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Coal and Coalbed Methane Development in the Flathead—An International Water Dispute

Allan Ingelson
University of Calgary

Lincoln Mitchell
University of Calgary

Sean Assie
Bennett, Jones LLP

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Coal and Coalbed Methane Development in the Flathead— An International Water Dispute*

Allan Ingelson,** Lincoln Mitchell*** and Sean Assie****

ABSTRACT

Coalbed methane (CBM), development in British Columbia, is in its infancy. The proposed coal mine and CBM testing along the Flathead River in southern British Columbia can provide economic benefits to the province, but the projects have the potential for negative environmental impacts on water resources in Canada and downstream in Montana, near Glacier National Park. Objections to the proposed mineral extraction projects have been raised by local residents and environmental groups in Canada and the United States, as well as by Montana State politicians and federal government officials. In light of the reported environmental problems from CBM produced water in the Western United States, the different physical and chemical characteristics of coals in each sedimentary basin, and the lack of CBM operational experience in British Columbia, there is significant uncertainty about the potential downstream water impacts and cumulative effects from proposed coal and CBM projects. The Canadian Government has a legal obligation to prevent water degradation in the Flathead River, which flows into the United States. U.S. regulators have more experience and expertise than Canadian regulators with CBM operations and environmental assessments for CBM projects. Consistent with the precautionary principle and Canada's legal obligation to protect the quality of the water that flows from British Columbia into Montana, a Transboundary Environmental Impact Assessment (TEIA) should be undertaken to examine the cumulative effects of the proposed projects and to consider the relevant studies completed by U.S. scientists.

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** Allan Ingelson, BA, BSc, LLB, LLM, Associate Professor, Faculty of Law, University of Calgary, Member of the Law Society of Alberta.

*** Lincoln Mitchell, BA, JD, LLM Candidate, University of Calgary, Member of the California Bar.

**** Sean Assie, BA, LLB, Articling Student, Bennett, Jones LLP,

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I. INTRODUCTION

In regard to the first commercial CBM field in British Columbia announced in January 2009, Hon. Richard Neufeld, the Minister responsible for mining and energy development in the province stated:

Unconventional gas development plays an important role in British Columbia's future energy security. Investment in coalbed gas development and the realization of gas royalties and taxes from coalbed gas production and sales will help fuel the Province's economy. The Ministry of Energy, Mines and Petroleum Resources acknowledges your accomplishment in coalbed gas development and looks forward to continuing to work with industry to allow the sector to succeed while balancing economic and social priorities and protecting our environment and quality of life.¹

Coal mining and CBM development are proposed on provincial Crown lands along the Flathead River in the province. The river flows into Montana near Glacier National Park. An open pit coal mine could remove two million tons of coal per year for two decades. In addition, oil and gas companies have been exploring the economic potential for CBM production. The Flathead basin, which extends across the Canadian-U.S. border, is one of North America's more pristine ecosystems with diverse fish species.

The proposed mineral development along the Flathead has prompted controversy and opposition from residents on both sides of the border since the 1970s. In 1982, the Cabin Creek Mine was conditionally approved by the British Columbia Environmental and Land Use Committee (ELUC).² Conditions for mine development were developed in "response to Montana's concerns and included requirements that Sage Creek complete in-depth studies of the fisheries and wildlife of the area."³ In response to objections from the State of Montana in 1984 pursuant to the *International Boundary Waters Treaty*⁴, the British Columbian government agreed to a referral to the International Joint Commission (IJC). In 1988, the IJC concluded there was significant uncertainty about the environmental effects from the proposed coal mine and recommended that the mine should not be approved until the "[P]otential transboundary impacts . . .

1. Press Release, Canada Energy Partners Inc., Gas Sales from the First Commercial Coalbed Methane Project in British Columbia (Jan 5, 2009), available at http://www.canadaenergypartners.com/news/index.hp?&content_id=79.

2. See Dino Ross, *International Management of the Flathead River Basin*, 1 COLO. J. INT'L ENVTL. L. & POL'Y 223, 226-27 (1990) (discussing Sage Creek's proposal and approval for the building of two open-pit mines).

3. *Id.* at 227 (quoting Wilson, *Cabin Creek and International Law—An Overview*, 5 PUB. LAND L. REV., 110, 117 (1984)).

4. Treaty Between the United States and Great Britain Relating to Boundary Waters Between the United States and Canada, U.S.-GR. BRIT., Jan. 11, 1909, 36 Stat. 2448.

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have been determined with reasonable certainty and would constitute a level of risk acceptable to both Governments; and, the potential impacts on the sport fish populations and habitat . . . would not occur or could be fully mitigated in an effective and assured manner.”⁵

In response to the more recent Lodgepole Coal Mine Proposal, Willie R. Taylor, of the U. S. Department of the Interior’s Office of Environmental Policy and Compliance, in a letter dated February 21, 2007, to the Office of Canadian Affairs stated the proposed projects “[M]ay threaten the natural resource values of two landholdings of the Interior, Glacier National Park and the Flathead National Wild and Scenic River. A World Biosphere Reserve and a World Heritage Site, along with the Crown of the Continent and the International Peace Park at Waterton-Glacier . . .” are also in the region.⁶

During the last five years, in addition to proposed coal mining, CBM exploration has been undertaken in the province. British Petroleum (BP) has expressed interest in developing CBM in the Flathead Basin as part of its Mist Mountain Coalbed Gas Project. The initial application for tenure referral provides the energy developer with the right to apply to the British Columbian Oil and Gas Commission for permission to access, explore, and develop the resource, including an area in the Flathead Basin south of Fernie. Although the British Columbian government has now excluded the Flathead portion from tenure referral, it has noted that BP might be able to apply for CBM tenure in the future. BP volunteered to include the Flathead Basin in the environmental study that the company is conducting in south eastern British Columbia. The oil and gas company has indicated that it may apply for coalbed gas tenure in the Flathead Basin in the future.

In light of negative water impacts downstream in Montana from the surface discharge of water produced from Wyoming CBM wells—Montana residents and some British Columbia residents, environmental groups, the state Governor, senators, Glacier Park officials, and the U.S. federal government have objected to the proposed coal and CBM development along the Flathead. A key concern is that effluent or “produced water” from the coal mine and CBM operations will flow into the Flathead River and negatively impact the water quality and sport fishing resources downstream in the United States. As there is significant uncertainty about the cumulative effects from both types of fossil fuel extraction in British Columbia, a comprehensive environmental impact assessment on the proposed mineral development has been requested by the State of Montana.

The next section will discuss the legal obligation of the Canadian Government to prevent the degradation of the quality of water in the Flathead

5. INT’L JOINT COMM’N, IMPACTS OF A PROPOSED COAL MINE IN THE FLATHEAD RIVER BASIN 11 (1988), available at <http://www.ijc.org/php/publications/pdf/ID590.pdf> [hereinafter ICJ REPORT].

6. Letter from Willie R. Taylor, Dir., Office of Env’tl. Policy and Compliance: U.S. Dep’t of the Interior, to Edward Alexander Lee, Office Dir., Office of Canadian Affairs: U.S. Dep’t of State, (Feb. 21, 2007), available at http://www.flatheadbasincommission.org/mining/cline/teference/DOI2_21_07.pdf.

River that flows into the United States. The paper then analyzes the different federal and provincial environment impact assessment (EIA) regimes in Canada, and considers challenges to sustainable development posed by coal mining and CBM development in the Flathead River Basin. The paper will also evaluate the water protection regime for CBM development adopted in British Columbia and compare the provincial scheme with the regulatory framework for produced water in Montana. Finally, this paper considers opportunities for increased coherency or integration between the Canadian and U. S. EIA systems in regard to coal and CBM projects.

II. THE LEGAL OBLIGATION OF THE CANADIAN GOVERNMENT TO THE UNITED STATES REGARDING WATER IN THE FLATHEAD RIVER

In light of decisions in *The Trail Smelter Arbitration*⁷ and the *Lac Lanoux Arbitration*⁸ this paper suggests that under customary international law, the Canadian Government has a duty to avoid environmental harm such as the degradation of water quality in the Flathead River that flows into the United States. As quoted from *Responsibility of States in International Law* and cited in the *Trail Smelter* case, “[a] State owes at all times a duty to protect other States against injurious acts by individuals from within its jurisdiction.”⁹

The *Trail Smelter* decision, which reflects a “polluter liability” principle in the context of air emissions,¹⁰ was followed by the *Lac Lanoux* decision in which a similar approach was used in a water degradation dispute between Spain and France.

It should also be noted that there is ongoing transboundary litigation in which the operator of the Trail Smelter is being pursued by the U.S. Environmental Protection Agency (EPA) and other U.S. residents for water contamination to the Columbia River, which flows from British Columbia into the United States.¹¹ For much of the 20th century, the Trail Smelter allegedly dumped millions of tonnes of industrial toxic waste into the river. One report concluded that that Trail Smelter dumped the equivalent of “one full dumptruck [of slag] every hour for sixty years.”¹² Slag is a “fine, black, sand-like substance that’s a by-product of the smelting process,”¹³ and has accumulated in heavy deposits along the banks of

7. *Trail Smelter Arbitration* (U.S. v. Can.), 3 R. Int’l Arb. Awards 1905, 1965 (1941).

8. *Lac Lanoux Arbitration* (Spain v. Fr.) 12 R. Int’l Arb. Awards 281 (1957).

9. LAKSHMAN D. GURUSWAMY ET AL, *INTERNATIONAL ENVIRONMENTAL LAW & WORLD ORDER*_1409 (2d ed., 1999).

10. See Sanford E. Gaines, *The Polluter-Pays Principle: From Economic Equity to Environmental Ethos*, 26 TEX. INT’L L.J. 463, 468 (1991).

11. See *Teck Cominco Metals, Ltd. v. Lloyd’s Underwriters*, [2009] S.C.R.11 (Can.); *Pakootas v. Teck Cominco Metals, Ltd.*, 452 F.3d 1066 (9th Cir. 2006), *cert. denied*, 552 U.S. 1095 (2008).

12. Chris Brown, *A Century of Slag*, CBC NEWS, Dec. 15, 2003, available at <http://www.cbc.ca/news/background/environment/centuryofslag.html>.

13. *Id.*

the Columbia River. The EPA has detected “exceptionally high quantities of arsenic, lead, mercury and other contaminants in the river. . .”¹⁴ In response to the industrial waste, U.S. citizens, “including Native American Tribes,” have claimed that they have been subject to environmental degradation and health problems.¹⁵ A refusal on the part of the Canadian government to submit to the IJC has led the EPA to take unprecedented measures to ensure the cleanup of the Columbia River and Roosevelt Lake.¹⁶ The EPA is “attempting to apply” U.S. domestic environmental cleanup laws to Teck Cominco Metals Ltd., the operator of the Trail Smelter, a Canadian company.¹⁷ As well, two Native American Tribe members filed lawsuits against the company under the citizen’s suit provisions of the U.S. Superfund laws.¹⁸

In addition to emerging international environmental law, the duty to protect the quality of the water in the Flathead River is consistent with the general objective of the North American Agreement on Environmental Cooperation,¹⁹ which is to protect the environment for present and future generations based on cooperation as provided under Article One.

A. *Jurisdictional Uncertainty in the Regulation of Transboundary Freshwater in Canada—A Challenge for Sustainable Development*

Freshwater governance is complicated because when the *British North America Act*²⁰ was adopted in 1867, the division of legislative powers in the Canadian Constitution did not specifically assign responsibility for freshwater to either the federal government or the provincial governments. The Constitution provides for “heads of power” between the federal and provincial governments. This allocation of jurisdiction is exclusive in that if the Constitution provides one level of government with jurisdiction over a matter, it excludes the other level from legislating on that subject matter. If one level of government passes a statute or regulation governing a matter over which the Constitution gives the other an exclusive power to legislate, a court may strike down the law as being ultra vires. Because the powers enumerated in the Constitution Act are not exhaustive, Canadian courts have the responsibility to determine jurisdiction in accordance with interpretive rules that have evolved in law.

14. Austen Parrish, *Trail Smelter Déjà vu, Extraterritoriality, International Env'tl. Law, and the Search for Solutions to Canadian-U.S. Transboundary Water Pollution Disputes*, 85 B.U. L. REV. 363, 366 (2005).

15. *Id.*

16. *Id.* at 366-67, 379.

17. *Id.*

18. *See id.* at 366-67.

19. *See generally* North American Agreement on Env'tl. Cooperation, U.S.-Can.-Mex., *opened for signature* Sept. 8, 1993, 32 I.L.M. 1480.

20. Constitution Act, 1867 (also known as British North American Act 1867), 30 & 31 Vict. c. 3 (U.K.), as reprinted in R.S.C. app. § 2 no. 5.

It is clear that non-renewable natural resources such as coal and CBM are under the sole jurisdiction of the provinces,²¹ unless the minerals are located on federal lands or the proposed mineral development impacts federal jurisdiction. Some of the specific provincial “heads of power” relevant to the freshwater in the Flathead River include: “[t]he management and sale of the public lands belonging to the province”,²² “[including] timber and wood thereon”;²³ “Local works and undertakings . . .”,²⁴ “Property and civil rights . . .”,²⁵ “[A]ll matters of a merely local or private nature”,²⁶ and “[P]enalties . . . for[violating] provinc[ial] law.”²⁷

The relevant “heads of power” that the federal government has available to legislate for the protection of water and fisheries resources include: “[P]ublic debt and public property”,²⁸ “[T]rade and commerce”,²⁹ “Raising money by . . . taxation”,³⁰ “Navigation and shipping”,³¹ “Seacoast and inland fisheries”,³² “[Matters that regard] Indians and lands reserved for Indians”,³³ “The criminal law . . .”,³⁴ “[Extra provincial] works and undertakings . . .”,³⁵ “[Works] for the general advantage of Canada . . .”,³⁶ “[To establish] peace, order, and good government . . .”,³⁷ and to implement any international treaty which Great Britain entered on behalf of Canada.³⁸

The federal government has the right to legislate freshwater on federal lands in national parks and in other federal reserved lands, as well as all resources on these lands (e.g., timber, water, range, wildlife and mines and minerals). In regard to fish in the Flathead River, the Canadian federal government has jurisdiction to regulate commercial, sport or recreation fishery habitat in fresh

21. *Id.* at § 92A(; *see also* Natural Resource Transfer Agreement (NRTA). The NRTA is found in the Constitution Act, 1930, 20 & 21 Geo. 4, c. 26 (U.K.), *reprinted in* R.S.C. 1985, app. § 2, no. 26.

22. Public lands in Canada are primarily owned by the provinces and not the federal government, although the federal government does own the lands in national parks, and Indian lands.

23. Constitution Act 1867, § 92(5).

24. *Id.* § 92(10).

25. *Id.* § 92(13).

26. *Id.* § 92(16).

27. *Id.* § 92(15).

28. *Id.* § 91(1)(A).

29. Constitution Act, 1867 (also known as British North American Act 1867), 30 & 31 Vict. c. 3, § 91(2) (U.K.), *as reprinted in* R.S.C. app. § 2 no. 5.

30. *Id.* § 91(3).

31. *Id.* § 91(10).

32. *Id.* § 91(12).

33. *Id.* § 91(24).

34. *Id.* § 91(27).

35. Constitution Act, 1867 (also known as British North American Act 1867), 30 & 31 Vict. c. 3, § 92(10)(a) (U.K.), *as reprinted in* R.S.C. app. § 2 no. 5.

36. *Id.* § 92(10)(c).

37. *Id.* § 91.

38. *Id.* § 132.

water whether on federal or non-federal lands and whether on private or public lands.

The British Columbia government has the right to legislate over freshwater, including water courses and water bodies on provincial lands, in provincial parks, and all resources on these lands. In addition, the provincial government can legislate and set water pollution and soil contamination standards for provincial Crown lands within the province. The federal government has the right to legislate deletion inter-provincial pollution, as well as the right to regulate toxic substances wherever they occur.³⁹

Numerous federal and provincial government acts, as well as non-governmental initiatives, influence freshwater management in Canada. When it is unclear whether a federal or provincial government has jurisdiction over a matter, the Canadian courts have three options. The courts may decide that the matter falls within the power of either the federal or provincial government. In interpreting the jurisdiction over the subject matter, the courts will characterize the essence or pith and substance of the legislation to determine the constitutional validity of an act. If the essence of a law provides for provincial authority over subject matter that falls under federal jurisdiction, or vice versa, then the court will declare the law to be *ultra vires*.⁴⁰

Alternatively, the court may decide that neither level of government has exclusive jurisdiction over the subject matter. In such a case, the court can apply the *double aspect* doctrine, which means that both levels of government can legislate certain aspects of that matter. For instance, the British Columbia government may pass legislation regulating pollution in the Flathead River since the provinces have the jurisdiction to legislate for the protection of property and civil rights. The federal government may also pass legislation regulating water pollution that interferes with fish habitat in the Flathead River, because it has jurisdiction to regulate inland and coastal fisheries. If the *double aspect* doctrine applies, then both the provincial and federal laws operate concurrently. Should conflict occur between the operation of the laws, Canadian courts, applying the doctrine of federal *paramountcy*, will recognize the standing of the federal law and declare the provincial law to be inoperative to the extent that it conflicts with the federal. Thirdly, the courts may conclude that the Constitution confers neither exclusive jurisdiction nor shared jurisdiction over a matter. As the federal government is provided with the power to regulate residual matters,⁴¹ such a matter usually falls under federal jurisdiction. Arguably transboundary freshwater in the Flathead River is a matter that falls under the residual power of

39. See *R v. Hydro-Quebec*, [1997] 3 S.C.R. 213 (Can.).

40. See Alastair R. Lucas, *Natural Resources and Environmental Management: A Jurisdictional Primer*, in *ENVIRONMENTAL PROTECTION AND CANADIAN CONSTITUTION* 31, 31-35 (Donna Tingley ed., 1987).

41. Constitution Act, 1867 (also known as British North American Act 1867), 30 & 31 Vict. c. 3, § 91 (U.K.), as reprinted in R.S.C. app. § 2 no. 5 (stating that the peace, order, and good government clause, imply the federal right to legislate over residual matters found neither in federal nor provincial jurisdiction).

the federal government. However, provincial governments like the British Columbian government often take the lead in reaching regional agreements with cross-border partners in the United States, such as the British Columbia and Montana Environmental Cooperation Agreement.⁴²

As noted, under Section 91(12) of the Constitution Act, the federal government has exclusive jurisdiction to regulate all matters concerning coastal and inland fisheries, which is the basis for the federal *Fisheries Act*.⁴³ Although the federal parliament possesses this exclusive jurisdiction, the provinces may exercise some legislative control over matters that concern fish. Section 92(5) of the Canadian Constitution provides the British Columbia government with the exclusive right to legislate the management and sale of public lands. Because provinces own the fish within their boundaries, they can pass laws relating to proprietary aspects of fish, such as fishing regulations, as found in the British Columbia- *Fisheries Act*.⁴⁴ As with the founding provincial governments, Section 109 provides the British Columbian government with exclusive jurisdiction over the development of minerals on provincial lands adjacent to the Flathead River.

In *Fowler v. The Queen*⁴⁵ and *Northwest Falling Contractors v. The Queen*,⁴⁶ Canada's highest court ruled that the federal government had the jurisdiction to protect fish and habitat, even if the project in question is on provincial Crown lands.⁴⁷ In other decisions, the power granted to the federal government under the "Peace, Order and Good Government"⁴⁸ (POGG) clause was the basis for allowing federal regulation in matters that seemingly fell under provincial jurisdiction. For example, the Supreme Court of Canada, in *R v. Crown Zellerbach Can. Ltd.*, decided that the POGG power was an acceptable legal basis for federal environmental regulation of provincial territorial waters in British Columbia.⁴⁹ The federal government also has exclusive jurisdiction over criminal law as provided in Section 91(27) of the Constitution. The Supreme Court of Canada in *R. v. Hydro-Quebec*,⁵⁰ ruled that the federal government can legislate to protect public health under the criminal law power. Pursuant to

42. Env'tl. Cooperation Arrangement Between the Province of British Columbia and the State of Montana, B.C.-Mont. (2003), available at http://www.env.gov.bc.ca/spd/docs/Montana_ENVIRONMENTAL_COOP_ARRANGEMENT.pdf.

43. Fisheries Act, R.S.C., ch. F-14 (1985) (Can.).

44. Fisheries Act, R.S.B.C. ch. 149 (1996) (Can.); see generally STEVEN A. KENNETT, *MANAGING INTERJURISDICTIONAL WATERS IN CANADA: A CONSTITUTIONAL ANALYSIS* (1991).

45. [1980] 2 S.C.R. 213 (Can.).

46. [1980] 2 S.C.R. 292 (Can.).

47. See DAVID R. BOYD, *UNNATURAL LAW: RETHINKING CANADIAN ENVIRONMENTAL LAW AND POLICY* (Sarah Wight ed., 2003).

48. Constitution Act, 1867 (also known as British North American Act 1867), 30 & 31 Vict. c. 3, § 91 (U.K.), as reprinted in R.S.C. app. § 2 no. 5.

49. [1988] 1 S.C.R. 401 (Can.).

50. [1997] 3 S.C.R. 213 (Can.).

Section 91(27), the federal government can protect the environment “through prohibitions against toxic substances . . . a wholly legitimate . . . objective”⁵¹

B. Federal and Provincial Jurisdiction and the Environmental Impact Assessment Process

This is an important issue because there are differences in the EIA processes administered by the federal and British Columbian governments. These differences will affect the thoroughness of the environmental assessment for the proposed coal and CBM projects, and the mitigation requirements to minimize water impacts. The federal regulatory approval process under the Canadian Environmental Assessment Act⁵² (CEAA) is generally viewed to be more thorough than the British Columbian environmental assessment process. While no Canadian judicial decisions have directly addressed the issue of transboundary freshwater, there have been some decisions in regard to jurisdiction over the environment, pollution, and aboriginal lands impacted by development.

In *Friends of the Oldman River Society v. Minister of Transportation*,⁵³ the Supreme Court of Canada concluded that the federal government had the authority to require a federal environmental impact assessment on a dam project under the “Peace Order and Good Government” clause in the Canadian Constitution. This precedent supports a broad power for the federal government to enact environmental protection legislation. If the federal government decides to conduct a federal environmental impact assessment on the proposed Lodgepole Coal Mine or CBM projects, it likely can be based on the constitutional powers provided to the national government. While environmental protection has been assigned a double aspect by Canadian courts, in the case where there could be environmental impacts across the international border, the POGG power appears to be a reasonable basis for federal jurisdiction.

The Supreme Court of Canada, in *Quebec (Attorney General) v. Canada and the Cree Regional Authority*,⁵⁴ held that the National Energy Board, a federal government regulator, had jurisdiction to conduct a federal environmental impact assessment based on the federal trade and commerce power for a hydro-electric dam and the export of electricity to the United States. As well, under Section 91(24) of the Canadian Constitution, the federal government has jurisdiction over “Indians, and lands reserved for Indians.” This power provides the federal government with indirect jurisdiction over projects that may have environmental impacts on residents of Indian reserves.⁵⁵ Since the Constitutional Amendments in 1982,⁵⁶ aboriginal and

51. Neil Hawke, *Canadian Federalism and Environmental Protection*, 14 J. ENVTL. L. 185, 188 (2002).

52. Canadian Environmental Assessment Act, 1992 S.C., ch. 37 (Can.).

53. [1992] 1 S.C.R. 3 (Can.).

54. [1994] 1 S.C.R. 159 (Can.).

55. KATHRYN HARRISON, *PASSING THE BUCK: FEDERALISM AND CANADIAN ENVIRONMENTAL POLICY* 50 (1996).

treaty rights have been explicitly recognized in the Canadian Constitution. In the *Quebec* case, the Supreme Court ruled that the federal regulator had to consider the impact of the project on the aboriginal residents and the failure to do so could amount to an infringement of their constitutional rights. While it has been acknowledged that the current dispute in the Flathead Basin could potentially affect First Nations groups in Canada, these groups have yet to reach treaty agreements with the government of Canada, nor do they live on federal reserves. Therefore, they may not be entitled to the same protection that the aboriginal group received in the *Quebec* case.

Regardless of which government (or governments) ultimately has jurisdiction to regulate transboundary freshwater disputes, it appears that the federal government has established a recent trend of abdicating its environmental protection responsibility to provincial governments. The result has been the proliferation of regional agreements aimed at resolving and avoiding disputes among sub national actors. Apart from the ICJ, which is unlikely to enter the picture in this dispute due to the reluctance of the Canadian and British Columbian governments to agree to such a mechanism, regional agreements might assist in resolving the dispute.

Differences in the requirements of the British Columbian and federal environmental impact assessment processes prompted U.S. regulators to request that the more comprehensive assessment be used in the Flathead area. While opponents to the Lodgepole mine would prefer no mine development at all, they have also advocated for a federal assessment under CEAA, and a three- to five-year baseline assessment before any exploratory drilling is completed. Section 16(1) of the CEAA provides for a consideration of cumulative effects:

Every screening or comprehensive study of a project...shall include a consideration of the following factors:

- (a) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
- (b) the significance of the effects referred to in paragraph (a);
- (c) comments from the public that are received in accordance with this Act and the regulations;
- (d) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and
- (e) any other matter relevant. . .⁵⁷

56. Part II of the Constitution Act 1982, being Schedule B to the Canada Act 1982, ch. 11 (U.K.).

57. Canadian Environmental Assessment Act, 1992 S.C., ch. 37, § 16(1) (Can.).

Section 16(2) of CEAA requires additional factors be considered in certain types of assessments. These factors include:

- (a) the purpose of the project;
- (b) alternative means of carrying out the project that are technically and economically feasible and the environmental effects of any such alternative means;
- (c) the need for, and the requirements of, any follow-up program in respect of the project; and
- (d) the capacity of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future.⁵⁸

Elaine Hughes *et al.* note that the evaluation of the significance of the environmental effects under CEAA is based on the following “three part test”:

- (1) Are the environmental effects *adverse*?
 - (2) Are the adverse environmental effects *significant*?
 - (3) Are the significant adverse environmental effects *likely*?
- According to the Responsible Authority Guide, significance must be determined objectively, having regard for scientific and technical information.⁵⁹

In addition, Elaine Hughes *et al.* cite *Curragh Resources Inc. v. The Queen in Right of Canada* (1992), 87 DLR (4th) 219 (FCTD) for the proposition that “mitigation or compensation measures must in fact prevent potentially adverse environmental effects from becoming significant” as opposed to requiring measures that “merely could prevent environmental effects from becoming significant.”⁶⁰

As demonstrated in the preceding section, the question of jurisdiction over the regulation of the proposed coal and CBM projects is clearly a complicated one. While the Canadian federal government has become involved in the environmental assessment process, many critics feel that the less thorough provincial assessment is inadequate. It is unlikely that opponents of development in the Flathead Basin will be satisfied until the Canadian federal government agrees to conduct a cumulative assessment of transboundary impacts on both aquatic and terrestrial species, and include the involvement of an independent panel made up of American and Canadian members. At this point, the chances of this happening appear to be slim.

58. *Id.* § 16(2).

59. ELAINE HUGHES, ALASTAIR LUCAS & WILLIAM TILLEMANN, *ENVIRONMENTAL LAW AND POLICY* 247 (3rd ed. 2003).

60. *Id.* at 248.

C. Current Regulation and Development of Proposed Projects in the Flathead Region

The 2004 *Canada-British Columbia Agreement on Environmental Assessment Cooperation*,⁶¹ provides for harmonized reviews when EAs are required under both the CEAA and the BCEAA.⁶² In accordance with this agreement, Cline Mining Corporation developed draft Terms of Reference (TOR) to address requirements under the CEAA and the BCEAA. The draft TOR was finalized, however, prior to a determination by the federal government as to whether any project components were to be subject to review under the CEAA. When the Lodgepole Coal Mine project description was initially submitted on January 9, 2006, the British Columbia Environmental Assessment Office (EAO) issued a section 10 order under the BCEAA, requiring an Environmental Assessment Certificate for the project. The EAO also issued a Section 11 order to stipulate the scope of the project, the scope of the assessment, and the procedures and methods for assessing the project. Included in the order was a requirement for the completion of a draft TOR, the contents of which were to identify the issues to be addressed and the information to be provided by Cline Mining Corporation in its Application. Cline was to provide sufficient data and analysis in the application to allow evaluation of the potential effects of the project on First Nations, government agencies, local governments, stakeholders and the public. The approved TOR was to incorporate comments from federal, provincial, and local government agencies, First Nations representatives and the public based on their review of the proponents draft TOR.

After completion of the draft TOR, the BCEAO invited public consultation from numerous stakeholders including Montana residents and state agencies. Among them were the State of Montana, the Confederated Salish and Kootenai Tribes, the Flathead Basin Commission, and various federal agencies such as the U.S. Department of the Interior. The response was overwhelming. Many noted that the proposed timeline for the beginning of the mine development was too fast, and that the draft TOR lacked important information. In a letter dated April 14, 2006, the Chief Policy Advisor to Governor Brian Schweitzer wrote to the Director of Strategic Policy Planning, Garry Alexander, commenting:

Given the breadth of data collection required to attain a comprehensive baseline and scientific understanding of potential impacts, the proposed timeline does not ensure that the socio-economic and environmental impacts of the proposed mine will be adequately addressed. Due to the lack of information in the TOR, including the lack of an adequate

61. Agreement on Environmental Assessment Cooperation, Can.-B.C. (2004), available at http://www.eao.gov.bc.ca/pub/can-bc_agreement/can-bc-agree_mar1104.pdf.

62. Environmental Assessment Act, S.B.C., ch. 43 (2002).

summary of the proposed project, the reviewing agencies found it difficult to provide detailed and constructive comments.⁶³

These concerns were echoed in the *State of Montana Comments on the Draft Terms of Reference—Cline Mining Corporation Lodgepole Project*.⁶⁴ Montana noted that the IJC 1988 *Flathead River International Study: Board Supplementary Report* stated the inadequacy of the available data needed to make predictions and determine mitigating measures.⁶⁵ According to the report, the most pressing deficiencies were in regard to “ground water, sediment, nitrate and ammonia, nutrients, and various components of the biota including fish.”⁶⁶ The concerns expressed in the 1988 Report were similar to those expressed by the State of Montana in its comments on the proposed coal mine prompting the current dispute. Again, the State of Montana pointed out a lack of data in regard to the project itself, groundwater, fish habitat, risk assessment, wildlife management, alternatives, and socio-economic impacts.⁶⁷ The Montana government also pointed out that a request for Canadian federal review under the CEAA to address cumulative impacts and transboundary impacts would be necessary.⁶⁸ According to the State of Montana, “the proposed mine triggers Section 47 of the CEAA, which, ‘[a]llows a foreign state or subdivision thereof (ie; the state of Montana) to initiate this reference through a request to the Canadian Minister of the Environment based on concerns that developments in one country will negatively impact another.’”⁶⁹

In response to numerous issues raised about the Lodgepole Mine draft TOR, the British Columbian government sent the mine proponent back to the drawing board to develop a revised draft. However, the revised draft TOR did little to alleviate the concerns of Montana stakeholders about the project. According to Rich Moy, Chairman of the Flathead Basin Commission in Montana, the British Columbian government “essentially ‘ignored’ recommendations that a Montana delegation submitted on the draft terms of reference.”⁷⁰ Noting his disappointment in the outcome of the opportunity for public comment, Moy stated: “[w]e’re appreciative that British Columbia allowed us to participate in the regulatory process regarding the Cline mine. We would have hoped that

63. Letter from Hal Harper, Chief Policy Adviser to Governor Brian Schweitzer, to Garry Alexander, Director, Strategic Policy and Planning Envtl. Assessment Office (April 14, 2006), http://flatheadbasincommission.org/mining/cline/reference/1_2007PublicTOR.pdf.

64. STATE OF MONTANA, COMMENTS DRAFT TERMS OF REFERENCE—CLINE MINING CORP. LODGEPOLE PROJECT (2006), available at <http://flatheadbasincommission.org/mining/cline/reference/MT.draft4.12.06.pdf>.

65. *Id.* at 1.

66. *Id.*

67. See generally *id.*

68. *Id.* at 4.

69. *Id.*

70. Jim Mann, *BC Launching Review of Cline Mine*, DAILY INTER LAKE, Dec. 22, 2006, available at: <http://www.dailyinterlake.com/articles/2006/12/22/news/news03.txt>.

British Columbia would have incorporated our comments, but they did not . . . Basically, for the most part, they ignored our issues.”⁷¹

The U.S. Department of the Interior (DOI) also expressed concern about the revised draft that Cline released in December 2006. Like the State of Montana, the DOI was concerned that the TOR focussed “too narrowly on individual components of the proposed mining operation and does not adequately provide for the assessment of cumulative project impacts, especially transboundary impacts.”⁷² The DOI recommended that baseline data be collected on terrestrial species, and a “3-5 year baseline survey on fish and wildlife resources.”⁷³ Again, concerns about the inadequacy of the information provided in the draft TOR were evident.

Since the release of the revised draft TOR, Montana’s congressional delegation and Governor Schweitzer continue to “request[] the most rigorous type of federal review under Canadian law.”⁷⁴ On December 13, 2007, the Canadian Environmental Assessment Agency published a “notice of commencement” for review of the Lodgepole mine. However, instead of being triggered by Section 47 as suggested in Montana’s Comments, the review was triggered by Section 5.⁷⁵ The federal review will be carried out by Fisheries and Oceans Canada,⁷⁶ and is considerably less intensive than that being sought by opponents of the mine. Whereas review of Section 47 would require study by an independent panel that many observers hoped would include US scientists, the review under Section 5 will be carried out only by a Canadian federal agency.

Will Hammerquist, Glacier Program Manager for the National Parks Conservation Association, stated that the current level of review falls short of what should be required. He remarked that “[a]n adequate level of review for a project like this should be the most rigorous type of review under Canadian law.”⁷⁷ Hammerquist also noted that he was disappointed the notice made no mention of utilizing the research that has been completed by Montana and U.S. scientists in the transboundary Flathead drainage.⁷⁸ According to Hammerquist, U.S. scientists have amassed a wealth of scientific research in the Flathead Basin, while efforts on the Canadian side have been lacking.⁷⁹ Rich Moy, Chairperson of the Flathead Basin Commission, said that he was “pleased that the Canadian

71. *Id.*

72. Letter from Willie R. Taylor, *supra* note 6, at 2.

73. *Id.* at 13.

74. Jim Mann, *Canada OKs Limited Review of Mine Plans*, DAILY INTER LAKE, Dec. 18, 2007, available at: <http://www.dailyinterlake.com/articles/2007/12/18/news/news02.txt>.

75. See Press Release, Canadian Envtl. Assessment Agency, Notice of Commencement of an Envtl. Assessment (Dec.13, 2007), available at <http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=36201&ForceNOC=Y>.

76. See *id.*

77. Mann, *supra* note 70.

78. *Id.*

79. *Id.*

government is getting involved,” but expressed that he was still somewhat concerned that the involvement was only coming from the Department of Fisheries.⁸⁰ According to a newspaper report in the *Missoulian*, the review that Moy and Governor Schweitzer are seeking is far more extensive than that proposed:

[They] want a full cumulative effects study, which would include terrestrial species as well as aquatic. They want a transboundary analysis, and an international review panel to assess the collective science. In short, they want a comprehensive analysis of environmental conditions in the wilderness valley, on both sides of the international line.⁸¹

The dispute remains a sore spot in cross-border relations between Montana and British Columbia, and has gained national attention in the United States. In June 2008, President Barack Obama’s campaign official, Matt Chandler, wrote an e-mail to Hammerquist, stating that Obama, “supports efforts by Senators Max Baucus and Jon Tester as well as Gov[ernor] Brian Schweitzer to stop the Cline mine.”⁸² Despite this, the BCEAO recently stated that the project was at the pre-approval stage. The potential for further strain on US-Canada relations has left many seeking processes to resolve the dispute. Traditional methods of transboundary dispute resolution such as the International Joint Commission appear to be making way for regional and sub-national agreements. Political lobbying and the influence of state agencies such as the Flathead Basin Commission and community business alliances such as the Flathead Coalition have played an extremely important role in the dispute.

III. SUSTAINABLE DEVELOPMENT CHALLENGES POSED BY COAL AND CBM DEVELOPMENT IN THE FLATHEAD BASIN - PROTECTING WATER QUALITY AND FISHERIES’ RESOURCES IN BOTH CANADA AND THE UNITED STATES

In their 2006 analysis of the water quality and fishery resources in the Canadian section of the Flathead Basin, Sax and Keiter noted that the North Fork of the Flathead River is:

“[t]he last uninhabited major watershed in Canada” with unsurpassed water and air quality. . . The ESA-listed bull trout is doing better in the

80. Michael Jamison, *Canadian Feds Agree to Review Proposed Flathead Mine*, *MISSOULIAN*, Mar. 31, 2007, available at http://www.missoulian.com/news/state-and-regional/article_e47f9805-5d63-554a-ae12-66fd95b83f55.html.

81. *Id.*

82. Andy Ivans, *Obama Onside to Stop B.C. Open-pit Coal Mine near Montana*, *THE VANCOUVER PROVINCE*, June 4, 2008, available at <http://www.canada.com/theprovince/news/story.html?id=01803a11-ce29-43be-b99b-2e4d6abedd30>.

Flathead watershed than anywhere else in the region, and biologists believe the basin's tributary streams serve as crucial spawning grounds.⁸³

In light of the pristine nature of the watershed, there are significant concerns about the impact of the proposed coal mining development, CBM development, and the combined effects of both. We will first consider coal mining as the type of mineral extraction project at a more advanced stage of consideration.

A. Sustainable Development Challenges Posed by Coal Mining in the Flathead Basin

In its 1988 Report on the proposed Cabin Creek Mine, the International Joint Commission concluded there was a great deal of uncertainty regarding the potential environmental impacts from the coal mine.⁸⁴ Among other things, this uncertainty related to the mine design and the possible contamination of groundwater with its subsequent interaction with other water bodies.⁸⁵ The Commission was particularly concerned about the possible effects on the bull trout spawning grounds, given the proposed location of the mine in the Flathead Basin.⁸⁶ Additionally, the Commission concluded that the combined effects of the mine including the "liberation of toxic substances" would have a significant negative impact on fish habitat.⁸⁷ Because the Cline Mine would also be located in the Flathead Basin, the concerns are similar to those identified in 1988 by the IJC in the *Cabin Creek Mine Referral*.

B. Sustainable Development Challenges Posed by CBM Development in the Flathead Basin

There is uncertainty about the impacts from CBM development on the fish resources in British Columbia and downstream in the United States. There are twenty-four species of fish in the Flathead River including the Bull Trout (which is listed under the U.S. *Endangered Species Act* (ESA))⁸⁸ and the Kokanee Salmon.⁸⁹ A 2008 report on another species of salmon, *Coalbed Methane and Salmon: Assessing the Risks*,⁹⁰ considered the risk from CBM extraction in

83. Joseph L. Sax & Robert B. Keiter, *Realities of Regional Resource Management: Glacier National Park and its Neighbours Revisited*, 33 *ECOLOGY L.Q.* 233, 286 (2006).

84. ICJ REPORT, *supra* note 5, at 7.

85. *Id.*

86. *Id.*

87. *Id.* at 7-8.

88. 16 U.S.C. § 1531 (2003).

89. See FLATHEAD RIVER INT'L STUDY, BOARD REPORT: SUMMARY AND CONCLUSIONS (1988) (discussing the impact on various fish living in the river, including the bull trout).

90. GW SOLUTIONS INC., THE PEMBINA INST., COALBED METHANE & SALMON: ASSESSING THE RISK v, 43-44 (Ranee Holmes ed., 2008), available at <http://pubs.pembina.org/reports/cbmandsalmon-rpt.pdf>.

another area in British Columbia. The report concluded that CBM extraction “poses potentially significant risks” to another species of salmon.⁹¹ According to Jaisel Vadgama, a senior policy analyst on the report stated, “scientists don’t yet know how harmful the impacts on salmon would be.”⁹² The 2008 report concluded that land clearing for CBM development “can change the patterns and intensity of runoff, increasing erosion. This can lead to muddier streams and destruction of spawning habitat. Groundwater removal, even when it occurs deep underground, can change the flow and temperature of streams.”⁹³

Concerns in Montana about CBM development along the Flathead River arise from the problems it has encountered from the discharge of produced water from CBM operations in Wyoming. In the Powder River Basin (PRB), which encompasses part of Wyoming and Montana, up to “sixty million gallons of water each day are being dumped on the surface in northern Wyoming.”⁹⁴ The Montana government has expressed concerns to Wyoming regulators about produced water flowing from CBM wells into creeks and rivers in Wyoming, because it can degrade the quality of the water used by Montana ranchers and farmers downstream.

The salinity of the produced water can cause significant degradation in the quality of water in rivers and other water bodies.⁹⁵ Experience with CBM development in the western United States has revealed that discharging produced saline water directly into creeks and surface water bodies can cause damage to crops and other plant life while simultaneously affecting the organisms that feed on the plant life.⁹⁶ Deborah Elcock *et al.* have noted that:

CBM-produced water can contain concentrations of sodium, total dissolved solids (TDS), total suspended solids (TSS), fluoride, chloride, ammonia, and metals higher than those of the receiving waters. The sodium absorption ratio (SAR) is the ratio of the sodium ion concentration to the combined concentrations of calcium and magnesium ion in water. Water with high SARs can cause soils to become dispersed, less permeable (resulting in reduced plant growth), and more prone to erosion; such waters may not be appropriate for irrigation. High levels of soil salinity, resulting from irrigation with some produced water can reduce crop yields. The cumulative effects of produced water on crop

91. Media Release, Pembina Institute, Report: Coalbed Methane Extraction in Northwest British Columbia Would Put Salmon at Risk, (May 15, 2008), available at <http://bc.pembina.org/media-release/1636>.

92. *Id.*

93. *Id.*

94. James Murphy, *Slowing the Onslaught and Forecasting Hope for Change: Litigation Efforts Concerning the Environmental Impacts of Coalbed Methane Development in the Powder River Basin*, 24 PACE ENVTL. L. REV. 399, 407 (2007).

95. *Id.* at 406.

96. *Id.* at 409.

soils and yield and the factors that influence those effects are not completely understood.⁹⁷

CBM development in the western United States has revealed that there is uncertainty about the extent of some of the negative environmental impacts from the discharge of produced water on fish. Elcock *et al.* note that “[h]ydrologic changes resulting from CBM operations may adversely affect fisheries; the nature and extent of those effects, however, are largely unknown.”⁹⁸ One Environmental Impact Statement (EIS) for proposed CBM development in the Powder River Basin concluded that “water levels in wells completed in developed coals within 10 miles of CBM development are likely to drop and that flow rates in artesian wells and springs sourced within the area are likely to decrease.”⁹⁹

In light of the uncertainty about water impacts in the Western United States, it should be noted that even less is known about the impacts from CBM production in British Columbia, as most of the Canadian production to date has been from “dry” Alberta coals which contain no water or negligible amounts of water. There is no track record of CBM operations in British Columbia, as the first commercial production in the province was in 2009 and that production is not in the Flathead River area.

C. Sustainable Development Challenges Posed by both Coal and CBM Development in the Flathead Basin

As noted above, there are significant concerns about the discharge of produced water from CBM wells in British Columbia on the quality of water in the Flathead River and the potential impacts on the spawning grounds for bull trout.¹⁰⁰ It is even less clear what the impacts might be on water and the associated resources from both a coal mine and CBM operations along the Flathead. If the effluent from the coal mine and/or CBM operations degrades the water quality downstream there could be irreversible environmental damage. The following impacts from coal and CBM development in Canada are described by Sax and Keiter:

The environmental impacts associated with this massive industrial incursion into the Canadian Flathead would be significant by any measure. Mining projects of this magnitude will require an expansive infrastructure of new roads and pipelines that will have to be constructed on unstable mountain terrain. Water quality degradation is also a major concern. The proposed Cline coal mine could

97. DEBORAH ELCOCK ET AL, DEP’T OF ENERGY, ENVIRONMENTAL REGULATORY DRIVERS FOR COAL BED METHANE RESEARCH AND DEVELOPMENT (2002).

98. *Id.*

99. *Id.*

100. *See* Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1544 (2003).

dramatically increase sedimentation levels and toxic pollutants in North Fork tributary streams and destroy bull trout spawning grounds. Coalbed methane development, based on experience elsewhere, involves extracting massive amounts of alkaline wastewater that must be disposed of somewhere. Wildlife would also be put at risk. New roads and drilling rigs will mean habitat loss and fragmentation, increased poaching opportunities, and the severance of key migratory routes . . . These impacts are not confined to the Canadian side. Sedimentation and toxic pollutants will disperse throughout the entire Flathead drainage, threatening the river's aquatic ecology and its fisheries. Wildlife displacement, habitat losses, and migration blockages will create stresses across the regional ecosystem. Of particular concern is the 'threatened' grizzly bear¹⁰¹

There has never been a project in Canada for which an EIA has considered the impacts from both a coal mine and CBM production on water and the associated fisheries resources. Furthermore, a study on the cumulative effects from coal mine and CBM development on the transboundary fisheries resources in the Flathead River has yet to be completed. Given this high level of uncertainty, this clearly appears to be a situation in which the precautionary principle should be applied.

The precautionary principle provides that when there is a threat of serious environmental damage, scientific uncertainty should not be utilized as the basis to postpone measures which are cost effective to prevent the degradation of water quality and the associated fisheries. Arguably it is more cost effective to carefully study and consider the environmental impacts before the mineral development proceeds and water contamination occurs, resulting in substantial remediation costs. To that end, it is suggested that before any coal or CBM development in the Canadian Flathead proceeds, a transboundary environmental impact assessment (TEIA) that incorporates scientific evidence collected by U.S. scientists is more cost effective than ignoring the studies. The TEIA, in addition, could more effectively deal with the uncertainty posed by the proposed combination of coal and CBM development in the Canadian Flathead Basin.

IV. THE CBM REGULATORY REGIME ADOPTED BY THE BC GOVERNMENT FOR PRODUCED WATER

Notwithstanding the absence of actual commercial CBM production in the province until 2009, the British Columbian government has considered the CBM development experience in the Western United States and has adopted a comprehensive regime to protect water resources from CBM extraction. In order to evaluate the degree of environmental protection for water afforded by the British Columbian CBM legal framework, we will first consider the current

101. Sax & Keiter, *supra* note 83, at 289-90.

regime in Montana and then compare it with the British Columbian regulatory system.

A. *Environmental Protection from Produced Water in Montana*

In Montana, CBM operators are subject to state laws, federal laws or both, depending on whether the CBM is owned and/or located under land owned by the state government, federal government or by a private individual.¹⁰² Where CBM is developed on federal lands, the Bureau of Land Management assumes the role of primary regulatory agency.¹⁰³ When a well is on state or private land, it is regulated by the Department of Environmental Quality (DEQ), the Department of Natural Resource Conservation (DNRC) and the Montana Board of Oil and Gas Conservation (MBOGC).¹⁰⁴ By and large, the state laws are industry-friendly and pro-development. As of 2005, the MBOGC had not denied approval for any CBM well on grounds relating to environmental impacts.¹⁰⁵ With regard to the environmental effects of produced water, the most important state agency is the DEQ because it administers the National Pollution Discharge Elimination System (NPDES) and associated permits authorized by the Clean Water Act.¹⁰⁶ Moreover, the DEQ has the responsibility to regulate any pollutants released into waters of the state.¹⁰⁷

The State of Montana began issuing permits for CBM operations in the late 1990s, even though the DEQ, MBOGC and DNRC had not completed an assessment of the specific environmental impacts of CBM development.¹⁰⁸ The Northern Plains Resource Council challenged the MBOGC's actions in court, and the parties settled with the relevant agencies agreeing to implement a moratorium barring approval of CBM well permit applications.¹⁰⁹ The Moratorium was to remain in effect "until an environmental impact statement (EIS) specifically addressing CBM development was completed."¹¹⁰ In 2003, the DEQ, MBOGC and Bureau of Land Management issued records of decision for the jointly conducted EIS.¹¹¹

102. Robert J. Duffy, *Political Mobilization, Venue Change, and the Coal Bed Methane Conflict in Wyoming and Montana*, 45 NAT. RESOURCES J. 409, 414 (2005).

103. *Id.*

104. *Id.* at 419-20.

105. *See id.* at 418-20.

106. *Id.* at 419.

107. *Id.* at 419.

108. *Id.* at 420-21.

109. *Id.* at 421.

110. *Id.*

111. *See generally* Mont. Dep't of Env'tl. Quality, Record of Decision for Mont. Statewide Oil and Gas Env'tl. Impact Statement (Aug. 7, 2003), available at http://bogc.dnrc.state.mt.us/pdf/rodaug7_03.pdf [hereinafter Statewide Impact Statement]; *see generally*, Mont. Dep't of Natural Res. and Conservation: Board of Oil and Gas Conservation, Record of Decision: Statewide Coal Bed Methane Exploration and Dev. (Mar. 26, 2003), available at <http://bogc.dnrc.state.mt.us/pdf/finalrod.pdf>; *see generally* U.S. Dep't of the Interior: Bureau

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In its Record of Decision, the DEQ notes that pursuant to Montana's *Water Quality Act*, it "regulates the discharge of pollutants into state waters through the adoption of water quality standards and the permit process," and that the Record of Decision would determine the manner in which "water quality permitting for coal bed methane development will occur."¹¹² The Record of Decision states:

Water quality standards specify what changes in water quality are allowed as a result of discharges to state waters and establish a basis for wastewater discharge permitting. DEQ's water quality standards program has two levels of protection: (1) protection of the designated uses of waters, and (2) prevention of significant degradation of high quality waters. In order to achieve the first purpose, state waters are classified according to the uses they are capable of supporting. Standards designed to protect those specific uses are then applied to those waters. For the non-degradation process, significance levels are established for new or increased discharges. If a proposed discharge would exceed the significance level, the discharger must apply for an authorization to degrade¹¹³

Against this backdrop, in 2003 the Montana Board of Environmental Review enacted numeric electrical conductivity (EC) and sodium absorption ratio (SAR) standards for CBM produced water released into streams in the Powder River Basin including: the Powder River, Little Powder River, Tongue River, Rosebud Creek and tributaries.¹¹⁴ The Record of decision goes on to state:

For discharge of coal bed methane water to state waters in other basins not covered by the rule, the narrative standard, contained in ARM 17.30.637 is applicable. That rule prohibits discharges which will create concentrations that are toxic or harmful to human, animal, plant or aquatic life.¹¹⁵

The Record of Decision also confirms that releasing CBM produced water into any state waters will require an MPDES permit from the DEQ.¹¹⁶ It further states that, "DEQ must require compliance with state water quality standards,

of Land Mgmt. et al, Record of Decision for the Final Statewide Oil and Gas Env'tl. Impact Statement and Proposed Amendment of Powder River and Billings Res. Mgmt. Plans (Jan. 2003), *available at* http://www.blm.gov/pgdata/etc/medialib/blm/mt/field_offices/miles_city/og_eis/rod.Par.40771.File.tmp/preface1.pdf (Supplemented in 2008. 2008 supplement, *available at* http://www.blm.gov/eis/mt/milescity_seis/ROD/rodcomplete.pdf).

112. Statewide Impact Statement, *supra* note 111.

113. *Id.*

114. *Id.* at 2-3.

115. *Id.* at 3.

116. *Id.* at 5.

including nondegradation requirements.”¹¹⁷ The non-degradation standards play an important role in produced water regulation. As the Appellee’s brief in *Pennaco Energy, Inc. v. Montana Board of Environmental Review* explains, that when the Montana Board of Environmental Review (BER) established numeric standards in 2003 it:

[A]ddressed EC and SAR for purposes of Montana’s nondegradation policy, which is designed to protect high quality water. BER voted to retain a narrative nonsignificance criterion for high quality water (rather than imposing numeric thresholds) to determine whether a nondegradation review is triggered . . . As a result of its 2003 decision to retain a narrative nonsignificance standard, BER acknowledged that EC and SAR became the only parameters to which numeric standards applied, but for which there were no corresponding numeric nonsignificance criteria.¹¹⁸

In 2005, the BER again began a rule-making process to address requests that it determine, for purposes of Montana’s non-degradation policy, that EC and SAR are “harmful” elements.¹¹⁹ In addition, the BER was also petitioned to mandate that CBM produced water be re-injected or that it undergo treatment.¹²⁰ Again, the Appellee’s brief explains,

[d]esignation of EC and SAR as harmful parameters meant that discharges containing those constituents qualify as ‘nonsignificant’ for purposes of nondegradation review ‘only if the changes outside of a mixing zone designated by the [DEQ] are less than 10% of the applicable standard and the existing water quality level is less than 40% of the standard’ . . . The significance is that if a discharge does not qualify as nonsignificant, the discharger must obtain an authorization to degrade prior to discharging.¹²¹

In 2006, the BER declared EC and SAR “harmful” for purposes of the state’s nondegradation policy, as the proposal had requested.¹²² However, the BER “rejected” the proposition that injection of CBM produced water should be mandatory.¹²³

117. *Id.*

118. Brief of Appellee at 14-15, *Pennaco Energy, Inc. v. Mont. Bd. of Environmental Review*, 199 P.3d 191 (Mont. 2008) (No. DA 07-0755).

119. *Id.* at 16.

120. *Id.*

121. *Id.* at 16-17.

122. MONT. DEP’T OF ENVTL QUALITY, COAL BED METHANE RULE UPDATE (2006), available at <http://www.deq.state.mt.us/ber/pdfs/cbmsummary.pdf>.

123. *Id.*

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In short, Montana authorities have established a system of numeric standards and numeric nondegradation rules to deal with produced water from CBM development in the Powder River Basin and other rivers discussed above. The previous narrative standards remain in effect for those river basins not described in the Record of Decision.

B. Produced Water Regulation in British Columbia

The British Columbia Oil and Gas Commission (BCOGC) and the Ministry of Water, Land and Air Protection (MWLAP) are the most significant regulatory agencies for CBM production in British Columbia.¹²⁴ As the name implies, the *Code of Practice for the Discharge of Produced Water from Coalbed Gas Operations*¹²⁵ contains the regulations with regard to the discharge of produced water in British Columbia. The Code became effective on July 1, 2005, and authorized surface discharge into streams and on the ground in certain circumstances.¹²⁶ In 2007, the British Columbian government released *The BC Energy Plan: A Vision for Clean Energy Leadership*. Under this plan, British Columbia would have “the best coalbed gas practices in North America. Companies will not be allowed to surface discharge produced water. Any re-injected produced water must be injected well below any domestic water aquifer.”¹²⁷ In addition, under the *Energy Plan*, companies must “fully engag[e] communities and First Nations.”¹²⁸

In response to the requirements of the energy plan, the Minister of Environment and Minister Responsible for Water Stewardship and Sustainable Communities issued an order amending the Code to prohibit surface discharge except in cases where “section 4.1 of the Waste Discharge Regulation applies.”¹²⁹ Section 4.1 of the Waste Discharge Regulation provides an exemption for CBM producers from the general requirement under the Section 6(2) and (3) of the *Environmental Management Act* that they do not allow waste to pollute the environment while carrying on business operations.¹³⁰ However, Section 4.1 of the Waste Discharge Regulation only grandfathers certain CBM operations that

124. See Alan Ingelson, Jason Gray & Pauline Li McLean, *CBM Produced Water—The Emerging Canadian Regulatory Framework*, 10 U. DENVER WATER L. REV. 23, 35-36 (2006).

125. Code of Practice for the Discharge of Produced Water from Coalbed Gas Operations (Environmental Management Act) B.C. Reg. 156/2005 (Can.), available at <http://www.bclaws.ca>.

126. *Id.*

127. Press Release, B.C. Ministry of Energy, Mines and Petroleum Res., BC Energy Plan Outlines Vision for Clean Energy (Feb. 27, 2007), available at http://www.energyplan.gov.bc.ca/PDF/2007EMPR0008_000178.pdf.

128. The BC Energy Plan, Oil and Gas Policies 4 http://www.energyplan.gov.bc.ca/PDF/BC_Energy_Plan_Oil_and_Gas.pdf (last visited Dec. 20, 2009).

129. Ministerial Order No. M 294 (Mar. 11, 2008) (Can.).

130. Waste Discharge Regulation (Environmental Management Act) B.C. Reg. 320-2004, § 4.1(Can.); Environmental Management Act, 2003 S.B.C., ch. 53, §§ 6(2), (3) (Can.).

were registered and producing water before the effective date of the section.¹³¹ The Ministry of Environment claims that as a result of the changes to the Code, “[p]roduced water must be disposed of to an underground formation in accordance with the Oil and Gas Waste Regulation.”¹³² Section 7(1) of the Oil and Gas Waste Regulation allows produced water to be injected underground in compliance with applicable regulations and statutes.¹³³ With regard to this process, the B.C. Ministry of Energy, Mines and Petroleum Resources website states:

In approving an application to re-inject produced water into the ground the OGC considers information such as the location and design of the re-injection well, the geological properties of the proposed underground area, and the composition of the water being injected. Companies must isolate the subsurface disposal areas from potential groundwater zones and prove that these formations will contain the anticipated volumes of re-injected water. To protect drinking water from possible cross-contamination, all disposal wells are lined with steel casing that is cemented into the well bore. The OGC also requires that there be monitoring conducted throughout the re-injection process.¹³⁴

In addition, the Ministry’s website claims the BCOGC will mandate “companies to carry out water well testing within a one kilometre radius of [CBM] wells.”¹³⁵ In summary, consistent with the commitments set out in the *BC Energy Plan*, the British Columbia government has created a regulatory scheme that effectively bars surface discharge of produced water, regardless of the water quality.

C. Sustainability and the Montana and British Columbia Produced Water Regimes

The regulatory systems for produced water in Montana and British Columbia will be considered in the context of sustainable water practices, in light of the uncertainty surrounding the environmental impacts on water from CBM operations. Barrett argues that the most sustainable water disposal methods are:

1. [r]einjection into aquifers depleted or otherwise affected by CBM production;

131. Waste Discharge Regulation (Environmental Management Act) B.C. Reg. 320-2004, § 4.1(Can.).

132. Ministry of Env’t, Industrial Waste, <http://www.env.gov.bc.ca/epd/industrial/regs/codes/coalbed/index.htm> (last visited Dec. 20, 2009).

133. Oil and Gas Waste Regulation (Environmental Management Act) B.C. Reg. 254/2005, § 7(1) (Can.).

134. B.C. Ministry of Energy, Mines and Petroleum Res., Questions and Answers: Coalbed Gas, <http://www.em.gov.bc.ca/Subwebs/CoalbedGas/FAQs/Q&ACBG.htm> (last visited Dec. 20, 2009).

135. *Id.*

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2. [i]njection or percolation into depleted aquifers with water treatment as required, protecting, and/or enhancing water quality;
3. [c]rop, livestock, municipal, or industrial use with water treatment and other mitigations as required, ensuring against negative impacts;
4. [s]urface discharges with water treatment as required, resulting in improved stream flows with adequate mitigations against negative impacts.

The least sustainable practices are:

1. [e]vaporation of water resulting in loss of [the] resource;
2. [i]njection or percolation into aquifers where water quality [has] deteriorated and negative hydrological impacts occur;
3. [l]and application that creates negative impacts on soils and water quality;
4. [d]irect discharges that degrade water quality and negatively impact aquatic life, downstream user, or result in loss of resource.¹³⁶

From the list above, it is clear that when subsurface injection of produced water is completed according to best oil industry practices, this method of water disposal is more sustainable because it avoids the negative surface discharge impacts observed in Wyoming and may assist in replenishing the aquifer. Discharging produced water into a river without treatment is a less sustainable practice. This is a view adopted by environmental groups in Montana such as The Montana Environmental Information Center (MEIC), a self-described “government agency watchdog.”¹³⁷ The MEIC argues that re-injection of produced water is the most favourable method to dispose of produced water, stating: “[u]ltimately, re-injection has to be the answer for CBM water.”¹³⁸ Duffy also states that the “Northern Plains Resource Council has supported legislation requiring CBM drillers to treat discharge water and re-inject it into the ground, arguing that re-injection is ‘the most sustainable, reasonable, and appropriate method for dealing with water produced by coal bed methane wells.’”¹³⁹

136. Colby Barrett, *Fitting a Square Peg in a Round (Drill) Hole: The Evolving Legal Treatment of Coalbed Methane-Produced Water in the Intermountain West*, 38 ENVTL. L. REP. NEWS & ANALYSIS 10661, 10668 (2008).

137. Mont. Envtl. Info. Ctr., About MEIC, <http://www.meic.org/about> (last visited June 20, 2009).

138. Mont. Envtl. Info. Ctr., Coal Bed Methane, <http://www.meic.org/water-quality/coal-bed-methane> (last visited June 20, 2009).

139. Duffy, *supra* note 102, at 428.

The uncertainty surrounding the effects of CBM operations was specifically dealt with by Jack Stanford and Richard Hauer in a White Paper prepared at the behest of Montana legislators.¹⁴⁰ The authors ranked methods for dealing with produced water, from the most environmentally uncertain and risky to the least.¹⁴¹ The authors rank “discharge to surface water” as the method most uncertain option and one that poses the largest risk to the environment.¹⁴² On the opposite end of the spectrum “injection” is ranked as the least uncertain and posing the smallest risk.¹⁴³ The authors suggest that “[t]he water problem could most simply be solved by re-injection.”¹⁴⁴ However, this method of disposal is more costly than other measures.¹⁴⁵

Based on the foregoing analysis of the Montana and British Columbia regulatory systems, as the framework in British Columbia requires subsurface injection, it appears to provide more protection for water resources than those in Montana. In light of British Columbia’s more stringent regulatory requirements, the potential for water degradation from CBM operations in British Columbia appears to be less than in Montana. It should be remembered that the Montana BER declined to set standards that require produced water to be treated or injected.

However, it should also be noted that a simple comparison between how British Columbia and Montana would regulate CBM in the Flathead Basin is problematic. The Flathead River is not among the rivers where the BER numeric standards are applicable, and therefore, the narrative standards apply to produced water discharged in that area. The narrative standard requires that the CBM producer show the permitting agency that the discharge is not “toxic” or “harmful” to aquatic and other forms of life. It is unclear how this standard would be applied in the Flathead Basin. In light of the proximity to Glacier National Park, federal and state regulators still have reservations about CBM development that might proceed along the Flathead River in British Columbia, as it has in the Powder River Basin. The state government may not have developed numeric water quality standards for the Flathead River because it does not anticipate granting any CBM drilling permits in the Montana portion of the Flathead Basin.

The requirement that water produced from CBM wells in British Columbia must be injected should provide some comfort to Montana residents and regulators. However, as noted above, there remains significant uncertainty about

140. Jack A. Stanford & F. Richard Hauer, Coalbed Methane (CBM) in Montana: Problems and Solutions, A White Paper 1, 3 (Feb. 4, 2003), <http://www.umt.edu/flbs/research/cbmfinal2-5-03.pdf>.

141. *Id.* at 10-11. The methods are ranked with regard to the effect they may have on Montana ecosystems.

142. *Id.* at 11.

143. *Id.*

144. *Id.* at 13.

145. *See id.* at 8.

the cumulative impacts from combined coal and CBM development on water and fishery resources and a lack of CBM operational experience in southeast British Columbia, in a different sedimentary basin than the Powder River. Water and fisheries' environmental degradation from CBM development has already occurred in Wyoming and Montana. Coals in a variety of sedimentary basins have different chemical and physical characteristics that may result in different environmental impacts. The combined coal and CBM production near the Flathead appears to be the first project in North America (and possibly the world) in which coal and CBM development may occur near an international border and upstream from a national park in a pristine ecosystem. No one really knows what the cumulative effects from coal mining and CBM extraction will be.

V. UNCERTAINTY ABOUT THE CUMULATIVE IMPACTS FROM COAL AND CBM DEVELOPMENT ALONG THE FLATHEAD AND THE INTERNATIONAL JOINT COMMISSION FINDINGS

In light of the uncertainty about the impacts from most recent coal mine proposal, the State of Montana requested that the issue to be taken again to the International Joint Commission (IJC), an independent bilateral organization arising out of the 1909 *Boundary Waters Treaty*, (BWT)¹⁴⁶ (this was also the case with the Cabin Creek coal mine in the 1980s). The BWT establishes legal rules and processes to help resolve disputes “primarily concerning water quality and water quantity along the boundary between Canada and the United States.”¹⁴⁷ The treaty defines “boundary waters” as the waters of lakes and rivers connecting waterways or portions thereof, along which the international boundary between the United States and the Dominion of Canada passes bays and inlets, not including rivers flowing across the boundary.¹⁴⁸ The Flathead River is not “boundary water” for the purposes of this article. However, Article IV of the BWT applies to both boundary waters and “waters flowing across the boundary,”¹⁴⁹ such as the Flathead River. Therefore, Article IV applies in the current dispute. Article IV states that boundary and transboundary waters, “shall not be polluted on either side to the injury of health or property of the other.”¹⁵⁰ Opponents of development in the Flathead Basin can argue that the use of the words “shall not” creates a legal obligation to avoid transboundary pollution and that the nature of the proposed development in the Flathead Basin automatically

146. Treaty Between the United States and Great Britain Relating to Boundary Waters Between the United States and Canada, U.S.-Gr. Brit., art.vii, viii, Jan. 11, 1909, 36 Stat. 2448.

147. Int'l Joint Comm'n, Who We Are, <http://www.ijc.org/rel/agree/water.html> (last visited Dec. 20, 2009).

148. Treaty Between the United States and Great Britain Relating to Boundary Waters Between the United States and Canada, U.S.-Gr. Brit., Preliminary art., Jan. 11, 1909, 36 Stat. 2448.

149. Treaty Between the United States and Great Britain Relating to Boundary Waters Between the United States and Canada, U.S.-Gr. Brit., art.vi, Jan. 11, 1909, 36 Stat. 2448.

150. *Id.*

calls for the intervention of the IJC.¹⁵¹ However, as noted by Dino Ross, finding a binding legal obligation in the words of Article IV is difficult for a variety of reasons, including the lack of a definition for either of the key terms, “pollution” or “injury.”¹⁵² Ross also notes that the incorporation of the *Harmon* Doctrine in Article II has been described as affecting the treaty in this way:

That doctrine was formulated in 1895 by Attorney General Judson Harmon to deal with apportionment of waters flowing out of the United States into Mexico. It states that nations have exclusive jurisdiction and control over the uses of all waters within their boundaries. The strongly nationalistic terms of the doctrine are only slightly tempered by subsequent language in Article II stating that a downstream user injured by an upstream user is entitled to the same rights and remedies he would have if the injury had occurred in the source nation. Realistically, this “right” to legal recourse in the source nation is almost completely hampered by the difficulty of filing suit and enforcing damages in a foreign country.¹⁵³

Therefore, neither country has attempted to utilize Article IV in a binding fashion. Nonetheless, the IJC has played a valuable role in resolving some transboundary water disputes between the United States and Canada, such as the Cabin Creek Mine.

A. The Cabin Creek Coal Mine Referral

“Provincial approval [of the Cabin Creek proposed in the 1980s] was made conditional on actions taken by the Canadian government pursuant to Boundary Waters Treaty obligations.”¹⁵⁴ In December 1984, the U.S. government formally submitted the matter to the IJC for non-binding recommendations by way of letter with the Canadian government following suit in February 1985. The IJC was requested to “examine and report on the water quality and quantity of the Flathead River in connection with the coal mine that was previously conditionally approved by the British Columbia Government, and to make recommendations which would assist Governments in assuring that provisions of Article IV of the said treaty are honoured.”¹⁵⁵ In response to this task, the IJC established the Flathead River International Study Board, which undertook a three-year investigation into the effects of the proposed Cabin Creek Coal Mine. Based on its findings regarding water pollution, effects on fish, and the ambiguity of the Coal Creek Mine Proposal, the Board recommended the following:

151. See Dino, *supra* note 2, at 227.
152. *Id.*
153. *Id.* at 227-28 (quoting Wilson, *Cabin Creek and International Law—An Overview*, 5 PUB. LAND L. REV., 110, 119 (1984)).
154. *Id.* at 227 (quoting Wilson, *supra* note 153, at 117).
155. ICJ REPORT, *supra* note 5, at 1, 15.

2) the mine proposal not received regulatory approval in the future unless and until it can be demonstrated that:

(a) the potential transboundary impacts identified in the report of the Flathead River International Study Board, have been determined with reasonable certainty and would constitute a level of risk acceptable to both governments; and,

(b) the potential impacts on the sport fishing populations and habitat in the Flathead River system would not occur could be fully mitigated in an effective and assured manner; and,

3) the governments consider, with the appropriate jurisdictions, opportunities for defining and implementing compatible, equitable and sustainable development activities and management strategies in the upper Flathead River basin.¹⁵⁶

In light of these recommendations, Sage Creek let its provincial permit lapse, and the British Columbian government stated that it was satisfied with the IJC's findings, although Canada has not accepted the same.¹⁵⁷ Also arising out of the 1988 IJC Report was the suggestion that international watershed management boards be created in areas where such disputes have arisen.

B. The Prospect of an International Watershed Management Board Now in the Flathead River Basin

In the 1988 IJC Report, the Board recommended the following:

It may be desirable in such cases, including this case, to consider some bilateral process for identifying and assisting in creative, alternative development opportunities that are both sustainable and consistent with maintaining the aforementioned environmental requirements pertinent to Article IV, while paying due regard to the legitimate goals of the other country.¹⁵⁸

The IJC has previously used the powers given to it under the BWT to create a number of watershed management boards.¹⁵⁹ One of the touted advantages of the

156. *Id.* at 11.

157. Michael Azulay, *The Flathead River Basin: How Could a Functioning IJC International Watershed Board be Created and What Would the Board's Purpose, Powers, Membership and Jurisdiction Be?* 9 (unpublished manuscript, on file with author).

158. IJC Report, *supra* note 5, at 9.

159. Int'l Joint Comm'n, *Boards*, http://www.ijc.org/en/boards/boards_conseils.htm (last visited Dec. 20, 2009) (citing the following: International Columbia River Board of Control, International Kootenay Lake Board of Control, International Lake of the Woods Control Board, International Lake Superior Board of Control, International Niagara Board of Control, International Osoyoos Lake Board of Control, International Rainy Lake Board of Control, International Rainy River Water Pollution Board, International Red River Board

creation of an international watershed management board is that it ensures that interested parties “collect, coordinate and have access to baseline data.”¹⁶⁰ In February 2000, the Flathead Basin Commission requested cooperation from the IJC in developing an international watershed management board in the Flathead Basin, “in part because the FBC [had] not been able to establish an effective working relationship with the province of B.C.”¹⁶¹ United States IJC Chair, Dennis Schornack, responded in December 2005, advising the FBC that the IJC would “facilitate the creation of a permanent B.C.-Montana Flathead watershed board as a dispute-avoidance mechanism.”¹⁶² The trouble is that the creation of such a board “requires the cooperation and consent of all levels of government on both sides of the border.”¹⁶³ The British Columbian Government is now wary about submitting to a quasi-judicial board that would limit its course of future action.¹⁶⁴ Michael Azulay, a member of United Nations University—International Network on Water, Environment and Health, suggests that in order to bring British Columbia on board, the mandate of the watershed board should be limited to “information gathering and dissemination.”¹⁶⁵ British Columbia, however, has been very clear that it has no interest in establishing an IJC watershed board anywhere in the province.¹⁶⁶ In light of the current dispute, it appears increasingly unlikely that British Columbia would be willing to submit to such a mechanism, especially as it would likely represent further delays in proposed development.

VI. AN OPPORTUNITY FOR INCREASED COHERENCY IN THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS BETWEEN CANADA AND U.S.

An important opportunity for increased coherency in the EIA process is provided by the *Convention on Environmental Impact Assessment in a Transboundary Context* (or Espoo Convention).¹⁶⁷ Furthering the sustainable development policies of the Canadian, British Columbian and United States governments, the Preamble to the Convention outlines the objectives of the convention:

Affirming the need to ensure environmentally sound and sustainable development,

International Souris River Board, International St. Croix River Board, International St. Lawrence River Board of Control and the Great Lakes Water Quality Board).

160. Azulay, *supra* note 157, at 15.

161. *Id.* at 16.

162. *Id.*

163. *Id.* at 17.

164. *Id.*

165. *Id.* at 18.

166. *Id.* at 17.

167. Convention on Environmental Impact Assessment in a Transboundary Context, Feb. 25, 1991, 30 I.L.M. 800.

Determined to enhance international co-operation in assessing environmental impact in a transboundary context,

Mindful of the need and importance to develop anticipatory policies of preventing, mitigating and monitoring significant adverse environmental impact in general and more specifically in a transboundary context.¹⁶⁸

The convention reflects sustainable development and requires member parties to conduct a transboundary environmental impact assessment (TEIA) when developments are “likely to cause a significant adverse transboundary impact,” and are delineated in the relevant appendix to the Convention.¹⁶⁹

Appendix I to the Convention lists major coal mining operations and large “[g]roundwater abstraction” as “activities” that require a TEIA if they are “likely to cause a significant adverse transboundary impact.”¹⁷⁰ Therefore, we submit that the combined proposed Lodgepole Coal Mine and CBM development in the Flathead Basin should require a TEIA under the Espoo Convention.

The TEIA must be conducted according to the provisions in the Convention,¹⁷¹ which require a “Party of origin” to give “an opportunity to the public in areas likely to be affected to participate in relevant environmental impact assessment procedures regarding proposed activities and [to] ensure that the opportunity provided to the public of the affected Party is equivalent to that provided to the public of Party of origin.”¹⁷² In addition, the Convention requires TEIAs to be “undertaken at the project level.”¹⁷³ The Convention outlines the type of information that must be disclosed to an “affected Party” and requires the “Party of origin,” after the TEIA is completed, to “enter into consultations with the affected Party concerning, inter alia, the potential transboundary impact of the proposed activity and measures to reduce or eliminate its impact.”¹⁷⁴

Unlike Canada, the U.S. Government has not ratified the Convention, even though it was a signatory in 1991.¹⁷⁵ Had the U.S. Government ratified the Convention, we submit that the public in Montana would have had more input into the approval process to date and the U.S. Government and/or Montana State Government would have had the opportunity to enter into direct consultation with the British Columbian government regarding the proposed mining and energy development projects.

168. *Id.* Preamble.

169. *Id.* art. 2(3).

170. *Id.* art 2(3), app. I (12), (14).

171. *See id.* art. 2.

172. *Id.* art. 2(6).

173. Convention on Environmental Impact Assessment in a Transboundary Context art. 2(7), Feb. 25, 1991, 30 I.L.M. 800.

174. *Id.* art. 3, 5.

175. *See* United Nations, United Nations: Treaty Collection, Chapter XXVII: Environment: 4, available at <http://treaties.un.org/>.

The Espoo Convention affords an opportunity for the current U.S. administration and Congress to promote sustainable development by ratifying the Convention. Given the high profile nature of the Flathead dispute and the fact that many of Montana's concerns would have been dealt with had the U.S. ratified the convention, this situation might provide a justification for the Obama administration to promote sustainable development by ratifying the Convention.

The Convention, which defines an EIA as a "national procedure,"¹⁷⁶ requires that a TEIA contain at least:

- (a) A description of the proposed activity and its purpose;
- (b) A description, where appropriate, of reasonable alternatives (for example, locational or technological) to the proposed activity and also the no-action alternative;
- (c) A description of the environment likely to be significantly affected by the proposed activity and its alternatives;
- (d) A description of the potential environmental impacts of the proposed activity and its alternatives and an estimation of its significance;
- (e) A description of mitigation measures to keep adverse environmental impact to a minimum;
- (f) An explicit indication of predictive methods and underlying assumptions as well as the relevant environmental data used;
- (g) An identification of gaps in knowledge and uncertainties encountered in compiling the required information;
- (h) Where appropriate, an outline for monitoring and management programmes and any plans for post-project analysis; and
- (i) A non-technical summary including a visual presentation as appropriate (maps, graphs, etc.).¹⁷⁷

A. Method for Carrying out TEIA

In light of the Canadian government's international legal duty to protect the quality of the water in the Flathead River, the uncertain environmental impacts associated with the proposed coal and CBM development in the Canadian section of the Flathead basin, we submit that Canada would be well advised to agree to a TEIA. However, conducting such an assessment in the Flathead Basin will likely require the use of procedures not contained in CEAA. Craik explains that even

176. Convention on Environmental Impact Assessment in a Transboundary Context art. 1(vi)(7), Feb. 25, 1991, 30 I.L.M. 800.

177. *Id.* App. II.

though the U.S. and Canadian EIA laws provide for the assessment of transboundary effects, these laws assess the transboundary effects simply “as an extension of the domestic EIA process so as to include the consideration of impacts beyond the boundaries of the state. . .the assumption is that domestic and TEIA processes need not be differentiated.”¹⁷⁸ However, Craik argues the assumption is faulty because transboundary environmental effects can “trigger[] international legal obligations,” and because a “TEIA raises unique issues concerning access to information, notice and consultation and the availability of remedies to affected persons.”¹⁷⁹ Given these considerations, it appears that an EIA conducted under Canadian law alone would be insufficient. Therefore, we propose adopting the requirements of the Espoo Convention.

As stated above, the Espoo Convention defines a TEIA as a “national procedure,” and therefore, Section 16 of Canadian Environmental Assessment Act (CEAA) could certainly provide the basis for a TEIA in the Flathead Region. To that end, additional measures would be required to address the concerns stated above. For example, the Convention would require a TEIA to include mechanisms that would provide, *inter alia*, concerned residents and other stakeholders in Montana with the same level of input as the public in British Columbia, an arrangement for producing information to the U.S. (as required under the Convention), and for the establishment of a process allowing government agencies to enter into consultations after the assessment is completed. In these consultations, the U.S. government and State of Montana could address their many concerns, such as the use of scientific information it has developed pertaining to the Flathead Basin.

It should be noted that this process does not require the reviewing body be composed of officials from the U.S. as well as Canada, as some of the opponents have sought. In this regard, the TEIA as proposed above is somewhat of a middle ground between the two positions.

B. Why Should the British Columbia Government Support a TEIA in the Flathead?

The British Columbian government should support the use of a TEIA in the Flathead dispute to avoid the controversy from environmental regulatory takings and the payment of significant compensation to the mine developer, as was the case in the Windy Craggy Mine dispute. The British Columbian government was embroiled in a serious international environmental controversy after it issued the mineral rights to Geddes Resources Ltd. and the company developed a world

178. Neil Craik, *Transboundary Environmental Impact Assessment in North America: Obstacles and Opportunities*, in, THEORY AND PRACTICE OF TRANSBOUNDARY ENVTL. IMPACT ASSESSMENT 8 (Kees Bastmeijer & Timo Koivurova, eds., 2008).

179. *Id.*

class copper deposit near the Alaskan border.¹⁸⁰ “Windy Craggy Mountain is located in a spectacular wilderness area surrounded by Canadian and U.S. parks—Kluane National Park, the Wrangell-St. Elias and Glacier Bay National Parks, and the Tongass National Forest in Alaska.”¹⁸¹ The British Columbian government faced pressure regarding the proposed mine from environmental groups and U.S. Vice President, Al Gore.¹⁸² The proposal to build the mine was ultimately rejected,¹⁸³ and in 1993 the British Columbian government designated the area as a park which “effectively [killed] the proposed Windy Craggy copper-gold mine.”¹⁸⁴ In 1995, the British Columbian government agreed to a “\$166 million cash and a benefits package” as “compensation for its 1992 expropriation of the Windy Craggy copper project.”¹⁸⁵

The similarities between the Windy Creek and Flathead scenarios are striking. The most obvious similarity is the proximity of both proposed mineral development areas to the U.S. border and national parks. Furthermore, both disputes attracted the attention and involved influential U.S. politicians. Thus, conducting a thorough TEIA could stifle the criticism and pressure that is certain to follow should the proposed projects be approved without a comprehensive EIA. Moreover, it seems clear that it is desirable to accurately assess the environmental impacts and require effective mitigation measures before approval rather than later in the process when the government will be more vulnerable to environmental takings claims.

Additionally, the British Columbian government should note the outcome in another environmental regulatory taking dispute, in which the U.S. Government provided \$65 million in compensation to the mine developer when it refused to approve the New World Mine near the boundary of Yellowstone National Park.¹⁸⁶ In response to environmental concerns about mine development close to the National Park Boundary, the U.S. Government refused to approve the project, notwithstanding the fact that it had awarded the mineral rights to the developer and compensation provided to the mine proponent.

VII. CONCLUSION

The Flathead Basin international water dispute raises complex constitutional issues in Canada that elicit no easy solution. The decision of the British

180. See Donald K. Alper, *Transboundary Environmental Relations in British Columbia and the Pacific Northwest*, 27 AMER. REV. OF CANADIAN STUD. 359, 363-365 (1997).

181. *Id.* at 363.

182. See *Id.* at 363-365.

183. *Id.* at 364.

184. Wendy Stuek, *Teck, Nova Gold to Build Huge B.C. Mine*, THE GLOBE & MAIL (Can.), May 24, 2007, at B1.

185. *Post Says Dispute with B.C. Ends*, CANADA STOCKWATCH, July 2, 1997.

186. *New World Mine Proposed Buyout: Hearing Before the Subcomm. on Energy and Mineral Resources of the H. Comm. on Resources*, 105th Cong. 73 (1997).

Columbian government to allow a coal mine upstream from an ecologically sensitive and pristine area near Glacier National Park has roused controversy and adamant opposition from both sides of the international border. Most opponents to the proposed coal mine argue that the provincial environmental assessment process required for the project is inadequate, even with an announcement that the Canadian Federal Department of Fisheries and Oceans will also conduct a review under the CEAA. There is general consensus among critics that the draft TOR submitted by the mine developer in the provincial process contains inadequate information, and omits vital scientific research conducted in the U.S. in regard to cumulative and transboundary impacts. Major players in the dispute have advocated that a three- to five-year baseline assessment be completed before any mineral development proceeds, while the mine developer has expressed its intent to be in operation in the Flathead within the next couple years.

Challenges to sustainable development are created by even more uncertain cumulative environmental effects from combined coal and CBM operations. This uncertainty and the significant risks to the environment in both Canada and the U.S. underscore the importance of completing a more thorough TEIA that examines the cumulative effects in both countries from mineral extraction, alternatives to mineral development in the Flathead area and mitigation practices.

Notwithstanding an existing environmental cooperation agreement between the Canadian federal government and the British Columbian provincial government, the question of jurisdiction over transboundary freshwater continues to be a perplexing issue for the promotion of sustainable development. While the Canadian Constitution is unclear in regard to federal or provincial jurisdiction over transboundary freshwater, arguably the federal government can exercise jurisdiction in the Flathead dispute owing to the international character of the dispute and potential transboundary impacts from the proposed coal and CBM development. Previous decisions of the Supreme Court of Canada have highlighted the broad context of the application of the residual POGG power provided in the Canadian Constitution. Nonetheless, as has been discussed in this paper, the decentralization of Canada-U.S. environmental cooperation is apparent in the proliferation of regional agreements such as the British Columbia and Montana environmental cooperation agreement. While the use of regional environmental cooperation agreements have been successful in some cases to avoid or resolve transboundary disputes, the Montana and British Columbia environmental cooperation agreement has been of little value in resolving the concerns in this energy-water dispute. Consideration of the dispute by an international watershed management board in the Flathead Region has been rejected by the British Columbia government. This dispute has prompted local, regional, national, and international interest. Local politicians, state agencies, and non-governmental groups, as well as concerned citizens have become the major players in this dispute. Organized pressure from both sides of the border has played a role in the decision of the British Columbian government to retreat from

allowing BP to proceed with CBM development in the Flathead Basin for now. Continued lobbying efforts by U.S. politicians may lead to similar results with the proposed Lodgepole mine.

With the decentralization of environmental cooperation between the U.S. and Canada, such stakeholder groups may become increasingly important in resolving transboundary environmental disputes in the future. The unpredictable and haphazard EIA process evident in this dispute could be improved through the implementation of a TEIA in the Flathead region. Interested stakeholders in the U.S. would be in favour of such a process.

The support of the British Columbian government to complete a TEIA should be based on avoiding the payment of significant takings compensation as in the Windy Craggy dispute. In addition the completion of a TEIA is consistent with the British Columbian government's policy of "sustainable" mineral development. Currently, the Ministry of Energy Mines and Petroleum Resources website contains the following statement on mining, the environment and sustainable development:

B.C.'s mining and mineral exploration industry upholds world-class standards. Strict standards for clean air and water. . . apply throughout each of the phases of mining. Both the Province and industry recognize that minimizing an operation's impacts on the surrounding environment is essential to ensuring the mining and mineral exploration sector's long-term sustainability.¹⁸⁷

Given such a commitment to upholding the strictest environmental standards in the world, it should follow that the British Columbian government would have little to fear from a TEIA that includes input from U.S. scientists, especially after considering that the produced water regulations in Montana do not appear to be as strict as those adopted by in British Columbia. As noted above, conducting a TEIA would be consistent with Canada's obligation to avoid transboundary pollution under emerging international law. In light of the potential liability arising from transboundary water contamination in the current Trail Smelter dispute, and the duty of a state to avoid cross-border contamination, the Canadian federal government would be well advised to facilitate a TEIA for the Flathead Basin, as it will be cost efficient to avoid the water contamination problem before the environmental damage occurs.

187. B.C. Ministry of Mines and Petroleum Re, Sustainable Development in British Columbia: Mining and the Environment, <http://www.empr.gov.bc.ca/Mining/Sustainability/Pages/default.aspx> (last visited May 15, 2009).

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