Columbia River Treaty

Jennifer Kinzey

Introduction: The Columbia River Basin, an area roughly the size of France, sits on the United States (US) and Canada border.[1]The Columbia River is one of the most hydroelectrically developed river systems in the world, with 411 dams along the tributaries and main stem for irrigation and hydropower, and it has a generating capacity of more than twenty-one million kilowatts.[2] This development is the result for the Columbia River Treaty (CRT) between Canada and the US.[3] The hydroelectric and flood control benefits are great, however, the system of dams has adversely affected much of the wildlife, including many species of salmon.[4] The dams have prohibited salmon from returning upstream to their spawning grounds, which has caused a severe decline in the salmon population in the Columbia River Basin.[5] The solution to the salmon problem has remained ever elusive, perhaps due to the great economic benefits both countries receive from the dams. Pursuant to the treaty, Canada built three main dams, called the Treaty Dams, to provide a more constant flow of water down the river.[6] These dams allow a greater

---

[1] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 308.

[2] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 308.

[3] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 308.

[4] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 308.

[5] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 251-252.

[6] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 310.

control over the river for both hydropower production and flood prevention.[7] The US shares in these two benefits as they pay Canada for one-half of the estimated flood control benefits and one-half of the downstream hydroelectric power benefits generated by the Treaty Dams, which is known as the "Canadian Entitlement".[8] These two economic provisions have resulted in hundreds of millions of dollars being transferred between the two countries annually.[9] Such revenue creates a strong incentive to prohibit changes that could adversely impact the flow of money.[10]

The CRT has been called "one of the most successful agreements of international cooperation."[11] This is in part due to the efficient stream of cheap electricity available to the two countries by the Treaty Dams.[12] However, this success is tarnished by the failures of the CRT to

---

[7] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 310.

[8] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 310.

[9] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 310.

[10] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 334.

[11] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 312.

[12] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 312.

adequately address the negative impact of these dams to the salmon and other fish populations.[13] The decrease in these populations has caused a severe decrease in the ability of locals to fish, which is a particular problem for Native American tribes along the river as they depend on fishing to continue their customary, traditional way of life.[14] Now that the CRT has become available for renegotiation, many groups would like to see the dams reworked to allow salmon to reach their spawning grounds, which would contribute to a solution for some of the cultural problems as well.[15]

Tribal access to fisheries is a protected right by both the Canadian and US governments.[16] However, most tribes do not have adequate access to fisheries, such as salmon, because the CRT and its dams have resulted in a severe decrease to fish populations.[17] Despite the existence of numerous court proceedings and a Pacific Salmon Treaty, the fisheries are still

---

[13] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 313.

[14] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 314.

[15] Inter-Tribal Fish Commission, website, Institutional Recommendation 13; Columbia River Treaty.

[16] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 316.

[17] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 316.

depleted and the tribes still lack their legal right to access them.[18] This is because there have been no significant changes to the way the dams are built and run.

CRT Purpose and Methods: When settlers finally explored the west in the years after 1805, there were no dams on the Columbia River.[19] At that time, the salmon fisheries were capable of sustaining tribal populations with excellent fishing locations all along the river.[20] These locations, with their abundance of migrating salmon, provided an ideal place for tribal nations to gather and trade becoming cultural centers for the tribes.[21]

Despite the benefits of a thriving salmon population, the Columbia River has major problems. The Columbia River was prone to severe flooding due to runoff from snowpack.[22] This runoff can provide up to fifty percent of the river volume in the summer.[23] These uncertain runoff levels, coupled with low total storage capacity downstream, which is the ability to hold back water, store it, and release it at levels that would prevent flooding, lead the US to approach

---

[18] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 316.

[19] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 242.

[20] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 242.

[21] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 242.

[22] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 242.

[23] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 242.

Canada to facilitate the building of dams to increase upstream water storage.[24] These dams were of the utmost importance to the US in the 1950s as the river had already destroyed towns, like Vanport, Oregon.[25]

The preamble of the CRT includes numerous references to the " economic growth and strength" and the development of the resources of the Columbia River to "make the largest contribution to the economic program of both countries…."[26] The preamble makes no reference to the sustainability of the ecosystem showing that such impacts were of minimal concern to the parties at the time the CRT was created. Article II of the CRT provides for Canada to establish the three Treaty Dams to store the water at suitable levels.[27] Article IV details Canada's obligations for flood control and hydroelectric power generation.[28] Articles V and VI enumerate the US obligation to pay Canada for one-half the benefit of flood control and hydroelectric power production from the Dams.[29] Article XIX established the period of the treaty where termination can only occure after the CRT has been in force for sixty years, or the year 2024, and then only upon ten year notice from one of the countries, which became available in 2014.[30] The

---

[24] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 242.

[25] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 242.

[26] CRT, preamble (1961).

[27] CRT, Art. II (1961).

[28] CRT, Art. IV (1961).

[29] CRT, Art. V-VI (1961).

[30] CRT, Art. XIX (1961).

treaty was ratified and entered into force in 1964. Due to the article describing the termination process, any renegotiation of the treaty would have to take place after such termination notice was given, otherwise any change would need to be made in the form of an amendment or protocol.[31] There is nothing in the language of the CRT, or in subsequent protocols, that provide for conservation or protection of the natural ecosystems and fish populations. While the Treaty Dams and others have worked marvelously to control flooding and create hydroelectric power, what the 1950s CRT creators did not account for was the damage the dams would pose to the ecosystem and the fisheries.[32]

Salmon Problem: The creation of the dams eliminated portions of the salmon habitat.[33] This reduction in habitat, along with the inability of salmon to reach spawning grounds due to the dams, has led to a reduction in the salmon population from an estimated six million to sixteen million in the 1880s to less than one million today.[34] To keep the salmon levels at this low level, the population is supplemented by 200 hatcheries to make up for the inaccessibility of spawning

---

[31] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 320.

[32] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 252; SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 937-938.

[33] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 252.

[34] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 252.

grounds.[35] While the hatcheries are helping to support polulation levels now, they may not be the answer long term.[36] Despite the clear evidence of adverse impact on fisheries, those operating the dams have held hydroelectric power production and flood control as important, or more so, than the depleted fisheries causing a gridlock in ongoing litigation to resolve the problem.[37]

The problem with hatcheries is that they do not allow a natural adaptation of the salmon species.[38] These salmon populations have survived millions of years due to their ability to use the entire river system and the Pacific ocean to complete their life cycle.[39] Salmon have a complicated lifecycle beginning with their birth in freshwater streams to their travel downstream to the ocean where they feed and mature to their travel back upstream to their freshwater habitats to spawn in the same place that they were born.[40] This complicated lifecycle is threatened by the CRT as the dams built on the Columbia River mean that salmon pass up to nine dams, each with the potential to kill more than fifteen percent of the passing salmon, on their way downstream to

---

[35] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 252.

[36] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 252.

[37] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 252.

[38] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 253.

[39] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 253.

[40] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 937.

the ocean.[41] This hardship is further multiplied by the fact that the upstream return trip is more dangerous due to the lack of fish ladders or other ways for the salmon to swim up the same nine dams they swam down from earlier in their life. That potential for fifteen percent of salmon being killed at each dam on the way out to the ocean is just as dangerous, if not more so, for salmon swimming back up the river to spawn making extreme decreases in salmon population a mathematically certain result due to the dam construction.

By eliminating access to key life cycle habitats, such as spawning grounds, the need for hatcheries to maintain genetic diversity in the salmon population began.[42] If natural processes of reproduction are not reintroduced, the ability of salmon to adapt and grow without human intervention, in other words their resilience as a species, will be destroyed.[43] The salmon populations would no longer be able to sustain themselves without continued human intervention.[44] The problem with human intervention, as we have seen, is that even with 200 hatcheries, we are unable to grow the salmon population back to original, sustainable levels.[45] As for expanding hatcheries, they have cost an estimated 6.4 billion dollars between 1982 and 2001

---

[41] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 937.

[42] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 253.

[43] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 253.

[44] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 253.

[45] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 252.

so expansion is not an economically viable solution.[46] Without relatively immediate changes to the dam system to reopen access to natural spawning grounds, irreparable damage to the salmon population will occur.[47]

Potential for Change: The CRT has any options for the future including termination, revision, and continuation with the status quo.[48] The problem with termination is that control of the river would default back to territorial sovereignty, with each country having to obtain consent from International Joint Commission (ICJ), which governs the Canadian/US border, before any changes to river management can occur.[49] Termination has a strong possibility of leading to a lack of cooperation, which is sorely needed for adequate governance of a transboundary river. Continuing with the status quo is only short term option as the CRT will inherently change in 2024 when Canada's obligations for flood control expire.[50] When Canada's obligations expire, the US must either make additional payments to Canada for any requested flood control

[46] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 938.

[47] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 253.

[48] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 320.

[49] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 320.

[50] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 320.

measures or renegotiate the treaty to establish new obligations for flood control.[51] Given that termination could result in lack of cooperative management, and maintaining the status quo will most likely result in renegotiation in the long run, the best solution for fixing the CRT lies in renegotiation in the immediate future.

What to Renegotiate: To address the complex problems associated with the dams impact to the ecosystem and fisheries, many legal scholars suggest a governance involving multiples levels for each system impacted.[52] These levels of governance would involve local, state, federal, and international bodies able to respond directly to problems according the scale of emergency and level of flexibility required to address the problem.[53] However, these levels of governance will not produce the necessary affects without changes to the substantive law governing CRT.[54] These changes include going from a system focused on optimization of hydroelectric power and flood control to a focus on enhancing the resilience of natural ecosystems in balance with flood control and hydropower.[55] This change in substantive law can be found in other international environmental laws.

---

[51] ARTICLE: Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, 16 Hastings W.-N.W. J. Env. L. & Pol'y 307, 320.

[52] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 256.

[53] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 259.

[54] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 256.

[55] ARTICLE: Transboundary River Governance in the Face of Uncertainty: Resilience Theory and the Columbia River Treaty, 30 J. Land Resources & Envtl. L. 229, 256.

International Examples: International law has undergone significant and substantive changes since the CRT was drafted in 1961.[56] There are over 260 transboundary watercourses and their governance has established a number of key principles.[57] The CRT was drafted following the principle of equitable apportionment.[58] Equitable apportionment is a system of cooperation among the countries to distribute the benefits from river management equally among them.[59] Should one country benefit more from flood control, like the US, that country would compensate the other, such as Canada, for that flood control benefit.[60] Equitable apportionment, however, fails to take into account for environmental costs of actions taken regarding the river.[61] International law has evolved to put environmental concerns among the most important of

[56] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 945.

[57] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 945.

[58] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 945.

[59] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 945.

[60] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 945.

[61] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 946.

issues.[62] This has led to the development of principles such as “no significant harm” and “timely notification”.[63] No significant harm is a principle that says one state, usually upstream, cannot do something to the river that has a significant adverse impact on downstream states.[64] Originally this principle evolved to combat chemicals released into the river but has come to be used in the protection of fisheries.[65] This is most commonly seen when a state does something to the river, such as dump chemicals, that make the river an unsuitable habitat for the fish.[66] This same principle can be applied to the dams, which as built, make the river an unsuitable habitat for the salmon since it eliminates their access to spawning grounds and turns their natural lifecycle into a highly dangerous affair.

---

[62] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 945.

[63] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 946.

[64] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 947.

[65] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 947.

[66] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 947.

Timely notification is just as it sounds, a principle that mandates one state to timely notify any affected state of proposed changes to the river.[67] This principle ensures that affected states have adequate time to research changes and voice objections before the proposed change takes place.[68] While the CRT prohibits unilateral changes to the river dams, such prohibition does not extend to other changes unless they impact flood control or hydropower production.[69] The goal of timely notification in the international law realm is to provide governments a chance to cooperate in any change to the river in order to ensure such change does not negatively affect the economy or the environment of a downstream state.[70] The CRT desperately needs to extend its timely notification ideals to include changes that effect the ecosystem as a whole, not just the two enumerated economic concerns. Both of these international legal principles can be seen in the adoption of EIA treaties, such as the Espoo Convention.

EIA: EIA stands for Environmental Impact Assessment. The Espoo Convention, an international convention from the United Nations that came into force in 1997, adopted EIAs in a transboundary context because the convention recognized that environmental impacts do not

---

[67] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 948.

[68] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 948.

[69] CRT (1961).

[70] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 948.

respect territorial boundaries.[71] The Espoo Convention lists a host of activities in its various appendixes that have the potential to impact the environment across boundary lines.[72] In Appendix I, number 11, the Espoo Convention lists large dams and reservoirs as actions that have a transboundary effect on the environment.[73] When a state proposes to do something that is listed in these appendixes, that state must follow the procedure for an EIA in order to proceed with the action in a way that has the least transboundary environmental impact.[74] Appendix II states what such an EIA must contain.[75] An EIA must include:

> (a) A description of the proposed activity and its purpose;
>
> (b) A description, where appropriate, of reasonable alternatives (for example, locational or technological) to the proposed activity and also the no-action alternative;
>
> (c) A description of the environment likely to be significantly affected by the proposed activity and its alternatives;
>
> (d) A description of the potential environmental impact of the proposed activity and its alternatives and an estimation of its significance;
>
> (e) A description of mitigation measures to keep adverse environmental impact to a minimum;
>
> (f) An explicit indication of predictive methods and underlying assumptions as well as the relevant environmental data used;
>
> (g) An identification of gaps in knowledge and uncertainties encountered in compiling the required information;
>
> (h) Where appropriate, an outline for monitoring and management programmes and any plans for post-project analysis; and

---

[71] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 38.

[72] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 39.

[73] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 40.

[74] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 40.

[75] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 40-41.

(i) A non-technical summary including a visual presentation as appropriate (maps, graphs, etc.). [76]

To obtain this information, the country proposing the activity informs any country that might be affected by the proposed action and together they form an Inquiry Commission.[77] The Inquiry Commission is composed of one scientific expert chosen by each participant country and one scientific expert agreed upon by the participating countries.[78] If the neutral expert cannot be agreed upon, the UN can nominate an expert.[79] The Inquiry Commission is then tasked with gathering all of the relevant scientific data, to the best of its abilities, necessary to compile the EIA.[80]

In addition to the scientific component of the EIAs, the Espoo Convention, in articles two and three, puts forth a requirement for public participation.[81] The public participation requirement mandates that each affected country shall provide a forum for education of the public and on the proposed activity and its environmental impact.[82] The requirement also states that the public should have the opportunity to comment on the proposed activity and voice any objections.[83] This focus on public participation, in addition to scientific participation, is an

[76] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 40-41.

[77] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 44.

[78] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 44.

[79] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 44.

[80] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 44-45.

[81] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 47.

[82] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 47.

[83] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 47.

acknowledgment of the fact that one activity can affect more than just one party and that, in order to effectively manage such transboundary activities, all parties that may be affected should be able to participate in the decision-making process.[84]

While this Inquiry Commission is made up of scientific experts who determine the environmental impact, they can only make recommendations as to what should happen.[85] Their EIA is non-binding.[86] The Espoo Convention was intended to take the EIA process that many countries use domestically and apply it to transoundary events.[87] While the principles embodied in the Espoo Convention and EIAs reflect the changing international principles, such as no significant harm and timely notification, it also shows a trend toward more internationally cooperation towards managing transboundary areas. One of the problems with EIAs, however, is that they are non-binding.[88]

EIAs are the equivalent of a research paper in school. It allows you to discuss the options, but in the end, it's the teacher, or in this case the country proposing the activity, that has the final say on what gets done.[89] EIAs establish no permanent managing body for whatever activity is being investigated. On the bright side, EIAs serve the important function of bring environmental

---

[84] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 38.

[85] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 46.

[86] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 46.

[87] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 48.

[88] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 46.

[89] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 57.

impacts to the negotiating table.[90] While the recommendations of the EIA may not always be followed, it is at least a more holistic approach to making such decisions.[91] International law is currently looking for ways to encourage these holistic discussions in the real world management of activities once they have occurred. One of the proposed ways to accomplish this is with a Transboundary Water Management Organization.

Transboundary Water Management Organizations: International law has also evolved to include the concept of basin-wide management.[92] While it was codified in the Helsinki Rules in 1966, basin-wide management is considered international customary law.[93] As international customary law, the concept is technically binding on all countries. Basin-wide management is the recognition that transboundary rivers cannot be managed unilaterally, since the river creates a physical dependence of one country to another as any change can cause an adverse reaction in the other state, and require a coordinated organization from the affected countries to manage

[90] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 57.

[91] Stephen McCaffrey, Rachel Salcido, Global Issues in Environmental Law, p. 57.

[92] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 949.

[93] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 949.

such waterways.[94] Thus, the concept is to collectively manage the basin as a whole, rather than individual countries trying to manage only their territorial section.[95]

Transboundary Water Management Organizations (TWMO) are a logical manifestation of the basin-wide management principle.[96] TWMOs are international organizations created by states who share a transboundary river in order to effectively and efficiently management all elements of the river.[97] The idea behind a TWMO is to transcend national boundaries in a way that does not compromise territorial sovereignty.[98] Since it is made up of officials from all affected nations, it allows each nation to be represented in all development of the river.[99] TWMOs are described as being "designed to perform several functions: to develop and manage the water basin as a unit, without regard to international borders; to share the benefits of that

---

[94] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 949.

[95] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 949.

[96] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 949.

[97] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 949.

[98] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 949.

[99] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 949.

development and management according to some agreed-upon formula; and to create a procedure for investigating and resolving inevitable disputes constructively."[100] A TWMO was incorporated into the Amazon Cooperation Treaty Organization, the Niger Basin Authority, and the International Commission for the Protection of the Rhine.[101] These examples of TWMOs all include more than two countries, which infers that, if they can do it, so can the US and Canada. The basin-wide management principle is also found in Agenda 21 and the UN Convention on the Law of the Non-navigational Uses of International Watercourses.

Agenda 21: Agenda 21 is an international declaration, which is a statement of intent rather than binding international law. However, this statement of intent is indicative of the ideals that international law has adopted as it grows. Specifically, Agenda 21, Chapter 18 is a declaration of the Protection of the Quality and Supply of Freshwater Resources.[102] Section 2 puts the ecosystem of freshwater resources at the same level of importance as human consumption of those resources.[103] Section 3 denotes the widespread destruction and pollution of these freshwater areas and states that an integrated water resources planning and management.[104]

---

[100] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 949 (citing N. Kliot, D. Shmueli & U. Shamir, Institutions for Management of Transboundary Water Resources: Their Nature, Characteristics and Shortcomings, 3 WATER POL'Y 229, 244 (2001)).

[101] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 949.

[102] Agenda 21, Ch. 18, (1992).

[103] Agenda 21, Ch. 18.2, (1992).

[104] Agenda 21, Ch. 18.3, (1992).

This idea of integrated management is expounded upon in sections 4 and 5 where it specifically states that transboundary waters need the most interrelated system as management of the water affects more than just a single state and that integrated management needs to focus on protecting ecosystems and sustainability.[105] Sections 8 and 9 once again state the importance of the freshwater ecosystem and that integrated management should be carried out at the basin-wide level.[106] Section 12 lists the ways in which states can adopt this integrated management system including the use of scientific research and forecasting to help plan the use of freshwater basins.[107] Section 20 includes a requirement for community participation or public participation in order to educate the people along the basin about how their use affects the ecosystem and create a solid foundation of support at all levels.[108]

Chapter 18 continues with these broad themes of basin-wide integrated management, scientific and public involvement, and balancing the sustainability of the ecosystem with the need for human consumption.[109] While Agenda 21 is not binding international law, it is the international community coming together to profess the importance of an integrated, basin-wide management system for the protection of freshwater ecosystems. This idea, which spawned the creation of TWMOs, has been codified not only though the establishment of TWMOs but also through the UN Convention on the Non-navigational Uses of International Watercourses (Watercourses Convention).

---

[105] Agenda 21, Ch. 18.4-5, (1992).

[106] Agenda 21, Ch. 18.8-9, (1992).

[107] Agenda 21, Ch. 18.12, (1992).

[108] Agenda 21, Ch. 18.20, (1992).

[109] Agenda 21, Ch. 18, (1992).

UN Convention on the Non-navigational Uses of International Watercourses: The UN General Assembly adopted the Watercourses Convention May 21 1997.[110] The Thirty-Fifth state ratified the Watercourses Convention on May 19, 2014.[111] Consequently, the Watercourses Convention entered into force, and became binding international law on those who ratified it, on August 17, 2014.[112]

The Watercourses Convention was drafted with the ideals of Agenda 21 in mind.[113] Article 5 reminds states that equitable and reasonable management of an international watercourse, or transboundary water, requires a balance between human consumption and sustaining the ecosystem.[114] Article 6 lists the considerations necessary to take a holistic, or basin-wide, approach to managing the resources and stresses the importance of international cooperation.[115] Article 7 explicitly states another international principle regarding transboundary waters, that every state has an obligation to not cause significant harm.[116] Articles 8 and 9 describe the regular exchange of data and information regarding the river with other states in a effort of international cooperation, which could easily be fulfilled by a TWMO.[117] Articles 12 through 18 discuss the need for timely notification, an important part of any transboundary water

[110] Watercourses Convention, international water law project, website.

[111] Watercourses Convention, international water law project, website.

[112] Watercourses Convention, international water law project, website.

[113] Watercourses Convention, international water law project, website.

[114] Watercourses Convention, international water law project, website, Art. 5.

[115] Watercourses Convention, international water law project, website, Art. 6.

[116] Watercourses Convention, international water law project, website, Art. 7.

[117] Watercourses Convention, international water law project, website, Art. 8-9.

management system, and what to do when no notification is received.[118] The Watercourses Convention embodies the international principles of no significant harm, timely notification, and basin-wide management as they relate to transboundary watercourses.

Part IV, which includes articles 20 through 26, specifically calls for the protection of ecosystems through a organization of international cooperation.[119] This protection of the ecosystem includes the regulation of hydraulic works that alter the flow of water, such as dams.[120] Under the Watercourses Convention, dams should be jointly operated at a level that does no significant harm to the ecosystem. The problem is that neither Canada nor the US are parties to the Watercourses Convention. This means they have no obligation to institute a watercourses agreement to implement a TWMO. However, given the pervasiveness of the international ideals, both countries would be wise to renegotiate the CRT to establish some form of TWMO. Not only does international law call for it, but the salmon depend on it.

Future of the CRT: Renegotiations to the CRT should focus on incorporating international transboudary legal concepts, such as no significant harm, in order to move from a focus on flood control and hydroelectric power to a focus on a more cumulative approach to transboudary water governance.[121] This would include creating a management system which relies on public and scientific input, from various levels of administrative bodies, to guide the development of the

---

[118] Watercourses Convention, international water law project, website, Art. 12-18.

[119] Watercourses Convention, international water law project, website, Part IV.

[120] Watercourses Convention, international water law project, website, Art. 25.

[121] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 950.

Columbia River.[122] This Transboundary Water Management Organization (TWMO) would be the best way to see that each problem encountered, such as the salmon population, would have both public and scientific opinions taken into account according to its scale of important to the whole ecosystem, in order to create a more balanced Columbia River Basin. Such a system would allow "the distribution of water rights while providing water managers the flexibility necessary to accommodate newer, environmentally and socially important uses."[123] To adequately address all relevant issues, including both economic and environmental, the TWMO would need to involve authorities from both countries, affected states, tribal agencies, and other governmental bodies such as the EPA.[124] This would be an international organization that could adopt the most cutting edge advances to transboundary water management.[125] It would incorporate both the public and scientific aspects of an RIA. It would also keep the CRT current with evolving substantive goals in international law, such as no significant impact and ecosystem preservation.

---

[122] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 950.

[123] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 951.

[124] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 951.

[125] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 952.

A TWMO would also allow parties a comprehensive platform for negotiation and mediation rather than abiding by the CRT's current dispute resolution system through the International Joint Commission.[126] This would give TWMO the flexibility it needs to deal with the ever changing water flows and the effects those different flow levels have on the ecosystem and the economy.[127] The involvement of the public and scientific communities, in addition to the tribal and governmental agencies, would ensure that voiceless victims like the salmon would be fully represented in any decision regarding development to the dams. The Inter-Tribal Fishing Commission, which is one of the tribal nations' agencies, has a list of recommendations that include adapting ecosystem management as a goal of the Treaty alongside flood control and hydropower as well as incorporating an a representative of the tribes in the membership to the governing body.[128] These recommendations would be fulfilled by a TWMO.

The US and Canada should open renegotiations, either through an additional protocol, renegotiating the treaty, or by terminating the CRT and creating a whole new treaty. Regardless of how it happens, the Columbia River Basin deserves a TWMO that provides a more solid and comprehensive foundation for equal and efficient management of the area's resources. If the CRT stays as it is, a treaty solely concerned with the economic benefits of flood control and hydroelectric power, the salmon may never see a return to a natural lifecycle and the tribal

---

[126] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 953.

[127] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 953.

[128] Inter-Tribal Fishing Commission, website, Institutional Recommendation 13; Columbia River Treaty.

nations, and the public as a whole, may never see salmon populations return to sustainable levels. The continued loss of salmon will create a larger change than just a lack of fishing. Salmon, and other fish, are a sign of the river's overall health, like a canary in a mine shaft.[129] Sure, the tribes may have to give up their traditional way of living, but more important is that if the health of the river has fallen to the point of not sustaining fisheries, how far will it continue to fall if nothing is done to stop it?

[129] SYMPOSIUM: NOT A DROP TO DRINK: WATER RIGHTS IN AMERICA: A RIVER RUNS THROUGH IT: THE FUTURE OF THE COLUMBIA RIVER TREATY, WATER RIGHTS, DEVELOPMENT, AND CLIMATE CHANGE, 29 Ga. St. U.L. Rev. 921, 937.