POLICY AND PRACTICE REPORT

INTERNATIONAL LAW RELEVANT TO THE CONSERVATION AND MANAGEMENT OF FRASER RIVER SOCKEYE SALMON

Table of Contents

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This Policy and Practice Report sets out the international law treaties, rules and principles relevant to the conservation and management of Pacific salmon, including Fraser River sockeye. It is not intended as a scholarly effort; nor is it comprehensive. Rather, the intent of this Report is to provide participants and the public with information on relevant international law frameworks and to assist them in understanding and contextualizing the evidence to be presented in the commission's hearings.

This Policy and Practice Report is also intended to build upon information given by Canada to the commission. In correspondence, and later through a helpful table, Canada has identified international conventions that, in its view, are the international instruments relevant to the conservation and management of Pacific Salmon.[1]

In Section 1, a brief overview is provided of the main sources of public international law: treaties, customary rules and principles.

Section 2 introduces key international law principles – the precautionary principle, harm prevention, sustainable use and the polluter pays principle. Following from this is discussion of the fundamental and overarching concept of sustainable development.

Finally, Sections 3 to 6 set out four broad groups of international instruments:

1. The UN Law of the Sea and regional agreements for the North Pacific Ocean;[2]
2. International agreements governing the conservation and the sustainable use of biodiversity, primarily the Convention on Biological Diversity;
3. International fisheries agreements, including Food and Agriculture Organization instruments, and also the *UN Fish Stocks Agreement* which does not govern anadromous stocks but provides useful guidance; and
4. A number of international treaties which govern marine pollution, climate change and environmental assessment.

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[1] *List of Treaties, Acts, Regulations, Agreements, Policies, Programs and Procedures Related to the Management of Fish and Fish Habitat on the Pacific Coast of Canada*, submitted by DFO to the Cohen Commission of Inquiry on May 17, 2010 at pages 7-10. See also the letters from the Government of Canada to the Cohen Commission, identifying some relevant international treaties and agreements, dated April 13, 2010 and April 27, 2010.

[2] The *Pacific Salmon Treaty* and Pacific Salmon Commission will be the subject of a separate Policy and Practice Report.

1. Sources of International Law

1. Article 38 of the *Statute of the International Court of Justice* (hereafter *ICJ Statute*)[3] confirms the main historical sources of international law: conventional law, customary law and general principles of international law.[4] Two subsidiary sources of international law noted in the *ICJ Statute* are judicial decisions and the teachings of highly qualified publicists.[5] This section also briefly comments on the status and role of "soft law" instruments.

1.1. Conventions, agreements and treaties

2. Treaties are a primary source of international law.[6] They are the result of negotiations between two or more states, often facilitated through international organizations like the United Nations or its agencies.

3. Treaties are binding on their parties. At international law, only those treaties to which a state has consented to be bound are legally binding upon it. However, despite this rule, states that are not parties to a treaty may nonetheless find themselves bound by its rules; this occurs when a treaty codifies existing customary international law, or when a treaty obligation evolves into a customary norm.[7]

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[3] All members of the United Nations are parties to the *Statute of the International Court of Justice*, annexe of the *Charter of the United Nations*, 26 June 1945, 1 UNTS xvi [*ICJ Statute*]; see Article 93 of the *Charter of the United Nations*, 26 June 1945, 1 UNTS xvi.

[4] Conventional law is created through conventions, treaties, agreements, and protocols thereto, and includes bilateral, regional and multilateral treaties. Customary law is often also referred to simply as custom.

[5] Article 38(1)(d) *ICJ Statute, supra* note 3.

[6] Article 38(1)(a) *ICJ Statute*, *ibid*. See also Patricia Birnie, Alan Boyle & Catherine Redgwell, *International Law and the Environment*, 3rd ed (Oxford: Oxford University Press, 2009) at 15 to 22 [Birnie & Boyle]; Philippe Sands, *Principles of International Environmental Law*, 2nd ed (Cambridge: Cambridge University Press, 2003) at 125 to 140 [Sands]; and Ted McDormand, *Salt Water Neighbors: International Ocean Law Relations Between the United States and Canada* (Oxford: Oxford University Press, 2009) at 24 [McDormand].

[7] Malcolm N. Shaw, *International Law*, 6th ed (Cambridge, Cambridge University Press, 2008) at 95 [Shaw]; and Birnie & Boyle, *supra* note 6 at 16.

4. The creation and interpretation of international treaties is governed by rules under the law of treaties. These rules are codified in the *Vienna Convention on the Law of Treaties* (VCLT).[8] Generally, the VCLT rules are viewed as customary norms.[9]

5. As set out in Articles 9 and 10 of the VCLT, at the conclusion of negotiations, states adopt a final version of the treaty text which can then be signed by states. Generally, treaties come into force following ratification by the number of states set out in the treaty itself.[10]

6. In Canada, the executive branch of government has exclusive decision-making authority to negotiate and ratify an international treaty. There is no requirement for approval of ratification by Parliament.[11] When Canada ratifies a treaty and that treaty comes into force, Canada is bound by the treaty's obligations.[12] Furthermore once a state has signed a treaty, or otherwise expressed its consent to be bound by a treaty when it enters into force, international law requires that it refrain from actions which would defeat the treaty's object and purpose.[13]

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[8] *Convention on the Law of Treaties*, 23 May 1969, 1155 UNTS 331, 8 ILM (1969) 689 [*Vienna Convention*]. On rules for treaty creation, see Articles 6 to 25 *Vienna Convention*. On rules for treaty interpretation, see Articles 31 to 33 *Vienna Convention*. For judicial comment on the use of customary international rules or principles in interpreting treaties, see Article 31(3)(c) *Vienna Convention* and the International Court of Justice judgments in *Namibia Advisory Opinion* [1971] I.C.J. Rep 16, at 31 and *Aegean Sea Continental Shelf Case* [1978] I.C.J. Rep 3, at 32 and 33.

[9] Shaw, *supra* note 7 at 903; and Anthony Aust, *Handbook of International Law* (Cambridge: Cambridge University Press, 2005) at 52.

[10] Article 24 *Vienna Convention*, *supra* note 8.

[11] McDormand, *supra* note 6 at 23; John Currie, *Public International Law*, 2nd ed (Toronto: Irwin Law, 2008) at 235 to 237 [Currie]; and Claude Emanuelli, *Droit International Public, Contribution à l'Étude du Droit International Selon une Perspective Canadienne*, 2nd ed (Montréal: Wilson & Lafleur, 2004) at 89 and 90.

[12] Because Canada is a dualist country, it does not automatically incorporate treaties that are ratified into its domestic law. Parliament incorporated treaties through statutes (ex: *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act*, S.C. 1992, c. 52). For a discussion of Canadian reception of international treaties see Currie, *supra* note 11 at 235 to 262; Stéphane Beaulac, "National Application of International Law: The Statutory Interpretation Perspective" (2003) 41 Can. Y.B. Int'l L. 225; and Jean-Maurice Arbour & Geneviève Parent, *Droit International Public*, 5th ed (Cowansville (Qc), Éditions Yvon Blais, 2006) at 177 to 192 [Arbour & Parent]. For a discussion on the incorporation of custom see Arbour & Parent at 192 to 200; Currie, *supra* note 11 at 226 to 235; and *R. v. Hape*, 2007 SCC 26.

[13] Article 18 *Vienna Convention*, *supra* note 8.

1.2. Customary International Law

7. Customary law is the second main source of binding international law. Unlike treaties, customary law is directly binding upon all states.[14]

8. Custom derives from the behaviour or practice of states. It is often identified by international tribunals, in particular by the International Court of Justice. For state practice to constitute custom, two criteria must be met. First, there must be consistent and widespread usage of the practice by states. Second, states must hold the view that the practice is required by law (*opinio juris*).[15] A principle stated in a non-binding declaration can, over time, develop into a customary norm.[16]

9. The international community increasingly codifies existing custom in treaties; key examples are parts of the *UN Convention on the Law of the Sea*.

1.3. Principles of international law and other international law sources

10. The third main source under the *ICJ Statute* is general principles of international law. International law principles are less specific than customary rules, and may be implemented through more specific conventional or customary rules.[17]

11. Over the last 40 years, international environmental law has seen the evolution of numerous principles. Principles of international law often find expression in treaties and declarations although they may also be free-standing. In the area of environment and sustainable development, perhaps the most famous expression of international law principles is the *Rio Declaration on Environment and Development* (the *Rio Declaration*), adopted at the 1992 United Nations Conference on Environment and Sustainable Development in Rio de Janeiro

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[14] Article 38(1)(b) *ICJ Statute, supra* note 3. See also Birnie & Boyle, *supra* note 6 at 22 to 25; and Sands, *supra* note 6 at 143 to 150.

[15] *Case Concerning Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, Merits, Judgement, I.C.J. Reports 1986, p.14, at par.183 and following; and *North Sea Continental Shelve*, Judgment, I.C.J. Reports 1969, p. 3, at par. 70 to 80.

[16] Birnie & Boyle, *supra* note 6 at 23, 24, 31 to 33, 108 and 109; and Sands, *supra* note 6 at 142 and 143.

[17] Birnie & Boyle, *supra* note 6 at 26 to 28; Sands, *supra* note 6 at 150 to 152, 232 and 233; Lal Kurukulasuriya & Nicholas A. Robinson, eds, *UNEP Training Manual on International Environmental Law* (UNEP, 2006) at 23 and 24 [UNEP Manual]; and Duncan French, *International law and policy of sustainable development* (Manchester: Manchester University Press, 2005) at 52 [French].

(often referred to as the "Earth Summit").[18] Declarations are not themselves legally binding although they may constitute evidence of emerging or established customary law. Declarations, along with other instruments such as decisions, guidelines, programmes and resolutions of international bodies, are sometimes referred to as "soft law" instruments.[19]

12. In the *Rio Declaration* and other declarations, the legal status of the stated principles is not often apparent: some principles are existing customary law, some principles are emerging custom, some principles are codified in treaties in more specific contexts, and some principles are merely aspirational. It is uncontroversial that such declarations often play a formative role in international law. Regardless of the legal status of such principles at a point in time, they reflect the views, consensus and commitments of the international community. Principles are intended to guide – if not always bind – state actors, particularly in the interpretation and implementation of their international obligations.[20]

13. Finally, sources of international law also include the decisions of international tribunals and scholarly writings.[21] International tribunals do not "create" law or precedent; rather, they discover the content of international law. The decisions of international tribunals like the International Court of Justice are highly persuasive and have significant normative weight.[22]

2. Some Relevant Rules and Principles of International Environmental Law

14. This section identifies some of the key international law rules and principles applicable and relevant to the conservation and management of Pacific salmon,

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[18] *Rio Declaration on Environment and Development*, 3 June 1992, [1992] PITSE 11, UN Doc A/CONF.151/26 (Vol. I) [*Rio Declaration*]. See Birnie & Boyle, *supra* note 6, at 53 to 58 and 112 to 114. The UN General Assembly refers to the *Rio Declaration* as containing "fundamental principles for the achievement of sustainable development, based on a new and equitable partnership" UNGA Res 47/190 and 191 (1992) and 48/190 (1993). See Birnie and Boyle at 113. Other declarations containing foundational principles of international law including the *Stockholm Declaration on the Human Environment*, 16 June 1972, [1972] PITSE 8, UN Doc A/CONF/48/14/REV.1, and, although less established, the *Johannesburg Declaration on Sustainable Development*, Report of the WSSD, UNOR, UN Doc A/Conf 199/20, (2002), Resolution 1 [*Johannesburg Declaration*]. See Birnie & Boyle, at 52 and 53 for an overview of the World Summit on Sustainable Development (WSSD) and the *Johannesburg Declaration*.

[19] Birnie & Boyle, *supra* note 6 at 14, 15, 34 to 37, and 50 to 53.

[20] *Supra* note 17.

[21] Article 38(1)(d) *ICJ Statute*, *supra* note 3. See also Birnie & Boyle, *supra* note 6 at 28 and 29; and Sands, *supra* note 6, at 153 and154.

[22] Shaw, *supra* note 7 at 109 and 110; and Birnie & Boyle, *supra* note 6 at 28 and 29.

including precaution, harm prevention, sustainable use of natural resources, polluter pays, environmental assessment and public participation. The *Rio Declaration* is a widely-endorsed statement of these international law principles, although it is not the only source or reflection of these principles.

15. Whether custom or principles, whether binding law or evolving norms, these rules and principles should guide the implementation of treaties relevant to Pacific salmon. These rules and principles are included in treaties and declarations, and underscore customary rules. They bind or guide Canada in fisheries management, biodiversity conservation and marine environmental protection.

16. Section 2 concludes with a discussion of sustainable development, including the international law principle of integration. Sustainable development is a fundamental international law concept, developed in numerous conventions and declarations. Sustainable development is also an overarching legal concept: it overlaps with, and incorporates many of the following specific rules and principles relevant to the conservation and management of Fraser River sockeye.

2.1. Precautionary principle

17. The precautionary principle, also known as the precautionary approach, is a central principle of international environmental law. The most well-known and widely accepted[23] definition of the principle is found in the *Rio Declaration:*

> In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.[24]

[23] Marie Claire Cordonier Segger & Ashfaq Khalfan, eds, *Sustainable Development Law – Principles, Practices, & Prospects* (Oxford: Oxford University Press, 2004) at 143 and 144 [Cordonier Segger & Khalfan]; Benjamin J, Richardson & Stepan Wood, eds, *Environmental Law for Sustainability* (Portland: Hart Publishing, 2006) at 362 [Richardson & Wood]; and UNEP Manual, *supra* note 17 at 30. See also Sands, *supra* note 6 at 268 and 279; Birnie & Boyle, *supra* note 6 at 154 and 159; Richards Barnes, David Freestone & David M. Ong, eds, *The Law of the Sea: Progress and Prospects* (Oxford: Oxford University Press, 2006) at 51 [Freestone]; and Shaw, *supra* note 7 at 867.

[24] Principle 15 of the *Rio Declaration*, *supra* note 18.

18. The precautionary principle is expressly integrated in numerous treaties.[25] For example, the *Convention on Biological Diversity* uses a similar formulation to that of the *Rio Declaration*, albeit absent the words "cost-effective".[26]

19. Precaution has, as a central object, the prevention of environmental damage.[27] The precautionary principle is intended to address situations involving scientific uncertainty regarding the existence or extent of an environmental risk. Where scientists are uncertain about the environmental consequences of an activity, a precautionary approach promotes implementing measures to prevent environmental harm. Regulatory inaction cannot be justified simply because the nature or magnitude of potential significant environmental harm is uncertain.[28]

20. Commentators have noted that the precise operational requirements of the precautionary principle are difficult to delimit.[29] The threshold that triggers the precautionary approach is unsettled: it varies from the risk of serious and irreversible damage to reasonable risk of adverse impact.[30] Where the threshold is met, the precautionary principle empowers states to take preventative measures against environmental damage, even if there is no scientific certainty of the likelihood or nature of the harm.[31] Some commentators consider that, where the principle is triggered, states may be required to take precautionary measures and "must not wait" for full scientific knowledge before taking

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[25] See the *Cnovention on Biological Diversity*, the *United Nations Fish Stocks Agreement*, the *United Nations Framework Convention on Climate Change*, the *Stockholm Convention on Persistent Organic Pollutants*, and the *London Protocol on Dumping at Sea*.

[26] The *United Nations Fish Stocks Agreement* and the *FAO Code of Conduct for Responsible Fisheries* also formulate the precautionary principle without the words "cost-effective"; see Article 6(2) of *United Nations Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Migratory Fish Stocks*, 4 August 1995, 34 ILM 1542 [*UN Fish Stocks Agreement*]; and Article 7.5.1 *FAO International Code of Conduct for Responsible Fisheries*, Food and Agriculture Organisation of the United Nations (Rome, 1995) [*FAO Code of Conduct*].

[27] Arie Trouwborst, Evolution and Status of the Precautionary Principle in International Law (The Hague: Kluwer Law International, 2002) at 10 and 11 [Trouwborst]; and Mead, infra note 30, at 151.

[28] Trouwborst, ibid at 11; Sands, supra note 6 at 269; and Cordonier Segger & Khalfan, supra note 23 at 152.

[29] Trouwborst, ibid at 14 to 16; Mead, infra note 30 at 138; and Cordonier Segger & Khalfan, supra note 23 at 152.

[30] Jean-Maurice Arbour & Sophie Lavallée, *Droit International de l'Environnement* (Cowansville (Qc): Éditions Yvon Blais, 2006) at 50 and 51 [Arbour & Lavallée]; and Stephanie Joan Mead, "The Precautionary Principle: A Discussion of the Principle's Meaning and Status in an Attempt to Further Define and Understand the Principle" (2004) 8 N.Z. J. Envtl. L. 137 at 144 [Mead].

[31] Arbour & Lavallée, *supra* note 30 at 48; and Sands, *supra* note 6 at 267.

environmental action.[32] However, even if precautionary measures are obligatory, states may be permitted to limit themselves to cost-effective measures.[33]

21. The precautionary principle may also shift the burden of proof. Traditionally, it has been opponents of a potentially harmful activity that have been required to prove its negative impacts. However, some have argued that the precautionary principle puts the burden of proof on the proponent of a potentially harmful activity to convince regulators that its proposed activities would not cause harm.[34]

22. Decisions of international tribunals have shed light on the application of the precautionary principle. For example, the *Southern Bluefin Tuna* proceedings before the International Tribunal for the Law of the Sea (ITLOS) involved Australia, New Zealand and Japan in a dispute over high seas fishing rights. ITLOS issued a provisional order protecting tuna from further exploitation by the parties, pending resolution of the dispute. This order followed the precautionary approach: ITLOS ruled that the parties were required to "act with prudence and caution to ensure that effective conservation measures are taken," and expressly recognized that scientific uncertainty was not a reason to postpone these measures.[35] Concurring separate opinions further examined the role of the precautionary principle in the conservation of living marine resources.[36]

23. In 2001, the Supreme Court of Canada first employed this international law principle in interpreting a statute,[37] and the Federal Court has also relied on it for

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[32] Cordonier Segger & Khalfan, *supra* note 23 at 144; Sands, *supra* note 6 at 269. See *Ministerial Declaration of the International Conference on the Protection of the North Sea*, Bremen, 1 November 1984.

[33] Arbour & Lavallée, *supra* note 30 at 51; see Principle 15 of *Rio Declaration*, *supra* note 18; and Article 3 *United Nations Framework Convention on Climate Change*, 9 May 1992, 31 ILM (1992) 851 [UNFCCC].

[34] Sands, *supra* note 6 at 273; Cordonier Segger & Khalfan, *supra* note 23 at 144; Birnie & Boyle, *supra* note 6 at 158 and 159; Mead, *supra* note 30 at 152 to 157; Christopher Stone, "Is there a Precautionary Principle?" (2001) 31 Environmental Law Reporter 10790 at 10791; and Article 4 *New Delhi Declaration on Principles of International Law Relating to Sustainable Development* (London: International Law Association, 2002) [*New Delhi Declaration*].

[35] *Southern Bluefin Tuna Cases (Order)*, (1999) ITLOS Nos. 3&4, at par. 77, 79 and 80 [*Southern Bluefin Tuna Cases*].

[36] *Southern Bluefin Tuna Cases, ibid,* Separate Opinion of Judge Laing at par. 12 to 21, Separate Opinion of Judge Treves at par. 8-9, and 11, and Separate Opinion of Ad Hoc Judge Shearer. See also Birnie & Boyle, *supra* note 6 at 160; Sands, *supra* note 6 at 275 and 276; Freestone, *supra* note 23 at 51; Simon Marr, "The Southern Bluefin Tuna Cases: The Precautionary Approach and Conservation and Management of Fish Resources", (2000) 11-4 EJIL 815 at 826 to 828; and Francisco Orrego Vicuña, "The International Tribunal for the Law of the Sea and Provisional Measures: Settled Issues and Pending Problems", (2007) 22-3 The International Journal of Marine and Coastal Law 451 at 458.

[37] *114957 Canada Ltée (Spraytech, Société d'arrosage) v. Hudson (Town)*, 2001 SCC 40.

this same purpose.[38] Parliament has incorporated the precautionary principle into legislation relevant to Fraser River sockeye salmon, including the *Oceans Act,* the *Canadian Environmental Assessment Act* and the *Canadian Environmental Protection Act*.[39] The executive branch has published an interpretation of the precautionary approach in a 2003 Cabinet directive entitled *A framework for the application of precaution in science-based decision making about risk*.[40]

24. Regardless of the challenges in defining the principle's parameters, precaution requires government actors to grapple with how they make regulatory decisions and specifically how they determine the level of permissible risk to the environment. A commentator has observed the questions that governments must ask: in what circumstances must government change its risk management policies and techniques to ensure it does not rely on scientific uncertainty to justify its management or regulatory approach? At what point must government assign less weight to technocratic expertise? In what circumstances must government require a proponent of a risky activity to demonstrate its safety or sustainability? Precaution requires acknowledging that we know little about ecosystem functioning and that, by itself, science cannot answer value-based questions such as "how many fish can be safely harvested."[41]

2.2. Polluter pays principle

25. Unlike the precautionary principle, the polluter pays principle applies in circumstances where environmental harm has already occurred. The polluter pays principle is found in Principle 16 of the *Rio Declaration*:

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[38] See *Environmental Defence Canada v. Canada (Fisheries and Oceans)*, 2009 FC 878, at 33, 34 and 40; and *Alberta Wilderness Association v. Canada (Environment)*, 2009 FC 710, at 25 and 41.

[39] Preamble and s.30 *Oceans Act*, S.C. 1996, c. 31; s.4 *Canadian Environmental Assessment Act*, S.C. 1992, c. 37; and preamble, s.2(1)(a), 6(1.1) and 76.1 *Canadian Environmental Protection Act*, 1999, S.C. 1999, c. 33.

[40] The precautionary principle is also discussed, in various ways, in some DFO policies. See in particular *A fishery decision-making framework incorporating the Precautionary Approach*. See also the *Wild Salmon Policy*, the *Policy for Managing the Impacts of Fishing on Sensitive Benthic Areas*, the *Policy on New Fisheries for Forage Species*, and the *Wild Atlantic Salmon Conservation Policy*. The *Wild Salmon Policy* references an articulation of the precautionary principle found at Article 6.2 of the *UN Fish Stocks Agreement*, *supra* note 26: "States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures"; see *infra,* Section 5.2.

[41] Richardson & Wood, *supra* note 23 at 363 and 364.

> National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.[42]

26. The polluter pays principle was first integrated in an international instrument by the Organisation for Economic Co-operation and Development.[43] It has been relied on by the Supreme Court of Canada.[44] In economic terms, it urges states to require polluters to internalize the costs generated by their pollution. In the context of resource exploitation, the principle is sometimes described as a "user pays" approach.[45] In short, the principle directs that the costs associated with pollution and environmental degradation should be borne by those responsible.

2.3. Duties to ensure environmental assessments and public participation

27. Government decision-making and policy-making can create environmental impacts, both adverse and beneficial. From a proponent's desire to build a project in spawning habitat, to new governmental legislation regulating aquaculture, there are many ways that government decision-making and policy-making can impact the health and sustainability of Fraser River sockeye.

28. It is well recognized that, before making decisions that could lead to significant adverse environmental effects, states should environmentally assess proposed projects and seek to mitigate their adverse impacts. Effective public participation has long been posited as a necessary component of sustainable development.[46]

29. Principle 17 of the *Rio Declaration* reflects international consensus that environmental impact assessment, as a national instrument, shall be undertaken

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[42] Principle 16 of *Rio Declaration*, *supra* note 18.

[43] OECD Council Recommendation C(72)128 (1972), 14 ILM 236 (1975).

[44] *Imperial Oil v. Quebec (Minister of Environment)* 2003 SCC 58, at 1, 23, 39; and *St. Lawrence Cement Inc. v. Barrette*, 2008 SCC 64, at 80.

[45] *Supra* note 43. See also Charles S. Pearson, "Testing the System: GATT + PPP = ?" (1994) 27 Cornell Int'l L. J. 553; Benjamin J. Richardson, "Economic Instruments in UK Environmental Law Reform: Is the UK Government Sending the Right Signals" (2001) 3 Eur. J.L. Reform 431.

[46] *Report of the World Commission on Environment and Development: Our Common Future*, UN Doc A/42/427, (1987) at Chapter 1 par. 43 [*Our Common Future*].

for proposed activities that are likely to have a significant adverse environmental impact and are subject to a decision of a competent national authority.[47]

30. The environmental assessment principle is also reflected in many binding conventions,[48] some of which are discussed below.[49] Article 14 of the *Convention on Biological Diversity* requires parties, as far as possible and as appropriate, to conduct environmental assessments when a proposed activity is likely to produce significant adverse effects on biological diversity, to minimize the negative effect of the activity on biodiversity and to notify and exchange information with other states that may suffer impacts.[50] Similarly, Article 206 of the *UN Convention on the Law of the Sea* requires parties to assess potential effects of activities under their jurisdiction where there are grounds to believe the activity may cause substantial pollution of or significant harmful changes to the marine environment.

31. Environmental assessment also involves customary obligations. In the *Pulp Mills on the River Uruguay Case*, the International Court of Justice confirmed that states have a duty to perform an assessment when there is a risk that a proposed activity may have adverse transboundary impacts.[51] Similarly, in certain factual contexts, the international law duty of co-operation includes duties to share information on environmental impacts, to negotiate in good faith with other states, and to give prior notice and engage in consultation where a state's activities are likely to impact its neighbour's interests.[52]

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[47] Birnie & Boyle, *supra* note 6 at 116, 166 and 167. It seems that Principle 10, 15 and 17 of the *Rio Declaration* have the status of general international law, Birnie & Boyle, at 138.

[48] For discussion of duties of environmental assessment, information collection, information sharing, information reporting, consultation and access to information codified in multilateral environmental treaties, see Sands, *supra* note 6 at 799 to 868.

[49] Duty to conduct environmental assessments, access to environmental information, public participation in decision making further addressed below in Section 6.3.

[50] Article 14 *Convention on Biological Diversity*, 5 June 1992, 31 ILM (1992) 818 [CBD]. For the CBD guidelines informing environmental and cultural impact assessment, see the Akwe : Kon guidlines, (http://www.cbd.int/traditional/outcomes.shtml) adopted by the CBD COP-7 in Decision VII/16 F.

[51] *Pulp Mills on the River Uruguay (Argentina v Uruguay)*, Judgment, I.C.J. Reports 2010, at par. 204 [*Pulp mills Case*]. The decision also provides some insight into the procedural and substantive aspects of this obligation, although this analysis very largely turns on the terms of the specific treaty between Argentina and Uruguay. For an earlier consideration by the International Court of Justice of states' environmental assessment obligations, see *Gabcikovo-Nagymaros Project (Hungary v. Slovakia)*, Judgment, I.C.J. Reports 1997 [*Gabcikovo-Nagymaros Case*].

[52] Richardson & Wood, *supra* note 23 at 368 to 371; Birnie & Boyle at 175 to 184; Article 1.3 of *UN Charter*, *supra* note 3; and *Declaration on Principles of International Law concerning Friendly Relations and Cooperation among States in accordance with the Charter of the United Nations*, GA Res 2625, UNGAOR, 25th Sess, UN Doc A/RES/2625(XXV) (1970).

32. Distinct from environmental assessment, it is also increasingly recognized by the international community that states should give their citizens opportunities to participate in government environmental decision-making and access to environmental information. This is reflected at Principle 10 of the *Rio Declaration*:

> Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.[53]

33. In many international instruments, heightened emphasis is given to the need for states to involve indigenous peoples in environmental decision-making.[54] Indeed, with respect to indigenous peoples, the *UN Declaration on the Rights of Indigenous Peoples,*[55] at Article 18, recognizes rights of indigenous peoples to participate in decision making which affect their rights "through representatives chosen by themselves in accordance with their own procedures, as well as to maintain and develop their own indigenous decision-making institutions". As well, Article 19 provides that states will consult in good faith with aboriginal peoples "in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them."[56]

2.4. Prevention of harm and sustainable use of natural resources

34. It has long been widely accepted in customary international law that states are required to take steps to ensure that activities within their jurisdiction or control do not damage the environment of other states or areas beyond national jurisdiction. That is, states are under a customary law duty to prevent significant

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[53] Birnie & Boyle, *supra* note 6 at 116. It seems that Principle 10, 15 and 17 of the *Rio Declaration* have the status of general international law, Birnie & Boyle, at 138.

[54] *Agenda 21*, UNCED, Report, I (1992); *Johannesburg Declaration, supra* note 18.

[55] *United Nations Declaration on the Rights of Indigenous Peoples*, GA Res 295, UNGAOR, 61th Sess, UN Doc A/RES/61/295, (2006) [*UN Declaration on Indigenous Peoples*].

[56] Canada voted against the *United Nations Declaration on the Rights of Indigenous Peoples.* See http://www.un.org/esa/socdev/unpfii/en/declaration.html). The rights of Aboriginal peoples under domestic law, including issues of consent, will be the subject of a separate Policy and Practice Report by the Commission.

harm to other states or areas outside national jurisdiction, sometimes referred to as the "no harm principle" or the "prevention principle."[57]

35. In the sustainable development context, the responsibility to prevent damage to the environment of other states is confirmed in both Principle 21 of the 1972 *Stockholm Declaration* and Principle 2 of the *Rio Declaration.*

36. In the marine context, Article 193 of the *UN Convention on the Law of the Sea* provides that states have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment.

37. Recently, the International Law Association has sought to codify evolving international law principles in the *New Delhi Declaration of Principles of International law relating to Sustainable Development*,[58] including the principle of the sustainable use of natural resources:

> States are under a duty to manage natural resources, including those solely within their own territory or jurisdiction, in a rational, sustainable and safe way so as to contribute to the development of their peoples, with particular regard for the rights of indigenous peoples and to the conservation and sustainable use of natural resources and protection of the environment, including ecosystems.[59]

38. This formulation of sustainable use, whether it reflects existing or evolving law, goes beyond the traditional prevention principle. It would require states to use and exploit natural resources sustainably, including in their own territory.

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[57] *Trail Smelter Arbitration,* 33 AJIL (1939) 182 and 35 AJIL (1941) 684; *Nuclear Weapons Advisory Opinion,* I.C.J. Reports (1996) 226, at par. 29. See also *Pulp Mills Case*, *supra* note 51 at par. 101. See also Birnie & Boyle, *supra* note 6 at 137, 143 and 144; Arbour & Lavallée, *supra* note 30 at 46; and Sands, *supra* note 6 at 241 and 242.

[58] In the context of the WSSD (World Summit on Sustainable Development), the International Law Association, after much debate and research, produced the *New Delhi Declaration*, *supra* note 34, which identifies 7 principles of sustainable development. See discussion in Cordonier Segger & Khalfan, *supra* note 23 at 95 to 98. The *New Delhi Declaration* was submitted to the WSSD in 2002, see UN Doc A/CONF.199/8, 9 August 2002.

[59] Article 1.2 *New Delhi Declaration*, *supra* note 34. See also Birnie & Boyle, *supra* note 6 at 199 to 201; and Cordonier Segger & Khalfan, *supra* note 23 at 109 to 122.

2.5. Sustainable development and Agenda 21

39. Sustainable development is an overarching and fundamental international law concept.[60] Many of the international law principles discussed above are elements of international law's emerging sustainable development framework, particularly through their inclusion in the *Rio Declaration.*[61] The concept of sustainable development applies to a broad range of environmental issues, as well as to issues not traditionally considered environmental in nature.[62]

40. The most commonly accepted international definition of sustainable development arises from the famous Brundtland Report, *Our Common Future*, authored by the World Commission on the Environment and Development in 1987: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[63]

41. At the Earth Summit in 1992, the international community again endorsed the concept of sustainable development. This endorsement is found in the *Rio Declaration* and Agenda 21. Indeed the *Rio Declaration* is built around the concept of sustainable development, and incorporates its component principles.

42. Sustainable development is not simply the pursuit of environmental protection, but the integration of environmental, social and economic decision-making. In this regard, Principle 4 of the *Rio Declaration* mandates that: "In order to achieve sustainable development, environmental protection must constitute an integral part of the development process and cannot be considered in isolation from it."

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[60] It does not appear that sustainable development should itself be understood as a principle of international law. For the view that sustainable development is not itself a norm or principle of international law, see French, *supra* note 17 at 51; Vaughan Lowe, "Sustainable Development, an Unsustainable Argument?" in Alan Boyle & David Freestone, eds, *International Law and Sustainable Development: Past Achievements and Future Challenges* (Oxford: Oxford University Press, 1999). For the different view that sustainable development is itself a stand-alone principle of international law, see Sands, *supra* note 6 at 252; Christina Voigt*, Sustainable Development as a Principle of International Law* (Leiden (The Netherland): Martinus Nijhoff Publishers, 2009).

[61] Cordonier Segger & Khalfan, *supra* note 23 at 98; French, *supra* note 17 at 51 to 54; and Richardson & Wood, *supra* note 23 at 373.

[62] Richardson & Wood, *ibid.*

[63] *Our Common Future*, *supra* note 46 Chapter 2, par.1

43. International law thus recognizes that environmental protection and development are interdependent and must be regulated in an integrated manner, and not as opposing objectives to be balanced against each other.[64] Integration is achieved, in part, through procedural requirements like environmental assessment and other regulatory schemes for gathering and sharing environmental information. To some, integration signals the "mainstreaming" of environmental concerns into government decision-making and policy-making.[65]

44. The principle of integration was reinforced in *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*:

> The principle of integration reflects the interdependence of social, economic, financial, environmental and human rights aspects of principles and rules of international law relating to sustainable development as well as of the needs of current and future generations of humankind.
>
> All levels of governance – global, regional, national, sub-national and local – and all sectors of society should implement the integration principle, which is essential to the achievement of sustainable development.
>
> States should strive to resolve apparent conflicts between competing economic, financial, social and environmental considerations, whether through existing institutions or through the establishment of appropriate new ones.[66]

45. The *Johannesburg Declaration on Sustainable Development* further confirms that sustainable development is built on three mutually reinforcing and interdependent pillars: social development, environmental protection and economic development.[67]

46. In addition to integration, another core element of sustainable development is equity. The equity element of sustainable development reflects the challenges to

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[64] See Philippe Sands, "Introduction" in Philippe Sands, ed, *Greening International Law* (London (UK): Earthscan Publications, 1993); Sands, *supra* note 6 at 253 to 256 and 263 to 266; Birnie & Boyle, *supra* note 6 at 55 and 116 to 118; Arbour & Lavallée, *supra* note 30 at 66-67; Richardson and Wood, *supra* note 23 at 375, 378 and 379; and *Agenda 21*, *supra* note 54 Chapter 8, par.8.4. As put by Ellis and Wood: "That environmental protection and economic development can be integrated in decision-making processes and that both can be achieved simultaneously is an article of faith in sustainable development discourse" (in Richardson & Wood, *supra* note 23 at 378).

[65] See Richardson & Wood, *supra* note 23 at 379. Also see Cordonier Segger & Khalfan, *supra* note 23 at 102-109.

[66] Article 7 *New Delhi Declaration*, *supra* note 34.

[67] *Johannesburg Declaration*, *supra* note 18 at par.5.

development faced by developing countries. Throughout the *Rio Declaration,* its principles recognize both the need for inter-generational equity between present and future generations, as well as the need for intra-generational equity.[68]

47. Sustainable development has been considered in opinions of the International Court of Justice.[69]

48. The concept of sustainable development has also been considered by the Supreme Court of Canada.[70] Sustainable development is incorporated into a number of Canadian statutes.[71] Bill C-45, a bill to amend the *Fisheries Act*, included sustainable development as a principle governing fisheries decision-making, along with the precautionary approach and ecosystem approach.[72]

49. The Department of Fisheries and Oceans (DFO) has often stated that "sustainable development is the lens through which Fisheries and Oceans Canada conducts its business."[73] In 2007, DFO released *A New Resource Management Sustainable Development Framework* for fisheries management decisions throughout Canada. The Framework was said to overarch a number of new DFO policies, including "*A Fishery Decision Making Framework Incorporating the Precautionary Approach to guide management decisions.*" The Framework was meant to build upon Pacific Fisheries Reform, said to contain modern concepts and tools for managing fisheries like the ecosystems approach and precautionary approach.[74]

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[68] Principles 3, 5, 6 and 7 *Rio Declaration*, *supra* note 18.

[69] *Gabcikovo-Nagymaros Case, supra* note 51 at par.140; and *Pulp Mills Case*, *supra* note 51 at par.75, 76, 177.

[70] See, amongst others, *114957 Canada Ltée (Spraytech, Société d'arrosage) v. Hudson (Town)*, 2001 SCC 40; *Imperial Oil Ltd. v. Quebec (Minister of the Environment)*, 2003 SCC 58; *St. Lawrence Cement Inc. v. Barrette*, 2008 SCC 64; *Friends of the Oldman River Society v. Canada (Minister of Transport)*, [1992] 1 S.C.R. 3

[71] See, amongst others, *Federal Sustainable Development Act*, S.C. 2008, c. 33; *Auditor General Act*, R.S.C. 1985, c. A-17; *Oceans Act*, S.C. 1996, c. 31; *Canadian Environmental Assessment Act*, S.C. 1992, c. 37; *Canadian Environmental Protection Act, 1999*, S.C. 1999, c. 33.

[72] Bill C-45, *An Act respecting the sustainable development of Canada's seacoast and inland fisheries*, First Session, Thirty-ninth Parliament, 55 Elizabeth II, 2006, see http://www2.parl.gc.ca/HousePublications/Publication.aspx?Docid=2604605&file=4.

[73] See e.g. "Resource Management Sustainable Development Framework" (Draft DFO webpage) at Ringtail document number CAN008390; and DFO webpage entitled "Sustainable Fisheries Framework" at http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm

[74] *A New Resource Management Sustainable Development Framework* is linked to in DFO's *List of Treaties, supra* note 1. Internal and external DFO documents that identify and describe this Framework have been produced in Canada's Ringtail document disclosure, including at CAN002114, CAN002115, CAN006844 and CAN00839. Although identified by DFO in its *List of Treaties* at page 37, under the heading Policies, Programs and Procedures, a search of the Department's website on September 16, 2010 did not produce a webpage addressing a Sustainable

50. In addition, DFO has published a number of Sustainable Development Strategies. The latest is *Our Waters, Our Future: Sustainable Development Strategy 2007-2009.*[75] Included in DFO's "sustainable fisheries and aquaculture" outcomes is a helpful introductory discussion of precautionary and ecosystem approaches to fisheries management.[76]

51. DFO's 2005-2010 Strategic Plan also discusses sustainable development as an approach that informs all of DFO's strategic priorities.[77]

52. Finally, no discussion of sustainable development is complete without brief reference to Agenda 21. Adopted by international consensus at the 1992 Earth Summit, Agenda 21 is an 800-page plan of action for sustainable development and environmental protection in the 21st century. While not legally binding, Agenda 21 is a critical guideline on how to implement sustainable development and make operational the international law principles noted above.

53. Agenda 21 has been an important blueprint for protection of the oceans. It reflects and advances the law of the sea by reframing states' commitments under the *United Nations Convention on the Law of the Sea* (hereafter UNCLOS) within a sustainable development context.[78] Chapter 17 deals with the protection of the oceans and their living resources.[79] It acknowledges that we require "new approaches to marine and coastal area management and development, at the national, subregional, regional and global levels, approaches that are integrated in content and are precautionary and anticipatory in ambit."[80] Chapter 17 sets out practical approaches for the protection of marine living resources and their

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Development Framework. DFO does currently have a webpage entitled "Sustainable Fisheries Framework" which includes the same policies and tools said to be part of the Sustainable Development Framework: see http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm

[75] *Our Waters, Our Future: Sustainable Development Strategy. Fisheries and Oceans Canada 2007-2009.* 2006. See http://www.dfo-mpo.gc.ca/sds-sdd/2007-2009/index-eng.htm. Pages 5 and 8 provide the Brundtland Report's definition of sustainable development as the "definition generally used in the Government of Canada." Also see Annex 1 at p.65, which discusses the international and domestic evolution of sustainable development.

[76] *Ibid,* at pp.28 and 29.

[77] 2005-2010 Strategic Plan: Our Waters, Our Future at http://www.dfo-mpo.gc.ca/dfo-mpo/glance-coup_oeil-eng.htm. Unlike the DFO publications discussed above, the Strategic Plan does not adopt the international definition of sustainable development.

[78] Freestone, *supra* note 23 at 66.

[79] Birnie & Boyle, *supra* note 6 at 745.

[80] *Agenda 21*, *supra* note 54 at par.17.1.

ecosystems, including mechanisms for integrated management, consultation, prior environmental assessment, conservation and restoration of critical habitats, and precautionary and anticipatory approaches.[81]

3. The Law of the Sea

54. Among other activities, the law of the sea governs fisheries and the protection of the marine environment. Section 3 of this paper summarises the relevant parts of UNCLOS. It also briefly canvasses a few treaties specific to the Northeast Pacific Ocean.[82]

3.1. The United Nations Convention on the Law of the Sea

55. UNCLOS is often referred to as the "constitution for the oceans".[83] It is a foundational treaty that creates a comprehensive framework for the law of the sea. UNCLOS covers many subject matters, including marine boundaries, navigation, mineral exploration, marine pollution, scientific research, the use and conservation of living marine resources and fisheries in different marine zones.

56. UNCLOS came into force on November 14, 1994.[84] Before it came into force, much of UNCLOS codified and reflected existing customary law.[85] Currently, most of the treaty's provisions are widely accepted to reflect customary international law.[86] Canada signed UNCLOS on December 10, 1982 and ratified it on November 7, 2003.

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[81] Birnie & Boyle, *supra* note 6 at 746.

[82] The *Pacific Salmon Treaty* and the Pacific Salmon Commission will be the subject of a separate Policy and Practice Report. This Policy and Practice Report on international law frameworks does however introduce the Convention on Anadromous Fish Stocks in the North Pacific, and the PICES Convention.

[83] A phrase coined by the President of UNCLOS III, Tommy Koh. See UN publication: The Law of the Sea (1983), at p.xxxiii; Freestone, *supra* note 23 at 1, 43 and 67; McDorman, *supra* note 6 at 21.

[84] The *Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982*, 28 July 1994, [1994] ATS 32, came into force on July 28, 1996.

[85] Shaw, *supra* note 7 at 555 and 556; Birnie & Boyle, *supra* note 6 to 386 to 390; Sands, *supra* note 6 at 396; Aust, *supra* note 9 at 298 and 299; Hugo Caminos & Michael R. Molitor, "Progressive Development of International Law and the Package Deal" (1985) 79 AJIL 871; UNEP Manual, *supra* note 17 at 8; Martin Lishexian Lee, "The Interrelation between the Law of the Sea Convention and Customary International Law", (2005-2006) 7 San Diego Int'l L.J. 405 [Lee].

[86] Robin Churchill & Vaughan Lowe, *The Law of the Sea*, 3rd ed (Manchester: Manchester University Press, 1999) at 16 to 22 [Churchill & Lowe]; Shaw, *supra* note 7 at 555 and 556; Birnie & Boyle, *supra* note 6 at 386 to 390; Sands,

57. UNCLOS informs and constrains the development of regionally or functionally specific law of the sea treaties, including regional fishing conventions. Regional fishing conventions and other multilateral treaties must be developed and interpreted to be consistent with UNCLOS.[87]

58. UNCLOS confirmed the existence of different marine zones under international law: internal waters, territorial seas, the exclusive economic zone and the high seas. Most notably with respect to fishing and navigation, different parts and provisions apply in different marine zones. Other parts of UNCLOS address subjects across all zones, such as Part XII on the protection of the marine environment and Part XIII on marine scientific research.

59. Sections 3.1.1 to 3.1.4 briefly note the relevant legal regimes within UNCLOS governing fisheries in the territorial sea and the Exclusive Economic Zone (EEZ); fisheries on the high seas; the protection of the marine environment under Part XII; and marine scientific research under Part XIII.

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supra note 6 at 396; Aust, *supra* note 9 p.298 and 299; UNEP Manual, *supra* note 17 at 8 and 157; Lee, *ibid*. Worth nothing, the US has asserted that most of UNCLOS is customary international law; McDormand, *supra* note 6 at 24 and 25.

[87] Article 311 *United Nations Convention on the Law of the Sea*, 10 December 1982, [1994] ATS 31 [UNCLOS]; David Heywood, "Legal Implications of the Entry Into Force of the UN Convention on the Law of the Sea" (1995) 44-2 International and Comparative Law Quarterly 313 at 321; Freestone, *supra* note 23 at 1, 5 to 15, 43, 44, 52 to 54, 184, 185, 225 and 226; UNEP Manual, *supra* note 17 at 157 and 222. See also Section 1, *supra*, regarding international law rules on the interpretation of treaties. Many treaties directly reference the legal framework codified by UNCLOS: see e.g. Article 22 CBD, *supra* note 50; Preamble *Convention for a North Pacific Marine Science Organization*, 22 October 1991, Can TS 1992/8 [PICES]; Article XV *Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean*, 11 February 1992, Can TS 1993/13 [*North Pacific Anadromous Stocks Convention*]; Preamble and Article I(b) *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas*, 24 November 1993, [2004] ATS 26 [*FAO Compliance Agreement*]; Preface and Articles 1.1, 3.1 and 3.2 *FAO Code of Conduct*, *supra* note 26; *Global Programme of Action*, UNEP, 1995, UNEP(OCA)/LBA/IG.2/7 at par.4; Preamble and Article 16 *International Convention for the Control and Management of Ships' Ballast Water and Sediments*, 13 February 2004, [2004] PITSE 14 [*Ballast Convention*]; Article 15 *International Convention on the Control of Harmful Anti-Fouling Systems on Ships*, 5 October 2001, [2008] ATS 15 [*Anti-fouling Convention*]; Preamble *1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*, 7 November 1996, [2006] ATS 11 [*London Protocol*]; Article 9 *Protocol of 1978 relating to the International Convention for the prevention of pollution from ships, 1973*, 17 February 1978, 1340 UNTS A-22484 [MARPOL]; Preamble *UN Fish Stock Agreement*, *supra* note 26.

3.1.1. Fisheries in Internal Waters, the Territorial Sea and the Exclusive Economic Zone

60. Coastal states have sovereign jurisdiction over their claimed territorial sea.[88] Part II, Section 2 of UNCLOS establishes the extent of territorial sea that a state can claim.[89] The territorial sea is within a coastal state's full sovereignty and jurisdiction, subject to rights of innocent passage held by foreign vessels.[90] Thus under UNCLOS, Canada can apply its national fisheries laws and regulations to its territorial sea.

61. Since 1969, Canada has set a territorial sea of 12 nautical miles from straight baselines; on the Pacific Coast, the territorial sea is westward of a straight baseline drawn along the west coast of Vancouver Island and Haida Gwaii.[91]

62. In 1971, Canada also enacted a "fisheries closing line" across the Queen Charlotte Sound. This line runs between the west coasts of Vancouver Island and Haida Gwaii, and proceeds northward to the Alaskan panhandle, thereby effectively "enclosing" Queen Charlotte Sound, Hecate Strait and Dixon Entrance.[92] [93]

63. While the precise status of this fisheries closing line at international law is uncertain,[94] Canada considers those waters enclosed by its fisheries closing line and its territorial seas baseline to be "internal waters."[95] At international law,

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[88] Article 2 UNCLOS, *supra* note 87.

[89] Article 3 UNCLOS, *ibid*. It provides that the territorial sea can be up to 12 nautical miles from a state's baselines.

[90] Articles 2, 17, 19 of UNCLOS, *ibid*.

[91] Article 7 UNCLOS, *ibid*. See also *Oceans Act*, S.C. 1996, c. 31, s.25 and *Territorial Sea Geographical Coordinates Order*, C.R.C., c. 1550. See also http://www.dfo-mpo.gc.ca/oceans/canadasoceans-oceansducanada/marinezones-zonesmarines-eng.htm.

[92] *Fishing Zones of Canada (Zone 1, 2 and 3) Order*, C.R.C., c. 1547, came into effect on 10 March 1971. Hugh Kindred & Phillip Saunders, eds, *International Law Chiefly As Interpreted and Applied in Canada*, 7th ed (Toronto: Emond Montgomery Publications, 2006) at 928 [Kindred & Saunders].

[93] With respect to the Dixon Entrance, Canada and the US claim two overlapping areas. The first involves an overlapping claim *within* the Dixon Entrance. The second, and relating to the maritime boundary within the Dixon Entrance, involves the precise limitation of each state's 200 mille EEZ seaward of the Entrance. See McDorman, *supra* note 6 at 7 and 269 to 271.

[94] Ted McDorman, "The West Coast Salmon Dispute – A Canadian View of the Breakdown of the 1985 Treaty and the Transit License Measure" (1994-1995) 17 Loy. L.A. Int'l & Comp. L.J. 477 at 499 and 500 [McDorman, "The West Coast Salmon Dispute"].

[95] These internal waters include Queen Charlotte Sound, Hecate Strait and Dixon Entrance, as well as Georgia Strait, Johnstone Strait and Queen Charlotte Strait. See *Territorial Sea Geographical Coordinates Order*, C.R.C., c.

internal waters are found on the landward side of the baselines from which the width of the territorial sea is measured.[96] A state's "sovereign jurisdiction over its internal waters is as plenary as over its land territory."[97] As with the territorial sea, Canada's internal waters are wholly subject to its national laws and form part of Canada.[98] Canada has exclusive access to and control over all living and non-living resources within its internal waters.[99]

64. Juan de Fuca Strait has been divided between the US and Canada by a marine boundary since 1846.[100] It has been recently observed that the precise status of the Juan de Fuca Strait at international law is not clear.[101]

65. Part V of UNCLOS creates the specific legal regime governing states' EEZs.[102] The EEZ is an area beyond and adjacent to a state's territorial sea. A state may claim an EEZ that extends 200 nautical miles from its baselines.[103]

1550. See also Department of External Affairs, Letter, 17 December 1973, in (1974) 12 CYIL 277 at 279. See also Peter Finkle & Alastair Lucas, "The Concept of the British Columbia Inland Marine Zone" (1990) 24 U. Brit. Colum. L. Rev. 37 at 40 to 42 [Finkle & Lucas]; Kindred & Saunders, *supra* note 92 at 924 to 930; McDorman, *supra* note 6 at 269 to 274.

[96] Article 8 of UNCLOS, *supra* note 87; s.6 *Oceans Act*, S.C. 1996, c. 31; Finkle & Lucas, *supra* note 95 at 40 and 41; McDorman, *supra* note 6 at 28 and 29; Shaw, *supra* note 7 at 556 and 557; Edward Duncan Brown, *International Law of the Sea*, vol. I (Brookfield (VT): Dartmouth Publishing, 1994) at chapter 5; Daniel Patrick O'Connell, *The International Law of the Sea*, vol. I (Oxford: Oxford University Press, 1983) at chapter 9; Vladimir D. Degan, "Internal Waters" (1986) 17 Netherlands YIL 3; and Churchill & Lowe, *supra* note 86 at chapter 3.

[97] Currie, *supra* note 11 at 295.

[98] Section 7 *Oceans Act*, S.C. 1996, c. 31.

[99] It must be noted that Canada's official position on the legal status of these five waterbodies is not one shared by the United States. The US has opposed Canada's 1970 fisheries closing lines and appears to take the view that Georgia Strait, Johnstone Strait and Queen Charlotte Strait are international straits at international law. See e.g. Statement on Canadian Fisheries Closing Lines Announcement, 18 December 1970, in S.Houston Lay, Robin Churchill & Myron Nordquist, eds, *New Directions in the Law of the Sea,* Vol. 1 (Dobbs Ferry (NY): Oceana Publications, 1973) at 74. See also McDorman, *supra* note 6 at 208, 209 and 269 to 274. However, little if anything turns on the categorization for the purpose of fisheries jurisdiction – in contrast to the implications for navigation rights at international law, or for federal-provincial relations in Canada; see e.g. Finkle & Lucas, *supra* note 95; McDorman, *supra* note 6 at Chapter 6.

[100] *Treaty Establishing the Boundary in the Territory on the Northwest Coast of America Lying Westward of the Rocky Mountains*, 15 June 1846, 100 Con. TS 39-42 (entered into force 5 August 1846).

[101] See McDorman, *supra* note 6 at 274 to 278. Regardless of the precise legal status at international law of the Juan de Fuca Strait, for national fishing regulation purposes, Canada has imposed a fisheries closing line at its mouth: *Fishing Zones of Canada (Zone 1, 2 and 3) Order*, C.R.C., c. 1547.

[102] Part V, UNCLOS, *supra* note 87 including Article 55.

[103] Article 57 UNCLOS, *ibid*.

66. As discussed further below, and as with territorial seas, a state can enforce its national fishing and marine conservation laws within its EEZ.[104] Canada has exercised its fisheries jurisdiction in its EEZ since 1977, with the creation of a 200 nautical mile fishing zone.[105] Canada formally legislated its EEZ in 1996.[106]

67. Article 56(1)(a) provides that, within their EEZs, coastal states have sovereign rights to exploit living and non-living resources. Within their EEZs, states also have the jurisdiction to engage in scientific research,[107] and to protect the marine environment.[108] Article 56(2) provides that a coastal state shall have "due regard to the rights and duties of other states" when exercising its rights and performing its duties under UNCLOS.

68. Regarding fishing in the EEZ, Article 61 provides that states should determine the total allowable catch (TAC) of living marine resources in the EEZ using the best scientific data available and must ensure that exploited species are properly conserved.[109] If a state cannot fully exploit the living resources of its EEZ allowed under its established quotas, it must let other states exploit the "surplus".[110]

69. Articles 63 to 68 establish rules governing exploitation of certain marine living resources. Respectively, these Articles govern straddling stocks, highly migratory species, marine mammals, anadromous species, catadromous species, and sedentary species.[111]

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[104] Article 73 UNCLOS, *ibid*.

[105] *Fishing Zones of Canada (Zones 4 and 5) Order*, Canada Gazette Part II, Vol. 111, SOR/77-62, 1 January 1977,115-120, replaced by *Fishing Zones of Canada (Zones 4 and 5) Order*, C.R.C., c. 1548. See also http://www.dfo-mpo.gc.ca/oceans/canadasoceans-oceansducanada/marinezones-zonesmarines-eng.htm

[106] s.13 *Oceans Act,* S.C. 1996, c. 31.

[107] Article 56(1)(b)(ii) UNCLOS, *supra* note 87.

[108] Article 56(1)(b)(iii) UNCLOS, *ibid*.

[109] Article 61(1) UNCLOS, *supra* note 87.

[110] Article 62 UNCLOS, *supra* note 87. However, fishing vessels of these other states must comply with the conservation measures and other regulations of the coastal State.

[111] For clarity, Articles 63 and 64 UNCLOS, *supra* note 87 do not apply to anadromous species, despite that some anadromous species like sockeye migrate great distances and straddle more than one EEZ and the high seas. Nor do subsequent UN treaties governing highly migratory and straddling stocks apply to Pacific salmon, although they provide insight and guidance on modern approaches to international fisheries law that is consistent with UNCLOS. See Francisco O. Vicuna, *Changing International Law of High Seas Fisheries*, (Port Chester (NY): Cambridge University Press, 1999) at 141 [Vicuna]; and Colin Warbrick & Dominic McGoldrick, "The straddling stocks agreement of 1995: an initial assessment," (1996) 45 International and Comparative Law Quarterly 463 at 468.

70. Article 66 governs anadromous species. Article 66 creates a specific, discrete regime that governs all salmon, including Fraser River sockeye salmon.[112]

71. Article 66(1) mandates that those states in which an anadromous species originate have the primary interest in and responsibility for those species. Thus Canada has the primary interest in and responsibility for sockeye salmon originating from the Fraser River.[113] This is often referred to as the "state-of-origin principle."[114] Article 66(1) does not, however, create for a state of origin a proprietary interest in salmon found within the waters of a neighbouring state.[115]

72. Article 66(3)(a) prohibits the fishing of anadromous species on the high seas; salmon may only be lawfully fished inside states' territorial seas or EEZs.[116] Only in the situation that states reach an agreement may a state of origin be permitted to enforce this prohibition on the high seas.[117]

73. Regarding waters subject to national jurisdiction,[118] under Article 66(2), a state of origin is permitted to establish the total allowable catch (TAC) for salmon originating in its territory, including setting the TAC for those salmon in a neighbouring state's waters. Thus, under Article 66(2), Canada would be permitted to establish the TAC in US waters for Fraser River sockeye salmon.

74. However, as has been explained by both Canadian and American commentators, Article 66(2) does not "trump" Article 56 of UNCLOS. That is, while a state of origin may establish the TAC for its neighbour's waters, it lacks legal authority to enforce it.[119] Thus it is assessed that, under UNCLOS, "once salmon have left

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[112] See also *infra* Section 3.2.1 on the *Pacific Salmon Treaty*, the subject of a separate Policy and Practice Report.

[113] Canada and the United States "vigorously championed the exceptional status of Pacific salmon...during the negotiation of the 1982 U.N. Convention on the Law of the Sea...and succeeded in having Article 66 included in the Treaty": McDorman, *supra* note 6 at 291.

[114] *Ibid.*

[115] Ted McDorman, "A Canadian View of the Canada-United States Pacific Salmon Treaty: The International Legal Context (I)" (1998) 6 Willamette J. Int'l L. & Dis. Res. 79 at 84 to 86, and 96 [McDorman, "A Canadian View"].

[116] Except where banning high seas fishing would result in economic dislocation of existing high seas salmon fishers: Article 66(3)(a) UNCLOS, *supra* note 87.

[117] Article 66(3)(d), *ibid*.

[118] Such as territorial seas and EEZs.

[119] McDorman, *supra* note 6 at 292; William T. Burke, *The New International Law of Fisheries: UNCLOS 1982 and Beyond* (Oxford: Oxford University Press, 1994) at 187; McDorman, "A Canadian View" *supra* note 115 at 81 to 86.

the waters of the state of origin and entered the waters of a neighbouring state, that neighbouring state can treat the salmon as its own."[120]

75. Importantly, Article 66(4) envisions that when an anadromous species migrates through a neighbouring state's EEZ, the neighbouring state shall cooperate in good faith with the state of origin regarding conservation and management.[121] Canada and the United States have entered into just such an agreement: the *Pacific Salmon Treaty*.[122] The *Pacific Salmon Treaty* could also be argued to fulfill the obligation to implement Article 66(5) through a regional organization, namely the Pacific Salmon Commission.[123]

76. International fisheries law experts view the Article 66 regime as customary international law, particularly the prohibition on high seas salmon fishing and neighbouring states' obligation to minimize interceptions of anadromous species. Furthermore Canada has expressly taken the position that the state-of-origin principle created by Article 66 is part of customary international law.[124]

77. Coastal states' rights to exploit, conserve and manage living resources within their EEZs, including their rights regarding anadromous species under Article 66, are not subject to UNCLOS' compulsory dispute settlement provisions.[125]

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[120] McDorman, "A Canadian View" *supra* note 115 at p.85 specifically and at 81-86 for a detailed legal analysis.

[121] Professor McDorman has assessed that the cooperation requirement in Article 66(4) UNCLOS does not oblige the neighbouring state to accept the TAC set by the state-of-origin and that "[a]t best, Article 66(4) may oblige states to seek in good faith to establish TACs," concluding that the "TAC wording is legally hollow to the extent that no obligation exists on the neighbouring state to acknowledge or implement the state of origin TAC." See McDorman, "A Canadian View" *supra* note 115 at pp.84-86.

[122] See *infra* Section 3.2.1 regarding the *Pacific Salmon Treaty* and the separate Policy and Practice Report on the *Pacific Salmon Treaty* and the Pacific Salmon Commission. Article III(1)(a) of the *Pacific Salmon Treaty,* 28 January 1985, 1469 UNTS 357 is directly related to Article 66(4) of UNCLOS: McDorman, *supra* note 6 at 294; McDorman, "A Canadian View" *supra* note 115 at 86 and 88.

[123] See McDorman, "A Canadian View" *supra* note 115 at 86 to 88. Regarding the Pacific Salmon Commission, see the separate Policy and Practice Report on this topic.

[124] McDorman, "The West Coast Salmon Dispute" *supra* note 94 at 485-486, citing Pacific Salmon Commission, *Statement Regarding the Canadian Position* (Dec. 3, 1992) in 1992 Eighth Annual Report 5; and William Burke, "Anadromous Species and the New International Law of the Sea", (1991) 22 Ocean Dev. & Int'l L. 95 at 117-119. See also Michael P. Shepard, *1985 Pacific Salmon Treaty: Sharing Conservation Burdens and Benefits* (Vancouver: UBC Press, 2005) at 50 to 52; and Commentary 1 to Article 66, DOC A/3159, p.39-40 (1956) 2 Y.B. Int'l L. Comm. 253 at 294-295.

[125] Article 297(3)(a) UNCLOS, *supra* note 87.

3.1.2. Fisheries on the High Seas

78. Beyond a state's EEZ lie the high seas.[126] The high seas are governed by a separate regime in Part VII of UNCLOS. The high seas are *res communis* (common property) and are governed by the principle of the freedom of the high seas. This includes freedom of fishing (subject to Part VII, Section 2) and freedom of scientific research (subject to Parts VI and XIII).[127]

79. The freedom to fish on the high seas is limited in various ways under UNCLOS. As do other states, Canada has a duty to conserve living marine resources in the high seas and cooperate with other states toward that end.[128] Article 119 requires Canada to share the scientific data in their possession relevant to the conservation of high seas fishes. High seas fishing is also limited by states' other various treaty obligations.[129]

80. As noted, Fraser River sockeye are not lawfully fished on the high seas. Beyond Article 66(3) of UNCLOS, this is confirmed by the *Convention on the Conservation of Anadromous Stocks of the North Pacific Ocean*, discussed in Section 3.2.2.

3.1.3. Protection of the marine environment

81. UNCLOS does not only regulate fisheries in the different zones of the seas, it also establishes a broad framework for marine environmental protection.[130]

82. Like other states, Canada has an obligation to protect and preserve the marine environment. Although Canada has a right to exploit its own natural resources, it must respect this obligation and its own national environmental obligations when exploiting these resources.[131] More specifically, under Part XII of UNCLOS, Canada is obligated to prevent and reduce marine pollution from all sources, avoid all damage to the environment of other states, avoid the introduction of

[126] Article 86 UNCLOS, *ibid*.

[127] Article 87 UNCLOS, *ibid*, subject to Part VII Section 2, Part VI, Part XIII and Article 116, and regional agreements.

[128] Articles 117 and 118 UNCLOS, *ibid*.

[129] Article 116 UNCLOS, *ibid*.

[130] See Part XXII UNCLOS, *ibid*.

[131] Articles 192 and 193 UNCLOS, *ibid*.

alien species, and protect rare or fragile ecosystems as well as the habitat of threatened or endangered species.[132]

83. Parties to UNCLOS also commit to conducting scientific research in a cooperative manner for the purpose of establishing international rules, standards and recommended practices and procedures on the protection of the marine environment.[133]

84. Moreover, when conducting activities that may impact the marine environment, UNCLOS requires Canada to evaluate the impact of these activities on the environment, report on this evaluation and do an environmental assessment when activities may produce risk of substantial pollution or environmental degradation.[134]

85. UNCLOS also has provisions addressing the prevention of marine pollution from land-based sources, from atmospheric sources, from dumping, from the exploitation of the seabed and from vessels.[135]

86. Section 6 of Part XII deals with the enforcement of marine environmental protection provisions. Section 6 establishes states' powers and duties when boarding, inspecting, arresting and charging a vessel from another state.[136] States are liable for fulfilling their environmental protection obligations under UNCLOS.[137] Finally, states can adopt other treaties to protect the marine environment and marine biodiversity, so long as these treaties respect the principles set out in UNCLOS.[138]

3.1.4. Marine scientific research

87. Part XIII of UNCLOS governs marine scientific research. Article 238 of UNCLOS provides that all states have a right to conduct scientific research, subject to their

[132] Articles 194 and 196 UNCLOS, *ibid*.

[133] Articles 200 and 201 UNCLOS, *ibid*.

[134] Articles 204, 205 and 206 UNCLOS, *ibid*; see also section 6.3 of this paper regarding international law on environmental assessment.

[135] Articles 207 to 212 UNCLOS, *ibid*; see also section 6.1 of this paper regarding marine pollution.

[136] See also Article 210(5) and 211(5) UNCLOS, *ibid*.

[137] Article 235 UNCLOS, *ibid*.

[138] Article 237 UNCLOS, *ibid*.

rights and duties. Canada, like other states, is obliged to promote scientific research.[139] When conducting research, states must respect other marine activities, respect the marine environment, use scientific methods, promote international cooperation, and share data relating to marine environment protection.[140]

88. Furthermore, UNCLOS directs states to establish agreements that create favourable conditions for research.[141] Canada, like other parties, has an obligation to publish and share the results of its marine scientific research.[142]

89. While Canada can regulate research in its territorial seas, in its EEZ and on its continental shelf, other states may also conduct research in Canada's EEZ and on its continental shelf if the research is for peaceful purposes and the advancement of science.[143] All states may conduct scientific research on the high seas.[144]

90. UNCLOS establishes a broad regime for the management of fisheries in territorial seas, EEZ and the high seas, for the protection of the marine environment, and for the promotion of scientific research. However, UNCLOS does not always institute a detailed set of rules governing these matters, which may instead be developed through multilateral, regional and bilateral treaties.

3.2. Regional treaties specific to the Northeast Pacific Ocean

91. Canada is party to three regional treaties relevant to Fraser River sockeye: the *Pacific Salmon Treaty*, the *Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean* and the *Convention for a North Pacific Marine Science Organization*.

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[139] Article 239 UNCLOS, *ibid*.

[140] Articles 240 and 242 UNCLOS, *ibid*.

[141] Article 243 UNCLOS, *ibid*; see the *Convention for a North Pacific Marine Science Organization, supra* note 87 and section 3.2.3 of this paper.

[142] Article 244 UNCLOS, *ibid*.

[143] Articles 245 and 246 UNCLOS, *ibid*.

[144] Article 257 UNCLOS, *ibid*.

3.2.1. The Pacific Salmon Treaty

92. The *Pacific Salmon Treaty* is a bilateral agreement between Canada and the United States addressing the allocation and conservation of Pacific salmon.[145] The *Treaty* creates the Pacific Salmon Commission, which, in addition to making management and conservation recommendations to Canadian and American governments, is directly involved in the management of Fraser River sockeye. The *Treaty* and its implementation must be consistent with UNCLOS, including Article 66. A separate Policy and Practice Report is intended to address the operation of the *Pacific Salmon Treaty* and the role and responsibilities of the Pacific Salmon Commission.

3.2.2. The Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean (North Pacific Anadromous Stocks Convention)

93. Fraser River sockeye salmon spend some of their life cycle in the high seas of the North Pacific. As discussed above, under Article 66 of UNCLOS, Canada has the primary interest in and responsibility for Fraser River sockeye, which cannot lawfully be fished on the high seas.

94. In recognition of the need to conserve Pacific salmon, and given the primary interests and responsibilities of coastal states under Article 66, a number of coastal states adopted the *North Pacific Anadromous Stocks Convention* to effectively prohibit the fishing of Pacific salmon in the high seas of the North Pacific Ocean. This convention was adopted on February 11, 1992 and came into force on February 16, 1993. The parties are Canada, the US, Japan, South Korea, and Russia. China participates informally in this convention, but is not a party to it.[146]

95. The primary purpose of the *North Pacific Anadromous Stocks Convention* is to prohibit targeted fishing of anadromous fish stocks outside of the parties'

[145] The predecessor to the current *Pacific Salmon Treaty* was the *Convention for the Protection, Preservation and Extension of the Sockeye Salmon Fishery in the Fraser River System* (*Fraser River Salmon Agreement*), 26 May 1930, 184 LNTS 305 (entered into force 28 July 1937). The *Fraser River Salmon Agreement* established the International Pacific Salmon Fisheries Commission, the predecessor to the current Pacific Salmon Commission.

[146] http://www.dfo-mpo.gc.ca/international/mcs-npafc-eng.htm Article IV *North Pacific Anadromous Stocks Convention*, *supra* note 87 directs parties to the Convention to encourage non-parties to adopt laws and regulations consistent with the convention.

EEZs.[147] The convention delimits a zone, called the Convention Area, within which this prohibition applies.[148] Under the treaty, only incidental catch of anadromous species is permitted within the Convention Area, and any incidental catches must not be retained, except for scientific research.[149]

96. Importantly, the *North Pacific Anadromous Fish Convention* creates what has been called a robust enforcement scheme applicable to the Convention Area.[150] Under this scheme, parties commit to take measures to stop illegal fishing and trafficking.[151] The convention authorizes parties to board, inspect, arrest and seize vessels of other parties reasonably believed to be breaching the treaty's obligations.[152] Offenders can only be prosecuted in and by their own state.[153]

97. The convention creates the North Pacific Anadromous Fish Commission. The goal of the Commission is to promote the conservation of anadromous species in the North Pacific and the enforcement of the convention.[154] While it does not play a fisheries management role, the Commission is mandated to determine scientific research projects, conservation measures and enforcement issues.[155] Parties also commit to promote cooperative scientific research in the North Pacific.[156]

3.2.3. The Convention for a North Pacific Marine Science Organization

98. Consistent with Article 243 of UNCLOS and states' obligations to promote marine scientific research, the North Pacific states adopted the *Convention for a North Pacific Marine Science Organization* on December 12, 1990. The parties to this

[147] Article III *North Pacific Anadromous Stocks Convention*, *ibid*. This object is consistent with Article 66(3) of UNCLOS, *supra* note 87 which provides that fishing for anadromous stocks must only occur within EEZs.

[148] Article I *North Pacific Anadromous Stocks Convention, ibid*.

[149] Article I and III *North Pacific Anadromous Stocks Convention*, *ibid*; See Annex II of the *North Pacific Anadromous Stocks Convention*, *ibid* for rule on minimizing incidental catches.

[150] See e.g. McDorman, *supra* note 6 at 311.

[151] Article III *North Pacific Anadromous Stocks Convention, supra* note 87.

[152] Article V *North Pacific Anadromous Stocks Convention*, *ibid*.

[153] *Ibid*.

[154] Article VIII *North Pacific Anadromous Stocks Convention, ibid*.

[155] Article IX *North Pacific Anadromous Stocks Convention, ibid*.

[156] Article VII *North Pacific Anadromous Stocks Convention, ibid*.

convention are Canada, the United States, China, South Korea, Russia and Japan.[157]

99. Article I creates the North Pacific Marine Science Organization, commonly known as PICES. The stated goals of PICES are to promote marine scientific research and data sharing.[158] Article II sets out the area within which the convention applies. This area includes "the temperate and sub-Arctic region of the North Pacific Ocean and its adjacent seas, especially northward from 30 degrees North Latitude"; this area can also be extended southward for scientific reasons.[159]

100. PICES is mandated to identify critical areas for research, to promote research and the exchange of data, and to develop scientific advice for parties to this convention. For example, PICES undertakes a permanent project called the North Pacific Ecosystem Status Report which "is intended to periodically review and summarize the status and trends of the marine ecosystems in the North Pacific, and to consider the factors that are causing or are expected to cause change in the near future."[160] PICES has published some reports on topics relevant to Pacific salmon fisheries, including climate change and science related to ecosystem-based management.[161]

101. Prior to PICES, an important international institution for marine scientific research and fisheries management in the North Pacific was the International North Pacific Fisheries Commission (IFNPC). Most of its research was closely tied to fisheries questions, often focused on anadromous stocks.[162] In the North Atlantic, the International Council for the Exploration of the Sea, or ICES,[163] is a much older multinational scientific organization. ICES provides stock

[157] Canada ratified the treaty on October 22, 1991.

[158] Article III PICES, *supra* note 87.

[159] Article II PICES, *ibid*.

[160] http://www.pices.int/projects/npesr/default.aspx

[161] See e.g. Impacts of Climate and Climate Change on the Key Species in the Fisheries in the North Pacific; Report of the Study Group on Ecosystem-Based Management Science and its Application to the North Pacific; Report of the Study Group on the Fisheries and Ecosystem Responses to Recent Regime Shifts; all at http://www.pices.int/publications/scientific_reports/default.aspx

[162] With the advent of UNCLOS and the 200 mile EEZ, IFNPC was effectively overtaken by the North Pacific Anadromous Fish Commission, which has a narrower research mandate focused on anadromous stocks on the high seas. See Warren Wooster & Sara Tjossem, "Scientific Cooperation in the North Pacific: The PICES Project" (2004) 6 San Diego Int'l L.J. 191. The authors suggest the possibility of a changed role for PICES to provide scientific advice in relation to fisheries management.

[163] As an acronym, "PICES" evolved from the notion of a "Pacific ICES", see Birnie & Boyle, *supra* note 6 at 99.

assessments and independent scientific recommendations regarding harvest management to fishery managers, in direct support of a number of international fishery agreements.[164]

102. UNCLOS, the *Pacific Salmon Treaty, North Pacific Anadromous Stocks Convention* and the PICES Convention are important law of the sea treaties with clear connections to Pacific salmon. However, Canada holds other international obligations that are also critical to the conservation and management of Pacific salmon. These are explored in the following sections.

4. Biological diversity and endangered species

103. Canada has obligations at international law aimed at ensuring the conservation of biological diversity and the sustainable use of the components of biodiversity. For Fraser River sockeye salmon, these obligations arise primarily under the *Convention on Biological Diversity* (hereinafter CBD). Legal obligations regarding endangered species also arise under the *Convention on International Trade of Endangered Species* (hereinafter CITES).

4.1. The Convention on Biological Diversity (CBD)

104. The international community adopted the CBD at the Earth Summit in Rio de Janeiro in 1992. Canada was the first industrialized nation to sign the CBD on June 11, 1992. The treaty came into force on December 29, 1993.

4.1.1. Objectives and preamble

105. The two goals of the CBD relevant to this discussion are first, the conservation of biodiversity and second, the sustainable use of biodiversity's components.[165]

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[164] Kathleen Miller et al., "The 1999 Pacific Salmon Agreement: A Sustainable Solution?" (2001) 47 Canadian-American Public Policy 1 at 47 and 48

[165] Article 1 CBD, *supra* note 50. The third goal is the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

106. These two goals appear closely reflected in the three objectives of Canada's *Wild Salmon Policy*:

1. Safeguard the genetic diversity of wild Pacific salmon;
2. Maintain habitat and ecosystem integrity; and
3. Manage fisheries for sustainable benefits.[166]

107. The CBD defines biodiversity as: "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems."[167]

108. As stated in the preamble, biodiversity has intrinsic value and ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values. Biodiversity plays a key role in the evolution and maintenance of life-sustaining systems of the biosphere.[168] The CBD confirms that "biodiversity is the common concern of humankind"[169] and that "states are responsible for conserving their biological diversity and for using their biological resources in a sustainable manner."

109. The CBD further confirms that "the fundamental requirement for the conservation of biological diversity is the *in-situ* conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings."[170]

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[166] The *Wild Salmon Policy* references the *UN Convention on Biological Diversity* at pages 3, 4, 8, 10, 41, and 43. Consistent with the Convention, the *Wild Salmon Policy* also separates and differentiates and two concepts of *conservation* and of *sustainable use:* see page 8.

[167] Article 2 CBD, *supra* note 50.

[168] Preamble CBD, *ibid*.

[169] The international law principle of common concern of humankind finds application in other treaties, including the UNFCCC, *supra* note 33, and the Antarctic treaty regime. The principle confirms that, in pursuing certain activities over which a state may have sovereign jurisdiction, a state nonetheless much take into account wider, global concerns that surpass the national interest. See Richardson & Wood, *supra* note 23 at 364 and 365; Laura Horn, "The Implications of the Concept of Common Concern of a Human Kind on a Human Right to a Healthy Environment" (2004) 7 Macquarie L.J. 53; and Jimena Murillo "Common Concern of Humankind and Its Implications in International Environmental Law" (2008) 5 Macquarie J. Int'l & Comp. Envtl. L. 133.

[170] Preamble CBD, *supra* note 50.

110. The preamble of the CBD also incorporates the precautionary principle – "where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat."[171]

4.1.2. Some core obligations under the Convention

111. The CBD applies both to areas under the territorial jurisdiction of states and to activities within the regulatory jurisdiction of states.[172] To apply the CBD outside of states' territorial or regulatory jurisdictions, states must cooperate with each other and/or with the appropriate international organisation.[173]

112. Many of the substantive obligations created by the CBD, and discussed below, are expressly to be executed "as far as possible and as appropriate" or "in accordance with its particular conditions and capabilities."[174] Commentators have observed that these expressions are included to allow flexibility in the application of the CBD, most particularly for developing states lacking the means to readily implement the treaty.[175]

113. Some core commitments relevant to the conservation of Fraser River sockeye salmon are expressed at Articles 7 and 8. Article 7 requires Canada to identify components of biodiversity important for its conservation, to monitor these components, to identify activities that may affect these components, and to maintain and organize the data collected.

114. Article 8 addresses *in-situ* conservation, which is stated to be critically important for the conservation of ecosystems.[176] *In-situ* conservation is defined to mean "the conservation of ecosystems and natural habitats and the maintenance

[171] The Federal Court has considered the CBD and the precautionary principle in interpreting the *Species at Risk Act* 2002, c.29*,* in *Environmental Defence et al. v. Canada (Minister of Fisheries and Oceans),* 2009 FC 898 at 33-39.

[172] Article 4 CBD, *supra* note 50.

[173] Article 5 CBD, *ibid*.

[174] These expressions are found in Articles 5 to 11 and Article 14 of the CBD, *ibid*.

[175] Arbour & Lavallée, *supra* note 30 at 453; Chris Wold, "The Futility, Utility, and Future of the Biodiversity Convention" (1998) 9 Colo. J. Int'l Envtl. L. & Pol'y 1 at 4; Ranee Khooshie & Lal Panjabi, "International Law and the Preservation of Species: An Analysis of the Convention on Biological Diversity Signed at the Rio Earth Summit in 1992" (1992-1993) 11 Dick. J. Int'l L. 187 at 272 and 273.

[176] Preamble CBD, *supra* note 50.

and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties."[177] Article 8 requires Canada to conserve biodiversity by, *inter alia,* establishing protected areas, regulating and managing the use of biodiversity, promoting the protection of ecosystems, promoting sustainable development, preventing the introduction of alien species, adopting legislation protecting endangered species, and by considering the traditional knowledge of indigenous peoples.

115. With reference to sustainable use of components of biological diversity, Article 10 requires that parties "integrate consideration of the conservation and sustainable use of biological resources into national decision-making" and "adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity". Parties shall also "protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements."[178] Under Article 11, parties are also required to adopt socio-economic measures to encourage the conservation of biological diversity.[179]

116. The CBD also recognizes the importance of indigenous traditional knowledge for the conservation and the sustainable use of biodiversity. The preamble recognizes the close and traditional dependence of many indigenous and local communities embodying traditional lifestyles on biological resources. Article 8(j) provides that parties shall, as far as possible and as appropriate, and subject to national legislation:

> "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices."[180]

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[177] Article 2 CBD, *ibid*.

[178] Article 10 CBD, *ibid*.

[179] Article 11 CBD, *ibid*.

[180] See also the Akwé: Kon guidelines *supra* note 50

117. Pursuant to Article 14, parties like Canada must complete an environmental assessment when an activity is likely to produce significant adverse effects on biodiversity, must minimize the negative effect of the activity on biodiversity, and must notify and exchange information with other states that may suffer impacts.[181]

118. In addition, parties must establish and maintain programmes for scientific and technical education and training on biodiversity conservation, and must conduct scientific research that contributes to the conservation and the sustainable use of biological diversity.[182] Parties commit to facilitate the exchange of information relevant to the conservation and sustainable use of biodiversity, including the exchange of results of technical, scientific and socio-economic research."[183] Parties must promote scientific cooperation in the field of conservation and sustainable use of biodiversity.[184]

119. Under Article 26, Canada has obligations to report to the CBD secretariat regarding Canada's implementation of the treaty.[185]

120. Finally, the Conference of the Parties to the CBD has adopted decisions addressing marine and coastal biodiversity[186] and inland waters biodiversity.[187] The Conference of the Parties adopted, through Decision VII/5, a Marine and Coastal Biodiversity Programme of Work divided into five elements: integrated marine and coastal management; marine and coastal living resources; marine

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[181] Article 14 CBD, *supra* note 50. For the CBD guidelines informing environmental and cultural impact assessment, see the Akwe : Kon guidlines, *ibid.*

[182] Articles 12 CBD, *ibid*.

[183] Article 17 CBD, *ibid*.

[184] Article 18 CBD, *ibid*.

[185] See *Caring for Canada's Biodiversity: Canada's First National Report to the Conference of the Parties to the Convention on Biological Diversity*, 1998; Canada, *Second National Report to the Conference of the Parties to the Convention on Biological Diversity*, 2001; Canada, *Third National Report to the Conference of the Parties to the Convention on Biological Diversity*, 2005; *Canada's 4th National Report to the United Nations Convention on Biological Diversity*, 2009. To access the list of reports (including voluntary reports and thematic reports) visit http://www.cbd.int/reports/search/?country=ca.

[186] COP 2 Decision II/10; COP 4 Decision IV/5; COP 5 Decision V/3; COP 6 Decision VI/3; COP 7 Decision VII/5; COP 8 Decision VIII/21; COP 8 Decision VIII/22; COP 8 Decision VIII/24; and COP 9 Decision IX/20. See http://www.cbd.int/marine/decisions.shtml.

[187] COP 4 Decision IV/4; COP 5 Decision V/2; COP 6 Decision VI/2; COP 7 Decision VII/4; COP 8 Decision VIII/20; and COP 9 Decision IX/19. See http://www.cbd.int/waters/decisions.shtml.

and coastal protected areas; mariculture; and invasive alien species.[188] The Conference of the Parties also adopted an Inland Waters Biodiversity Programme of Work containing three elements: conservation, sustainable use and benefit-sharing; institutional and socio-economic enabling environment; and knowledge, assessment and monitoring.[189]

4.2. The Convention on International Trade of Endangered Species (CITES)

121. One of the longest-standing international treaties aimed at protecting biodiversity is CITES, which Canada ratified on April 10, 1975. In a nutshell, through a set of annexes, CITES lists endangered species. It prohibits the international trade of those species listed in Appendix I,[190] except for scientific purposes, and limits the international trade of those species listed in Appendix II.[191] CITES also prohibits trade with a party in a species added to Appendix III by that party.[192]

122. To date, no Pacific salmon species has been added to the CITES appendices.

5. Other international fisheries instruments

123. The Food and Agriculture Organization of the United Nations (FAO) also has a role in international fisheries law. Several FAO treaties and guidelines are relevant to the management and conservation of Fraser River sockeye; in

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[188] See http://www.cbd.int/marine/resources.shtml. See also Secretariat of the Convention on Biological Diversity, *Technical Advice on the Establishment and management of a national system of marine and coastal protected areas*, CBD Technical Series No. 13, 2004, available at http://www.cbd.int/marine/tools.shtml.

[189] See http://www.cbd.int/waters/pow.shtml; adopted through COP 7 Decision VII/4. See also Secretariat of the Convention on Biological Diversity, *Guidelines for the Rapid Ecological Assessment of Biodiversity in Inland Water, Coastal and Marine Areas*, CBD Technical Series No. 22 / Ramsar Technical Report No. 1, 2006; and Secretariat of the Convention on Biological Diversity, *Valuing wetlands - Guidance for Valuing the Benefits Derived from Wetland Ecosystem Services*, CBD Technical Series No. 27 / Ramsar Technical Report No. 3, 2006; available at http://www.cbd.int/waters/tools.shtml.

[190] Articles II and III *Convention on international trade in endangered species of wild fauna and flora*, 3 March 1973, 993 UNTS 243 [CITES].

[191] Articles II and IV CITES, *ibid*.

[192] Articles II and V CITES, *ibid*.

particular, the FAO Code of Conduct on Responsible Fisheries and the *FAO Compliance Agreement*, which promote the adoption of effective and responsible fisheries laws and practices.

124. The *1995 United Nations Agreement relating to the management and conservation of highly migratory and straddling fish stocks* does not apply to Pacific salmon or anadromous species generally. However, it is an important example of modern international fisheries law, which has informed Canada's approach to the conservation of Pacific salmon.

5.1. FAO instruments applicable to Fraser River sockeye salmon

125. The mandate of the FAO is to achieve global food security and assist people and nations to increase food production and improve nutrition. In particular, the FAO plays an important international role in the promotion and development of sustainable fisheries. Its fisheries and aquaculture department seeks to facilitate and secure the long-term sustainable development and use of the world's fisheries and aquaculture.[193]

126. To ensure that the international community engages in responsible and sustainable fisheries, the FAO has initiated the adoption of several agreements, soft law instruments, guidelines and reports on fisheries and aquaculture. The two main agreements discussed below are the *FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas* (*FAO Compliance Agreement*) and the FAO Code of Conduct for Responsible Fisheries (FAO Code of Conduct).

5.1.1. FAO Compliance Agreement

127. The *FAO Compliance Agreement* came into force on April 24, 2003. It followed upon on the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, also developed through the FAO.

128. The *FAO Compliance Agreement* applies to fishing vessels.[194] Pursuant to Article III, parties must ensure that vessels flying their flags do not undermine

[193] http://www.fao.org/fishery/about/en

[194] Article II *FAO Compliance Agreement*, *supra* note 87.

international conservation measures. Vessels must be authorized to fish by their flag state, and parties should not allow vessels to use their flag when these vessels were previously registered in another state and undermined conservation measures. Parties must maintain a record of all authorized fishing vessels.[195]

129. Article V commits parties to notify a flag state if one of its vessels is found in a Canadian port and has undermined conservation measures. Article V also encourages parties to enter into regional agreements with other states to promote the implementation of the *FAO Compliance Agreement*.

130. Article VI commits parties to share information on enforcement and fisheries with the FAO. As a party, Canada is also committed to encouraging non-parties to adopt the *FAO Compliance Agreement*, to adopt domestic law that is consistent with the *Agreement* and, in a manner consistent with the *Agreement* and international law, to seek to halt the actions of non-parties' vessels that undermine international conservation measures.[196]

5.1.2. FAO Code of Conduct for Responsible Fisheries

131. While the *FAO Compliance Agreement* is focused on the enforcement of other international obligations, the FAO Code of Conduct creates substantive guidelines for the international community to achieve sustainable fisheries. The FAO Code of Conduct "sets out principles and international standards of behaviour for responsible practices with a view to ensuring the effective conservation, management and development of living aquatic resources, with due respect for the ecosystem and biodiversity."[197]

132. The FAO Code of Conduct was adopted in 1995. Canada supported its adoption, and was the first country to adopt its own national code of conduct.[198]

133. Article 1 indicates that the FAO Code of Conduct is voluntary. However, as confirmed at Article 1.1, certain provisions in the Code are based on relevant rules of international law, including those reflected in UNCLOS. Other provisions

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[195] Article IV *FAO Compliance Agreement, ibid.*

[196] Article VIII *FAO Compliance Agreement, ibid.*

[197] Introduction, FAO Code of Conduct, *supra* note 26.

[198] http://www.dfo-mpo.gc.ca/fm-gp/policies-politiques/cccrfo-cccppr-eng.htm

have also been given binding effect.[199] The Code is directed to both members and non-members of FAO and to international and regional entities involved in fisheries.[200] Its principles apply to all fisheries, as well as to aquaculture, fisheries research and the integration of fisheries into coastal area management.[201]

134. The objectives of the FAO Code of Conduct are: to create principles for responsible fishing in accordance with international law that take into account biodiversity, economic factors and social factors; to establish principles for the elaboration and implementation of national policies on fisheries conservation and management; to serve as a reference for states in establishing legal or institutional frameworks needed for responsible fisheries; to provide guidance on formulating and implementing other agreements; to provide standards of conduct to people involved in fisheries; and to promote trade, the contribution of fisheries to food security, research on fisheries and related ecosystems, and the protection of living aquatic resources and the marine environment.[202]

135. States must interpret the FAO Code of Conduct consistently with UNCLOS, the *UN Fish Stocks Agreement* and other international law obligations, and in light of the *Rio Declaration* and Agenda 21.[203] Article 6 canvasses the principles and objectives engaged by the FAO Code of Conduct, including the conservation of biodiversity and aquatic ecosystems, sustainable development, remedying overfishing, the use of best scientific data and traditional knowledge, the precautionary principle, transparency, and the protection and rehabilitation of critical freshwater and marine habitats.[204]

136. Article 7 provides guidelines for fisheries management. It provides that fisheries management policies should be developed in cooperation with all stakeholders, regional organizations should be established for shared resources, fisheries industries should have clear legal frameworks, and fishing should be done in an environmentally friendly way. When creating fisheries management policies, states must consider socio-economic and environmental factors and use the best scientific data available. States should also educate and train fishermen.

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[199] Article 1 FAO Code of Conduct, *supra* note 26.

[200] Article 1 FAO Code of Conduct, *ibid*.

[201] Article 1 FAO Code of Conduct, *ibid*.

[202] Article 2 FAO Code of Conduct, *ibid*.

[203] Article 3 FAO Code of Conduct, *ibid*.

[204] Article 6 FAO Code of Conduct, *ibid*.

Only vessels with a government permit should fish in the EEZ. States should do all that is possible to avoid overfishing.

137. Article 8 proposes that states should keep detailed records of fisheries permits, ensure that vessels are safe and insured, inspect fishing vessels in ports, and ensure safe harbours.[205]

138. In the area of aquaculture, states should ensure the conservation of biodiversity, avoid impacts on wild fish, monitor environmental effects, limit negative impact on fisheries productivity, use drugs and chemicals for disease control only minimally, and enter into agreements with other states when fish farms may cause transboundary impacts.[206]

139. States should integrate fisheries into coastal area management and avoid conflict between fisheries and other coastal activities.[207]

140. Article 11 provides conservation guidelines for post-harvest practices and trade. States should ensure that the processing, transporting and storing of fish is environmentally sound, and should ensure that no fish comes from depleted stocks.

141. In the area of fisheries research, Article 12 confirms that responsible fisheries involve sound science. International organizations should assist in conducting scientific research. States should monitor fish, fish habitat and fishing methods, and conduct studies on socioeconomic aspects of fishing. States should cooperate with each other in conducting research on fisheries.[208]

5.1.3. Other FAO instruments

142. Over the last two decades, through the FAO, the international community has adopted a number of guidelines and action plans aimed at achieving sustainable fisheries and aquaculture. As noted above, these include the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported

[205] Article 8 FAO Code of Conduct, *ibid*.

[206] Article 9 FAO Code of Conduct, *ibid*.

[207] Article 10 FAO Code of Conduct, *ibid*.

[208] Article 12 FAO Code of Conduct, *ibid*.

and Unregulated (IUU) fishing, and also the International Plan of Action to Reduce Excess Fleet Capacity.

143. During the 1990s, the FAO published technical guidelines to give more detailed technical guidance on the conduct of sustainable fisheries and aquaculture. Two such well-known guidelines respectively address the ecosystem approach to fisheries,[209] and the precautionary approach to capture fisheries and species introductions.[210]

144. In 2008, the FAO adopted the *Strategy and Outline Plan for Improving Information on Status and Trends of Aquaculture*.[211]

145. Recently, the FAO has facilitated the negotiation and adoption of a new treaty aimed at preventing illegal fisheries. The *FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing* was adopted on November 22, 2009, but has not yet entered into force. The signature period is open until November 2010. To date, Canada has not signed this treaty.[212]

5.2. The 1995 United Nations Fish Stocks Agreement

146. Like the FAO Code of Conduct, Canada also strongly supported and promoted the *1995 United Nations Agreement relating to the management and conservation of highly migratory and straddling fish stocks* (*UN Fish Stocks Agreement*).[213] The *UN Fish Stocks Agreement* entered into force on November

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[209] FAO (2003), *Fisheries management 2. The ecosystem approach to fisheries,* Technical Guidelines for Responsible Fisheries, No. 4, Suppl. 2; FAO (2008), *Fisheries management 2. The ecosystem approach to fisheries, 2.1 Best practices in ecosystem modelling for informing an ecosystem approach to fisheries*, Technical Guidelines for Responsible Fisheries, No. 4, Suppl. 2, Add. 1; and FAO (2009), *Fisheries management 2. The ecosystem approach to fisheries, 2.2 The human dimensions of the ecosystem approach to fisheries,* Technical Guidelines for Responsible Fisheries, No. 4, Suppl. 2, Add. 2

[210] FAO (1996). *Precautionary approach to fisheries; Part 1: Guidelines on the precautionary approach to capture fisheries and species introductions,* Technical Guidelines for Responsible Fisheries No.2.

[211] FAO, *Strategy and Outline Plan for Improving Information on Status and Trends of Aquaculture,* Rome, 2008.

[212] See http://www.fao.org/Legal/treaties/037s-e.htm for status of the Agreement, and the list of signature and ratification. Verification of Canada's signature was done on August 23rd, 2010.

[213] See e.g. McDorman, *supra* note 6 at 21.

11, 2001, and represents a significant recent development in international law governing fisheries.[214] Both Canada and the United States are parties.

147. It must be noted that the *UN Fish Stocks Agreement* does not govern Fraser River sockeye salmon. The *UN Fish Stocks Agreement* applies to straddling fish stocks and highly migratory fish stocks,[215] but, interpreted as it must be in the context of UNCLOS, it does not apply to anadromous stocks.[216]

148. However, the *UN Fish Stocks Agreement* gives guidance on modern international fisheries standards intended to "ensure the long-term conservation and sustainable use" of fish stocks that straddle more than one EEZ or are highly migratory,[217] in a manner expressly intended to be consistent with the precautionary approach.

149. In this respect, Canada's *Wild Salmon Policy* cites Article 6.2 of the *UN Fish Stocks Agreement,* stating that this provision builds upon the precautionary principle as expressed in Principle 15 of the Rio Declaration.[218] Other requirements of Article 6 are not mentioned in the *Wild Salmon Policy,* notably the duty of states to determine precautionary stock-specific reference points.[219]

150. The *UN Fish Stocks Agreement* promotes the use of new or existing regional fisheries management organizations to manage straddling fish stocks and highly migratory fish stocks. Under Article 5, its parties are directed:

- to adopt measures to ensure long-term sustainability of fish stocks and promote their optimum utilization;

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[214] The *UN Fish Stock Agreement* was first contemplated at the UN Conference on Environment and Sustainable Development (the "Earth Summit"), and Agenda 21 urged an international conference to deal with straddling and highly migratory fish stocks. The UN General Assembly formally convened this conference in 1992, and the Agreement was adopted in 1995.

[215] Article 3 *UN Fish Stock Agreement, supra* note 26.

[216] While certain species of Pacific salmon may, as a matter of fact, "straddle" EEZs and are highly migratory, as understood in the law of the sea they are not straddling stocks or highly migratory stocks but rather anadromous stocks. See Articles 63 to 68 UNCLOS, *supra* note 87; and Article 4 *UN Fish Stocks Agreement, supra* note 26. See also UNEP Manual, *supra* note 17 at 225; Vicuna, *supra* note 111 at 141; and Colin Warbrick and Dominic McGoldrick, "The straddling stocks agreement of 1995: an initial assessment" (1996) 45 International and Comparative Law Quarterly 463 at 468.

[217] This objective of the *UN Fish Stocks Agreement* is set out in Article 2. It should be noted that nothing in this Agreement shall prejudice the rights, jurisdiction and duties of states under UNCLOS: Article 4.

[218] Wild Salmon Policy at p.15. Article 6.2 is discussed further below.

[219] The *Wild Salmon Policy* adopts the new concept of "benchmarks" instead of using reference points.

- to ensure that such measures are based on the best science evidence available and are designed to maintain or restore stocks at levels capable of producing maximum sustainable yield as qualified by relevant environmental and economic patterns;
- to apply the precautionary approach in accordance with Article 6;
- to adopt, where necessary, conservation and management measures for species belonging to the same ecosystem or dependent upon the target stocks;
- to minimize pollution, waste, discards, catch by lost or abandoned gear, catch of non-target species and impacts on associated or dependent species;
- to protect biodiversity in the marine environment;
- to take measures to prevent or eliminate overfishing and excess fishing capacity and ensure that levels of fishing effort do not exceed levels commensurate with sustainable use;
- to take into account the interests of subsistence fisheries; to collect and share, in a timely manner, complete and accurate data;
- to conduct scientific research; and
- to implement and enforce conservation and management measures through effective monitoring, control and surveillance.[220]

151. The *UN Fish Stocks Agreement* requires coastal states like Canada to apply these same general Article 5 principles to areas under national jurisdiction (internal waters, territorial seas and the EEZ),[221] and to ensure the consistency of conservation and management measures established for the high seas with measures for areas of national jurisdiction.[222] In this manner, the *Agreement* directs coastal states to regulate domestic fisheries at a standard no less rigorous than that required by international law governing high seas fisheries.

152. Article 6 likewise applies to the conservation, management and exploitation of straddling fish stocks and highly migratory fish stocks in areas of national jurisdiction.[223] Article 6(2) directs parties to be more cautious when information is uncertain, unreliable or inadequate, with the formulation that the "absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures."[224]

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[220] Article 5 *UN Fish Stocks Agreement*, *supra* note 26. Regarding Article 5.j., Annex 1 sets out standard requirements for the collection and sharing of data.

[221] Article 3(2) *UN Fish Stocks Agreement, ibid.*

[222] Article 7 *UN Fish Stocks Agreement, ibid*. See also Birnie & Boyle, *supra* note 6 at 733 and 734; Freestone, *supra* note 23 at 248 and 249; UNEP Manual, *supra* note 17 at 235 and 236.

[223] Article 3(1) *UN Fish Stocks Agreement, supra* note 26. This requirement is expressly made subject to the different legal regimes that apply within areas under national jurisdiction and in areas beyond national jurisdiction as provided for in the Convention.

[224] Article 6(1) *UN Fish Stocks Agreement, ibid.*

153. Article 6(3) sets out detailed and useful direction on the implementation of the precautionary approach, requiring parties to:

> (a) improve decision-making for fishery resource conservation and management by obtaining and sharing the best scientific information available and implementing improved techniques for dealing with risk and uncertainty;
>
> (b) apply the guidelines set out in Annex II and determine, on the basis of the best scientific information available, stock-specific reference points and the action to be taken if they are exceeded;
>
> (c) take into account, *inter alia,* uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality and the impact of fishing activities on non-target and associated or dependent species, as well as existing and predicted oceanic, environmental and socio-economic conditions; and
>
> (d) develop data collection and research programmes to assess the impact of fishing on non-target and associated or dependent species and their environment, and adopt plans which are necessary to ensure the conservation of such species and to protect habitats of special concern.

154. Finally, Article 6(4) directs the application of the precautionary approach to fisheries reference points. States must "take measures to ensure that, when reference points are approached, they will not be exceeded." Where reference points are exceeded, states are obliged, without delay, to act in accordance with Article 6(3)(b) by applying the precautionary reference guidelines in Annex II and determine stock-specific reference points and the action to be taken if they are exceeded. Annex II contains detailed guidelines for the use of precautionary reference points in conservation and management of straddling fish stocks and highly migratory fish stocks.[225]

6. Other international environmental agreements

155. This section briefly covers a number of international instruments governing marine pollution, climate change and environmental assessment. Like other

[225] Annex II provides that a "precautionary reference point is an estimated value derived through an agreed scientific procedure, which corresponds to the state of the resource and of the fishery, and which can be used as a guide for fisheries management." Annex II directs parties to use both types of reference points: conservation – or "limit" – reference points, and management – or "target" – reference points. Annex II also commits states to pursue management strategies that seek to maintain or restore populations at levels consistent with previously agreement precautionary reference points, which shall trigger pre-agreed conservation and management action.

species, Fraser River sockeye and their habitats are susceptible to impacts of pollution and climate change. Conventions seek to prevent and mitigate these impacts. International law also mandates states to conduct environmental assessments of projects with the potential to cause significant adverse effects, and to ensure public participation in environmental decision-making. International law in these areas may advance efforts to conserve Pacific salmon, including by encouraging states to consider the input of stakeholders and the public.

6.1. Pollution treaties

156. A healthy and clean marine environment is important to the conservation of living marine resources. This truism is just as evident for Pacific salmon as other marine species. Intersecting with and developing the customary law framework in Part XII of UNCLOS, numerous international instruments aim at a variety of sources of marine pollution including ship-based pollution, land-based pollution, ocean dumping and persistent organic pollutants. Most of these are conventions developed and overseen by the International Maritime Organisation (IMO), a United Nations specialized agency charged with developing the international legal system for maritime transport and its environmental impacts.[226]

157. Some IMO marine environmental treaties are viewed as quite successful; for example, the London Convention and Protocol have effectively halted the practice of ocean dumping.[227] By contrast, the international community has not adopted a binding treaty aimed at limiting pollution from land-based sources, globally the largest source of marine pollution and a matter of local concern.[228]

158. Canada is a party or signatory to four IMO treaties relevant to Pacific salmon: the *International Convention for the Prevention of Pollution from Ships*, the *London Convention and Protocol on Dumping*, the *International Convention on the Control of Harmful Anti-fouling Systems on Ships*, the *International Convention for the Control and Management of Ships' Ballast Water and Sediments* and the *Stockholm Convention on Persistent Organic Pollutants*. Canada is a signatory to the *Washington Declaration* and the *Montreal*

[226] See http://www.imo.org/

[227] *London Protocol*, *supra* note 87; and Birnie & Boyle, *supra* note 6 at 472.

[228] Par. 1 Global Programme of Action, *supra* note 87; see also http://www.gpa.unep.org/content.html?id=180&ln=6

Declaration and participates in the UN Global Programme of Action on Land Based Pollution. In addition, Canada and the US have a bilateral arrangement regarding marine pollution. These instruments are outlined below.

6.1.1. The International Convention for the Prevention of Pollution from Ships

159. In 1972, the international community adopted the *International Convention for the Prevention of Pollution from Ships*, which was modified by the 1978 Protocol. Collectively, this convention and protocol are referred to as MARPOL.

160. As a treaty, MARPOL functions through its integration with a number of annexes that establish the applicable technical standards for types of ship pollutants. Annexes I and II are mandatory for all parties. The other four annexes are optional and can be acceded to individually. Canada has now acceded to all six of the current annexes.[229]

161. MARPOL annexes can be adopted and amended by the IMO Marine Environment Protection Committee, subject to the acceptance of at least two thirds of the parties constituting at least 50% of gross tonnage of the world fleet. Amendments are used to keep marine pollution standards up to date with the latest technologies and science.[230] Annex I deals with the prevention of pollution by oil and Annex II deals with the control of pollution by noxious liquid substances in bulk. Annex III regulates the carriage by sea of harmful substances in packaged form, Annex IV establishes standards to prevent sewage pollution from ships, and Annex V establishes standards to prevent garbage pollution from ships. Finally, Annex VI regulates air pollution from ships. The MARPOL annexes have been considered to create generally accepted international standards in accordance with Article 221 of UNCLOS.[231]

162. A state party is responsible for enforcing the MARPOL Convention against vessels flying its flag, and commits to prosecuting violations by such vessels.[232] Parties must also participate in detecting violations of MARPOL, by conducting inspections in their ports and off-shore terminals and transmitting the information

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[229] http://www.imo.org/includes/blastDataOnly.asp/data_id=29017/status-x

[230] Article 16 MARPOL, *supra* note 87; Birnie & Boyle, *supra* note 6 at 403 to 405.

[231] Birnie & Boyle, *supra* note 6 at 404.

[232] Article 4 MARPOL, *supra* note 87.

to the flag state of the inspected vessel.[233] Parties must provide the IMO with information relating to their domestic implementation of MARPOL, including official reports on the implementation of the Convention and a yearly statistical report on the penalties imposed for the infringement of the Convention.[234]

6.1.2. The London Convention and London Protocol

163. The *London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter* originally came into force in 1975. However, the *London Convention* has now been completely replaced by and subsumed into the *London Protocol,* for all parties to that protocol.[235] The *London Protocol* strictly limits dumping at sea. Dumping is the disposal at sea of waste or of other matter including redundant ships, aircraft, or oil and gas platforms.

164. The *London Protocol* now prohibits all dumping at sea, except for those wastes listed in Annex I, which may be acceptable.[236] This list contains materials such as dredged material, sewage sludge, fish wastes, vessels and platforms, inert and inorganic geological material, organic material of natural origin, bulky items primarily comprising iron, steel and concrete, and carbon dioxide streams from carbon dioxide capture processes. To dump an Annex 1 substance, a ship needs a permit that satisfies Article 9 of the *London Protocol*. Incineration at sea of waste is also prohibited.[237] Under Article 14 of the *London Protocol*, states are obliged to promote and conduct scientific research on dumping at sea and its impacts.[238] The *London Protocol* is considered to establish the minimum standards foreseen under Article 210(6) of UNCLOS.[239]

6.1.3. The International Convention for the Control and Management of Ships' Ballast Water and Sediments

[233] Article 6 MARPOL, *ibid*.

[234] Article 11 MARPOL, *ibid*.

[235] Article 23 *London Protocol, supra* note 87; see also Birnie & Boyle, *supra* note 6 at 466

[236] Article 4 *London Protocol, ibid.*

[237] Article 5 *London Protocol, ibid.*

[238] Article 14 *London Protocol, ibid.*

[239] Birnie & Boyle, *supra* note 6 at 466 and 467.

165. The transfer and introduction of harmful aquatic organisms and pathogens *via* ships' ballast water threatens the conservation and sustainable use of biological diversity.[240] The *International Convention for the Control and Management of Ships' Ballast Water and Sediments* is intended to prevent, minimize and ultimately eliminate the transfer of harmful aquatic organisms and pathogens through the control and management of ships' ballast water and sediments.[241] As with MARPOL, the technical standards required to implement this convention are found in the annex thereto.

166. Canada recently ratified this convention, although it is not yet in force.[242]

6.1.4. The International Convention on the Control of Harmful Anti-fouling Systems on Ships

167. Canada has signed and ratified the *International Convention on the Control of Harmful Anti-fouling Systems on Ships*, which came into force on September 17, 2008 and is designed to protect the environment from the harmful effects of vessels' anti-fouling systems. Parties are required to prohibit or restrict the use of harmful anti-fouling systems on ships flying their flag, on ships not flying their flag but operating under their authority, and on ships that enter their ports.[243] The Convention contains provisions governing transfer of information, enforcement and certification.[244] Technical standards are found in the annexes.

6.1.5. The Stockholm Convention on Persistent Organic Pollutants

168. Besides these IMO conventions, other international treaties indirectly protect the marine environment and living marine resources. One such example is the *Stockholm Convention on Persistent Organic Pollutants* (hereafter the *POP*

[240] Preamble, *Ballast Convention, supra* note 87.

[241] Article 2 *Ballast Convention, ibid.*

[242] Article *Ballast Convention, ibid* provides that the Convention shall enter into force twelve months after the date on which not less than thirty States, the combined merchant fleets of which constitute not less than thirty-five percent of the gross tonnage of the world's merchant shipping, have ratified the Convention. As of August 3, 2010, 26 states have ratified the Convention, which represents 24.44% of the gross merchant tonnage: http://www.imo.org/conventions/mainframe.asp?topic_id=247 . Canada ratified the Convention on April 8, 2010: http://www.treaty-accord.gc.ca/details.asp?id=105233

[243] Article 3 *Anti-fouling Convention, supra* note 87.

[244] See Articles 9 to 12 *Anti-fouling Convention, ibid.*

Convention). Persistent organic pollutants harm living marine resources, including salmon and the species that prey upon them, by bio-accumulating in fatty tissues. The objective of the *POP Convention* is stated at Article 1: "Mindful of the precautionary approach as set forth in Principle 15 of the *Rio Declaration on Environment and Development*, the objective of this Convention is to protect human health and the environment from persistent organic pollutants."

169. The *POP Convention* obliges its parties to prohibit,[245] restrict the use and production,[246] prohibit the import and export,[247] and reduce the releases of a variety of harmful pollutants,[248] with the nature of the response arising dependent on which substances are listed in different annexes. Stockpiles of Annex A, B and C substances must be managed so as to protect the environment and human health.[249] Parties must develop an implementation plan,[250] and must exchange information relevant to implementation of the *POP Convention*.[251] Parties must inform the public about persistent organic pollutants, ensure public access to updated information and ensure public participation in decision-making.[252] Parties commit to undertaking scientific research on persistent organic pollutants and to monitoring these pollutants.[253]

6.1.6. International instruments regarding land-based sources of marine pollution

170. Most marine pollution originates from land-based sources such as agricultural, urban and industrial run-off, and sewage disposal.[254] To date, there

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[245] Article 3 and Annex A *Stockholm Convention on Persistent Organic Pollutants*, 22 May 2001, 2656 UNTS 119 [*POP Convention*].

[246] Article 3 and Annex B and D *POP Convention, ibid.*

[247] Article 3 and Annex B *POP Convention, ibid.*

[248] Article 5 and Annex C *POP Convention, ibid.*

[249] Article 6 *POP Convention, ibid.*

[250] Article 7 *POP Convention, ibid*. Canada's implementation plan can be found at http://chm.pops.int/Countries/NationalImplementation/tabid/253/language/en-US/Default.aspx

[251] Article 9 *POP Convention, ibid.*

[252] Article 10 *POP Convention, ibid.*

[253] Article 11 *POP Convention, ibid.*

[254] Par. 1 *Global Programme of Action*, *supra* note 87; see also http://www.gpa.unep.org/content.html?id=180&ln=6

is no binding international agreement on the prevention of marine pollution from land-based sources.

171. Despite the lack of a binding treaty, the UN administers a Global Programme of Action on Land Based Pollution (hereafter the Global Programme of Action). The Global Programme of Action seeks to protect the marine environment by coordinating, directing and facilitating states' efforts to address land-based sources of marine pollution.

172. The Global Programme of Action was adopted as part of the *Washington Declaration* and reaffirmed in the *Montreal Declaration* and *Beijing Declaration*, which urge its implementation.[255] The declarations were endorsed by states, including Canada, to affirm their commitment to reduce marine pollution from land-based sources.

173. The *Washington Declaration on the Protection of the Marine Environment from Land-Based Activities* was adopted in November 1995. The *Washington Declaration* confirms the common goal of the signatory states, including Canada, as "sustained and effective action to deal with all land-based impacts upon marine environment, specifically those resulting from sewage, persistent organic pollutants, radioactive substances, heavy metals, oils (hydrocarbons), nutrients, sediments mobilization, litter and physical alteration and destruction of habitat."[256] To achieve this goal, the *Washington Declaration* urges international cooperation, new technologies, regional coordination, and cooperation with public and private sectors and stakeholders. It also urges states to give "priority to the treatment of waste water and industrial effluents."[257]

174. In signing the *Washington, Montreal* and *Beijing Declarations,* the international community has repeatedly urged implementation of the Global Programme of Action and asserted that states should adopt legally binding international instruments regarding marine pollution from land-based sources.

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[255] The Global Programme of Action and the *Washington Declaration on Protection of the Marine Environment from land-based activities* were adopted in November 1995. See UN Doc A/51/116, annex I, appendix II. The *Montreal Declaration* was adopted in November 2001. See E/CN.17/2002/PC.2/15. The *Beijing Declaration on furthering the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities* was adopted in October 2006. See UN Doc UNEP/GPA/IGR.2/7.

[256] Par. 1 *Washington Declaration, ibid.*

[257] Par. 15 *Washington Declaration, ibid.*

6.1.7 Canada – US Agreement concerning the Establishment of a Joint Marine Pollution Contingency Plan

175. In 1974, Canada and the US reached a formal marine cooperative agreement concerning the Establishment of a Joint Marine Pollution Contingency Plan.[258] The Contingency Plan sets out reporting steps and response measures to be taken to deal with oil spills or other dangerous spills from vessels.[259] Annexes apply *inter alia* to the Pacific coast and the Dixon Entrance.

6.2. Climate change

176. The *United Nations Framework Convention on Climate Change* (UNFCCC) and the *Kyoto Protocol* thereto constitute the international regime on climate change. Greenhouse gases are also addressed by the *Vienna Convention on Ozone Depleting Substances* and the *Montreal Protocol.* Climate change has the potential to impact Fraser River sockeye salmon and sockeye habitat, through impacts upon the marine environment and through increasing in-river temperatures and flows. Section 6.2 briefly canvasses Canada's international obligations to reduce its emissions of greenhouse gases, develop mitigation and adaptation plans, and contribute to stabilizing greenhouse gas concentrations.

6.2.1. The United Nations Framework Convention on Climate Change (UNFCCC)

177. The UNFCCC is a framework convention and its obligations are broadly stated. The UNFCCC was adopted in 1992 at the Earth Summit. Five years later the parties adopted the *Kyoto Protocol,* a more detailed agreement intended to advance and make operational the UNFCCC's more general commitments.

178. The UNFCCC confirms that climate change is the common concern of humankind.[260] The Convention's objective is to stabilize "greenhouse gas

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[258] *Exchange of Notes constituting an Agreement concerning the Establishment of a Joint Marine Pollution Contingency Plan*, 19 June 1974, CTS 1974/22, 25 UST 1280, TIAS 7861 (entered into force 19 June 1974).

[259] See Canada – U.S. Joint Marine Pollution Contingency Plan, at – http://www.arcticgovernance.org/canada-united-states-joint-marine-pollution-contingency-plan.4656243-137746.html

[260] Preamble UNFCCC, *supra* note 33. The international law principle of common concern of humankind also finds reflection in the *Convention on Biological Diversity*, *supra* note 169. The principle confirms that in pursuing certain

concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[261] Article 3 sets out the general principles that guide the UNFCCC, including sustainable development, common but differentiated responsibilities, equity and precaution.

179. More specifically, parties to the UNFCCC must create a national register of greenhouse gases, create a national plan to mitigate climate change, promote the reduction of greenhouse gases, manage greenhouse gas sinks sustainably, promote scientific research, and exchange relevant data.[262] Developed countries must develop greenhouse gas reduction and climate change mitigation policies, coordinate efforts to reduce greenhouse gases including through economic and administrative instruments, and assist developing countries in meeting their obligations.[263] Parties must cooperate in conducting research.[264] Finally, parties must report their implementation information to the UNFCCC secretariat.[265]

6.2.2. The Kyoto Protocol

180. The *Kyoto Protocol* is the only protocol to the UNFCCC. It further develops the UNFCCC commitments, spelling out more detailed obligations on parties to address climate change and specifically to reduce greenhouse gas emissions.

181. Under the *Kyoto Protocol,* developed countries have the obligation to promote sustainable development and reduce greenhouse gases by protecting greenhouse gases sinks and promoting efficient energy policies, green energy, and fiscal measures that encourage the reduction of greenhouse gases.[266] Article 3 developed countries (alone or jointly) commit to reduce greenhouse

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activities over which a state may have sovereign jurisdiction, a state nonetheless much take into account wider, global concerns that surpass the national interest. See Richardson & Wood, *supra* note 23 p.364-365; and Birnie & Boyle, *supra* note 6 at 128 to 130.

[261] Article 2 UNFCCC, *supra* note 33.

[262] Article 4 (1) UNFCCC, *ibid*.

[263] Article 4 (2) UNFCCC, *ibid*.

[264] Article 5 UNFCCC, *ibid*.

[265] Article 12 UNFCCC, *ibid*.

[266] Article 2 *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 11 December 1997, 2303 UNTS 148 [*Kyoto Protocol*].

gases by at least 5% of 1990 levels by 2012.[267] Parties can create a framework for joint implementation of their obligations.[268]

182. Parties must create a national system to estimate greenhouse gases.[269] The methodologies of these systems must be approved by the Intergovernmental Panel on Climate Change (IPCC). Article 6 establishes the possibility of creating carbon markets. Under Article 7, parties must communicate their greenhouse gases reduction progresses to the UNFCCC secretariat, and the information provided is to be reviewed by an expert panel.[270] Considering sustainable development, parties are required to create national and regional programmes to mitigate and adapt to climate change, to finance and transfer green technologies, and to promote scientific research.[271]

6.2.3. Vienna Convention and Montreal Protocol on ozone depleting substances

183. The *Vienna Convention on Ozone Depleting Substances* and the *Montreal Protocol* thereto do not deal directly with climate change.[272] Nevertheless, ozone depleting substances are also greenhouse gases that contribute to climate change. These treaties aim to eliminate ozone depleting substances, and they are viewed as largely successful.[273]

6.3. Environmental assessment and public participation

184. Section 6.3 builds upon the discussion in section 2 on international rules and principles regarding environmental assessment and public participation. This section identifies three additional international treaties that focus specifically on

[267] Article 3 *Kyoto Protocol, ibid.* Canada committed to reduce its greenhouse gases by 6% from 1990 levels.

[268] Article 4 *Kyoto Protocol, ibid.*

[269] Article 5 *Kyoto Protocol, ibid.*

[270] Articles 7 and 8 *Kyoto Protocol, ibid.*

[271] Article 10 *Kyoto Protocol, ibid.*

[272] Likewise, the *Kyoto Protocol* does not apply to those greenhouse gases that already governed by these treaties.

[273] Birnie & Boyle, *supra* note 6 at 354 and 355; Mark W. Roberts, "The Montreal Protocol Must Act to Prevent Global Climate Change While Restoring the Ozone Layer" (2008-2009) 9 Sustainable Dev. L. & Pol'y 33; Anne Lucia Plein, "Story between Success and Challenge - 20th Anniversary of the Montreal Protocol" (2007) 11 N.Z. J. Envtl. L. 67; and Elizabeth R. DeSombre, "The Experience of the Montreal Protocol: Particularly Remarkable, and Remarkably Particular" (2000-2002) 19 UCLA J. Envtl. L. & Pol'y 49.

environmental assessment, access to information and public participation in decision-making. The *Convention on Environmental Impact Assessment in a Transboundary Context* (*Espoo Convention*) binds Canada. However the *Kiev Protocol* and the *Aarhus Convention* are not binding law in this country. To date, Canada has chosen not to sign them or to embrace their commitments.[274]

6.3.1. The Convention on Environmental Impact Assessment in a Transboundary Context (*Espoo Convention)*

185. The *Espoo Convention* is a comprehensive international agreement on transboundary environmental impact assessment. The *Espoo Convention* was negotiated through and is administered by the UN Economic Commission for Europe, but is open for ratification to all United Nations members. Canada signed this treaty on February 26, 1991 and ratified it on May 13, 1998.

186. The *Espoo Convention* establishes mechanisms by which parties may avoid and prevent transboundary environmental impacts.[275] Parties must establish an environment impact assessment procedure for the types of projects listed in Appendix I.[276] Further, when unlisted projects may cause serious environmental impacts, potentially affected parties are entitled to an environmental impact assessment.[277] Parties must consult and notify other parties regarding all Appendix I projects that may affect them.[278]

187. The parties to the *Espoo Convention* recognized the importance of public participation in environmental impact assessments of transboundary effects; both the affected state parties and its citizens can participate in these assessments.[279]

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[274] Note that the fact that Canada has not signed the *Aarhus Convention* does not, by itself, dispose of the question of whether Canada may nonetheless have general international law obligations related to public participation and access to information. See Birnie & Boyle, *supra* note 6 at 138.

[275] Article 2 *Convention on Environmental Impact Assessment in a Transboundary Context*, 25 February 1991, 1989 UNTS 309 [*Espoo Convention*].

[276] Article 2(2) *Espoo Convention, ibid.*

[277] Article 2(5) *Espoo Convention, ibid.*

[278] Articles 3 and 5 *Espoo Convention, ibid.*

[279] Articles 3 and 5 *Espoo Convention, ibid.*

188. As for the content of environmental impact assessments, at a minimum assessments must cover the matters in Appendix II: descriptions of the activity, the potential impacts, the mitigation measures, the knowledge gaps and uncertainties, and a non-technical summary including visual representations.[280] The information used in and arising from an environmental impact assessment must be made public to the population of the other states affected.[281]

6.3.2. The Kiev Protocol on Strategic Environmental Assessment

189. The *Kiev Protocol on Strategic Environmental Assessment* (hereafter the *Kiev Protocol*) is a protocol to the *Espoo Convention.* It was adopted in 2003 and came into force in July 2010. Canada has not signed or ratified the *Kiev Protocol.*

190. Despite not joining the protocol, since 1999, Canada has required strategic environmental assessment of all new policies, plans or program proposals brought before a Minister for approval where the proposals may result in important environmental effects, either positive or negative.[282] DFO's Sustainable Development Strategy notes that strategic environmental assessment is an effective planning tool supporting sustainable development.[283]

191. In contrast to environmental impact assessment of proposed projects, strategic environmental assessment under the *Kiev Protocol* evaluates the environmental effects of government policies, plans and programs.[284] It is based,

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[280] Article 4(1) *Espoo Convention, ibid.*

[281] Article 4(2) *Espoo Convention, ibid.*

[282] *2004 Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals* and *Guidelines for Implementing the Cabinet Direction on the Environmental Assessment of Policy, Plan and Program Proposals* at http://www.ceaa.gc.ca/default.asp?lang=En&n=B3186435-1 The *Cabinet Directive* was revised in 2004 and its lack of implementation, included by Fisheries and Oceans Canada in developing its *2001 Aquaculture Policy Framework*, was criticised in the 2004 October Report of the Commissioner of the Environment and Sustainable Development, found at http://www.oag-bvg.gc.ca/internet/English/parl_cesd_200410_04_e_14917.html.

[283] *Our Waters, Our Future: Sustainable Development Strategy. Fisheries and Oceans Canada 2007-2009*, 2006. See http://www.dfo-mpo.gc.ca/sds-sdd/2007-2009/index-eng.htm. Pages 5 and 8 provide the Brundtland Report's definition of sustainable development as the "definition generally used in the Government of Canada."

[284] Article 2 *Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context*, 21 May 2003, Doc. ECE/MP.EIA/2003/2 [*Kiev Protocol*] defines "plans and programmes" to mean plans and programmes, and any modifications thereto, that are required by legislative, regulatory or administrative provisions; and that are subject to preparation and/or adoption by an authority, or to be adopted by a parliament or a government. Article 2 defines "strategic environmental assessment" to mean "the evaluation of the likely environmental, including health, effects, which comprises the determination of the scope of an environmental report and its preparation, the carrying out of public participation and consultations,

in part, on Principles 4 and 10 of the *Rio Declaration*.[285] Its objectives include ensuring consideration of environmental concerns in the development of plans and programs; ensuring consideration of environmental concerns in the preparation of policies and legislation; establishing procedures for public participation in strategic environmental assessment; and integrating environmental concerns into instruments aimed at sustainable development.[286]

192. Article 4 identifies plans and programs for which a strategic environmental assessment is required – including in sectors like agriculture, forestry, fisheries, energy, mining, and waste and water management – where such plans and programmes set the framework for development approvals. The *Kiev Protocol* automatically applies to plans and programmes that create regulatory frameworks for the industrial projects in Annex 1.[287] It also applies to plans and programmes setting regulatory frameworks for projects under Annex II, where those projects require an environmental impact assessment under national legislation. Annex II projects could include fish farms, hydroelectric energy production, road construction, wastewater treatment plants, and coastal works.[288]

193. In preparing policies and legislation likely to have significant effects on the environment, parties must attempt to ensure that environmental concerns are considered and integrated, to the extent appropriate.[289]

194. Parties to the *Kiev Protocol* commit to ensuring greater public participation in government decision-making. Participation must be engaged early, in an effective manner,[290] and the population of affected states must be consulted.[291]

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and the taking into account of the environmental report and the results of the public participation and consultations in a plan or programme.

[285] Preamble, *Kiev Protocol, ibid.*

[286] Artciel 1, *Kiev Protocol, ibid*.

[287] Article 4(2) and Annex I *Kiev Protocol, ibid.*

[288] Article 4(2) and Annex II *Kiev Protocol, ibid*.

[289] Article 13 *Kiev Protocol, ibid.*

[290] Article 8 *Kiev Protocol, ibid.*

[291] Article 10 *Kiev Protocol, ibid.*

6.3.3. The Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters

195. Canada has also not joined the *Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters* (*Aarhus Convention*). The *Aarhus Convention* came into force on October 30, 2001. Forty-four states, mostly European countries, are parties to the *Aarhus Convention.*

196. The *Aarhus Convention* "links environmental rights and human rights, acknowledges that we owe an obligation to future generations, establishes that sustainable development can be achieved only through the involvement of all stakeholders, links government accountability and environmental protection, and focuses on interactions between the public and public authorities in a democratic context."[292] Parties to this treaty have committed themselves to heightened public accountability, transparency and responsiveness in environmental matters.[293]

197. In the context of Fraser River sockeye salmon, Articles 4 and 5 of the *Aarhus Convention* may be of interest. Parties commit themselves to ensuring that the public has access to environmental information when it is requested.[294] Parties are also obliged to make available to the public environmental information in an easily accessible manner.[295] Articles 6, 7 and 8 establish international standards for public participation in decision-making; in the development of plans, programmes and policies; and in the development of regulations.

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[292] http://www.unece.org/env/pp/

[293] For more information see http://www.unece.org/env/pp/vid-presentation.htm

[294] Article 4 *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters*, 25 June 1998, 2161 UNTS 447 [*Aarhus Convention*].

[295] Article 5 *Aarhus Convention, ibid.*

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