and provide opportunities for greater exchange of information between each country's management agencies.⁶³⁶

Several changes to the Pacific Salmon Commission will improve the functioning of this important institution. A new bilateral Committee on Scientific Cooperation will be established to advise the Pacific Salmon Commission on its research, scientific, and monitoring needs.⁶³⁷ The Committee will consist of up to eight nominees by the two national sections of the Pacific Salmon Commission,⁶³⁸ with both governmental and nongovernmental representation.⁶³⁹ The Pacific Salmon Commission

631. *See id.* The agreement left the details of acceptance, review, evaluation, and approval of proposals to each fund committee to decide. *See Northern Boundary and Transboundary Rivers Restoration and Enhancement Fund*, ¶ 7 (visited July 31, 1999) <http://www.state.gov/www/global/oes/oceans/90630_salmon_attach_c.pdf>; *Southern Boundary Restoration and Enhancement Fund*, ¶ 7 (visited July 31, 1999) <http://www.state.gov/www/global/oes/oceans/90630_salmon_attach_c.pdf>.

632. *See Bureau of Oceans Summary*, *supra* note 578.

633. *See id.*

634. *See id.*

635. *See id.*

636. *See id.*

637. *See id.*

638. *See id.*

639. *See* Canadian Dep't of Fisheries, *Improved Science and Fisheries Management Arrangements* (last modified June 3, 1999) <[http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/HQ29\(111\)_e.htm](http://www.dfo-mpo.gc.ca/COMMUNIC/BACKGROU/1999/HQ29(111)_e.htm)>.

is also charged with developing rules and procedures to implement the technical dispute resolution process of Article XII of the Treaty.⁶⁴⁰

D. Habitat

Finally, the agreement addresses important initiatives to protect salmon habitat to improve salmon production for both parties.⁶⁴¹ Salmon production may be enhanced by assuring adequate water quality and quantity, improving spawning conditions, and ensuring migration corridors for adult and juvenile salmon.⁶⁴² The Pacific Salmon Commission must report annually on salmon habitat and restoration.⁶⁴³ The report must identify salmon stocks, examine nonfishing factors that may limit production, assess options for addressing these factors, and track the progress of both countries in improving production.⁶⁴⁴

E. Conclusion on the New Salmon Agreement

This most recent agreement between the United States and Canada represents an important step in salmon conservation and management. The comprehensive, long-term accord will enable both countries to share salmon harvests equitably, improve habitat and production, and ensure the viability of salmon industries. Rather than fixing annual harvest ceilings, the new Treaty provides for flexible harvest rates to account for variations in the health of certain stocks. The new regimes will be in effect for ten to twelve years, thereby avoiding the annual conflict resulting from interest-based negotiations. Continued cooperation between the United States and Canada will ensure the long-term viability of the salmon, as well as the industries that rely on these stocks.

640. See *Bureau of Oceans Summary*, *supra* note 578.

641. See *id.*

642. See *id.*

643. See *id.*

644. See *id.*

