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# Colorado Journal of International Environmental Law and Policy

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# Colorado Journal of International Environmental Law and Policy

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## Articles

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# International Legal Regimes to Manage Indigenous Rights and Arctic Disputes from Climate Change

Robert Snyder

*With warming temperatures, ice has begun to recede revealing Arctic riches. To obtain these riches, Arctic states have begun posturing themselves to obtain the most favorable Exclusive Economic Zone possible. However, the maritime borders that form the Exclusive Economic Zones threaten to cut off indigenous peoples from the resources that they have enjoyed for millennia. This Article examines the rights that Arctic natives enjoy under international law and with these rights, their ability to protect their interests. This Article then examines three international legal regimes that might resolve the Arctic states' disputes and the corresponding conflicts with indigenous rights.*

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## I. INTRODUCTION

Escalating tensions between the Arctic states—Russia, Denmark, Norway, Iceland, Canada, Sweden, Finland, and the United States—have caught indigenous people in the middle because as Arctic ice recedes, the Arctic states have positioned themselves to obtain control over the largest area of the Arctic Ocean possible.<sup>1</sup> The larger the maritime zones under an Arctic state's control the more Arctic riches it controls. An often marginalized feature of this incipient struggle is that Arctic states' delineation of the Exclusive Economic Zone ("EEZ") poses great threats to the livelihood and survival of indigenous peoples.<sup>2</sup>

A country's EEZ lies just beyond its territorial waters and can extend up to 200 miles from the shore (and sometimes farther).<sup>3</sup> The 1982 Convention on the Law of the Sea ("LOST")<sup>4</sup> allows a state to govern the "resources and activities in the water column and ocean surface"<sup>5</sup> that lie within its EEZ. Historically, few territorial disputes have occurred in the Arctic,<sup>6</sup> and so the Arctic states have had little incentive to address common concerns or issues in the region.<sup>7</sup> But the first 1958 Geneva Convention on the Law of the Sea,<sup>8</sup> and later the 1982 LOST, changed the status quo.<sup>9</sup> These treaties legitimized more expansive maritime zones, creating conditions rife with potential for interstate disputes.<sup>10</sup>

When Arctic states establish their EEZs, not only do they potentially antagonize adjacent states with competing claims; they also may infringe on traditional indigenous hunting and fishing grounds, which overlap with the EEZs. If an indigenous tribe belongs to a different nationality than the country controlling the EEZ, the tribe's access to hunt and fish in that area may be restricted.<sup>11</sup> The mammals and

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1. Donald R. Rothwell, *The Arctic in International Affairs: Time for a New Regime?*, 15 BROWN J. WORLD AFFAIRS 241 (2008), available at <http://ssrn.com/abstract=1314546>.

2. These issues also affect the continental shelf. However, my analysis is limited to the EEZ.

3. DAVID J. BEDERMAN, INTERNATIONAL LAW FRAMEWORKS 130 (2d ed. 2006).

4. United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 396.

5. *Id.*

6. Rothwell, *supra* note 1, at 242.

7. *Id.*

8. Convention on the Continental Shelf, Apr. 29, 1958, 499 U.N.T.S. 311.

9. Rothwell, *supra* note 1, at 242.

10. *Id.*

11. Clearly a state may also infringe upon the rights of its indigenous citizens

fish in the EEZ provide a critical food source for indigenous peoples, as well as economic benefits beyond sustenance, such as inter-tribal trading, selling, and tourism. Removing indigenous access to their hunting grounds may also harm the culture and traditions of indigenous peoples.

Indigenous peoples, however, do enjoy some legal protections. Contemporary international law recognizes at least some indigenous rights, even given that the contours of the law remain uncertain in this area. Although indigenous rights may not carry as much force as traditional human rights, they may nevertheless persuade the Arctic states to consider indigenous interests. Three arbitrations, in particular, illustrate and offer paradigms for how Arctic states may accommodate indigenous interests when forming maritime zones. First, under *Barbados v. the Republic of Trinidad and Tobago Arbitration*,<sup>12</sup> the Arctic states may negotiate the boundary in good faith. Second, in light of *In the Area Between Greenland and Jan Mayen*,<sup>13</sup> Arctic states may adjust the maritime borders according to indigenous needs. Third, under the *Eritrea-Yemen Arbitration*,<sup>14</sup> indigenous people may be given non-exclusive access to maritime zones important to their livelihood.

This Article evaluates the methods available in international law for Arctic indigenous people to protect their interests from disruption by incipient battles over maritime borders in the Arctic region. Specifically, the Article argues that the methods provided by international instruments and by international institutions alone will not protect indigenous interests. Rather, Arctic natives will need to use other international methods available to them to pressure and persuade states to accommodate indigenous interests when establishing their EEZs.

Part II provides background on the indigenous people living in the Arctic. Hunting and fishing play a critical role in the natives' livelihood. As ancient practices, hunting and fishing have become intertwined with Arctic indigenous culture. Moreover, the EEZs' threat to indigenous life increases with the effects of global climate change. Global climate change causes ice to recede, making access to animal resources difficult. The receding ice, in combination with the establishment of new EEZs, may also move indigenous hunting grounds into a different maritime zone, rendering them inaccessible. Thus, the establishment of maritime

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through actions taken internal to its EEZ. This Article only discusses potential infringements of indigenous rights across the maritime borders of EEZs.

12. *In re Arbitration between: Barbados and The Republic of Trinidad and Tobago* (Barb. v. Trin. and Tobago), 45 I.L.M. 800 (Perm. Ct. Arb. 2006).

13. *Maritime Delimitation in the Area Between Greenland and Jan Mayen* (Den. v. Nor.), 1993 I.C.J. 38 (June 14) [hereinafter *Maritime Delimitation*].

14. *Eritrea/Yemen (Second Stage: Maritime Delimitation)* (Eri. v. Yemen), 40 I.L.M. 983 (Perm. Ct. Arb. 2001) [hereinafter *Eritrea-Yemen Arbitration*].

zones could damage, if not destroy, Arctic indigenous livelihood and culture.

Part III looks at the rights implicated by EEZs. To exercise any rights implicated by EEZs, indigenous peoples must have international personality. To possess international personality, indigenous peoples must (1) be subjects of international law, (2) possess legal capacity, and (3) have *jus standi*. This Article argues that indigenous people meet the first two requirements. However, the forums where indigenous people have *jus standi* do not bind any of the Arctic states; they only allow claimants to air their grievances. Although not binding, a forum where indigenous people can voice their concerns may enable them to mobilize and generate political will to protect native interests when states are forming their EEZs.

Part IV explores three different approaches that states may implement when forming maritime borders. The first approach requires the parties to resolve their disputes through good-faith negotiations. The second approach adjusts maritime borders in light of economic concerns and fishing rights. The third approach creates a regime offering non-exclusive access to indigenous people engaged in the traditional fishing regime. This Article analyzes each approach in terms of the relevant case law and applies the proposed solution to the Arctic natives' situation. The third approach appears to give indigenous people the greatest economic and cultural protections.

Because states will ultimately determine their maritime borders, this Article concludes that indigenous people should use international law and international venues to pressure Arctic states to protect native interests. Indigenous people should also consider how to align their interests with states so that the states benefit from protecting indigenous interests. For indigenous people to obtain the most favorable result (likely the third option), they need to use some combination of the mechanisms just described because they lack international personality to bring an action in a binding forum.

## II. INDIGENOUS PEOPLE—HISTORY AND BACKGROUND

Arctic natives depend on the environment for their livelihood. Their dependence comes in many different forms. First, the indigenous people depend heavily on the Arctic for sustenance (fish, seal, whale, etc.). These resources also play an important part in their economy. Second, indigenous traditions and culture are intimately intertwined with hunting and fishing practices in the Arctic Ocean. By reducing natural resources, global climate change has strained the natives' self-sufficiency and

cultural integrity. Moreover, climate change may cause unanticipated future conflicts between indigenous hunting grounds and EEZs. If not properly implemented, establishing maritime zones could further damage, if not destroy, indigenous livelihood and culture. Maritime zones in the Arctic could have a significant impact on a large number of indigenous people's human rights.

### *A. Livelihood*

The sea is particularly important for Arctic indigenous livelihood.<sup>15</sup> “[V]ery few tribes live away from the coast, and of these still fewer are really independent of the sea.”<sup>16</sup> Indigenous people depend on fish such as herring, smelt, capelin, and various species of cod.<sup>17</sup> The sea mammals that natives hunt include hair seals, whales, walruses, sea lions, fur seals, and sea otters.<sup>18</sup> The large mammals (seal, walrus, and whale) give natives their most important food and materials for survival such as skin for clothing and blubber for lamp fuel.<sup>19</sup> But above all else, sea mammals provide indigenous people with the principal means to survive their greatest threat, the winter.<sup>20</sup>

Complete dependence on these natural resources changed after contact with Europeans and Russians.<sup>21</sup> Instead of continuing a nomadic lifestyle,<sup>22</sup> many indigenous people moved into permanent settlements.<sup>23</sup> At least on a seasonal basis, they began to engage in the wage economies of their respective countries,<sup>24</sup> such as tourism, craft-making, and similar economic activities.<sup>25</sup> Although today Arctic natives participate in a mixed economy (a blend of traditional hunting, fishing, and gathering as well as more modern economies of commercialism, labor, tourism, etc.),<sup>26</sup> many natives still depend on hunting and fishing to provide for

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15. KAJ BIRKET-SMITH, *ESKIMOS* 75 (1971).

16. *Id.*

17. ERNEST S. BURCH, JR., *THE ESKIMOS* 15 (1988).

18. *Id.* at 14–15.

19. BIRKET-SMITH, *supra* note 15.

20. *Id.* at 76.

21. BURCH, *supra* note 17, at 16–17.

22. *Id.* at 17.

23. *Id.*

24. *Id.*

25. Mark Nuttall, *Hunting, Herding, Fishing, and Gathering: Indigenous Peoples and Renewable Resources Use in the Arctic*, in *ARCTIC CLIMATE IMPACT ASSESSMENT* 656 (2004), available at <http://www.acia.uaf.edu/pages/scientific.html>.

26. *Id.*

their families.<sup>27</sup> In 1998, almost forty percent of the indigenous population in Dene communities did not belong to the labor force.<sup>28</sup> For people over fifteen years old, almost thirty-eight percent used non-cash activities to support their families.<sup>29</sup>

For example, the Inuit still rely heavily on the ringed seal and polar bear.<sup>30</sup> The seal helps counterbalance the lack of other important traditional foods because of its presence during most of the year.<sup>31</sup> Hunting polar bear, a traditional activity, provides the Inuit with an important source of money. “Ringed seals and polar bears are as important now as at any time in the past to the economic well-being of small Nunavut communities.”<sup>32</sup> The Inuit are just a small representation of Arctic indigenous peoples’ continued dependence on traditional methods of hunting and of fishing for their livelihood.<sup>33</sup>

### *B. Culture*

The ability to hunt and to fish also plays an important role in indigenous culture.<sup>34</sup> To successfully gather the fauna, natives have specialized knowledge of animal and fish behavior, the Arctic climate, and sea ice.<sup>35</sup> This knowledge provides them with a foundation for “cultural, spiritual, and ethical concerns that guide the use and management of natural resources.”<sup>36</sup> This foundation comes in the form of herding traditions, community hunting rules, and patterns of sharing the animals caught.<sup>37</sup> These hunting, fishing, and herding activities are often implemented on a local community basis;<sup>38</sup> they establish a

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27. See *Impacts of Climate Change: Hearing Before the United States Senate Committee on Commerce, Science & Transportation*, 107th Cong. (2004) (statement of Sheila Watt-Cloutier, Chair of the Inuit Circumpolar Conference), available at [http://commerce.senate.gov/public/index.cfm?FuseAction=Hearings.Testimony&Hearing\\_ID=f2f8ae6c-b8d3-4fe9-9381352329e2540a&Witness\\_ID=a333c8e7-1c2c-49a8-ad81-fd15ee3181ff](http://commerce.senate.gov/public/index.cfm?FuseAction=Hearings.Testimony&Hearing_ID=f2f8ae6c-b8d3-4fe9-9381352329e2540a&Witness_ID=a333c8e7-1c2c-49a8-ad81-fd15ee3181ff).

28. Nuttall, *supra* note 25, at 653 (citing ARCTIC MONITORING AND ASSESSMENT PROGRAM, AMAP ASSESSMENT REPORT: ARCTIC POLLUTION ISSUES 859 (1998)).

29. *Id.*

30. Nuttall, *supra* note 25, at 674.

31. *Id.*

32. *Id.*

33. See *id.* at 654.

34. *Id.*

35. *Id.*

36. *Id.* (citing MARK NUTTALL, PROTECTING THE ARCTIC: INDIGENOUS PEOPLES AND CULTURAL SURVIVAL (1998)).

37. *Id.*

38. See BIRKET-SMITH, *supra* note 15, at 93, 96–97, 100–01 (describing groups of



mechanism for socialization that is important for cultural identity. The sharing of fish and meat between different indigenous tribes across the Arctic further enhances social relationships among the various communities.<sup>39</sup>

Harvesting and processing the animals reinforces indigenous values and attitudes toward animals.<sup>40</sup> First-catch celebrations illustrate the important relationship between natives and animals. These celebrations occur after a boy has made his first catch.<sup>41</sup> From this first captured animal, every household in the community receives gifts of meat.<sup>42</sup> Members of the community also visit the boy's home for coffee or tea.<sup>43</sup> As well as celebrating the boy's development as a hunter, a first-catch celebration is "a statement of the vitality and cultural importance of the hunting way of life."<sup>44</sup> Sheila Watt-Cloutier, a representative for the Inuit people, stated:

It is on the land that our values and age-old knowledge are passed down from generation to generation. . . . The wisdom of the land and process of the hunt teaches young Inuit to be patient, courageous, tenacious, bold under pressure, reflective to withstand stress, to focus and carry out a plan to achieve a goal. . . . Hunting and eating the animals we hunt are spiritual and cultural activities.<sup>45</sup>

Animal ceremonialism as shown in other mythologies and practiced in other festivals reveals the important bonds between indigenous culture and hunting and fishing.<sup>46</sup>

By restricting indigenous people's ability to hunt and fish, the formation of EEZs may threaten indigenous livelihood and culture. Two examples illustrate how EEZs may hurt Arctic natives. Indigenous Saami reindeer herders have traditionally crossed national borders as they follow reindeer herds between winter and summer seasons.<sup>47</sup> Over the last 100 years, political actions have restricted the Saami's ability to follow the reindeer across national boundaries.<sup>48</sup> These restrictions have

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natives hunting and fishing together).

39. Nuttall, *supra* note 25, at 654.

40. *Id.*

41. *Id.* at 655.

42. *Id.*

43. *Id.*

44. *Id.*

45. Sheila Watt-Cloutier, Chair, Inuit Circumpolar Conf., Remarks at The World Bank Environmentally and Socially Sustainable Development Week (Mar. 20, 2005), available at <http://www.inuitcircumpolar.com/index.php?ID=290&Lang=En>.

46. Nuttall, *supra* note 25, at 655.

47. *Id.* at 664.

48. *Id.*

threatened natives' livelihood. Similar restrictions have impacted indigenous livelihood in Greenland.<sup>49</sup> The management regimes and government regulations in Greenland conflict with local customary practices and knowledge.<sup>50</sup> Wild resources traditionally subject to common use rights are becoming privately owned.<sup>51</sup> Such privatization deprives natives of needed resources.<sup>52</sup>

Like the Saami and natives in Greenland, political actions that restrict ancient subsistence practices will hurt Arctic tribes culturally and economically. Granted, the EEZs will not cut all Arctic natives off from their hunting and fishing grounds. However, the impact could be felt broadly because of the interdependence between indigenous economies. If maritime zones deny indigenous peoples access to their hunting and fishing grounds, these economic practices and rich social traditions will no longer occur. Therefore, maritime zones threaten indigenous social and cultural rights.

### *C. Impact of Global Climate Change*

Global climate change may exacerbate EEZs' impact on Arctic natives. By melting ice that indigenous hunting grounds rest on, global climate change may move indigenous hunting and fishing grounds into foreign EEZs. If the receding ice shifts indigenous hunting grounds into a foreign maritime zone, the indigenous people may be barred from hunting and fishing by the laws of the state controlling the EEZ.

Ice in the Arctic is quickly receding. With warming temperatures, the area that sea ice covers has decreased by approximately eight percent in the past thirty years.<sup>53</sup> This decrease represents an area larger than the countries of Norway, Sweden, and Denmark combined.<sup>54</sup> Furthermore, during the summer, sea ice has been reduced by fifteen to twenty percent.<sup>55</sup> Some models project a complete lack of polar ice during the summer months by 2100.<sup>56</sup>

Many of the animals that the Eskimo hunt and fish depend on the ice to survive. Ringed seals depend heavily on the sea ice for breeding,

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49. *Id.*

50. *Id.* at 665.

51. *Id.*

52. *Id.*

53. SUSAN JOY HASSOL, IMPACTS OF A WARMING ARCTIC: ARCTIC CLIMATE IMPACT ASSESSMENT 25 (2004), available at <http://amap.no/acia/>.

54. *Id.*

55. *Id.*

56. *Id.* at 30.

resting, and feeding.<sup>57</sup> The seals will move with the receding ice. Polar cod, which consume crustaceans adapted to life at the edge of the sea ice, will also shift with the ice and diminish in number as the sea ice diminishes.<sup>58</sup> The reduction in cod will impact other predators that depend on it for food, such as polar bears and seals.<sup>59</sup> Whales also depend on sea-ice organisms for feeding and for breeding.<sup>60</sup> As the ice recedes, animals that the natives depend upon will shift in range and decrease in abundance.<sup>61</sup>

The reduced ice will force indigenous hunting and fishing grounds to shift to where the animals are present or to change their cultural hunting practices. Sea ice “brings the sea animals from the north” into the natives’ territory.<sup>62</sup> For natives, the ice becomes an extension of their land.<sup>63</sup> The reduced sea ice is “likely to disrupt or even destroy [natives’] hunting and food sharing culture” as “the animals on which they depend . . . decline, become less accessible, and possibly become extinct.”<sup>64</sup> To obtain sufficient food for sustenance, the indigenous people will have to travel greater distances<sup>65</sup> or make other adjustments in hunting practices.<sup>66</sup>

For example, the ice pack has significantly retreated from the coast of northern Alaska.<sup>67</sup> The retreat has caused indigenous people in the area to travel greater distances to obtain the mammals they depend upon.<sup>68</sup> To travel farther to reach the animal resources, the natives have had to incur additional fuel, maintenance, and safety costs for their boats, imposing greater economic hardship.<sup>69</sup> The farther the natives must travel to obtain animal resources, the more likely a conflict will arise between their hunting grounds and the EEZ.

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57. Oleg A. Anisimov, *Polar Regions (Arctic and Antarctic)*, in CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY: CONTRIBUTION OF WORKING GROUP II TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 668 (2007), available at [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg2/en/contents.html](http://www.ipcc.ch/publications_and_data/ar4/wg2/en/contents.html).

58. *Id.*

59. *Id.*

60. *Id.* at 669.

61. Nuttall, *supra* note 25, at 659, 660; Anisimov, *supra* note 57, at 668.

62. HASSOL, *supra* note 53, at 24 (quoting Caleb Pungowiyi).

63. *Id.*

64. *Id.* at 16.

65. See Nuttall, *supra* note 25, at 656, 662.

66. *Id.* at 660.

67. *Id.* at 656.

68. *Id.*

69. *Id.*

Native hunting grounds not immediately affected by an EEZ's formation may be affected in the future. Global climate change will cause the ice to recede and as result may exacerbate EEZs' impact on Arctic natives.

### III. HUMAN RIGHTS IMPLICATED BY EXCLUSIVE ECONOMIC ZONE DIVISIONS

The EEZs' effects on indigenous peoples implicate various human rights. These human rights may protect Arctic natives by influencing the EEZ regime. To influence EEZ regimes, indigenous people may need to bring actions in international forums. Historically, states alone possessed the capacity to bring international claims because they had "international personality." With time, non-state actors have begun to develop international personality. Indigenous peoples are among those non-state actors. This section explores the rights that EEZs implicate and examines indigenous personality at the international level.

#### *A. Current Indigenous Rights Recognized by International Law*

Historically, international law has not recognized individual or people's rights. States were considered sovereign and independent from other states.<sup>70</sup> As a result, international law left a state's internal affairs alone.<sup>71</sup> Today, states no longer enjoy absolute and exclusive sovereignty.<sup>72</sup> International institutions have begun addressing internal state matters of international concern.<sup>73</sup> However, these international organizations still need states' consent to create legal obligations.<sup>74</sup> More importantly, out of international respect for state sovereignty, only the state can implement its commitments.<sup>75</sup> Only in the most exceptional circumstances may the international community intervene.<sup>76</sup>

With time, the international community has begun recognizing human rights. Although human rights are important to the Arctic natives'

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70. S. JAMES ANAYA, *INDIGENOUS PEOPLE IN INTERNATIONAL LAW* 14 (1996).

71. *Id.*

72. ANNA MEIJKNECHT, *TOWARDS INTERNATIONAL PERSONALITY: The POSITION OF MINORITIES AND INDIGENOUS PEOPLES IN INTERNATIONAL LAW* 20 (2001).

73. *Id.*

74. *Id.*

75. *Id.*

76. *Id.*

plight, these rights are almost always conceived as individual rights, as opposed to group or community rights. Individual rights alone are insufficient because indigenous livelihood centers on the community and the surrounding environment. The Advisory Committee on Human Rights and Foreign Policy explains:

[T]here will be claims which, while they might warrant recognition in the form of attribution of rights, cannot be easily translated into individual rights. Examples might be the claims of indigenous peoples . . . to collective right to lands and fishing grounds, to natural resources and to some cultural rights. The fact that these rights cannot easily be accommodated in the framework of individual *rights* does not itself constitute grounds for ignoring such claims altogether.<sup>77</sup>

To date, states have agreed to some instruments that promote the protection of indigenous peoples.<sup>78</sup> Some of these instruments bind the states; others do not. Within these instruments, the Arctic natives' situation implicates economic, social, and cultural rights:<sup>79</sup> the right to the benefits of culture,<sup>80</sup> indigenous rights,<sup>81</sup> the right to means of subsistence,<sup>82</sup> the right to freely use land and natural resources,<sup>83</sup> and the

77. *Id.* at 154–55 (emphasis added).

78. *See, e.g.* Council Resolution (EC), Indigenous Peoples Within the Framework of the Development Cooperation of the Community and Member States, *available at* [http://ec.europa.eu/external\\_relations/human\\_rights/ip/docs/council\\_resolution1998\\_en.pdf](http://ec.europa.eu/external_relations/human_rights/ip/docs/council_resolution1998_en.pdf); International Labour Organization Convention No. 169 Concerning Indigenous and Tribal Peoples in Independent Countries, June 27, 1989, 28 I.L.M. 1382 [hereinafter International Labour Organization Convention], *available at* <http://www.ilo.org/ilolex/cgi-lex/convde.pl?C169>.

79. Organization of American States, Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, "Protocol of San Salvador" art. 11, Nov. 17, 1988, O.A.S.T.S. No. 69 (*entered into force* Nov. 16, 1999).

80. Universal Declaration of Human Rights art. 27, G.A. Res. 217A(III) at 71, U.N. GAOR, 3d Sess., 1st plen. mtg., U.N. Doc. A/810 (Dec. 12, 1948); American Declaration on the Rights and Duties of Man O.A.S. XXX, adopted by Ninth International Conference of American States (1948), *reprinted in* Basic Documents Pertaining to Human Rights in the Inter-American System, art. XIII, OAS/Ser./L./V/I.4 rev. 7 (Feb. 2, 2000); International Covenant on Economic, Social and Cultural Rights, G.A. Res. 2200A (XXI), Annex, art. 15 ¶¶ 1–2, U.N. GAOR, 21st Sess., Supp. No. 16, U.N. Doc. A/6316 (Dec. 16, 1966).

81. International Labour Organization Convention, *supra* note 78; Proposed American Declaration on the Rights of Indigenous Peoples, Inter-Am. C.H.R. OEA/Ser/L/V/II.95, doc.6 (draft approved Feb. 26, 1997); U.N. Comm. for Elimination of Racial Discrimination, *General Recommendation No 23: Indigenous Peoples*, United Nations Committee for the Elimination of Racial Discrimination, annex V, U.N. Doc. A/52/18 (Aug 18, 1997), *available at* <http://www1.umn.edu/humanrts/gencomm/genrexxiii.htm>.

82. International Covenant on Civil and Political Rights, G.A. Res. 2200A (XXI),

right to life.<sup>84</sup>

In addition to these right-bearing instruments, international organizations have made declarations supporting indigenous rights. In 1996, a UN commission specifically mentioned “rights to a healthy environment and to sustainable development.”<sup>85</sup> The Human Rights Committee (“HRC”) has indicated that traditional indigenous resources should only be used in ways compatible with the group’s culture.<sup>86</sup> The HRC has also been sympathetic to violations of human rights that impact large numbers of people.<sup>87</sup> Furthermore, the UN’s Rio Declaration says “[h]uman beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.”<sup>88</sup> These developments demonstrate a practice of international actors recognizing indigenous people’s rights.

### *B. International Personality*

To enforce the rights just examined, indigenous peoples need to possess international personality.<sup>89</sup> Natives need not have international personality in the broad sense, such as states, which possess international personality under all circumstances. Natives only need international legal personality in a limited sense, such that they can vindicate their rights under particular circumstances.

According to the International Court of Justice in *Reparations for Injuries Suffered in the Service of the United Nations*, international

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Annex, art. 1, ¶ 2, U.N. GAOR, 21st Sess., Supp. No. 16, U.N. Doc. A/6316 (Dec. 16, 1966).

83. *Id.* at art. 1, ¶¶ 1–2; Soc. Econ. Rights Action Ctr. v. Nigeria, Comm. No. 155/96, ¶¶ 55–56 (Afr. Comm’n on Human & Peoples’ Rts. 2001), *available at* [http://www.achpr.org/english/Decison\\_Communication/Nigeria/Comm.155-96.pdf](http://www.achpr.org/english/Decison_Communication/Nigeria/Comm.155-96.pdf).

84. Universal Declaration of Human Rights, *supra* note 80, at arts. 1, 3; American Declaration on the Rights and Duties of Man, *supra* note 80.

85. U.N. Econ. & Soc. Council, Comm’n on Human Rights, *Report of the Special Representative of the Secretary-General for Human Rights in Cambodia*, ¶¶ 24–33, UN Doc. E/CN.4/1996/93, (Feb. 26, 1996).

86. Caroline Dommen, *How Human Rights Norms Can Contribute to Environmental Protection: Some Practical Possibilities Within the United Nations System*, in *LINKING HUMAN RIGHTS AND THE ENVIRONMENT* 105, 111 (Romina Picolotti & Jorge Taillant eds., 2003).

87. *Id.*

88. U.N. Conference on Environment and Development, June 3–14, 1992, *Rio Declaration on Environment and Development*, ¶ 1, U.N. Doc. A/ CONF.151/26 (Vol. I) (Aug. 12, 1992), *available at* <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>.

personality exists where a state, organization, or person "is a subject of international law and capable of possessing international rights and duties, and . . . has capacity to maintain its rights by bringing international claims."<sup>90</sup> This definition contains three requirements to establish international personality: (1) being a subject of international law, (2) possessing legal capacity, and (3) having the capacity to bring international claims (*jus standi*).<sup>91</sup> An examination of each criterion will show that "[t]he process of implementing rights is far more difficult than proclaiming them."<sup>92</sup>

### *1. Subjects of International Law*

Indigenous people become a subject of international law when an international legal order attributes rights or obligations to them.<sup>93</sup> These rights or obligations are created when the legal order implements positive law.<sup>94</sup> Thus, looking at international treaties, conventions, agreements, and proclamations that attribute rights or obligations to indigenous peoples, not solely indigenous individuals, helps identify whether indigenous people are subjects of international law.<sup>95</sup>

In 1989, the International Labour Organization ("ILO") Convention No. 169 *Concerning Indigenous and Tribal Peoples in Independent Countries* was adopted.<sup>96</sup> The convention demonstrates "responsiveness to indigenous people's demands through international law . . . ."<sup>97</sup> For example, Article 28 provides "[c]hildren belonging to the peoples concerned shall . . . be taught to read and write in their own indigenous language or in the language most commonly used by the group to which they belong."<sup>98</sup> Other provisions within the Convention also refer to indigenous peoples as whole groups.<sup>99</sup> Thus, with ILO No. 169, indigenous peoples began to hold rights as a group instead of rights being attached only to individual members of a group.<sup>100</sup>

Recently the UN General Assembly adopted the *Declaration on the*

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90. Reparations for Injuries Suffered in the Service of the United Nations, Advisory Opinion, 1949 I.C.J. 179 (Apr. 11, 1949).

91. MEIJKNECHT, *supra* note 72, at 61.

92. *Id.* at 10.

93. *See id.* at 121.

94. *Id.*

95. *Id.*

96. *Id.* at 136.

97. ANAYA, *supra* note 70, at 48.

98. International Labour Organization Convention, *supra* note 78, at art. 28.

99. *See id.* at arts. 10, 11, 17.3, 16.5, 21, 22, 26, 28.1.

100. MEIJKNECHT, *supra* note 72, at 150.

*Rights of Indigenous Peoples* (“Declaration”).<sup>101</sup> Although the Declaration does not impose binding obligations, it may be a stepping stone to a convention on indigenous rights.<sup>102</sup> The language of the Declaration’s preamble is stronger than predecessor documents in recognizing indigenous rights: “[w]elcoming the fact that indigenous peoples are organizing themselves for political, economic, social and cultural enhancement and in order to bring to an end all forms of discrimination and oppression wherever they occur.”<sup>103</sup> By welcoming the organization of and accepting the formation of indigenous groups, the Declaration implicitly recognizes rights possessed by indigenous peoples.

Further, Articles 25 and 26 of the Declaration recognize fishing, natural resources, and cultural rights as the some of the rights of indigenous peoples. With the recognition of indigenous peoples, these articles make protecting rights easier at a group or ethnic level compared to proclamations that recognize only individual rights. Articles 25 and 26 state:

Article 25

*Indigenous peoples* have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard.

Article 26

1. *Indigenous peoples* have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired.

2. *Indigenous peoples* have the right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired.

3. States shall give legal recognition and protection to these lands, territories and resources. Such recognition shall be conducted with due respect to the customs, traditions and land tenure systems of the indigenous peoples concerned.<sup>104</sup>

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101. Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, U.N. Doc. A/61/L.67 (Sept. 12, 2007), available at <http://www.iwgia.org/sw248.asp>.

102. MEIJKNECHT, *supra* 72, at 153.

103. Declaration on the Rights of Indigenous Peoples, *supra* note 101, at pmbl.

104 *Id.* at arts. 25–26 (emphasis added).



The Declaration has begun the process of broadening individual indigenous rights to indigenous group rights. All but four members of the UN<sup>105</sup> affirmatively voted on this international document. The consensus among so many countries that adopted the Declaration indicates that international law has begun to recognize indigenous groups, not just individuals, as subjects of international law.

## 2. Legal Capacity

Even if indigenous peoples are subjects of international law, to have international personality they must meet a second requirement: legal capacity to bring international claims. In *Towards International Personality: The Position of Minorities and Indigenous Peoples in International Law*, Anna Meijknecht outlines criteria<sup>106</sup> for establishing

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105. *Declaration on the Rights of Indigenous Peoples*, INT'L WORK GROUP FOR INDIGENOUS AFFAIRS [IWGIA], <http://www.iwgia.org/sw248.asp> (last visited Oct. 30, 2010) (Canada, Australia, New Zealand, and the United States voted against the resolution).

106. "While there may be certain objective criteria, . . . the [International Court of Justice] did not articulate these clearly. To some extent, they must be inferred." CHITTHARANJAN FELIX AMERASINGHE, *PRINCIPLES OF THE INSTITUTIONAL LAW OF INTERNATIONAL ORGANIZATIONS* 82 (2005); see also Alexander Orakhelashvili, *The Position of the Individual in International Law*, 31 CAL. W. INT'L L.J. 241, 241 (2001). In *Reparations for Injuries Suffered in the Service of the United Nations*, 1949 I.C.J. 179 (Apr. 11, 1949), the International Court of Justice clearly requires legal capacity to establish international personality. However, the requirements to establish legal capacity are less clear. Various criteria have been alleged to establish the international personality of the individual:

1. the individual has rights and duties under international law;
2. the individual has standing before some judicial and quasi-judicial international institutions for protecting his rights;
3. the rules of international law can be directly applied to the conduct and legal relationships of the individual;
4. the individual, along with private transnational corporations, can participate in international law-making; and
5. under certain conditions, in cases of some breaches of international law, the individual can be held responsible and tried under international law, by international judicial bodies, irrespective of the national state's will and its domestic law.

The purpose of this article is not to reconcile the different assertions about what is required to establish international legal personality. Although accurately examining the development of indigenous international legal personality is important, this article places more emphasis on the international competencies indigenous people have developed and how these competencies can influence the Arctic states. Reconciling the many different opinions on what is or is not required to establish legal capacity would detract from this purpose. For these reasons, this article only uses one source's criteria in examining

legal capacity: (1) the will to exist, (2) the development of institutions that assist in maintaining characteristics unique to them as a minority, (3) the development of representation and the internal acceptance of that representation, and (4) the external recognition of the representative.<sup>107</sup>

a. The Four Criteria

Two objectives make up the first requirement, the “will to exist.” First, the indigenous people must have the will to preserve their culture.<sup>108</sup> Second, they must have the will to achieve equality with the majority in law and in fact.<sup>109</sup> Under the first objective, the will to protect indigenous culture includes defending their traditions, religion, or language.<sup>110</sup> “Culture” may also include economic activities such as fishing and hunting in so far as those activities pertain to the indigenous way of life and cultural tradition.<sup>111</sup> The second objective, obtaining equality in fact and in law, is more of a procedural goal.<sup>112</sup> The Permanent Court of International Justice (“PCIJ”) addressed equality in law and in fact in *Minority Schools in Albania*.<sup>113</sup> The PCIJ recognized that the term “equality” has a dual aspect.<sup>114</sup> Equality in law excludes discrimination of any kind; equality in fact may require different treatment to institute equilibrium among different situations.<sup>115</sup>

The second criterion involves developing institutions to maintain unique indigenous characteristics. The PCIJ stated, “institutions . . . are indispensable to enable the minority to enjoy the same treatment as the majority . . . .”<sup>116</sup> Institutions are important in transposing the will of individuals into the will of a group<sup>117</sup> and in leading to the group’s representation.

The development of representation and the internal acceptance of representation is the third step. Natives may be represented in various

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indigenous legal capacity.

107. MEIJKNECHT, *supra* note 72, at 117—19. I have omitted one of the criteria that he lists, “awareness by minorities and indigenous peoples of the importance of their interests” because it is analytically almost indistinguishable from the other criteria. *Id.*

108. *Id.* at 117.

109. *Id.*

110. *Id.* at 93.

111. *Id.* at 94 (citing *Ominayak and the Lubicon Lake Band v. Canada*, HRC Communication No. 167/1984).

112. *Id.* at 98.

113. *Minority Schools in Albania*, Advisory Opinion, 1935 P.C.I.J. (ser. A/B) No. 64.

114. *See id.* at 16–17.

115. *Id.*

116. *Id.*

117. *See* MEIJKNECHT *supra* note 72, at 104.

ways: by NGOs, by tribal leaders, or even by individual victims of oppression.<sup>118</sup> For the representation to be binding, it is generally true that the represented must consent to such representation.<sup>119</sup>

For the final step, external actors also must recognize the indigenous representative. Due to their unique history, natives already have their own structure and institutions that are different from their nation-state.<sup>120</sup> As a result, indigenous structures and institutions do not always coincide with the democratic ideals and standards demanded by international actors.<sup>121</sup> Thus, even though a representative may have internal recognition, it may not receive external recognition.

#### b. The Four Criteria Applied

##### i. Criterion One—Will to Preserve Culture; Equality in Law and in Fact

Indigenous people in general and in the Arctic have gone to great lengths to preserve their culture and achieve equality in law and in fact. One striking example is the natives' efforts on the *Declaration on the Rights of Indigenous Peoples* ("Declaration"). The Declaration addresses indigenous issues involving equality in law and in fact. The Declaration is an example of how natives have met this first criterion and demonstrates their will to achieve such a goal. Indeed, indigenous groups have been working with the United Nations on the Declaration since 1983.<sup>122</sup> The Declaration supports the protection of indigenous culture: traditions,<sup>123</sup> religion,<sup>124</sup> language,<sup>125</sup> and economic activity.<sup>126</sup> The

118. *See id.* at 109–10.

119. *Id.*

120. *Id.* at 110.

121. *Id.*

122. *See, e.g., The Declaration on the Rights of Indigenous People—a Brief History*, INT'L WORK GROUP FOR INDIGENOUS AFFAIRS, <http://www.iwgia.org/sw8516.asp> (last visited Oct. 27, 2010).

123. Declaration on the Rights of Indigenous Peoples, *supra* note 101, at pmb., arts. 9, 11, 15, 20 ("Indigenous peoples and individuals have the right to belong to an indigenous community or nation, in accordance with the traditions and customs of the community or nation concerned. No discrimination of any kind may arise from the exercise of such a right.").

124. *Id.* at art. 12 ("Indigenous peoples have the right to manifest, practice, develop and teach their spiritual and religious traditions, customs and ceremonies; the right to maintain, protect, and have access in privacy to their religious and cultural sites; the right to the use and control of their ceremonial objects; and the right to the repatriation of their human remain."); *see also id.* at pmb., art. 11.

125. *Id.* at art. 14.

("1. Indigenous peoples have the right to establish and control their educational systems and institutions providing education in their own

twenty-seven years natives have dedicated to the Declaration and the specific issues it addresses manifests the indigenous peoples' will to preserve their culture.

In addition to preserving indigenous culture, the Declaration specifically addresses equality in law and in fact. As discussed previously, equality in the law excludes discrimination of any kind.<sup>127</sup> In the preamble, the Declaration states that indigenous people, in exercising their rights, "should be free from discrimination of any kind."<sup>128</sup> The Declaration also addresses equality in fact by "[a]ffirming that indigenous peoples are equal to all other peoples, while recognizing the right of all peoples to be different, to consider themselves different, and to be respected as such."<sup>129</sup>

Remember, equality in fact may require different treatment to institute equilibrium among different situations.<sup>130</sup> Here, the Declaration recognizes the equality of indigenous peoples compared with other peoples while recognizing their right to be different. Therefore, the Declaration provides an example of indigenous people meeting the first criterion.

## ii. Criterion Two—Developing Institutions to Maintain Unique Indigenous Characteristics

Indigenous peoples have developed many different institutions to maintain their unique cultural characteristics. For example, they have established an organization within the United Nations called the UN Permanent Forum on Indigenous Issues ("UNPFII"). On July 28, 2000,

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languages, in a manner appropriate to their cultural methods of teaching and learning.

2. Indigenous individuals, particularly children, have the right to all levels and forms of education of the State without discrimination.

3. States shall, in conjunction with indigenous peoples, take effective measures, in order for indigenous individuals, particularly children, including those living outside their communities, to have access, when possible, to an education in their own culture and provided in their own language.").

126. *Id.* at art. 5 ("Indigenous peoples have the right to maintain and strengthen their distinct political, legal, economic, social and cultural institutions, while retaining their right to participate fully, if they so choose, in the political, economic, social and cultural life of the state."); *see also id.* at pmbl., arts. 20, 21.

127. *Minority Schools in Albania (Greece v. Alb.)*, Advisory Opinion, 1935 P.C.I.J. (ser. A/B) No. 64, at 19.

128. Declaration on the Rights of Indigenous Peoples, *supra* note 101, at pmbl.

129. *Id.*

130. *See id.* at 17.

the UN Economic and Social Council ("ECOSOC") Resolution 2000/22 established the UNPFII.<sup>131</sup> The UNPFII, as an advisory body to the ECOSOC, has the mandate to "discuss indigenous issues related to economic and social development, culture, the environment, education, health and human rights."<sup>132</sup>

Outside of the UN, indigenous groups have formed Non-Governmental Organizations ("NGOs"). Among the more influential NGOs is the *International Work Group for Indigenous Affairs* ("IWGIA"). Human rights activists and anthropologists founded the IWGIA in 1968. The IWGIA maintains contact with indigenous organizations in Africa, Latin America, Asia, Scandinavia, Russia, Greenland, Canada, the United States, Australia, and parts of the South Pacific.<sup>133</sup> The Arctic indigenous peoples have their own organization, called the Inuit Circumpolar Council ("ICC"). The ICC was founded in 1977 and represents the unique interests of approximately 150,000 Inuit in Alaska, Canada, Greenland, and Chukotka (Russia).<sup>134</sup> These organizations provide just a sample of the many organizations that indigenous people have created to maintain their unique identity in the world, thus satisfying the second criterion.

iii. Criterion Three—Development and Internal Acceptance of Representation

Circumstantial evidence seems to indicate that most indigenous peoples accept the organizations just discussed. For example, the UNPFII has allowed indigenous peoples to have a voice within the United Nations. This voice has led to additional privileges and protections for indigenous peoples. The IWGIA has existed since 1968 and represents a large number of indigenous peoples across the globe.<sup>135</sup> Given the IWGIA's longevity and its global reach, there is likely a high rate of internal acceptance.

Determining internal acceptance of the ICC is difficult to decipher. The ICC has over 150,000 Inuit members in its organization. Two tribes,

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131. *Structure Within the ECOSOC*, U.N. PERMANENT FORUM ON INDIGENOUS ISSUES [UNPFII], <http://www.un.org/esa/socdev/unpfii/en/structure.html> (last visited Jan. 16, 2011).

132. *About US/Mandate, Permanent Forum: Origin and Development*, UNPFII, [http://www.un.org/esa/socdev/unpfii/en/about\\_us.html](http://www.un.org/esa/socdev/unpfii/en/about_us.html) (last visited Jan. 16, 2011).

133. *IWGIA's Mission Statement*, IWGIA, <http://www.iwgia.org/sw17673.asp> (last visited Jan. 16, 2011).

134. *Inuit Circumpolar Council*, INUIT CIRCUMPOLAR COUNCIL [ICC], [http://inuitcircumpolar.com/index.php?ID=16&Lang=En&Parent\\_ID=16](http://inuitcircumpolar.com/index.php?ID=16&Lang=En&Parent_ID=16) (last visited Jan. 16, 2011).

135. *IWGIA's Mission Statement*, *supra* note 133.

the *Yupik* of Alaska and Siberia, do not consider themselves Inuit despite the ICC's assertion that they are members of their constituency.<sup>136</sup> However, the ICC is engaged in a cause that furthers the interests of most, if not all, indigenous peoples in the area. This Article assumes internal acceptance of the ICC.

#### iv. Criterion Four—External Recognition of the Representation

External recognition of indigenous organizations is much clearer than internal indigenous acceptance. The UNPFII is a Permanent Forum within the UN. As a member of the UN, external acceptance at the international level is very likely. The IWGIA played a role in the formation of the UNPFII and a facilitating role in the Declaration.<sup>137</sup> This type of assistance in UN processes demonstrates the international acceptance of the IWGIA.

Moreover, the ICC's special consultative status at the UN suggests international acceptance.<sup>138</sup> Beyond special consultative status, two other principal classifications exist for NGOs: general and roster.<sup>139</sup> General is the highest status and roster the lowest. General status allows the participant to make oral presentations at UN meetings<sup>140</sup> and to propose agenda items.<sup>141</sup> Special consultative status allows the ICC many of the same privileges as general consultative status, including the right to receive meeting agendas,<sup>142</sup> attend meetings,<sup>143</sup> and make written statements.<sup>144</sup> The various influences and contacts that the ICC and the IWGIA have with the UN show the external acceptance of these organizations as international actors. With external acceptance of the IWGIA and ICC, all four criteria for international legal capacity appear to have been met.

### 3. *Capacity to Bring International Claims (Jus Standi)*

Although Arctic natives are subjects of international law and

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136. Lawrence Kaplan, *Inuit or Eskimo: Which Names to Use?*, Alaska Native Language Center, available at <http://www.uaf.edu/anlc/resources/>.

137. *IWGIA's Activities*, IWGIA, <http://www.iwgia.org/sw17653.asp> (last visited Jan. 16, 2011).

138. *Intuit Circumpolar Council*, *supra* note 134.

139. G.A. Res. 1996/31, ¶¶ 21–26, U.N. Doc. E/RES/1996 (July 25, 1996).

140. *Id.* ¶¶ 32, 38.

141. *Id.* ¶¶ 32, 34.

142. *Id.* ¶¶ 27, 33.

143. *Id.* ¶¶ 35, 42.

144. *Id.* ¶¶ 30, 36.

possess legal capacity, they still may not be able to vindicate their rights. To exercise their rights, indigenous people must have *jus standi*. Under a broad interpretation, *jus standi* includes semi-judicial or political means to file a claim or at the very least "to be heard at the international level."<sup>145</sup> In its strictest sense, *jus standi* is limited to states bringing claims before bodies such as the International Court of Justice or the European Court of Human Rights.<sup>146</sup>

Other institutions that can hear grievances are the Inter-American Court on Human Rights,<sup>147</sup> the 1503 Procedure,<sup>148</sup> the UN Permanent Forum, and the Human Rights Committee ("HRC").<sup>149</sup> The HRC only takes individual complaints.<sup>150</sup> As discussed previously, if the EEZ regime deprives indigenous peoples of traditional hunting and fishing areas, such deprivation is unlikely to create individual claims. Thus, the HRC is not a viable forum. The other organizations perform semi-judicial or political functions with their hearings.<sup>151</sup> The potential for indigenous people to bring a claim in each of these organizations is examined subsequently.

a. Inter-American Commission on Human Rights

The Inter-American Commission on Human Rights ("Commission") is a forum where claims may be brought against countries in North and South America, two of which are Arctic states: the United States and Canada. Two bodies—the Commission and the Inter-American Court of Human Rights ("Court")—make up the Inter-American Human Rights regime.<sup>152</sup> The Commission receives and examines petitions claiming violations of protected human rights.<sup>153</sup>

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145. MEIJKNECHT *supra* note 72, at 211.

146. *Id.*; Council of Europe, Convention for the Protection of Human Rights and Fundamental Freedoms, Sept. 3, 1953, CETS No.: 005, *available at* <http://conventions.coe.int/Treaty/Commun/ChercheSig.asp?NT=005&CM=&DF=&CL=ENG> (lists the signatories).

147. MEIJKNECHT *supra* note 72, at 195.

148. *Id.* at 199.

149. *Id.* at 205–06.

150. *Id.* at 211.

151. *Id.*

152. American Convention on Human Rights art. 33, Nov. 22, 1969, 1144 U.N.T.S. 123 (*entered into force* July 18, 1978), *available at* <http://www.cidh.oas.org/Basicos/English/Basic.TOC.htm>.

153. Statute of the Inter-American Commission on Human Rights, art. 19, Inter-Am. C.H.R., 9th Sess., G.A. Res. 447, OAS/Ser.L/V.12 rev. 8, 2 U.S.T. 2394, 119 U.N.T.S. 3 (*entered into force* Dec. 13, 1951), *available at* <http://www.cidh.oas.org/Basicos/English/Basic.TOC.htm>.

From these petitions, the Commission investigates and monitors the actions of any of the thirty-five member states of the Organization of American States (“OAS”). If any of the states engage in human rights abuses, the Commission recommends remedial action.<sup>154</sup> Decisions made by the Commission are not binding on any state.<sup>155</sup>

The Commission has played a significant role in expanding indigenous protections. In 1983, the Commission found Nicaraguan Miskito natives in need of “special protection” to preserve their culture.<sup>156</sup> The Commission stated, “for historical reasons and because of moral and humanitarian principles, special protection for indigenous populations constitutes a sacred commitment of the states.”<sup>157</sup> The Commission argued for increased indigenous protections in a 1997 report on human rights in Ecuador.<sup>158</sup> The report explained that special protections needed to be extended to indigenous people for them to exercise their rights under inter-American law and international law.<sup>159</sup> For example, the report stated that natives should have the right to maintain their traditional lands and to control part of their traditional hunting grounds.<sup>160</sup> These special protections would ensure indigenous rights to cultural and physical survival.<sup>161</sup> The Commission has made great efforts to expand the human rights and protections of indigenous peoples.

All complaints initiated under the Inter-American Human Rights regime must first pass through the Commission before going to the Court.<sup>162</sup> Remedies considered by the Court can include a temporary

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154. *Id.* at art. 18.

155. See *Ratifications of the Convention*, AM. CONVENTION ON HUMAN RIGHTS, <http://www.cidh.oas.org/Basicos/English/Basic4.Amer.Conv.Ratif.htm> (last visited Jan. 18, 2011).

156. Part II: The Rights of Which the Government of Nicaragua is Alleged to Have Violated, Inter-Am. C.H.R., OEA/Ser.L./V.II.62 rev. 3 (Nov. 29, 1983), *available at* <http://www.cidh.org/countryrep/miskitoeng/part2.htm>.

157. The Human Rights Situation of the Indigenous Peoples in the Americas, Inter-Am. C.H.R., OEA/Ser.L./V.II.108, doc. 62, at ch. I (Oct. 20, 2000), *available at* <http://www.cidh.oas.org/indigenas/chap.1.htm>.

158. Report on the Situation of Human Rights in Ecuador, Inter-Am. C.H.R., OEA/Ser.L./V.II.96, doc. 10 rev. 1, at ch. IX (April 24, 1977), *available at* <http://www.cidh.org/countryrep/ecuador-eng/chaper-9.htm>.

159. *Id.*

160. *Id.*

161. *Id.*

162. Rules of Procedure of the Inter-American Commission on Human Rights, Inter-Am. C.H.R., 109th Sess., OAS Special Res., at art. 44, (Dec. 4–8, 2000, amended Oct. 7, 2002 and Oct. 7, 2003), *available at* <http://www.cidh.oas.org/Basicos/English/Basic18.RulesOfProcedureIACHR.htm>.



injunction, compensatory damages, and reasonable attorney fees.<sup>163</sup> However, like the Commission, the Court's decisions are not binding on the United States or Canada and are only of persuasive value.<sup>164</sup>

Cases decided by the Court demonstrate that it might be sympathetic to the Arctic natives' plight. In a case between Belize and local Mayans, the Court recognized that the "use and enjoyment of the land and its resources are integral components of the physical and cultural survival of the indigenous communities and the effective realization of their rights more broadly."<sup>165</sup> In another case, the Court ordered Paraguay to demarcate the traditional indigenous lands of the Yakyé Axa.<sup>166</sup> Paraguay had forced the Yakyé Axa to relocate from their traditional lands to land alongside a roadway.<sup>167</sup> Several members of the indigenous community died from the dire circumstances, such as lack of potable water and proximity to the road.<sup>168</sup> Surprisingly, the Court's decision emphasized factors other than the dire circumstances: "indigenous community culture . . . derives from the relationship with traditional territories and the resources located therein, not only because these provide a means of subsistence, but because they are integral elements of their cosmovision, religion and their cultural identity."<sup>169</sup>

In 2001, the Court extended protections to the Awas Tingni against the Nicaraguan government.<sup>170</sup> The Court ordered Nicaragua to

163. See Jennifer A. Amriott, *Environment, Equality and Indigenous Peoples Land Rights in the Inter-American Human Rights System: Mayagna (Sumo) Indigenous Community of Awas Tingni v. Nicaragua*, 32 ENVTL. L. 873, 889 (2002).

164. See Randall S. Abate, *Climate Change, The United States, and the Impacts of Arctic Melting: A Case Study in the Need for Enforceable International Environmental Human Rights*, 43A STAN. J. INT'L L. 3, 39 (June 2007); see also *Signatories and Ratifications, American Convention on Human Rights*, ORG. OF AM. STATES, <http://www.oas.org/juridico/english/sigs/b-32.html>.

165. *Maya Indigenous Communities v. Belize*, Case 12.053, Inter-Am. C.H.R., Report No. 40/04, OEA/Ser.L/V/II.122, doc. 5 rev. 1 ¶ 114 (2004).

166. Fabiola Carrion, *Updates From the Regional Human Rights Systems*, 13 No.1 HUM. RTS. BRIEF 25, 27–28 (2005), available at [http://www.wcl.american.edu/hrbrief/13/humanrights\\_systems.pdf?rd=1](http://www.wcl.american.edu/hrbrief/13/humanrights_systems.pdf?rd=1).

167. *Yakyé Axa Indigenous Community of the Enxet-Lengua People v. Paraguay*, Admissibility Petition 12.313, Inter-Am. C.H.R., Report No. 2/02, ¶¶ 19, 20 (2002), available at <http://www.cidh.org/annualrep/2002eng/Paraguay.12313.htm>.

168. *Id.* ¶ 22.

169. F. Michael Willis & Timothy Seward, *Protecting and Preserving Indigenous Communities in the Americas*, 33 No. 2 HUM. RTS. MAG. 18, 19 (2006) (quoting *Yakyé Axa Indigenous Community v. Paraguay*, Inter-Am. Ct. H.R. (ser. C) No. 125, ¶ 135 (2005)), available at <http://www.abanet.org/irr/hr/spring06/willis.html>.

170. Abate, *supra* note 164, at 42–43; *Mayagna Awas Tingni Community v. Nicaragua*, Inter-Am. C.H.R. (ser. C) No. 79, ¶¶ 2, 27, 156 (2001), available at <http://www1.umn.edu/humanrts/iachr/AwasTingnicase.html>.

demarcate and recognize the traditional territories of the Awas Tingni people.<sup>171</sup> Nicaragua was enjoined from adversely impacting the use, enjoyment, or value of the indigenous peoples' territories until proper demarcation had occurred.<sup>172</sup> The case law demonstrates that the Court might be sympathetic to the Arctic natives' plight.

However, any claim the indigenous people bring will not have legal effect because neither Canada nor the United States has ratified the American Convention on Human Rights.<sup>173</sup> Yet, the Commission's decisions and the Court's rulings may still influence Canada and the United States. These two states will likely be involved in many of the Arctic maritime disputes. If the indigenous people continuously bring actions against the United States and Canada, they may build political support for their cause through "name and shame" tactics. The political pressure may cause the United States and Canada to adjust maritime regimes for indigenous needs.

#### b. The UN Permanent Forum

The UN Permanent Forum ("Forum") is another venue where indigenous people may voice their opinion about EEZs. The Forum has the mandate to discuss indigenous issues (economic development, human rights, culture, the environment, etc.) and advise the ECOSOC on those matters.<sup>174</sup> Sixteen members compose the Forum.<sup>175</sup> Eight members are nominated by governments and elected by the Council.<sup>176</sup> The ECOSOC President appoints the other eight members after consulting with indigenous organizations.<sup>177</sup> The Forum functions as a cooperation mechanism because it does not have dispute settlement or monitoring and compliance powers.<sup>178</sup>

The Forum is an excellent place for indigenous peoples to voice their concerns about the formation of EEZs. "Full, free, and active participation of indigenous peoples in the Forum is fundamental."<sup>179</sup> However, with half of the members on the Forum being states, the full force of indigenous complaints may not reach through the hierarchical

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171. *Mayagna Awas Tingni Community v. Nicaragua*, *supra* note 170, ¶153.

172. *Id.*

173. *Abate*, *supra* note 164, at 36–37.

174. *About us/Mandate*, UNPFII, [http://www.un.org/esa/socdev/unpfii/en/about\\_us.html](http://www.un.org/esa/socdev/unpfii/en/about_us.html) (last visited Nov. 28, 2010).

175. MEIJKNECHT, *supra* 72, at 209; *Structure Within ECOSOC*, UNPFII, <http://www.un.org/esa/socdev/unpfii/en/structure.html> (last visited Nov. 1, 2010).

176. MEIJKNECHT, *supra* 72, at 209; *Structure Within ECOSOC*, *supra* note 175.

177. MEIJKNECHT, *supra* 72, at 209

178. *Id.* at 207.

179. *Id.* at 208.

structure of the UN. In addition, without dispute settlement, compliance, or monitoring powers, the Forum may only serve as a tool for exerting political pressure on Arctic states. Thus, the indigenous people have a forum to voice their opinions but without the likelihood that it will lead to corrective action.

c. The 1503 Procedure

The 1503 Procedure is another method for Arctic natives to voice their grievances. Under the 1503 Procedure, a body called the Working Group determines whether to refer grievances brought before it to the Council on Human Rights ("CHR").<sup>180</sup> The Working Group will refer a matter to the CHR only where there are gross and consistent patterns of human right violations.<sup>181</sup> Furthermore, domestic remedies must be exhausted and must not overlap with other existing procedures before 1503 communications are considered.<sup>182</sup> Once the Working Group refers the grievance, the CHR may keep the situation under review, appoint a representative to collect more information, or discontinue the case.<sup>183</sup>

The 1503 Procedure is confidential<sup>184</sup> and available to all individuals, NGOs, and groups, regardless of treaty ratifications.<sup>185</sup> Common standards for all states and the provisions of the Universal Declaration of Human Rights are referenced to establish the rights and freedoms under consideration.<sup>186</sup> Because the 1503 Procedure is confidential, some states have used it to avoid a public process.<sup>187</sup> Only a decision from the CHR will make the information public.<sup>188</sup>

For Arctic natives, the 1503 Procedure is a last resort. Persuasively arguing that the establishment of an EEZ violates human rights in a gross and consistent manner would be difficult, unless the Working Group and CHR were to consider each denial of access to indigenous hunting or fishing grounds a gross and consistent violation of human rights. Another problem for natives is the 1503 Procedure's confidentiality. Secrecy does

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180. Hum. Rights Council Res. 5/1, Annex ¶ 103 (Mar. 15, 2006), *available at* [ap.ohchr.org/documents/E/HRC/resolutions/A\\_HRC\\_RES\\_5\\_1.doc](http://ap.ohchr.org/documents/E/HRC/resolutions/A_HRC_RES_5_1.doc).

181. *Id.* ¶ 85.

182. *Id.* ¶ 87.

183. *Id.* ¶ 109; MEIJKNECHT, *supra* note 72, at 200.

184. Hum. Rights Council Res. 5/1, *supra* note 180, at Annex ¶ 100.

185. MEIJKNECHT, *supra* note 72, at 199. Although this source predates revisions done on the 1503 Procedure, many of the previous procedures remain the same. They "served as a working basis" for the revised 1503 Procedure. U.N. Human Rights Council, *Human Rights Council Complaint Procedure*, *available at* <http://www2.ohchr.org/english/bodies/chr/complaints.htm>.

186. MEIJKNECHT, *supra* note 72, at 199–200.

187. *Id.* at 199, n.80.

188. Hum. Rights Council Res. 5/1, *supra* note 180, at Annex ¶ 104.

not allow the indigenous people to exert as much political pressure on the Arctic states through “name and shame” tactics, such as exposing the state’s actions to the media. As a result, the likelihood of the Arctic states ever being engaged in a 1503 Procedure, let alone accommodating indigenous needs due to political pressure resulting from a 1503 Procedure, is low.

### *C. Summary*

Arctic natives may bring actions in one of the aforementioned forums. However, each forum has limitations. Decisions from the Commission do not bind Canada or the United States—two countries whose decisions will have major impacts on indigenous peoples. The Forum only allows indigenous people to voice their opinion, and like the Commission, matters addressed in the Forum are not binding on its participants.

Although the Commission and the Forum cannot bind Arctic states, they serve important roles. These two entities can bring to light important concerns that may pressure or persuade countries to change their methods. As a confidential procedure, the 1503 Procedure does not typically create this kind of political pressure. Also, given the 1503 Procedure’s requirements of gross and consistent patterns of human rights violations, the Arctic indigenous people likely will not be able to use it as tool when maritime borders are delineated. Thus, although informal methods exist for indigenous people to raise their concerns, they are unlikely to remedy the problems that Arctic natives face.

Instead, these forums may serve as political tools to pressure states into taking action to protect indigenous hunting and fishing areas. Pressure comes from giving indigenous people the opportunity to communicate their concerns. This communication may bring additional support to the indigenous people through the news media, NGOs, or other organizations. However, coercing states into action may not be necessary. If indigenous interests align with states’ interests, Arctic states may use indigenous interests to further their own political agenda in delineating maritime borders. Ultimately, the Arctic states will control how indigenous concerns influence maritime borders.

## IV. THREE WAYS TO ACCOMMODATE INDIGENOUS INTERESTS IN THE ARCTIC

Arctic states may use three different approaches to accommodate traditional indigenous hunting and fishing grounds when forming maritime regimes. One approach, in *Barbados/Trinidad and Tobago*,

requires the parties to resolve the dispute through good faith negotiations.<sup>189</sup> Another alternative adjusts maritime borders to accommodate economic concerns and fishing rights.<sup>190</sup> The case *Maritime Delimitation in the Area Between Greenland and Jan Mayen* clearly illustrates this principle.<sup>191</sup> The final option discussed, in the *Yemen-Eritrea Arbitration*, gives non-exclusive access to people engaged in traditional fishing.<sup>192</sup> All three of these options are viable solutions to potential conflicts between maritime regimes and Arctic natives.

### *A. Negotiating in Good Faith—Barbados/Trinidad and Tobago Arbitration*

Under this first approach, accommodating indigenous hunting and fishing grounds is left to good faith negotiations between Arctic states. The Permanent Court of Arbitration Tribunal in the *Barbados/Trinidad and Tobago Arbitration* used negotiations to settle a maritime dispute over fishing rights between two Caribbean countries: Barbados and Trinidad and Tobago.

#### *1. An Explanation of the Barbados/Trinidad and Tobago Arbitration*

In the *Barbados/Trinidad and Tobago Arbitration*, the two Caribbean states had overlapping claims to the continental shelf and to a 200-mile EEZ.<sup>193</sup> These conflicting claims revolved around Barbadian fisherfolk's continued access to fish stocks.<sup>194</sup> The Tribunal's jurisdiction to decide the question was challenged.<sup>195</sup> At first, the Tribunal upheld its jurisdiction to consider how Barbadian fishing should influence a prospective delimitation line.<sup>196</sup> However, the Tribunal later determined that the fisheries issue did not impact the dispute over the maritime

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189. *Barbados v. Republic of Trinidad and Tobago*, 45 I.L.M. 800, 806–07 (Perm. Ct. Arb. 2006).

190. The International Court of Justice first presented this principle in dicta. The court explained that a “legitimate scruple” for adjusting the maritime border would lie in a maritime border that caused catastrophic repercussions for the “livelihood and economic well-being of the population of the countries concerned.” *Gulf of Maine (Can. v. U.S.)*, 1984 I.C.J. 246, 342 (Oct. 12, 1984).

191. *Maritime Delimitation*, *supra* note 13.

192. *Eritrea-Yemen Arbitration*, *supra* note 14.

193. *Id.*

194. *Id.*

195. *Id.* at 812.

196. Barbara Kwiatkowska, *Barbados/Trinidad and Tobago*, 101 AM. J. INT'L. L. 149, 151 (Jan. 2007).

boundary.<sup>197</sup> Upon Trinidad and Tobago's objection,<sup>198</sup> the Tribunal decided it did not have jurisdiction to decide substantive issues regarding a fishing regime for waters in Trinidad and Tobago's EEZ.<sup>199</sup>

The Tribunal took notice that Barbados's dependence on flying fish had kept fisheries as a focal point of the proceedings.<sup>200</sup> As a result, the Tribunal unanimously ruled that both parties had a duty to negotiate in good faith, to agree upon methods of conservation and management of the fish stocks, and to conclude a new fisheries agreement.<sup>201</sup>

## *2. Negotiating in Good Faith Applied to the Arctic*

Similar to the *Barbados/Trinidad and Tobago Arbitration*, Arctic states may determine maritime boundaries through good faith negotiations. Negotiating in good faith is more likely when, as in the arbitration, the claims under dispute do not fall under a treaty that places the disagreement before a tribunal. Because melting ice has exposed maritime waters that likely were not the subject of prior treaties, preexisting agreements may not govern many of the Arctic disputes that occur over maritime borders. As a result, Arctic states may find negotiation an attractive approach.

The ability of indigenous people to influence Arctic-state negotiations depends on how well natives' interests align with states' interests and whether indigenous peoples can exert political pressure on the states. This political pressure may come domestically. However, if natives effectively use the international institutions previously discussed, they also may bring international pressure on the states. This external pressure may come in many different forms, such as NGOs or the media "naming and shaming" the state. If enough political will exists behind the indigenous cause, they may influence decision-makers or hold them politically accountable.

Good faith negotiations could have positive as well as adverse effects on Arctic indigenous people. On the positive side, the natives' country may be more familiar with indigenous needs than a tribunal. The country may account for pre-existing programs and other forms of support when negotiating the maritime border. If an unfavorable EEZ is negotiated, the country may take ownership in the result and compensate indigenous peoples for the deficiencies.

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197. Barbados, *supra* note 189, at 836.

198. Trinidad and Tobago objected, using Article 297(3).

199. Barbados, *supra* note 189, at 836.

200. *Id.* at 845.

201. *Id.* at 860.

Negative results also may occur from negotiation. Alignment of the maritime border may allow other interests (such as oil) to compete with indigenous interests. As a minority, indigenous people may not be able to compete with these other interests. Other problems may include conflicts between indigenous interests. For example, a country may have indigenous constituents with compelling reasons for a maritime delimitation that harms another country's indigenous interests. Harm could also come from a country with strong bargaining power that negotiates a maritime zone irrespective of indigenous interests. In fact, the natives' country may not share or even want to protect the natives' interests. These examples are just a few ways negotiation may frustrate indigenous interests.

*B. Adjust the Maritime Borders—In the Area Between  
Greenland and Jan Mayen*

Adjusting maritime borders may also account for indigenous interests. In a dispute between Denmark and Norway, the International Court of Justice ("ICJ") adjusted a prospective maritime border to accommodate indigenous interests.

*1. An Explanation of the Maritime Delimitation in  
the Area Between Greenland and Jan Mayen*

The dispute between Greenland and Jan Mayen demonstrates how a tribunal might adjust prospective maritime borders when considering the livelihood and economic concerns of local populations. At the time of the dispute, Greenland belonged to the Kingdom of Denmark<sup>202</sup> and Jan Mayen belonged to the Kingdom of Norway.<sup>203</sup> The island of Jan Mayen lies some 250 nautical miles east of Greenland.<sup>204</sup> Jan Mayen had no permanent population; only twenty-five people lived on the island.<sup>205</sup> However, in the waters surrounding Jan Mayen, Norwegians engaged in whaling, sealing, and fishing.<sup>206</sup>

Greenland had a population of 55,000. The fishery sector employed about one-quarter of Greenland's labor force and constituted approximately eighty percent of Greenland's export earnings.<sup>207</sup> For

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202. Maritime Delimitation, *supra* note 13, at 41.

203. *Id.*

204. *Id.* at 44.

205. *Id.* at 46.

206. *Id.*

207. *Id.*

Greenland, the area under dispute was an important fishing ground for summer capelin, which was the only fish commercially exploited in the vicinity.<sup>208</sup>

In 1976, the Danish Parliament passed legislation allowing the Prime Minister to extend Danish fishery zones by 200 miles. That same year, Norway passed similar legislation that allowed the “Norwegian Government to establish 200-mile ‘economic zones.’”<sup>209</sup> Four years later Norway established a 200-mile EEZ around Jan Mayen. Norway limited the 200-mile EEZ to the median line between Greenland and Jan Mayen.<sup>210</sup> Due to Greenland and Jan Mayen’s proximity, these actions created overlapping claims. Denmark claimed that “Greenland is entitled to a full 200-mile fishery zone and continental shelf area vis-à-vis the island of Jan Mayen.”<sup>211</sup> Norway claimed that the “median line constitutes the boundary for the purpose of delimitation . . . .”<sup>212</sup> Denmark brought an action against Norway for violating its EEZ on August 16, 1988.<sup>213</sup>

With the support of customary law and precedent, the ICJ began with “the median line as a provisional line” and then shifted the line for special circumstances that it determined relevant to the dispute.<sup>214</sup> The ICJ considered numerous factors in deciding whether to adjust the line: coast length, access to the sea’s resources, presence of ice, population disparity, ability to protect the state’s interest, and the parties’ conduct.<sup>215</sup> In the end, the ICJ only adjusted the median line based on the disparity between the length of Greenland’s and Jan Mayen’s coastline and for access to the sea’s resources.<sup>216</sup>

The ICJ’s adjustment for access to sea resources is particularly relevant to this analysis. Both parties emphasized their dependence on fishing in the disputed area.<sup>217</sup> Norway indicated that it had used the disputed waters for fishing, whaling, and sealing over a long period of time.<sup>218</sup> Eight percent of Norway’s catches came from these waters and contributed to communities along the coast.<sup>219</sup> Greenland also benefited

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208. *Id.*

209. *Id.*

210. *Id.*

211. *Id.* at 42.

212. *Id.* at 43.

213. *Id.* at 41.

214. *Id.* at 61, 77.

215. *Id.* at 65, 70, 72–75.

216. *Id.* at 69, 72–74, 77.

217. *Id.* at 71.

218. *Id.*

219. *Id.*



economically. Over half of Denmark's fishing quotas for Greenland came from these waters<sup>220</sup> during the summer and fall when capelin traveled north from Icelandic waters.<sup>221</sup> Denmark further emphasized the Inuit dependence on the resources along the east coast of Greenland, "particularly where sealing and whaling are concerned."<sup>222</sup>

The ICJ recognized that it had to consider adjusting the median line for the vulnerable fishing communities concerned:

[T]he Court has to consider whether any shifting or adjustment of the median line, as fishery zone boundary, would be required to ensure equitable access to the capelin fishery resources for the vulnerable fishing communities concerned. ... [T]he median line is too far to the west for Denmark to be assured of an equitable access to the capelin stock, since it would attribute to Norway the whole of the area of overlapping claims. For this reason also the median line thus requires to be adjusted or shifted eastwards.<sup>223</sup>

The Court substantially adjusted the median line to ensure equitable access for fishing communities along Greenland's coast.<sup>224</sup> When considering the adjustment, the ICJ only mentioned the Inuit's needs among the many different communities along Greenland's east coast.<sup>225</sup> The underlying principle is clear: a judicial willingness exists to adjust maritime borders for adjudicative action that affects indigenous people.

## *2. Maritime Border Adjustment Applied to the Arctic*

Similar to the ICJ's adjustment for indigenous people, adjustments to maritime borders could be made for natives living in the Arctic. Adjusting maritime borders for indigenous needs will benefit states as well as Arctic natives.

Maritime zones allow countries to protect their economic interests. Clearly delineated maritime borders reduce the negative effects associated with resources held in common, such as over-harvesting. Indigenous people from another country, or any other foreign national, will be excluded from depleting resources in a foreign state's EEZ. This arrangement provides incentives for countries to protect and maintain natural resources contained in their EEZ.

However, due to the fluid nature of the ocean's resources, EEZs will

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220. *Id.*

221. *Id.* at 70.

222. *Id.* at 71.

223. *Id.* at 71–72.

224. *Id.* at 79.

225. *See id.* at 71.

not completely resolve problems associated with resources held in common. For example, fish stocks placed in one country's EEZ may eventually migrate to another country's EEZ. The positive effects of a country's efforts will extend beyond its maritime zone. These externalities increase the likelihood that states will form international agreements. These agreements will coordinate the prudent and efficient use of resources between different maritime zones.

Indigenous people may benefit from states' efforts to maintain natural resources in the Arctic. Indigenous people can continue to hunt and to practice rites based on hunting. If a foreign state breaks an international agreement by over-exploiting resources in its EEZ, the indigenous people will presumably enjoy the enforcement power of their nation-state or another nation-state. If the natives' nation-state brings a claim on their behalf, success is much more likely than natives' bringing their own claim. Overall, many benefits exist to adjusting maritime borders to accommodate indigenous hunting and fishing.

However, indigenous interests may still suffer. Indigenous interests may not perfectly align with the state's interests, and the state may enforce its treaties to the disadvantage of indigenous people. Indigenous interests may be hurt in other ways. For example, in *Greenland and Jan Mayen*, the ICJ began with the median line as the provisional line between Greenland and Jan Mayen. The provisional line was adjusted for the economic need of indigenous people. However, the median line was formed by factors independent of economic need, such as the coastline's geography, which forms the baselines, and the distance between the countries in question. By using these factors as the primary means in forming the provisional median line, subsequent adjustments to the provisional line may not fully compensate for factors used in forming the baseline that do not reflect the people's true economic need. In fact, the 200-mile framework used to define a country's EEZ may not reflect the true needs of its people.

Even assuming that maritime zone adjustments reflect the economic need of indigenous people, other factors that follow from a defined maritime border may still hurt indigenous people. As discussed previously, the formation of maritime zones will likely lead to international agreements. From these agreements, countries will impose quotas to internationally manage scarce resources. The formation of these quotas may not reflect the actual demand or need of indigenous people for resources. For example, quotas may be based largely on the state's bargaining power or any other factors that influence decisionmaking as the agreements are formed. Therefore, availability of valuable resources to indigenous peoples may be limited by factors other than their economic need, even if maritime borders are adjusted for their need.

Lastly, the effects of global climate change have caused a net recession in polar ice. When the *Greenland and Jan Mayen* case occurred, polar ice regressed and returned in predictable patterns.<sup>226</sup> These patterns could be accounted for when considering Greenland's access to the fish. If the recession of polar ice continues, natural resources could migrate outside of a maritime zone that was originally adjusted for indigenous benefit. Instead of benefiting the indigenous people, the maritime zone could subsequently bar them from needed resources removed by the receding ice.

In summary, many benefits exist to adjusting maritime borders to accommodate for the economic and social needs of indigenous people in the Arctic. Governments will better manage scarce resources. Efforts to protect Arctic resources may align government interests more closely with indigenous interests. However, the assertion that indigenous people will benefit from such an arrangement is not entirely clear. For example, a government overseeing a maritime zone may subject indigenous people to quotas that reduce their consumption of limited resources. Additionally, receding ice may completely remove indigenous hunting grounds from the EEZ. As a result, the maritime borders adjusted to accommodate indigenous interests may hurt more than help indigenous peoples. Careful planning may limit negative consequences. However, a potentially safer maritime method for indigenous interests exists.

### *C. Non-exclusive Access—Eritrea-Yemen Arbitration*

In this option, indigenous people have the right to continue accessing their hunting and fishing grounds despite the presence of maritime borders. In a sense, the indigenous people enjoy an easement through a foreign country's EEZ. The tribunal in the Eritrea-Yemen Arbitration awarded this type of access to Eritrean fisherfolk.

#### *1. An Explanation of the Eritrea-Yemen Arbitration*

The Eritrea-Yemen Arbitration illustrates how non-exclusive access works. Eritrea and Yemen face one another on opposite sides of the Red Sea. These two countries had a dispute over territory in the Red Sea. Both countries agreed to resolve the dispute by arbitration in the Permanent Court of Arbitration.<sup>227</sup> The arbitration proceeded in two stages. The first stage decided territorial sovereignty and defined the

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226. *See id.* at 72–73.

227. Eritrea/Yemen (Second Stage: Maritime Delimitation) (Eri. v. Yemen), 40 I.L.M. 983, 984 (Perm. Ct. Arb. 2001).

scope of the dispute between Eritrea and Yemen.<sup>228</sup> In the second stage, the tribunal delineated the maritime borders.<sup>229</sup> In the first stage, the arbitrators gave Yemen sovereignty over the Zuquar-Hanish Islands, the islands of Jabal al-Tayr, and the Zubayr group (“Mid-sea Islands”).<sup>230</sup>

Giving Yemen sovereignty over the Mid-sea Islands led to a significant dispute over maritime borders in stage two of the arbitration. To convince the arbiters to adopt its recommended maritime boundaries, Eritrea argued that its people had historically used the Mid-sea Islands for important economic purposes such as fishing, pearls, trading, extracting minerals and guano, drying fish, and drawing water.<sup>231</sup> The islands were also important to Eritrean people for religious and burial practices.<sup>232</sup> Eritrea wanted the Mid-sea Island area to be a shared or joint-resource zone governed by terms agreed to by both parties.<sup>233</sup>

Yemen countered that Eritrea’s proposed joint resource zones limited or made conditional the sovereignty awarded to Yemen in the first stage of the arbitration.<sup>234</sup> Yemen further argued that its people had long fished in the Mid-sea Islands.<sup>235</sup> Fishing, according to Yemen, constituted an important part of its national economy and the regional economy of Tihama.<sup>236</sup>

The arbitration tribunal found fishing to be important for both countries.<sup>237</sup> Evidence showed that both Eritrean and Yemeni fisherman “freely undertook” fishing and selling on the local market “regardless of their national political affiliation or place of habitual domicile.”<sup>238</sup> These social and economic conditions “reflected deeply-rooted and common social legal traditions that had prevailed for centuries among these populations.”<sup>239</sup> The tribunal found fish as an important resource and food source for both parties.<sup>240</sup> However, even with this finding, the tribunal concluded, “the fishing practices of the Parties . . . are not germane to the task of arriving at a line of delimitation.”<sup>241</sup>

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228. *Id.* at 985.

229. *Id.*

230. *Id.* at 1000.

231. *See id.* at 991.

232. *Id.* at 991.

233. *Id.* at 991–92.

234. *Id.* at 989.

235. *Id.* at 994.

236. *Id.* at 993.

237. *Id.*

238. *Id.* at 995.

239. *Id.*

240. *Id.* at 996.

241. *Id.* at 995.

Instead, the tribunal made the Mid-sea Islands free for the traditional fishing regimes of Eritrea and Yemen to access and to enjoy.<sup>242</sup> The tribunal charged Yemen, as the sovereign, with ensuring that artisan fisherman from both countries could continue their traditional fishing practices.<sup>243</sup>

However, the fishing regime did not comprise an entitlement to shared resources or a joint right in them.<sup>244</sup> The decision simply entitled Yemeni and Eritrean fisherman to participate in artisanal fishing around the Mid-sea Islands where Yemen had sovereignty.<sup>245</sup> As requested in Eritrea's complaint, the tribunal recognized diving for shells and pearls, as well as using the islands for drying fish, for way stations, for temporary shelter, and for repairs as part of the traditional fishing regime.<sup>246</sup> Indeed, the tribunal stated that the "traditional fishing regime covers those entitlements that all fishermen have exercised through the ages."<sup>247</sup>

Furthermore, the tribunal, anticipating future advancements of fishing, explained that "artisanal" should not be understood to apply to fishing as practiced contemporaneously;<sup>248</sup> artisanal does not preclude improvements in small boats, fishing techniques, and navigation techniques.<sup>249</sup> The traditional fishing regime does not extend to large-scale commercial fishing or to nationals of other states in the Red Sea.<sup>250</sup> The tribunal recognized that local traditions intertwined with the use of the area were "entitled to the respect and protection of the law."<sup>251</sup>

The "traditional regime" also gave additional rights. Those participating in the regime have free access through Yemen's sovereign waters to reach the ports where they have traditionally sold their goods.<sup>252</sup> Eritrea and Yemen could act on behalf of their nationals in exercising these rights.<sup>253</sup> Presumably, the decision also allows nationals to act on their own behalf: "[t]here is no reason to import . . . the western legal fiction . . . whereby all legal rights, even those in reality held by

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242. *Id.* at 1001.

243. *Id.* at 1002.

244. *Id.* at 1001.

245. *Id.*

246. *Id.*

247. *Id.*

248. *Id.* at 1002.

249. *Id.*

250. *Id.*

251. *Id.* at 1000.

252. *Id.* at 1002.

253. *Id.* at 1001.

individuals, were deemed to be those of the State.”<sup>254</sup>

## 2. *Non-exclusive Access Applied to the Arctic*

Similar to the *Eritrea-Yemen Arbitration*, Arctic indigenous people could be given the right to continue hunting and fishing across maritime borders. This type of regime will allow indigenous people to continue their traditional practices largely uninterrupted. However, allowing indigenous people continued access to their traditional hunting grounds may impose costs on the governments, which control the EEZs where indigenous hunting and fishing occurs.

Allowing indigenous people continued access to their traditional hunting grounds may create similar problems to other resources held in common, such as overexploitation. The magnitude of these problems has an upper bound limited by the number of indigenous people who continue hunting and fishing. If the number of indigenous people is sufficiently large, the government could adjust the number of private permits and quotas to compensate for the indigenous hunting and fishing. However, this type of action would disadvantage the people and organizations subject to the permits or quotas. Moreover, depending on the distribution of indigenous hunting and fishing in the Arctic, one government may carry a larger burden than the other Arctic states. The complications would only increase as resources become increasingly scarce from growing indigenous populations and climate change altering the ecosystem.

On the other hand, a non-exclusive access regime offers many benefits. The non-exclusive access regime may actually limit the problems associated with resources held in common. Only indigenous people who have traditionally participated and hunted in these areas will have access to marine life without permits. Assuming a small number of indigenous people hunt as compared to the resources, an overexploitation of the marine life should not occur. Another benefit is that indigenous concerns will not be pitted against the interests of other countries. In the formation of the maritime zone, a country may consider its oil, mineral, and other interests without having to balance them against indigenous interests. Lastly, the non-exclusive access method resolves concerns of an ice recession causing resources to leave the EEZ of the country where the natives reside.

In summary, non-exclusive access allows natives to continue their traditional hunting and fishing practices regardless of the maritime borders established. This type of access may lead to problems that occur

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254. *Id.*

with territories held in common, e.g. overexploitation. However, only indigenous people who have traditionally hunted and fished in the Arctic will have non-exclusive access. This restriction will limit the problems that commonly occur with territories held in common.

Moreover, many benefits exist to a non-exclusive regime. Indigenous interests from different countries will not be pitted against one another, and natives will be able to adjust their hunting and fishing practices with the receding ice. The flexibility of non-exclusive access to traditional hunting grounds and the many other benefits seem to outweigh the costs of holding territory in common for a limited number of people. A non-exclusive access regime would protect indigenous interests as EEZs are created.

## V. CONCLUSION

The Arctic states' establishment of EEZs may cut some natives off from natural resources. Removing these resources threatens indigenous livelihood and culture. With the interdependence of natives' economies, even tribes whose hunting and fishing grounds remain free of EEZs will feel economic and cultural effects. Receding ice from climate change and the resulting reduction in natural resources only complicates indigenous problems with the EEZs.

To secure their livelihood and culture, indigenous individuals or indigenous groups may be able to implement human rights protections. Among the rights implicated are economic, social, and cultural rights:<sup>255</sup> the right to the benefits of culture,<sup>256</sup> indigenous rights,<sup>257</sup> the right to means of subsistence,<sup>258</sup> the right to freely use land and natural resources,<sup>259</sup> and the right to life.<sup>260</sup> Although these rights exist in various

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255. See Organization of American States, Additional Protocol to the American Convention on Human Rights In the Area of Economic, Social and Cultural Rights, "Protocol of San Salvador," Nov. 17, 1988, O.A.S.T.S. No. 69 (*entered into force* Nov. 16, 1999).

256. Universal Declaration of Human Rights, *supra* note 80, at art. 27; American Declaration on the Rights and Duties of Man, *supra* note 80; International Covenant on Economic, Social and Cultural Rights, *supra* note 80, at Annex, art. 15 ¶¶ 1–2.

257. International Labour Organization Convention, *supra* note 78; Proposed American Declaration on the Rights of Indigenous Peoples, *supra* note 81; U.N. Comm. on the Elimination of Race Discrimination, General recommendation No. 23, art. 5 (Aug 18, 1997), *available at* [http://www.unhchr.ch/tbs/doc.nsf/\(Symbol\)/73984290dfea022b802565160056fe1c?Opendocument](http://www.unhchr.ch/tbs/doc.nsf/(Symbol)/73984290dfea022b802565160056fe1c?Opendocument).

258. International Covenant on Civil and Political Rights, *supra* note 82, at Annex, art. 1, ¶ 2.

259. *Id.* at Annex, art. 1 ¶¶ 1–2; Soc. Econ. Rights Action Ctr. v. Nigeria, *supra*

agreements and declarations, their enforcement remains uncertain. To enforce these rights, indigenous people must possess international personality in forums where they can bring actions.

Possessing international personality requires (1) being a subject of international law, (2) possessing legal capacity, and (3) having the capacity to bring international claims, *jus standi*.<sup>261</sup> Indigenous people appear to meet the first two requirements but not the third. Under the first requirement, indigenous people have been the subjects of various international legal instruments such as the convention *Concerning Indigenous and Tribal Peoples in Independent Countries* and the *Declaration on the Rights of Indigenous People*. Although it is not clear whether indigenous people possess legal capacity, their biggest obstacle is the third requirement. Under this final requirement, natives do not have *jus standi* in a forum where they can bring binding actions against the Arctic states. Rather, the forums available provide natives with a place to air their grievances. Arctic natives can use these venues to pressure states to protect their interests.

Alternatively, pressuring the Arctic states through these forums may not be necessary if indigenous interests align with the respective state, i.e. the nation-state can use indigenous interests to further its own political agenda. For example, indigenous interests may be used by a nation-state to acquire a more expansive EEZ. Ultimately, the states will determine how and if indigenous interests are used to delimitate the EEZs.

The states may use three different methods to accommodate indigenous interests. They can negotiate in good faith, adjust the maritime borders for indigenous interests, or give natives non-exclusive access to their hunting grounds. These three different options are not exclusive of each other. Different segments of the maritime border may require different methods.

For example, in an area with large indigenous populations, non-exclusive access provides natives with the greatest flexibility and protection. However, non-exclusive access will not allow the state to use indigenous interests as a tool to further its political goals. If a state can use indigenous interests to advance its ambitions, adjusting the maritime border for indigenous interests will be the more attractive option. However, with global warming, receding ice, and depleting natural resources this option may hurt indigenous interests in the future.

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note 83.

260. Universal Declaration of Human Rights, *supra* note 80, at art. 27; American Declaration on the Rights and Duties of Man, *supra* note 80, at art. XIII.

261. MEIJKNECHT, *supra* 72, at 61.



The first option, good faith negotiation, may be the most attractive to a state with a lot of bargaining power. Under this scenario, it is unclear what may occur with indigenous interests. The state may protect natives' interests or ignore them as the negotiations proceed. Although states ultimately will determine the outcome of EEZs, indigenous people may use international institutions to pressure states to consider their interests or align indigenous interests with the state so that it advantages the state to protect indigenous interests, or they can try a combination of the two.

# **Beyond the Global Summits: Reflecting on the Environmental Principles of Sustainable Development**

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## I. INTRODUCTION

In addition to challenges we face in the context of specific environmental problems, there is the greater challenge of creating legal rules for achieving sustainable development, which will in time play a central role in international and domestic environmental law and policy. In order to pave the way to a sustainable future, a new economic paradigm is necessary, which integrates traditional economics with ecological economics. A new economic paradigm is the only viable option to secure the path for future generations.<sup>1</sup> "Our goal must be to meet the economic needs of the present without compromising the ability of the planet to provide for the needs of future generations."<sup>2</sup> The legal challenge for sustainable development is enormous: a legal framework is needed in which environmental and social considerations are integrated into developmental processes along with economic analyses so that decision making reflects the 'real' values and services that nature provides. Despite incorporation of sustainable development into treaties, and domestic environmental and planning legislation, the concept largely remains one of rhetoric and policy without clear legal parameters. Much discussion has occurred but little international law has emerged. "Sustainable development is notoriously difficult to pin down. It is subject to competing interpretations, and its application to any particular problem is often contentious."<sup>3</sup> From the outset the difficulties faced in implementing sustainable development have been clear, and while legislation is needed, more crucial is the need to achieve political commitment and "change."<sup>4</sup>

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1. The World Bank forecasts that by 2020, nine out of the fifteen largest world economies will be developing states. As they develop, they increasingly contribute to global environmental risks including climate change and the degradation of biological resources. Therefore, the industrialized world must, through changes in production and consumption, reduce its environmental impact so as "to leave space for developing States to meet their own needs and aspirations." Maurice Strong, Chairman, Earth Council, Inaugural Annual Jack Beale Lecture on the Global Environment: Towards a Sustainable Civilization (Feb. 11, 1999), *available at* <http://www.ies.unsw.edu.au/events/jb1.pdf>.

2. KOFI A. ANNAN, WE, THE PEOPLES, THE ROLE OF THE UNITED NATIONS IN THE 21ST CENTURY 55 (2000).

3. Maria Lee, *Sustainable Development in the EU: The Renewed Sustainable Development Strategy 2006*, 9 ENV'T. L. REV. 41, 41 (2007).

4. Ben Boer, *Implementing Sustainability*, 14 DELHI L. REV. 1, 4 (1992).

Much has been written on sustainable development,<sup>5</sup> so why write another article on the area? The major task of this article is to reflect on the customary law status of sustainable development's core environmental principles. In addition, the article evaluates the global summits on sustainable development by looking both backwards and forwards, and it argues that despite much optimism, a subsequent loss of political momentum and expectations have meant that the concept and its core environmental principles have not transcended into binding rules of international law; further political and legal commitment is needed. Due to the breadth of sustainable development, the article limits itself to discussing three central themes. Part II evaluates sustainable development's environmental principles, reflects on why such lofty expectations were set, and asks why there was a subsequent loss of optimism associated with espousal of rules implementing the principles. Part III examines how the current priorities of social development have broadened the concept into the three pillars of sustainable development. It also posits that other current international problems have negatively impacted the further implementation of sustainable development's environmental principles. Part IV looks beyond the global summits and assesses the customary law status of sustainable development's core environmental principles and argues that despite state support, it is not reflective of customary international law. The article concludes that as states are already doing much in terms of environmental integration they ought to formalize their conduct and adopt a framework of treaty rules integrating environmental considerations into developmental activities. Only through adoption of legally binding international rules can the environmental principles be uniformly implemented and thus help meet the environmental security needs of present and future generations thereby achieving sustainable development's goals.

## II. SUSTAINABLE DEVELOPMENT'S ENVIRONMENTAL PRINCIPLES

The international law of sustainable development is contained within a series of United Nations' General Assembly ("GA") facilitated global summits that have collectively produced a suite of declaratory

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5. Sustainable development has been the subject of abundant academic writing. Much of the academic work has focused on sectoral discussion of sustainable development in the context of areas including biodiversity, threatened species, fisheries, climate change, international trade, and transport policy. Regarding the principles of sustainable development, discussion has tended to focus on the precautionary principle, intra and intergenerational equity, and the polluter pays principle.

instruments articulating broad aspirational principles of environmental and social justice to be incorporated into the traditional developmental framework. Because sustainable development's principles are expressed within declaratory instruments, and not as treaty rules, they are soft law provisions that do not reflect an intention to create binding rules under international law.

### *A. The Conceptualization of Sustainable Development*

The 1972 United Nations Conference on the Human Environment ("UNCHE") commenced "a new journey of hope" broadening the concept of environment from merely a domestic and sectoral plane. Until 1972, multilateral environmental agreements ("MEAs") had focussed on first generation environmental problems, including: (1) regulation of valuable economic resources; (2) protection of species; (3) pollution from hazardous and ultra-hazardous activities; and (4) underdevelopment.<sup>6</sup> The UNCHE included the concerns of developing states for environmental impacts of poverty and underdevelopment, as well as the intrinsic linkages between environment and development, within a new international framework. At the UNCHE, states adopted the Stockholm Declaration, a statement of twenty-six principles calling upon governments and peoples to exert common efforts for the preservation and improvement of the human environment.<sup>7</sup> "The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world; it is the urgent desire of the peoples of the whole world and the duty of all Governments."<sup>8</sup> The Stockholm principles elaborate broadly

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6. By 1972, much environmental normative standard-setting had occurred on narrow subject matter as evidenced by adoption of MEAs on wild animals; birds and fish in Africa; birds useful to agriculture; seals in the North Pacific Ocean; migratory birds in the United States and Canada; whaling; fauna and flora in their natural state; nature and wildlife preservation in the western hemisphere; Northwest Atlantic fisheries; birds; pollution of the sea by oil; fishing and conservation of living resources of the high seas; Northeast Atlantic fisheries; the Antarctic; third party liability in nuclear energy; liability of operators of nuclear ships; high seas intervention in cases of oil pollution damage; wetlands; and world heritage.

7. U.N. Conference on the Human Environment, *Declaration of the United Nations Conference on the Human Environment*, U.N. Doc. A/CONF./48/14/REV.1 (June 16, 1972), available at 11 *ILM* 1416-69. The UNCHE also produced an Action Plan implementing the Stockholm principles, one of the measures provided for the establishment of a new international environmental organization. Thus, in December 1972, the GA established the United Nations Environment Program ("UNEP"), responsible for implementing the Stockholm Declaration.

8. *Id.* at 1416.

on matters including the rights of future generations<sup>9</sup> and the duty to prevent transboundary environmental harm.<sup>10</sup> Since the Stockholm Declaration, states have demonstrated a more diligent approach to global environmental regulation.

By the early 1980s, however, environmental deterioration was accelerating due to expanding population and economic growth, and second generation environmental problems, including: acid rain; ozone depletion; climate change; deforestation; desertification; biodiversity conservation; trade in hazardous wastes; and lack of protection of the environment in times of armed conflict.<sup>11</sup> Despite the established link between environment and development, too little progress had been made in integrating environmental dimensions into developmental policy.<sup>12</sup> In response, a 1983 GA resolution established the World Commission on Environment and Development (“WCED”) to investigate the state of the global environment.<sup>13</sup> The outcome of the Commission’s work was its 1987 seminal report, “Our Common Future.”<sup>14</sup> The Report identified dramatically increasing world population and powerful technological advances that facilitate over-exploitation of global resources as the two major causes of environmental degradation. Pursuant to the Report, “[s]ustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future.”<sup>15</sup> The adoption of “Our Common Future” and its popularization of sustainable development revitalized the momentum that had commenced with the Stockholm Conference.

After completion of the Brundtland Commission’s work many states expressed continuing concern over second-generation environmental problems. In particular, the climate change debate was gathering momentum, especially in the context of threat to low-lying small-island developing states such as those in the South Pacific. Despite these concerns, the post-Brundtland period was particularly optimistic. During

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9. *Id.* at 1417.

10. *Id.* at 1420.

11. A.O. Adede, *The Road to Rio: The Development of Negotiations*, in *THE ENVIRONMENT AFTER RIO: INTERNATIONAL LAW AND ECONOMICS* 4 (Luigi Campiglio et al. eds. 1994).

12. *Id.* at 4–5.

13. G.A. Res. 38/161, U.N. Doc. A/38/161 (Dec. 19, 1983) *available at* <http://www.un-documents.net/a38r161.htm>.

14. World Commission on Environment and Development [WCED], *World Commission on Environment and Development*, U.N. Doc. A/42/427 (Mar 20, 1987). The Report was adopted by UNEP and presented to the GA at its 42nd Session.

15. *Id.* ¶ 49.

the 1980s and early 1990s environmental issues were populist and often at the top of the political agenda. Treaty-making was prolific, and standard setting through the adoption of a plethora of international instruments was commonplace.<sup>16</sup> Extensive regulation occurred through adoption of tens of MEAs in a wide range of areas.<sup>17</sup> It appeared that any problem could be solved through treaty adoption. For most sectoral treaties there is evidence of early success as reflected by widespread political cooperation and diligent adoption of UN-set standards.<sup>18</sup> However, the more difficult issues surrounding enforcement regimes, including liability and compensation regimes, were often eluded. Irrespective, the period evidenced several environmental successes including: (1) the significant reduction of vessel-source marine pollution; (2) the international regulation of the trade in hazardous waste; and (3) the successful avoidance of the narrowly-averted disaster of irreversible ozone depletion. There was also evidence of a significant 'greening' of the European Union ("EU") treaty system<sup>19</sup> and its lobbying in major international environmental fora that created an atmosphere of optimism extending from the Stockholm Declaration and reaching into the Rio Summit.<sup>20</sup> The result of all the optimism was the convening of the Rio mega-conference on the environment and development.

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16. So many treaties were created that the term 'treaty congestion problem' was coined. Edith Brown Weiss, *International Environmental Law: Contemporary Issues and the Emergence of a New World Order*, 81 GEO. L.J. 675, 697-702. Apart from the logistics in administering these treaties, issues of coordination and integration, or at least the lack thereof, also arose. In this regard there exist special possibilities for international organizations, especially UNEP.

17. Environmental standard-setting was common place, as evidenced by adoption of sectoral MEAs on areas including marine pollution by dumping from ships and aircraft; cultural and natural heritage; international trade in endangered species of wild fauna and flora; pollution by ships; polar bears; long-range transboundary air pollution; Antarctic marine living resources; oceans and seas; ozone depletion; notification and assistance in cases of nuclear accident or radiological emergency; Antarctic mineral resource activities; and transboundary movement and disposal of hazardous wastes.

18. A particular treaty regime that stood out is the United Nations Convention on the Law of the Sea, U.N. Doc. A/Conf 62/122 (Dec. 10, 1982), available at [http://untreaty.un.org/cod/diplomaticconferences/lawofthesea-1982/docs/vol\\_XVII/a\\_conf-62\\_122\\_CONVENTION.pdf](http://untreaty.un.org/cod/diplomaticconferences/lawofthesea-1982/docs/vol_XVII/a_conf-62_122_CONVENTION.pdf) [hereinafter LOSC]. LOSC came into force November 16, 1994. The LOSC sets out a concrete legal scheme codifying customary international law and creating new legal obligations. It is impressive because of its far-reaching nature and careful balance of competing interests of maritime, coastal, developed, and developing states.

19. With the adoption of the Maastricht Treaty, sustainable development was incorporated as one of the Community's core aims. Treaty on European Union art. 3, Feb 7, 1992, 1992 O.J. (C 191); Treaty Establishing the European Community art. 2, Nov 10, 1997, 1997 O.J. (C 340).

20. Further, during the period, the world was in a relative peace, and the collapse of

### *B. The Espousal of Rio's 'Green' Principles*

In 1989 the GA resolved to convene the 1992 United Nations Conference on Environment and Development ("UNCED" or "Earth Summit").<sup>21</sup> The UNCED addressed the imperative of developing policies and mechanisms for sustainable development in a world that continues a path of environmental destruction and exploitation of natural resources at unprecedented levels. At the Conference, States adopted the Rio Declaration on Environment and Development ("Rio Declaration")<sup>22</sup> and the associated Agenda 21.<sup>23</sup> Both instruments promote transition to a new global partnership requiring new dimensions of cooperation amongst states and peoples and in particular, a new basis for relationship between wealthy industrialized states and less developed states in which the benefits and risks brought on by development are equitably shared by all.<sup>24</sup>

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communist and socialist regimes in Central and Eastern Europe and the former Soviet Union generated further optimism. Coupled with this there were relatively few pockets of breaches to international peace and security such as the ethnic struggles and human rights abuses in Cambodia, East Timor, Middle-East, Rwanda, Sierra Leone, and the former Yugoslavia. *See* The conflicts in the former Yugoslavia, S.C. Res. 808, U.N. Doc. S/RES/808 (1993), *available at* <http://www.nato.int/for/un/u930222a.htm>; The International Criminal Tribunal for Rwanda, S.C. Res. 955, U.N. Doc. S/RES/955 (1994), *available at* <http://www.un.org/ict/english/Resolutions/955e.htm>.

21. G.A. Res. 44/228, U.N. Doc. A/44/49 (Dec. 22, 1989), *available at* <http://www.un.org/documents/ga/res/44/ares44-228.htm>. In 1992, the United Nations Conference on Environment and Development ("UNCED" or "Earth Summit") was held in Rio de Janeiro. The conference was attended by delegates from over 170 governments and resulted in the adoption of several binding and non-legally binding instruments.

22. U.N. Conference on Environment and Development, June 3-14, 1992, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26/Rev.1 (Aug. 12, 1992) [hereinafter *Rio Declaration*].

23. Agenda 21, U.N. Conference on Environment and Development, U.N. Doc. A/CONF.151.26 (1992) *available at* <http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm>. The Summit also adopted the United Nations Framework Convention on Climate Change. FCCC/Informal/84, U.N. Doc. GE.05-62220 (May 9, 1992), *available at* <http://unfccc.int/resource/docs/convkp/conveng.pdf> [hereinafter UNFCCC]; International Convention on Biological Diversity, U.N. Doc. UNEP/Bio.Div/CONF/L.2 (May 22, 1992) [hereinafter CBD]; and Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, U.N. Doc. A/CONF.151/26 Vol. III, *available at* <http://www.un.org/documents/ga/conf151/aconf15126-3annex3.htm>. In addition, the Earth Summit launched the process that led to the 1994 adoption of the International Convention Combating the Effects of Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, U.N. Doc. A/AC.241.27 (Sept. 12, 1994), *available at* <http://www.unccd.int/convention/text/pdf/conv-eng.pdf>.

24. Strong, *supra* note 1, at 39.



The Rio Declaration is similar in style and ambition to the Stockholm Declaration and aspirationally expresses twenty-seven principles to guide the international community on a path of sustainable development. Sustainable development is achieved by implementing the concept's constituent principles that include the environmental needs of future generations,<sup>25</sup> environmental protection to be an integral part of development,<sup>26</sup> common but differentiated responsibilities,<sup>27</sup> reduction of unsustainable patterns of production and consumption,<sup>28</sup> enactment of effective environmental laws,<sup>29</sup> recognition of the precautionary principle,<sup>30</sup> internalization of environmental costs, and the use of economic instruments.<sup>31</sup> Agenda 21 is a comprehensive action plan implementing the Rio Declaration into the twenty-first century. The instrument covers sectors including the oceans, mining, and forestry, but also complex inter-sectoral issues including the adoption of environmentally sound technology, the provision of financial resources to developing states, the development of planning and monitoring database information systems, the progressive new institutional and legal arrangements, and the creation of a new international organization to oversee implementation.<sup>32</sup>

### *C. Evaluating the Rio Outcomes*

A new sense of optimism prevailed over the Earth Summit as virtually all states came together for the biggest-of-its-time environmental forum. The UNCED represented the most successful and comprehensive program reached by governments for shaping the environmental needs of our human future. Most significantly, the UNCED's outcomes gave international environmental law ("IEL") a distinct conceptual framework for its operation and governance that "has assisted in supporting the view that international environmental law has emerged as a discrete discipline of international law with its own distinctive structures and principles."<sup>33</sup> "In other words, a system of

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25. *Rio Declaration*, *supra* note 22, at princ. 3.

26. *Id.* at princ. 4.

27. *Id.* at princ. 7.

28. *Id.* at princ. 8.

29. *Id.* at princ. 11.

30. *Id.* at princ. 15.

31. *Id.* at princ. 16.

32. The twenty-one nation inter-governmental Commission on Sustainable Development ("CSD") was established to oversee implementation of Agenda 21.

33. David Freestone, *The Road from Rio: International Environmental Law After the Earth Summit*, 6 J. ENVTL. L. 193, 195 (1994).

international environmental law has emerged, rather than simply more international rules about the environment.”<sup>34</sup>

Perhaps the most significant way in which the Rio process may have contributed to the development of international environmental law is through the crystallisation of legal principles. It can be argued that the emergence of a new discipline can be demonstrated by its development of discrete ‘discipline specific’ principles.<sup>35</sup>

Both the Rio Declaration and Agenda 21 are soft law instruments providing no legal framework for implementing sustainable development. Rather, they show goodwill and symbolic commitment to a new, popular global concern.<sup>36</sup> There are three major difficulties flowing from these soft law outcomes: first, implementation ultimately rests on political good will of states to give effect to non-legally binding rules; second, their customary law status is not clear; and third, they are difficult to implement or to discern any kind of international standard from. Reliance on these soft law rules, whose content is unclear, ultimately means that IEL is less effective.

Even though there had been no adoption of an MEA on sustainable development, the sense of optimism leading to the UNCED still prevailed in the immediate post-summit period, as evidenced by continued treaty proliferation.<sup>37</sup> In this way the post-Rio era continued the momentum created by UNCED.<sup>38</sup> This was, however, quickly succeeded by a period of fragmentation and unravelling of the law as evidenced by pessimism associated with a loss of political momentum and the inability to meet the lofty expectations of attaining sustainable development. Correlating with this loss of optimism was an increased emphasis on globalization and trade liberalization.

In the post-UNCED period, MEAs, often framework in nature, continued being adopted with apparent ease, but implementation was often poor,<sup>39</sup> and early political ‘commitment’ to treaties proved shallow

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34. *Id.* at 218.

35. *Id.* at 209.

36. One of the UNCED’s shortcomings was the inability to adopt the ‘Earth Charter’ defining a set of moral and ethical principles for the conduct of people and states to each other and the earth as a basis for achieving environmental sustainability.

37. Treaties were adopted in the following areas: Antarctic environmental protection; climate change; biodiversity; desertification in states experiencing serious drought and/or desertification, particularly in Africa; hazardous and noxious substances; nuclear tests ban; bio-safety; persistent organic pollutants; prior informed consent; and straddling fish stocks.

38. DAVID HUNTER ET AL., *INTERNATIONAL ENVIRONMENTAL LAW AND POLICY* 197 (3rd ed. 2007).

39. David M. Driesen, *Thirty Years of International Environmental Law: A*

with subsequent failure to implement basic provisions. Overall, there was neither great success with enforcement nor with the adoption of liability and compensation instruments. Further, the sheer number of instruments in existence by the mid-1990s, often based at a regional level, contributed to the increasing fragmentation of the body of regulation of IEL.<sup>40</sup> The high number of treaties adopted led to the treaty-congestion problem, whereby as different standards were set, the unity that made Rio possible began to disintegrate. Further, despite the establishment of a new institution, the CSD is charged with the impossible task of monitoring the implementation of Agenda 21, and it has accomplished very little.<sup>41</sup> By the mid-1990s the magnitude of the UNCED ambition was clearer, and it was appearing doubtful whether its high and far-reaching aims were achievable. As poverty and pollution continued to rise, so did disenchantment, which led to an incremental loss of political momentum. At the time of its creation, the international community did not fully understand the enormous challenges that widespread implementation of even the Rio Declaration's most fundamental tenets such as the precautionary principle and its institutionalization of caution would pose.<sup>42</sup>

Despite huge attendance at the UNCED by state delegations and non-governmental organisations ("NGOs"), the United States, under the administration of President George H. Bush, was a reluctant participant in the conference.

In international environmental law's hour of need, the United States largely abandoned its tradition of leading international environmental efforts. It opposed a firm agreement to stabilizing greenhouse gas emissions, paving the way for a weak framework agreement that allowed emissions to rise throughout the 1990s. And it opposed key provisions of the biodiversity agreement on behalf of special interests primarily concerned with intellectual property rights in biota.<sup>43</sup>

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*Retrospective and Plea for Reinvigoration*, 30 SYRACUSE J. INT'L L. & COM. 353, 358 (2003).

40. *Id.* at 356.

41. David G. Victor, *Recovering Sustainable Development*, FOREIGN AFFAIRS, Jan.-Feb. 2006, at 91, 94.

42. While there was an overall recognition that human pollution of the environment is inevitable, the precautionary principle forced debate about the acceptable types and quantities of human-induced environmental harm thus becoming one of the most controversial principles of IEL during the 1990s. *See also* Precautionary Principle, *infra* Section IV(B)(3).

43. Driesen, *supra* note 39, at 359-60.

In contrast to its position at the 1972 Stockholm Conference,<sup>44</sup> the United States was, at best, ambivalent about the 1992 Summit.<sup>45</sup> Even though the UNCED process had initially secured the support and cooperation of the U.S. Environment Protection Agency:

[n]o vision was ever articulated on what the U.S. wanted out of the Conference and where it wanted to take it. The U.S. position was largely negative and more defined in terms of what it did not want as compared to what it wanted. Basically, it seemed the U.S. wanted the *status quo* and nothing that would require it to do anything new. It gave short shrift to preparation of the national report and refused to commit the attendance of President Bush until it ensured that the climate treaty would meet the U.S. bottom line. It refused to address legitimate developing country concerns. All in all U.S. leadership was missing at this time.<sup>46</sup>

But it was not until after the Summit that the shift in U.S. policy was more obvious.

Since the Rio Conference the United States seems to have become increasingly wary of international mega-conference diplomacy, multilateral environmental treaty regimes, and efforts to develop customary international environmental law . . . . US enthusiasm for international environmental law appears to have diminished since the Rio Summit.<sup>47</sup>

Since the Earth Summit, for example, the United States has persistently objected to the inclusion of both the precautionary principle and common but differentiated responsibilities into customary international law.<sup>48</sup> The shifting attitude towards sustainable development can be seen as a microcosm of a wider shift in thinking. The United States has failed to ratify the Convention on Biological Diversity (“CBD”)<sup>49</sup> and the Kyoto Protocol to the UN Framework Convention on Climate Change,<sup>50</sup> while its ratification of other MEAs

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44. Even the US, that has in recent times resisted environmental multilateralism, played a leading role at Stockholm; “[i]t had a clear sense of purpose for the Conference, putting environmental protection on the international agenda and contributing a substantial amount of intellectual and other resources.” Scott A. Hajost, *The Role of the United States, in THE ENVIRONMENT AFTER RIO* 15, 16–17 (Luigi Campiglio et al. eds. 1994).

45. *Id.* at 17.

46. *Id.*

47. Jutta Brunneé, *The United States and International Environmental Law: Living With an Elephant*, 14 *EURO. J. INT’L L.* 617, 620, 622 (2004).

48. *Id.* at 629.

49. CBD, *supra* note 23.

50. Kyoto Protocol to the UNFCCC, Mar. 25, 1998, U.N. Doc.

has been sluggish. The United States symbolically abandoned its position as global environmental pioneer, or if not that, chief enforcer, with the repudiation of the Kyoto Protocol in March 2001 by President George W. Bush.<sup>51</sup> The window of opportunity in which the world had a chance to make a start on reversing climate change closed as governmental focus returned to the economy. In the lead-up to the Johannesburg Summit, Worldwatch Institute released statistics showing the 1990s to be the warmest decade since recordings began in the nineteenth century and that global carbon dioxide emissions had risen by over nine percent.<sup>52</sup>

### III. THE THREE PILLARS OF SUSTAINABLE DEVELOPMENT

The 2002 Johannesburg World Summit on Sustainable Development ("WSSD" or "World Summit") is the most recent of the GA sponsored sustainable development initiatives. The WSSD focused on a variety of urgent developmental problems as well as the further implementation of the Rio Declaration and Agenda 21. By and large, however, the focus of the Summit was not on the further elaboration of the 'green' Rio principles but rather a focus on social justice, in particular the fight against poverty, thereby broadening the concept of sustainable development.

#### *A. The World Summit Outcomes*

States did not approach the WSSD with the level of enthusiasm that they did the UNCED, which was characterized by strong optimism surrounding future international cooperation on environment, resources, and development. At the World Summit the international community struggled to maintain the *status quo*. States were not able to create further legal rules addressing either urgent environmental problems or a legal framework for implementing sustainable development.<sup>53</sup> At the

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FCCC/CP/1997/C.7/Add.1 [hereinafter Kyoto Protocol].

51. Although this is the official date of repudiation, scholars suggest that abandonment occurred long before. Despite former President Bill Clinton having signed the agreement, it was not ratified, leaving the Bush administration with room to declare that compliance cost was simply 'too much.'

52. Lisa Mastny, *Melting of Earth's Ice Cover Reaches New High*, WORLDWATCH INST. (Mar. 6, 2000), <http://www.internetpirate.com/meltingice.htm>.

53. In 1997 States met in New York for the follow-up conference to the Earth Summit ("Earth Summit II" or "Rio +5"). The conference was unfortunate as it demonstrated a backlash from the ambitious agenda of five years previous and did not result in adoption of further initiatives. See DEREK OSBORN & TOM BIGG, EARTH SUMMIT

same time, the United States resisted and obstructed adoption of negotiated global treaties, principles, targets, and timetables.<sup>54</sup>

The US delegation's position at Johannesburg was negative and reactionary on virtually every issue, from renewable energy, safe drinking water, sanitation, trade, foreign aid to women's reproductive health, agricultural subsidies, and human rights. But it was not alone.<sup>55</sup>

The agenda for the WSSD was broad and ambitious, including the adoption of measures combating world poverty, addressing water shortages, and increasing available renewable energy sources. Three instruments were adopted: (1) the Johannesburg Declaration on Sustainable Development ("Johannesburg Declaration" or "Declaration"),<sup>56</sup> (2) the Plan of Implementation of the World Summit on Sustainable Development ("Plan of Implementation" or "Plan"),<sup>57</sup> and (3) the Statement Regarding the Use of Renewable Energy Sources ("Statement on Renewable Energy").

Like the Stockholm and Rio Declarations, the Johannesburg Declaration is aspirational, reaffirming previous commitment to sustainable development<sup>58</sup> and emphasizing "the need to produce a practical and visible plan that should bring about poverty eradication and human development."<sup>59</sup> The Declaration attempts to pave "a common path, towards a world that respects and implements the vision of sustainable development"<sup>60</sup> while recognizing that particular priority is needed for

the fight against the worldwide conditions that pose severe threats to the sustainable development of our people. Among these conditions

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## II: OUTCOMES & ANALYSIS (1998).

54. George Pring, *The 2002 Johannesburg World Summit on Sustainable Development: International Environmental Law Collides with Reality, Turning Jo'burg into 'Joke'burg*, 30 DENV. J. INT'L L. & POL'Y 410, 413–14 (2002).

55. *Id.* at 416.

56. World Summit on Sustainable Development, Johannesburg, South Africa, Aug. 26–Sept. 4, 2002, *Draft Political Declaration Submitted By the President of the Summit*, U.N. Doc. A/CONF.199/L.6/Rev.2/Corr.1 (Sept. 4, 2002) [hereinafter *Johannesburg Declaration*], available at [http://www.un.org/jsummit/html/documents/summit\\_docs.html](http://www.un.org/jsummit/html/documents/summit_docs.html).

57. World Summit on Sustainable Development, Johannesburg, South Africa, Aug. 26–Sept. 4, 2002, *Draft Plan of Implementation of the World Summit on Sustainable Development*, U.N. Doc. A/CONF.199/L.1 (June 26, 2002) [hereinafter *Plan of Implementation*], available at [http://www.un.org/jsummit/html/documents/summit\\_docs.html](http://www.un.org/jsummit/html/documents/summit_docs.html).

58. *Johannesburg Declaration*, *supra* note 56, at arts. 1, 8.

59. *Id.* at art. 7.

60. *Id.* at art. 10.

are: chronic hunger; malnutrition; foreign occupation; armed conflicts; illicit drug problems; organized crime; corruption; natural disasters; illicit arms trafficking; trafficking in persons; terrorism; intolerance and incitement to racial, ethnic, religious and other hatreds; xenophobia; and endemic, communicable and chronic diseases, in particular HIV/AIDS, malaria and tuberculosis.<sup>61</sup>

The Declaration speaks generally about poverty eradication and sustainable development,<sup>62</sup> ensuring women's empowerment,<sup>63</sup> the particular needs of small island states whose existence is precarious, developing states,<sup>64</sup> and of "the vital role of indigenous peoples in sustainable development."<sup>65</sup> Overall, however, the Declaration is disappointing because of its lack of commitment to further espousal of environmental principles and treaty commitment.

The Plan is a negotiated document, implementing the provisions of the Rio Declaration, Agenda 21, and the Johannesburg Declaration. It recognizes and reaffirms the fundamental principles of sustainable development, as provided for at the Earth Summit and in the Millennium Declaration.<sup>66</sup> The Plan deals with poverty eradication; unsustainable patterns of consumption and production; protecting and managing the natural resource base of economic and social development; sustainable development in a globalizing world; health and sustainable development; sustainable development of small island states; regional initiatives for sustainable development for Africa, Latin America, the Caribbean, Asia, the Pacific, West Asia, and the Economic Commission for Europe; means of implementation; and institutional framework for sustainable development.<sup>67</sup>

The Statement on Renewable Energy was the most controversial aspect of the WSSD. Negotiation surrounded the achievement of targets for the use of renewable energy including the adoption by 2015 of a

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61. *Id.* at art. 17.

62. *Id.* at art. 19.

63. *Id.* at art. 18.

64. *Id.* at art. 22.

65. *Id.* at art. 25.

66. *Plan of Implementation*, *supra* note 57, at art. 1.

67. Institutional initiatives include: objectives, strengthening the institutional framework for sustainable development at the international level, role of the GA, role of the Economic and Social Council, role and function of the CSD, role of international institutions, strengthening international arrangements for sustainable development at the regional level, strengthening international arrangements for sustainable development at the national level, and participation of major groups. Institutional initiatives are crucial for achieving sustainability, or at least better environmental protection in that to date the international infrastructure dealing with the environment has been particularly weak. *Plan of Implementation*, *supra* note 57.

treaty on the use of renewable energy sources. The EU lobbied states to follow its lead by urging for the adoption of a global timetable for increasing the use of renewable energy.<sup>68</sup> However, because of the resistance by the United States and the Organisation of Petroleum Exporting Countries (“OPEC”) states, there was not enough political will to facilitate treaty adoption. The United States was joined by Australia, Canada, Japan, and Saudi Arabia in opposing deadlines for a ten to fifteen *percent* conversion from fossil fuels to solar, wind, and other renewables.<sup>69</sup> Rather than adopting a treaty on the use of renewable energy sources, the promotion of “clean” fossil fuels was attained through a non-legally binding energy plan calling for states to develop cleaner fossil fuels and green energy.<sup>70</sup>

### *B. Evaluating the World Summit Outcomes*

The WSSD “provided a new opportunity to address systemic obstacles to progress on the environment in especially difficult areas, including the eradication of poverty.”<sup>71</sup> Even though the WSSD outcomes were disappointing, when noting the absence of espousal of rules implementing Rio’s environmental principles, it was reassuring to see the Plan’s commitment to full implementation of Agenda 21.<sup>72</sup> However, progress was made on the alleviation of world poverty and the elaboration of social development as the third pillar of sustainable development.<sup>73</sup> Further, ‘partnerships’ between governments and with business were a major theme of the WSSD and were recognized as a

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68. The timetable envisaged that by 2015 states would derive at least fifteen *percent* of their total energy needs from renewable sources. Aside from the EU’s interest in creating a global renewable energy timetable, it has created regional targets which involve doubling its use of renewable energy by 2010, representing twelve *percent* of its total energy consumption.

69. Pring, *supra* note 54, at 416.

70. The World Summit was also significant for the regulation of greenhouse gas emissions. There was an important development at the conference wherein China and Russia announced their ratification of the Kyoto Protocol, while Canada and India announced intention to also ratify. The practical effect of these ratifications is that they allowed the Protocol to commence operation in 2004. The US and Australia, however, continued to object to the Protocol. After Canada and Australia’s ratifications the US is now the only developed state not to have ratified the Kyoto Protocol.

71. Hans Christian Bugge & Lawrence Watters, *A Perspective on Sustainable Development After Johannesburg on the Fifteenth Anniversary of Our Common Future: An Interview with Gro Harlem Brundtland*, 15 GEO. INT’L ENVTL L. REV. 359, 361 (2002–03).

72. *Plan of Implementation*, *supra* note 57, at art. 1.

73. Hari M. Osofsky, *Defining Sustainable Development After Earth Summit 2002*, 26 LOY. L.A. INT’L & COMP. L. REV. 111, 123 (2003–04).



major vehicle for the achievement of sustainable development.<sup>74</sup> Thus, despite inability to adopt a legal framework implementing sustainable development's environmental principles, the WSSD outcomes can be viewed positively.

It must be stressed that the WSSD was held in a significantly more desperate political climate than the UNCED. The world's failing interest in environmental issues was accelerated by the events of September 11, 2001 that changed the global panorama: security against terrorism became paramount. In the United States, not only did environmental protection have to compete with an administration positioned against environmental multilateralism and participation in global climate change regulation, it was forced to stand alongside the threat of a new type of audacious terrorism, a culture of fear, the creation of a snowballing, unstoppable focus on national security.<sup>75</sup> Evidence of this has never been more available: The first sentence of the Department of State's website, entitled *Advance Sustainable Development and Global Interests*, provides that "Protecting our country and our allies from the dangers of terrorism, weapons of mass destruction, international crime, and regional instability is necessary but not sufficient for national security."<sup>76</sup> This escalating concern on terror and security was further exacerbated and "internationalized" by the Bali, Madrid, London, and Mumbai terrorist bombings. Thus, the inability to meet the lofty expectations of

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74. S. Jacob Scherr & R. Juge Gregg, *Johannesburg and Beyond: The 2002 World Summit on Sustainable Development and the Rise of Partnerships*, 18 GEO. INT'L ENVTL. L. REV. 425, 439-40 (2005-06).

75. Ekundayo George examines an obvious problem arising out of increased global focus on national security. His concern is not only the decreased political focus on environmental issues but the environmental degradation occurring through weapons building, stockpiling, disposal, and use. Weapons-producing states are yet to produce viable techniques for disposing of chemical and nuclear waste associated with production. George discusses seabed disposal advocated by some states, whereby capsules of nuclear waste are injected into the earth's core. Ekundayo George, *Whose Line in the Sand: Can Environmental Protection and National Security Coexist, and Should the Government be Held Liable for not Attaining this Goal?*, Ekundayo 27 WM & MARY ENVTL. L. & POL'Y REV. 651 (2003). George quotes Simon Rippon, writing in 1997:

It is well-established from various international scientific studies that the best long-term isolation of radioactive waste could be achieved by disposal in deep ocean sediments. This ultimately is where everything will finish up, as mountains and other land formations are slowly eroded away and washed down into the deepest ocean trenches. How elegant to short circuit this multi-billion year natural waste disposal route by shooting vertical torpedoes of concentrated nuclear waste into these infinitely stable resting places.

*Id.* at 690-91.

76. U.S. Dep't of State, *Advance Sustainable Development and Global Interests* (2003), available at <http://www.state.gov/t/pm/rls/rpt/walkearth/2004/37224.htm>.

implementing legal rules on sustainable development was sidestepped by a new global panorama focussed on fighting the new “demons” of terrorism and national security.

At the opening of the GA on November 10, 2001, the then UN Secretary-General Kofi Annan gave the astute reminder that: “Let us remember that none of the issues that faced us on 10 September has become less urgent . . . . The factors that cause the desert to advance, biodiversity to be lost, and the Earth’s atmosphere to warm have not decreased.”<sup>77</sup> Adding to the new panorama have been the global refugee and people trafficking crisis, the SARS virus, bird and swine flu, and the recent global financial crisis. Further, in the 2008 U.S. elections, the environment was greatly overlooked as both Democratic and Republican policies focussed on global anti-terror; the wars in Iraq and Afghanistan; and the maintenance of trade, healthy economies, and global financial security.

#### IV. BEYOND THE GLOBAL SUMMITS

Despite the absence of a global treaty on sustainable development, a certain level of state-acceptance of its environmental principles already exists. Since adoption of the Rio Declaration and Agenda 21, several of Rio’s environmental principles have been positively reiterated in treaties.<sup>78</sup> Furthermore, commitment of states to sustainable development is reflected by ongoing work in diverse areas.<sup>79</sup> In the 2008 Report of the Secretary-General, the GA recommended that governments, UN organizations, and major groups deepen their commitment to sustainable development by redoubling their efforts in implementing Agenda 21 and the Johannesburg Plan of Implementation.<sup>80</sup> At the same time, many states have incorporated sustainable development’s environmental principles into domestic planning and environmental legislation. Are

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77. Heidemarie Wieczorek-Zeul, *Development Policy After September 11: Towards a Comprehensive Peace and Security Policy Approach*, D+C DEVELOPMENT AND COOPERATION 4–5 (Mar.–Apr. 2002), available at <http://www.inwent.org/E+Z/zeitschr/de202-3.htm>. Heidemarie Wieczorek-Zeul is the German Federal Minister for Economic Cooperation and Development.

78. See *infra*, notes 108–15, 120–22.

79. For example, states continue to create marine environmental protection rules under the LOSC in the areas of sustainable fisheries and shipping. More recently, US Secretary of State Hillary Clinton has hinted possible US ratification of the LOSC. Joseph Abrams, *Lost and Found: Senate Moves Toward Ratification of U.N.’s ‘Law of the Sea Treaty’*, FOXNEWS.COM (Mar. 12, 2009), <http://www.foxnews.com/politics/2009/03/12/lost-found-senate-moves-ratification-un-treaty/>.

80. U.N. Doc. A/63/304 (Aug. 18, 2008).

these international and domestic initiatives sufficient to reflect state-acceptance and a rule of customary international law whereby states must abide by sustainable development's environmental principles? Or is more needed to transform the environmental principles into legally binding rules? Custom, which is based on the practice and commitment of states, is difficult to establish and requires either an explicit recognition by states or a declaration of its existence through subsidiary means identified in Article 38(1)(d) of the Statute of the International Court of Justice ("ICJ Statute").<sup>81</sup> Assessing the customary status of sustainable development's environmental principles is therefore a particularly difficult task requiring a clarification of meaning as well as an examination of state practice.

### *A. Clarifying Meaning*

The most widely accepted definition of sustainable development is that of the WCED. However, this definition is ambiguous, inadequately understood, and inappropriately applied, which undermines effective implementation of the concept.<sup>82</sup> Thus, despite widespread use of the WCED definition, a more precise definition of sustainable development eludes.<sup>83</sup> Even if states were to agree on a definition for sustainable development, "widespread agreement on a principle does not translate

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81. Custom is recognized as a source of international law under Article 38(1)(b) of the Statute of the International Court of Justice ("ICJ Statute").

The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply:

- a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states;
- b. international custom, as evidence of a general practice accepted as law;
- c. the general principles of law recognized by civilized nations;
- d. subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicist of the various nations, as subsidiary means for the determination of rules of law.

Statute of the International Court of Justice, art. 38(1), June 26, 1945, 59 Stat. 1031, available at <http://www.icj-cij.org/documents/index.php?p1=4&p2=2&p3=0>.

82. It is not clear what sustainable development means: does it mean development that is economically sustainable or is this a contradiction in terms as nothing physical can grow indefinitely or indeed that 'development' can never be 'sustained'? What about sustainable use of renewable resources at rates within the capacity for renewal? What about non-renewable resources?

83. Priscilla Schwarz, *Sustainable Development in International Law*, 5 NON-STATE ACTORS & INT'L L. 127, 132-34 (2005); Graham Mayeda, *Where Should Johannesburg Take Us? Ethical and Legal Approaches to Sustainable Development in the Context of International Environmental Law*, 15 COLO. J. INT'L ENVTL. L. & POL'Y. 29, 32 (2004).

into agreement on the principle's normative content.”<sup>84</sup> Despite its beginnings as a powerful concept it is suggested that sustainable development has become meaningless over the last two decades.<sup>85</sup>

The ideal of sustainable development simply cannot serve as a beacon indicating the direction legal development should take because profound differences of opinion exist with regard not only to the means by which these goals are to be reached, but also the exact meaning of the goals themselves.<sup>86</sup>

It is also unclear what is meant by “principles” of sustainable development. “It is important to know what the exact meaning of those principles is and to know if internationally-accepted principles have to be considered as principles of law or principles of policy, and whether of specific or general application.”<sup>87</sup> Are the environmental principles “principles of law” and thus a source of legal obligation under Article 38(1)(c) of the ICJ Statute? The environmental principles are not legally binding “principles,” as it was not the intention of the drafters to create legally binding international rules. They are instead “soft law” or “principles of policy,” although it is argued that principles go beyond mere policy:

Principles go beyond concrete rules or policy goals; instead, they say something about a group of rules or policies, they denote what a collection of rules has in common, or what the common goal is of a collection of rules (for instance a statute). Principles usually contain a high moral and/or legal value.<sup>88</sup>

The article advocates Brundtland's approach of addressing the two critical and inter-related problems of continued environmental degradation and the developmental needs of the poorest states. Reliance is then placed on Johannesburg's three-pillar approach advocating integrating environmental, economic, and social considerations within the developmental process.<sup>89</sup> Sustainable development is thus the

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84. Rebecca M. Bratspies, *Rethinking Decisionmaking in International Environmental Law: A Process-Oriented Inquiry into Sustainable Development*, YALE J. INT'L L. 363, 364 (2007).

85. Victor, *supra* note 41, at 103.

86. J. Verschuuren, *Sustainable Development and the Nature of Environmental Legal Principles*, 57 POTCHEFSTROOM ELECTRONIC L.J. 1, 15 (2006).

87. F. Maes, *Environmental Law Principles, Their Nature and the Law of the Sea: A Challenge for Legislators*, in ENVIRONMENTAL LAW PRINCIPLES IN PRACTICE 59, 59 (Sheridan M & Lavrysen eds. 2002).

88. Verschuuren, *supra* note 86, at 4.

89. Regardless of more specific contextual needs, the definition of sustainable development must remain broad because of its widespread use. More specific contextual definitions can sit alongside the traditional Brundtland definition thus providing sectoral

integration of environmental, economic, and social considerations within developmental process so as to cure continued environmental degradation and the developmental needs of the poorest states. Sustainable development is an ideal representing an outcome to be attained through its implementing principles. As for principles, "principles are a necessary medium for ideals to find their way into concrete rules."<sup>90</sup> Furthermore, several principles can be viewed as forming sustainable development's core: "while the concept is still subject to some uncertainty in meaning, it is possible to identify intra and intergenerational equity, sustainable use, and the principle of integration among the core elements of sustainable development."<sup>91</sup>

### *B. State Practice*

Does the state practice evidence a customary rule where policy makers use environmental factors in their decisionmaking? This is a difficult question as the state practice implementing sustainable development's core environmental principles of integration and sustainable use is selective and diverse. It demonstrates varying levels of state-acceptance of the separate but linked principles of integration, prevention, precaution, and environmental impact assessment ("EIA"). These principles in some way all identify the environmental risk involved in developmental activities each possessing a unique linkage with policy and approval processes. It should be noted, however, that sustainable development cannot be a catchphrase for environmental protection.<sup>92</sup>

#### *1. The Integration Principle*

Of sustainable development's core principles, environmental integration is pivotal in meeting the environmental security needs of present and future generations and is thus key to achieving the concept's goals.

To operationalize sustainable development we need to recognize that one principle—integrated decisionmaking—holds the other principles together . . . . Of all principles contained in the sustainable

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application of the concept and its principles.

90. Verschuuren, *supra* note 86, at 13.

91. Alhaji B. M. Marong, *From Rio to Johannesburg: Reflections on the Role of International Legal Norms in Sustainable Development*, 16 GEO. INT'L ENVTL. L. REV. 21, 59 (2003) (citing *Report of a Consultation on Sustainable Development: The Challenge to International Law*, REV. EUR. COMM. INT'L ENVTL. L., 1-16 (May 1993)).

92. Lee, *supra* note 3, at 43.

development framework, integrated decisionmaking is perhaps the principle most easily translated into law and policy tools.<sup>93</sup>

Effective environmental integration requires law and policy, including developmental decisionmaking, to reflect the sustainable utilization of natural resources and social equity. The importance of environmental integration is recognized in Principle 4 of the Rio Declaration that provides: “[i]n order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.” Environmental integration is also recognized in the European Union’s new Sustainable Development Strategy (“SDS”)<sup>94</sup> that identifies the main challenges as being to gradually change current unsustainable consumption and production patterns and the non-integrated approach to policymaking.<sup>95</sup> A key objective of the SDS is to break the link between economic growth and environmental degradation.<sup>96</sup>

Generally, environmental integration means that environmental policy is integrated into all facets of policymaking (policy integration). However, environmental integration can also refer to procedural legal obligations pertaining to decisionmakers integrating environmental considerations into their decisions (procedural integration).

In practice . . . procedural integration has more often been articulated in terms of environmental protection and/or socio-economic development. It generally requires that states set up institutions and decision-making processes which ensure that social, human rights

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93. John C. Dernbach, *Achieving Sustainable Development: The Centrality and Multiple Facets of Integrated Decisionmaking* 10 IND. J. GLOBAL LEGAL STUD. 247, 248 (2003).

94. Pursuant to Article 6 of the EC Treaty, environmental protection is to be integrated into the definition and implementation of the Community’s policies, thus promoting sustainable development. “The importance of integration is reaffirmed in the Sixth Environment Action Program, which stipulates that the “integration of environmental concerns into other policies must be deepened in order to move towards sustainable development.” *Environmental Integration*, EUROPEAN COMMISSION, <http://ec.europa.eu/environment/integration/integration.htm> (last visited Nov. 13, 2010). Further, on June 9, 2006, the European Council approved the renewed EU Sustainable Development Strategy (“SDS”). “It addresses seven main challenges: climate change and clean energy; sustainable transport; sustainable consumption and production; conservation and management of natural resources; public health; social inclusion, demography and migration and [g]lobal [p]overty.” Particular priority is to be given to climate change and clean energy. Press Release, European Council, Commission Issues First Sustainable Development Report (Oct. 24, 2007).

95. Council of the European Union, Note from General Secretariat to Delegations, Review of the EU Sustainable Development Strategy [EU SDS] – Renewed Strategy, at 2, SEC (2006) 10917/06 final (June 26, 2006).

96. *Id.* at 3.

and environmental concerns are taken into account when development decisions are made, and/or that institutions and decision-making processes be set up so that development, social and human rights concerns are taken into account when decisions regarding environmental protection are made.<sup>97</sup>

## *2. Prevention of Transboundary Environmental Harm*

States have a duty to prevent transboundary environmental harm under customary international law.<sup>98</sup> The duty is recognized in Principles 21 and 2 of the Stockholm and Rio Declarations respectively, and it is a cornerstone rule of IEL reflecting a composite duty<sup>99</sup> based on a standard of due diligence geared towards foreseeable risk.

While the environmental jurisprudence is not extensive, it nevertheless affirms the existence of a legal obligation to prevent, reduce and control transboundary environmental harm, to cooperate in the management of environmental risks, to utilize shared natural resources equitably and sustainably, and albeit less certainly, to carry out environmental impact assessment and monitoring.<sup>100</sup>

The duty to prevent is the subject of the Articles on the Prevention of Transboundary Harm from Hazardous Activities ("Prevention

97. Sebastien Jodoin, *The Principle of Integration and Interrelationship in Relation to Human Rights and Social, Economic and Environmental Objectives* 14 (CISDL Legal Working Papers 2005), available at [http://www.cisdil.org/pdf/sdl/SDL\\_Integration.pdf](http://www.cisdil.org/pdf/sdl/SDL_Integration.pdf).

98. The duty to prevent transboundary environmental harm originates in Trail Smelter Arbitration (United States v. Canada), 33 AJIL 182 (1939) and 35 AJIL 684 (1941), available at <http://www.lfip.org/laws666/trailsm.htm#first>, where it was found that Canada had to refrain from emitting fumes affecting the United States. The duty was further elaborated on by the ICJ in the *Corfu Channel* case where it was found that every State has a duty "not to allow knowingly its territory to be used for acts contrary to the interests of other States" Memorial of United Kingdom, *Corfu Channel* (U.K. v. Alb.), 1949 I.C.J. Pleadings 19 (Sept. 30, 1947), available at <http://www.ijl.org/courses/documents/CorfuChannel.UnitedKingdomv.Albania.pdf>. The duty was subsequently codified in Principle 21 of the Stockholm Declaration:

States have in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or areas beyond the limits of national jurisdiction.

*Rio Declaration*, *supra* note 22, at princ. 21. Principle 21 has been reiterated in numerous initiatives and judicial pronouncements.

99. The duty to prevent transboundary environmental harm includes the more specific duties of prevention, reduction, control, mitigation, cooperation, and notification.

100. PATRICIA BIMIE ET AL., *INTERNATIONAL LAW AND THE ENVIRONMENT* 140 (3d ed. 2009).

Articles”).<sup>101</sup> The “articles apply to activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences.”<sup>102</sup> The Prevention Articles elaborate on the Rio Declaration<sup>103</sup> and demonstrate that states are fully aware of the risks between the environment, human rights, and uncontrolled development. Their adoption by the International Law Commission (“ILC”) in 2001 evidences state support as does their favorable GA discussion and judicial consideration.<sup>104</sup> The articles emphasize appropriate risk analysis as a precursor to any kind of preventive approach.

Any decision in respect of the authorization of an activity within the scope of the present articles shall, in particular, be based on the assessment of the possible transboundary harm caused by that activity, including any environmental impact assessment.<sup>105</sup>

Despite the apparent acceptance by states of the duty to prevent transboundary environmental harm, they will support liability flowing from a violation of the duty only in circumstances of significant environmental harm, and in particular where the risk has not been appropriately managed as required under the Prevention Articles.

### *3. The Precautionary Principle*

Precaution “ensures that substances or activities posing environmental threat are prevented from adversely affecting the environment even if no conclusive scientific proof links the particular substance or activity to the environmental damage.”<sup>106</sup> Principle 15 of the Rio Declaration requires states to take a precautionary approach.

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where

101. International Law Commission, *Prevention of Transboundary Harm from Hazardous Activities*, ILC Report, U.N. Doc. A/56/10 (2001), available at [http://untreaty.un.org/ilc/texts/instruments/english/draft%20articles/9\\_7\\_2001.pdf](http://untreaty.un.org/ilc/texts/instruments/english/draft%20articles/9_7_2001.pdf). Transboundary harm is defined as “harm caused in the territory of or in other places under the jurisdiction or control of a State other than the State of origin, whether or not the States concerned share a common border.” *Id.* at art. 2(c).

102. *Id.* at art I.

103. *Rio Declaration*, *supra* note 22, at princs. 2, 10, 11, 17, 18, 19.

104. The MOX Plant Case (Ir. v. U.K.), 2001 I.T.L.O.S. No. 10, Provisional Measures, (Dec. 3), *reprinted in* 41 INTERNATIONAL LEGAL MATERIALS 405 (2002); Pulp Mills on the River Uruguay (Arg. v. Uru.), 2010 I.C.J.

105. International Law Commission, *supra* note 101, at art. VII.

106. James Cameron & Juli Abouchar, *The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment*, 14 B.C. INT’L COMP. L. REV. 1, 2 (1991).



there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Precaution requires states to act *now* to protect the environment and to avoid delay by waiting until all scientific facts are known. Enough is known, including that repairing environmental damage costs more than prevention. Precaution thus encourages decision makers to consider the potential environmental impacts of development so that if they err in developmental decisionmaking it is on the side of caution.

Precautions are based on the premise that we must avoid in the future the reproduction of past wrongs and injustices . . . . This principle enables us to provide concrete content for policies by looking at past injustice, and determining our responsibility towards the future based on the need to avoid the reproduction of historic wrongs to nations, individuals, and the environment.<sup>107</sup>

There is significant debate as to whether precaution is a principle overarching all policy and decisionmaking or whether it is merely an approach to be utilized in cases of hazardous or ultra-hazardous activities. This distinction is significant in explaining the varying versions of precaution that have been adopted in many global and regional treaties including the Vienna Convention for the Protection of the Ozone Layer,<sup>108</sup> Montreal Protocol on Substances that Deplete the Ozone Layer,<sup>109</sup> CBD,<sup>110</sup> UNFCCC,<sup>111</sup> Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes,<sup>112</sup> Kyoto Protocol,<sup>113</sup> Cartagena Biosafety Protocol,<sup>114</sup> and

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107. Mayeda, *supra* note 83, at 66.

108. U.N. ENVIRONMENT PROGRAMME, *The Vienna Convention for the Protection of the Ozone Layer*, 1, available at <http://www.unep.org/ozone/pdfs/viennaconvention2002.pdf>.

109. Montreal Protocol on Substances that Deplete the Ozone Layer, pmbl. Sept. 16, 1987, 26 I.L.M. 1541, available at <http://www.unep.org/ozone/pdfs/montreal-protocol2000.pdf>.

110. CBD, *supra* note 23.

111. UNFCCC, *supra* note 23.

112. Convention on the Protection and Use of Transboundary Watercourses and International Lakes [Helsinki Convention] art. 2(5)(a), Mar. 17, 1992 31 I.L.M. 1312, available at <http://www.unece.org/env/water/pdf/watercon.pdf>.

113. *Kyoto Protocol*, *supra* note 50, at arts. 2, 3(3).

114. Cartagena Protocol on Biosafety to the Convention on Biological Diversity arts. 10(6)–11(8), Sept. 11, 2003, available at <http://bch.cbd.int/protocol/publications/cartagena-protocol-en.pdf>.

Persistent Organic Pollutants Treaty.<sup>115</sup> However, the diverse versions are also problematic as they reflect a lack of uniformity in meaning and state practice, thus making it less probable that states will recognize a customary rule.

Despite positive international treatment, it is precaution's domestic application that is the key to achieving real, long-term change and the requisite state practice for crystallizing a rule of customary international law. Many states have provided for sustainable development in their domestic law by incorporating the precautionary principle into planning and environmental legislation, where it is included in objects clauses playing primarily an interpretive role. "For objects clauses to be a useful interpretive device, they should be drafted in a way that facilitates the incorporation of environmental values into decision making while still providing sufficient flexibility in the exercise of administrative discretion."<sup>116</sup> Statements of legislative objects then weave into a more substantive obligation through directing administrative decision makers to take the precautionary principle into consideration, along with other factors, in determining development proposals. Furthermore, the principle's judicial consideration is usually limited to cases of review challenging aspects of administrative action, and in particular, the failure to take the precautionary principle into account in decision-making. This plays a crucial role in ensuring that decision makers take all relevant environmental factors into consideration when assessing a proposed development. "It follows that the use of objects clauses in legislation which refer to principles of sustainable development may have some influence on decision makers by requiring them to at least consider those principles in reaching a determination."<sup>117</sup>

The most crucial aspect of the precautionary principle, however, is the identification of triggering conditions for its use. The triggering conditions and the legal process attached to the application of the precautionary principle, under domestic and international law, are varied and unsettled. Their identification is pivotal in ensuring the precautionary principle's effective implementation.

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115. Stockholm Convention on Persistent Organic Pollutants, arts. I-VIII, annex A-C, May 22, 2001, 2256 U.N.T.S. 119, available at <http://chm.pops.int/Convention/tabid/54/language/en-US/Default.aspx#convtext>.

116. Charmian Barton, *Aiming at the Target: Achieving the Objects of Sustainable Development in Agency Decision-Making*, 13 GEO. INT'L ENVTL. L. REV. 837, 839-40 (2000-01).

117. *Id.* at 891.

#### 4. EIA

Recognized as a key tool of environmental management, EIA identifies the adverse environmental effects of proposed developments as well as any mitigating measures.<sup>118</sup> It is provided for in many legal systems and plays a central role in safeguarding the inclusion of environmental considerations into decisionmaking processes. Principle 17 of the Rio Declaration requires that EIA be conducted for proposed activities likely to have a significant, adverse environmental impact: "Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority."

The sheer volume of states worldwide with domestic legislative EIA procedures suggests the existence of a customary normative duty. However, although many states have adopted EIA procedures, the duty to conduct transboundary EIA enjoys less state support. The duty to conduct transboundary EIA is recognized in Article 7 of the Prevention Articles requiring states to consider EIA in assessing transboundary harm.<sup>119</sup> However, the duty also exists regionally in the Convention on Environmental Impact Assessment in a Transboundary Context ("Espoo Convention").<sup>120</sup> Further, the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context<sup>121</sup> requires strategic environmental assessment ("SEA") to be undertaken much earlier in the decisionmaking process than project EIA and is thus seen as a key tool for sustainable development.<sup>122</sup>

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118. NEIL CRAIK, *THE INTERNATIONAL LAW OF ENVIRONMENTAL IMPACT ASSESSMENT: PROCESS, SUBSTANCE AND INTEGRATION* (2008).

119. International Law Commission, *supra* note 101, at arts. 7, 9 (assessment of risk, consultation on preventative measures).

120. Convention on Environmental Impact Assessment in a Transboundary Context art. 7(1), Feb 25, 1991, 1989 U.N.T.S. 309, *available at* <http://www.unece.org/env/eia/documents/legaltexts/conventioncontextenglish.pdf>.

121. Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context, May 21, 2003, U.N. Doc. ECE/MP.EIA/2003/, *available at* <http://www.unece.org/env/eia/documents/legaltexts/protocolenglish.pdf>.

122. The Protocol also provides for extensive public participation in government decisionmaking in numerous development sectors.

### *C. Case Law of International Courts and Tribunals*

The most important evidence of customary acceptance of sustainable development's environmental principles is the ICJ's—and other international courts and tribunals—recognition of them. Judicial decisions are a subsidiary means for the determination of rules of law<sup>123</sup> and are key in determining whether customary international law obligates states to abide by sustainable development's environmental principles. The case law engages with the conflict between protecting the environment and development, and it confronts the role of sustainable development in resolving these disputes. Overall, however, judicial consideration of environmental principles is disappointing because it does not explicitly apply the environmental principles to the disputes nor does it adequately elaborate on their legitimacy. Further, the judgments are far from clear on the relationship between sustainable development's environmental principles. Despite these flaws, certain individual judgments support the view that customary international law has crystallized around some of these newly-emerging principles of IEL.

In the *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v France) (Nuclear Test case)*,<sup>124</sup> New Zealand requested the ICJ review earlier proceedings against France alleging that the French nuclear tests contravened its rights under international law and/or that it was unlawful for France to carry out nuclear tests without first carrying out EIA based on accepted international standards.<sup>125</sup> Although the court dismissed New Zealand's request because France used alternative modes of testing, the three dissenting judgments addressed recent developments in IEL. According to Judge Weeramantry, the French nuclear tests would contravene the intergenerational equity principle, the precautionary principle, and the requirement to carry out EIA,<sup>126</sup> and the EIA was *prima facie* applicable in the current state of IEL.<sup>127</sup> Even though Judge Weeramantry cited the precautionary principle with approval, he did not declare it to be customary international law. For Judge *ad hoc* Palmer, however, “the norm involved in the precautionary principle has developed rapidly and

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123. Statute of the International Court of Justice, *supra* note 81, at art. 38(1)(d).

124. Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v France) Case, 1995 I.C.J. 288 (Order of Sept. 22), *available at* <http://www.icj-cij.org/docket/files/97/7557.pdf>.

125. *Id.* at 288–90.

126. *Id.* at 341–45 (Weeramantry, J., dissenting).

127. *Id.* at 345 (Weeramantry, J., dissenting).

may now be a principle of customary international law relating to the environment.”<sup>128</sup> Further, Judges Weeramantry and Koroma relied on Principle 21 of the Stockholm Declaration and the duty to prevent transboundary harm, with Judge Weeramantry confirming its customary law status.<sup>129</sup>

In the *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)* (Merits) (“*Gabčíkovo-Nagymaros case*”), the ICJ had to resolve a dispute regarding the construction of a series of locks and dams.<sup>130</sup> Even though the case involved a conflict between the rights to environmental protection and development, the court relied on existing treaty law between the parties rather than on emerging sustainable development principles. Although the court did not apply the environmental principles, it was mindful that “vigilance and prevention” are required on account of the often irreversible character of damage to the environment.

Owing to new scientific insights and to a growing awareness of the risks for mankind—for present and future generations—of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development.<sup>131</sup>

In a separate opinion, Vice-President Weeramantry found sustainable development’s primary purpose was to reconcile differences between the rights to environmental protection and to development. Further, sustainable development was “more than a mere concept, but [sic] a principle with normative value.”<sup>132</sup> Despite not explicitly declaring that it was reflective of customary international law, the Vice-President stated that “[t]he principle of sustainable development is thus part of modern international law by reason not only of its inescapable logical necessity, but also by reason of its wide and general acceptance by the global community.”<sup>133</sup> He also confirmed that “EIA, being a specific application of the larger principle of caution, embodies the

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128. *Id.* at 412.

129. *Id.* at 347 (Weeramantry, J., dissenting), 370 (Koroma, J., dissenting).

130. *Gabčíkovo-Nagymaros Project (Hung. v. Slov.)*, 1997 I.C.J. 7, 11 (Sept. 25).

131. *Id.* at 78.

132. *Id.* at 88 (separate opinion of Vice-President Weeramantry).

133. *Id.* at 95.

obligation of continuing watchfulness and anticipation.”<sup>134</sup> The obligation thus requires at minimum that an assessment be undertaken prior to project commencement.

The International Tribunal for the Law of the Sea (“ITLOS”) has also considered sustainable development and the precautionary principle. In *Southern Bluefin Tuna* (*New Zealand v Japan*; *Australia v Japan*; *Australia and New Zealand v Japan*) (“*Southern Bluefin Tuna* cases”), Australia and New Zealand claimed that Japan was in violation of its duty to protect and preserve an optimal level of exploitation of southern bluefin tuna, thus failing to satisfy a precautionary obligation under the United Nations Convention on the Law of the Sea (“LOSC”).<sup>135</sup> Despite the ITLOS declining to take a stance on the customary international law status of the precautionary principle, “its decision reflected a classic ‘precautionary approach.’”<sup>136</sup> In separate opinions, however, Judge Treves indicated that a precautionary approach seems inherent in the very notion of provisional measures,<sup>137</sup> while Judge ad hoc Shearer found that “the measures ordered by the Tribunal are rightly based upon considerations deriving from a precautionary approach.”<sup>138</sup>

In *MOX Plant* (*Ireland v United Kingdom*), (“*MOX Plant* case”), the ITLOS considered protection of the Irish Sea from radioactive pollution from a proposed power plant on the English coast.<sup>139</sup> Ireland claimed that the activities of the power plant required proper assessment of environmental effects of the plant’s operations in accordance with the precautionary principle as espoused by the Rio Declaration. The ITLOS denied Ireland’s request for provisional measures as it did not agree there was any urgency in the matter and implicitly rejected Ireland’s claim that the precautionary principle was applicable to the dispute. The case suggests that the precautionary principle, even though a legal principle, is not incorporated into Part XII of the LOSC as it had not yet crystallized into customary international law. In a separate opinion, Judge Wolfrum found that “[i]t is still a matter of discussion whether the precautionary

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134. *Id.* at 113.

135. *Southern Bluefin Tuna* (Request for Provisional Measures) (*New Zealand v Japan*; *Australia v Japan*), 117 I.L.R. 148 (Int’l Trib. L. of the Sea 1999).

136. TIM STEPHENS, INTERNATIONAL COURTS AND ENVIRONMENTAL PROTECTION 225 (2009).

137. *Southern Bluefin Tuna*, *supra* note 135, at 180 (separate opinion of Judge Treves).

138. *Id.* at 187 (separate opinion of Judge Shearer).

139. *MOX Plant* (Request for Provisional Measures) (*Ireland v. United Kingdom*), 126 I.L.R. 260 (Int’l Trib. L. of the Sea 2001).

principle or the precautionary approach in international environmental law has become part of international customary law.”<sup>140</sup>

The most dramatic judicial consideration of sustainable development and its environmental principle occurred within the World Trade Organization (“WTO”).<sup>141</sup> In *EC Measures Concerning Meat and Meat Products (Hormones)* (“*Beef Hormones* case”),<sup>142</sup> the WTO’s Appellate Body ruled that it did not need to declare on the precautionary principle’s customary international law status.<sup>143</sup> It determined that an EC ban on the import of U.S. beef treated with artificial growth hormones could not be justified by application of the precautionary principle. The particular risk in question could not be established with sufficient specificity as it was not clearly scientifically proven—there was not a “rational relationship between the trade measure and the risk assessment.”<sup>144</sup> In *United States - Import Prohibition of Certain Shrimp and Shrimp Products* (“*Shrimp-Turtle P*”),<sup>145</sup> the United States imposed a prohibition on the importation of shrimp that utilized harvesting methods involving a high incidental mortality of turtle. The Panel and Appellate Body found that the ban was inconsistent with WTO rules. Despite the finding, the case is important in that it identified a two-stage-test for determining the legality of trade restrictions that included consideration of sustainable development.<sup>146</sup>

#### *D. Is There a Rule of Custom?*

Alongside the decisions of international courts and tribunals, academic writings are a subsidiary means for the determination of rules

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140. *Id.* at 296 (separate opinion of Judge Wolfrum).

141. Controversy surrounded the different approaches adopted by the EU and United States with respect to the precautionary principle. The EU maintained that the precautionary principle has customary international law status while the U.S. position is that the precautionary principle has no legal status, but is merely an ‘approach’ to be used in certain narrow circumstances. A middle ground was taken by Canada viewing the precautionary principle as an emerging general principle of international law that should be viewed as subservient to more specific rules, for example the rules of the WTO.

142. Appellate Body Report, *EC - Measures Concerning Meat and Meat Products (Hormones)*, 1, WT/DS26/AB/R (Jan. 16, 1998), available at [http://www.wto.org/english/tratop\\_e/dispu\\_e/cases\\_e/ds48\\_e.htm](http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds48_e.htm).

143. *Id.* at 47–48.

144. *Id.* at 78, 80.

145. Appellate Body Report, *United States - Import Prohibition of Certain Shrimp and Shrimp Products*, 1–2, WT/DS58/AB/R (Oct. 12, 1998), available at [http://www.wto.org/english/tratop\\_e/dispu\\_e/distab\\_e.htm#r58](http://www.wto.org/english/tratop_e/dispu_e/distab_e.htm#r58).

146. *Id.* at 48.

of law.<sup>147</sup> The case law of sustainable development and its environmental principles has been the subject of some worthy discussion by commentators. Indeed, some commentators have argued that the *Gabčíkovo-Nagymaros* case endorsed sustainable development as having a role in reconciling the competing interests of development and environmental protection.<sup>148</sup> The judgment “suggests that we are dealing with a legal principle, however confined, rather than a mere policy or moral invocation . . . . [R]equiring states to evaluate and assess environmental impacts and apply new environmental norms and standards becomes part of the process for giving effect to the objectives of sustainable development.”<sup>149</sup> Other commentators, however, do not see the case law as establishing any customary obligation. Indeed, it is argued that the examples cited by Judge Weeramantry in the *Gabčíkovo-Nagymaros* case can be distinguished as they “do not include any instances of the actual application of the principle of sustainable development in order to reach a binding determination that states have acted unlawfully. There is no instance of reliance upon the concept itself as a rule of law binding upon states and constraining their conduct.”<sup>150</sup>

By and large, however, the academic writing on sustainable development is often ad hoc and based on analysis of a select principle or on a sectoral or national treatment of a principle. The customary status of the precautionary principle, for example, has been the subject of much academic writing,<sup>151</sup> some of which has suggested that the principle is a rule of customary international law.<sup>152</sup>

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147. Statute of the International Court of Justice, *supra* note 81, at art. 38(1)(d).

148. Afshin A-Khavari & Donald R. Rothwell, *The ICJ and the Danube Dam Case: A Missed Opportunity for International Environmental Law?*, 22 MELBOURNE U. L.R. 507, 527 (1998).

149. A. E. Boyle, *The Gabčíkovo-Nagymaros Case: New Law in Old Bottles*, 8 Y.B INT'L ENVTL. L. 13, 18 (1997).

150. Vaughan Lowe, *Sustainable Development and Unsustainable Arguments*, in INTERNATIONAL LAW AND SUSTAINABLE DEVELOPMENT 23 (Alan Boyle & David Freestone eds., 1999).

151. Sonia Boutillon, *The Precautionary Principle: Development of an International Standard*, 23 MICH. J. INT'L L. 429 (2002); James Cameron & Juli Abouchar, *The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment*, 14 B.C. INT'L & COMP. L. REV. 1 (1991); James Cameron & Juli Abouchar, *The Status of the Precautionary Principle in International Law*, in THE PRECAUTIONARY PRINCIPLE AND INTERNATIONAL LAW: THE CHALLENGE OF IMPLEMENTATION 29 (David Freestone & Ellen Hey eds., 1996); Jaye Ellis & Alison Fitzgerald, *The Precautionary Principle in International Law: Lessons from Fuller's Internal Morality*, 49 MCGILL L. J. 779 (2004); Gullett Warwick, *Environmental Protection and the "Precautionary Principle": A Response to Scientific Uncertainty in Environmental Management*, 14 ENVTL. & PLAN. L. J. 52 (1997); Ellen Hey, *The Precautionary Concept in Environmental Policy and Law: Institutionalizing Caution*, 4



Opinion remains divided as to whether the precautionary principle may have crystallized into a binding norm of international law. However, the prevalence of the principle in recent environmental treaties, declarations and resolutions as well as its inclusion in the Rio Declaration and the UNCED treaties suggests that it may have indeed attained this status . . . . [The] level of academic support coupled with recent State practice and ICJ commentary, would appear to conclusively endorse the principle's status as a norm of customary international law.<sup>153</sup>

Most commentators agree that sustainable development's environmental principles have not obtained a customary status.<sup>154</sup> However, some commentators are more optimistic, viewing the legality of sustainable development in less absolute terms: "[t]here are degrees in the legal capacity through which the concept can be applied. It might have failed the test of 'obligation', but not of 'responsibility' for environmental damage."<sup>155</sup> In this sense, environmental principles—although not binding customary rules—help shape the dialogue that informs policy and law.

Whether or not sustainable development is a legal obligation, and as we have seen this seems unlikely, it does represent a policy which can influence the outcome of cases, the interpretation of treaties, and the practice of states and international organizations, and may lead to significant changes and developments in the existing law. In that very important sense, international law does appear to require states and international bodies to take account of the objective of sustainable development, and to employ appropriate processes for doing so.<sup>156</sup>

Environmental principles, although abundant, lack the requisite uniformity for customary incorporation. Indeed, the "[m]ere repetition of soft law principles, by itself, does not result in the realization of those

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GEO. INT'L ENVTL. L. REV. 303 (1992); James E. Hickey Jr. & Vern R. Walker, *Refining the Precautionary Principle in International Environmental Law*, 14 VA. ENVTL. L. J. 423 (1995); Jacqueline Peel, *Precaution – A Matter of Principle, Approach or Process?*, 5 MELB. J. INT'L L. 483 (2004); Christopher D. Stone, *Is There a Precautionary Principle?*, 31 ENVTL. L. REP. 10790 (2001); Jon M. Van Dyke, *The Evolution and International Acceptance of the Precautionary Principle*, in BRINGING NEW LAW TO OCEAN WATERS 357 (David C. Caron & Harry N. Scheiber eds., 2004).

152. Brunneé, *supra* note 47, at 630; Van Dyke, *supra* note 151, at 357; Philippe Sands, *PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW* I 212–13 (1995).

153. Owen McIntyre & Thomas Mosedale, *The Precautionary Principle as a Norm of Customary International Law* 9 J. ENVTL. L. 221, 235 (1997).

154. Schwarz, *supra* note 83, at 138–39.

155. *Id.* at 139.

156. BIMIE ET AL., *supra* note 100, at 127.

principles.”<sup>157</sup> As for state practice, states have not generally recognized environmental principles in an “extensive and virtually uniform”<sup>158</sup> way.

The principles, cases, and commentary also do not demonstrate the requisite *opinio juris* for the creation of a customary rule. Despite the absence of the requisite state practice and *opinio juris*, these initiatives are, however, demonstrating some sense of obligation for states to act in a manner consistent with sustainable development’s environmental principles. Thus, the state practice and sense of obligation, albeit limited, is arguably demonstrating an emerging rule of customary international law from which, however, it is difficult to gauge the precise scope and content of any customary incorporation.

### *E. The Way Forward*

Unsustainable development practices are continuing because environmental protection and sustainable use of natural resources are not yet integrated into the policy of development. Thus, as we have not yet attained environmental sustainability, it is an important time to reflect on the past. The 1980s and early 1990s were a period of comparative prosperity and optimism, much of it surrounding the end of the cold war and the push towards globalization. In particular, treaty making continued prolifically, it was a time of relative western stability, and ‘green’ issues were populist. This was a perfect climate for the espousal of Rio’s environmental principles. However, “the emergence of globalization as the predominant economic trend in the 1990s set up an inevitable potential conflict with the goals of sustainable development proclaimed at Rio.”<sup>159</sup> Furthermore, we are now in a global panorama distinctly different from that prevailing at the UNCED and one in which the international community has not demonstrated the stamina required to keep the environmental principles “alive.”

The WSSD was convened in this new panorama where the challenge of implementing sustainable development is greater, given that world population, poverty, and underdevelopment are increasing; natural resources continue being used at alarming rates; and urgent environmental problems, including the greenhouse challenge, continue to cause havoc. Despite controversy surrounding achievement targets for

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157. Nicholas A. Robinson, “Colloquium: The Rio Environmental Law Treaties” *IUCN’s Proposed Covenant on Environment & Development*, 13 PACE ENVTL. L. REV. 133, 142 (1995).

158. North Sea Continental Shelf (F.R.G. v. Den.; F.R.G. v. Neth.) 1969 I.C.J. 3 (Mar. 8, 1967).

159. HUNTER ET AL., *supra* note 38, at 206.

the use of renewable energy, the WSSD can be seen as not forgetting these concerns, thereby continuing Rio's momentum.

It is now posited that the only way to strengthen the international law of sustainable development is to return to Brundtland's fundamentals. "Fixing the concept will require going back to its origins, and especially stressing the integration of economic and ecological systems while leaving it up to competent local institutions to decide how to set and pursue their own priorities."<sup>160</sup> The central message of sustainable development is that we need to use natural resources at rates where the resources replenish themselves. To do this, states must recognize that they have a moral obligation to safeguard the environmental needs of current and future generations. "Far from requiring the cessation of economic growth, it recognizes that the problem of poverty and under-development cannot be solved unless we have a new era of growth in which developing countries play a large role and reap large benefits."<sup>161</sup>

We know that to achieve sustainable development significant, legal reform is needed. "The concept of sustainable development reflects an international ideology, but an ideology requires a legal framework by which it may be put into practice."<sup>162</sup> Thus a new political commitment is necessary to transform the environmental principles into an IEL paradigm with legally binding rules: commitment to a new treaty is needed, despite critics who may question the value of adopting yet another MEA. "It is time to reaffirm the principles and duties of these widely supported soft-law statements and distil them into a clear treaty."<sup>163</sup> The adoption of soft law first followed by subsequent treaty-adoption is a well-established approach in international human rights law.<sup>164</sup> In this way the soft-law Rio Declaration and Agenda 21 can be viewed as a precursor of a UN global treaty.<sup>165</sup> Although, in making this nexus between soft and hard law instruments the Rio Declaration can be

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160. Victor, *supra* note 41, at 103.

161. WCED, *supra* note 14, at 27.

162. Susan H. Bragdon, *The Evolution and Future of the Law of Sustainable Development: Lessons from the Convention on Biological Diversity*, 8 GEO. INT'L ENVTL. L. REV. 423, 434 (1996).

163. Robinson, *supra* note 157, at 142.

164. In 1948, states adopted the non-legally binding Universal Declaration of Human Rights [UDHR], G.A. Res. 217A (III), U.N. Doc. A/RES/217A(III) (Dec. 12, 1948). It was not until 1966, however, that the terms of the UDHR were provided for in treaty. International Covenant on Civil and Political Rights [ICCPR], Mar. 23, 1976, 999 U.N.T.S. 171; International Covenant on Economic, Social and Cultural Rights, Dec. 16, 1966, 999 U.N.T.S. 171.

165. *New Treaty in the Making*, SOVEREIGNTY INTERNATIONAL, INC. (Jan./Feb. 1998), <http://sovereignty.net/p/sd/covenant.htm>.

distinguished from the Universal Declaration on Human Rights, the precursor to the twin covenants on human rights.<sup>166</sup>

Through treaty incorporation sustainable development's environmental principles can elevate to 'hard' law thereby providing mandatory obligations on states to abide by the principles. Furthermore, under international law a violation of those rules would entail state responsibility.<sup>167</sup> Despite the apparent difficulty of adopting a global treaty on sustainable development's environmental principles there is already in existence significant, albeit diverse and non-uniform, state practice allowing for integration of ecological considerations into developmental decision making. There is in addition the model treaty created by the International Union for the Conservation of Nature and Natural Resources ("IUCN"). The IUCN's Draft International Covenant on Environment and Development<sup>168</sup> (Draft Covenant) is a valuable model for a treaty on sustainable development's environmental principles. The Draft Covenant contains 72 articles organized into eleven parts. Part II of the Draft Covenant provides for fundamental principles that will assist the parties in achieving the Covenant's objective<sup>169</sup> and includes the duties to prevent<sup>170</sup> and to act with precaution,<sup>171</sup> as well as a duty to undertake EIA,<sup>172</sup> including transboundary EIA.<sup>173</sup>

The article recommends the adoption of a framework treaty supplemented by specific protocols. The framework and protocol approach is a successful model that has been extensively utilized in IEL. The framework treaty would be adopted first; it would define and reconcile the various environmental principles, as well as provide obligations on states to strengthen their national laws and policy implementing the environmental principles. The framework would then

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166. Marc Pallemarts, *International Environmental Law in the Age of Sustainable Development: A Critical Assessment of the UNCED Process*, 15 J.L. & COM. 623, 629 (1996) (citing Philippe Sands, *International Law in the Field of Sustainable Development*, 65 BRIT. Y.B. INT'L L. 303, 322 (1994)).

167. U.N. Int'l Law Comm'n, *Draft Articles on Responsibility of States for Internationally Wrongful Acts*, in *Report of the International Law Commission*, 43, U.N. Doc. A/56/10 (2001).

168. The World Conservation Union & Int'l Council of Env'tl. Law, Comm'n on Env'tl. Law, *Draft International Covenant on Environment and Development* (Env'tl. Policy & Law Paper No. 31 Rev. 2, 2004), [hereinafter *Draft Covenant*], available at [http://www.i-c-e-l.org/english/EPLP31EN\\_rev2.pdf](http://www.i-c-e-l.org/english/EPLP31EN_rev2.pdf).

169. "The objective of this Covenant is to achieve environmental conservation and sustainable development by establishing integrated rights and obligations." *Id.* at art. 1.

170. *Id.* at art. 6.

171. *Id.* at art. 7.

172. *Id.* at art. 37.

173. *Id.* at art. 33(a).

be supplemented by specific protocols on each of the environmental principles. Such a treaty regime would be similar to the EU's initiatives in promoting environmental integration, the precautionary principle, and EIA. The treaty's EIA provisions, for example, would operate in the same way that the EIA Directive has become a cornerstone principle of EU developmental law. Finally, in the *Gabčíkovo-Nagymaros* case it was noted that a treaty is not static, but may be clarified and adapted by emerging norms of environmental law.<sup>174</sup> In this way an initial obligation to conduct EIA would require a continuous monitoring of the effects a project may have, including significant transboundary impact.<sup>175</sup>

## V. CONCLUSION

During the last two decades, states have adopted treaty rules on a wide range of environmental concerns but have struggled to create rules implementing sustainable development, largely due to the concept's broad effects, uncertain meaning, and inter-disciplinary impacts. The article discussed the evolution of sustainable development and reflected on the optimism associated with espousal of its environmental principles and the subsequent loss of expectation in adopting implementing rules. Twenty-two years since "Our Common Future" and numerous global summits later, states are still trying to adopt an international legal framework implementing sustainable development's environmental principles into an integrated developmental policy. Furthermore, implementation of sustainable development's environmental principles has today been overshadowed by the new demons of maintaining security against terrorism, protecting trade and healthy economies, and avoiding global financial recession. Fighting the new 'demons' has delayed creating a legal framework integrating the environmental principles of sustainable development.

The article also assessed the complex question of customary incorporation of sustainable development and its environmental principles. The principles have in varying degrees been included in domestic legislation where policy has driven their inclusion into legislative objects. The principles have also been included in many regional and global treaties. However, the case law and academic writings suggest that measuring any customary status from these initiatives is difficult. Despite the environmental principles often being positively reiterated, they do not reflect the requisite uniformity of state practice and *opinio juris* to be reflective of customary international law.

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174. See *Gabčíkovo-Nagymaros Project*, *supra* note 130, at 115.

175. *Id.*

Furthermore, global environmental problems are more appropriately dealt with by creating specific treaty rules rather than through loose and general customary rules.

Thus, given the problems in measuring levels of customary obligation, sustainable development's environmental principles need to be formally incorporated into an MEA reflecting a set of binding international rules; they cannot be destined simply as aspirational. Such a treaty would both obligate states to implement sustainable development's environmental principles, as well as reconcile the principles of integration, prevention, precaution, and EIA, all of which seek to identify potential environmental effects alongside economic and social values. Despite ambiguities over meaning and legal content, and if backed by political commitment and incorporated into treaty, sustainable development and its constituent environmental principles will in time emerge as strong legal rules of IEL.

# Preliminary Comments on the WTO Seals Products Dispute: Traditional Hunting, Public Morals and Technical Barriers to Trade

Xinjie LUAN<sup>\*</sup> & Julien CHAISSE<sup>\*\*</sup>

*Eyes open, I can't fall asleep,  
As if my heart were heavy with grief.  
——The Book of Songs (1122-256 B.C., China)<sup>1</sup>*

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## ABSTRACT

This paper explores the current dispute between the European Union (“EU”) and Canada over the import of Canadian seal products into the European market. The *EU Seal Ban Regulation* (“SBR”) is aimed at preventing seal hunting in Canada. Canada has protested the provisions of the SBR, claiming that they violate the EU’s commitment to free trade in areas such as Most Favored Nation (“MFN”) treatment, national treatment, elimination of quantitative restrictions, and avoidance of unnecessary obstacles to trade. The complaint lodged by Canada under the World Trade Organization (“WTO”) Dispute Settlement Mechanism (“DSM”) sidesteps the issue of cruelty that is fundamentally at the heart of this dispute. The partial sympathy mechanism and exclusion mechanism in the consultation and panel procedures under the current WTO DSM appear to be weighted in favor of the complainant, making it difficult for the defending party to present a comprehensive case. The risk assessment under the Technical Barriers to Trade Agreement (“TBT”) is different from that under the Sanitary and Phytosanitary Measures Agreement (“SPS”), and this disparity also tends to work in favor of the complainant. For these reasons, it is the authors’ opinion that Canada will prevail when the dispute proceeds to the Panel and Appellate Body procedures under the WTO DSM.

## I. INTRODUCTION

Seal hunting remains an important part of Canada's cultural heritage and is a way of life for the Inuit and other residents of Atlantic Canada, Quebec, and the Far North.<sup>2</sup> More importantly, the right of indigenous peoples to secure their livelihood by hunting is recognized by the United Nations Declaration on the Rights of Indigenous Peoples. Canada's Department of Fisheries and Oceans ("DFO") has asserted that seal hunting provides important seasonal income and food to this group.<sup>3</sup> Indigenous Peoples' income from sealing represents between twenty-five and thirty-five percent of their total annual income.<sup>4</sup> It would therefore be extremely difficult for Canadian authorities to put an end to seal hunting in Canada.<sup>5</sup>

The commercial benefits of seal hunting have long been recognized in Canada. Commercial seal hunting in Canada's Arctic waters is attested to have occurred at least as early as the sixteenth century.<sup>6</sup> However, commercial seal hunting along Canada's Atlantic coast only reached prominent proportions in the 1980s.<sup>7</sup> Canada is now one of the world's leading commercial sealing nations. Subsistence seal hunting by the Inuit accounted for only about 20,000 animals between 2003 and 2005, and according to the European Union ("EU"), represents only three percent of the total number of seals killed by Canadian sealers.<sup>8</sup> In 2005 alone,

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2. Int'l Centre for Trade & Sustainable Dev. [ICTSD], *Canada, Norway Launch WTO Complaint over EU Seal Ban*, BRIDGES TRADE BIORES, Nov. 13, 2009, at 3.

3. *Overview of the Atlantic Seal Hunt 2006-2010*, § 2, DEP'T OF FISHERIES AND OCEANS [DFO] OF CANADA, <http://www.dfo-mpo.gc.ca/fm-gp/seal-phoque/reports-rapports/mgtplan-plangest0610/mgtplan-plangest0610-eng.htm> (last updated July 18, 2008) [hereinafter *Overview of Atlantic Seal Hunt*].

4. *Socio-economic Importance of the Seal Hunt*, DFO OF CANADA, <http://www.dfo-mpo.gc.ca/fm-gp/seal-phoque/reports-rapports/facts-faits/facts-faitsSE-eng.htm> (last updated Aug. 1, 2008) [hereinafter *Socio-economic Importance of the Seal Hunt*].

5. See, e.g., Robert Galantucci, *Compassionate Consumerism within the GATT Regime, Can Belgium's Ban on Seal Products Imports be Justified Under Article XX*, 39 CAL. W. INT'L L.J. 281, 284-85 (2009).

6. *Overview of Atlantic Seal Hunt*, *supra* note 3, § 2.

7. See Barbara Lelli & David E. Harris, *Seal Bounty and Seal Protection Laws in Maine, 1872 to 1972: Historic Perspectives on a Current Controversy*, 46 NAT. RESOURCES J. 881, 889, 909 (2006).

8. The Canadian seal hunt has enraged many, prompting several U.S. Senators to urge President Bush to pressure Canada into prohibiting the hunt. See Jason Parent, *Animal Salvage: Cost-Effective Methods for the Preservation of Marine Life*, 14 BUFF. ENVTL. L.J. 117, 137 (2006). In the case of the European Union, see Declaration on Banning Seal Products in the European Union, PARL. EUR. DOC. TA (2006) 0369 (Apr. 20, 2006).

sealers in Atlantic Canada and Quebec killed 329,829 harp seals, with a value of “exports of identifiable seal products” amounting to \$15.43 million.<sup>9</sup> More seriously, the 2003-2005 Total Allowable Catch (“TAC”) of 975,000 was exceeded by 10,000 animals. The quota for Canada’s seal harvest in 2009 still reached 280,000 animals. The sealing harvest’s growth and the strong financial incentives demonstrate that the commercial hunting of seals in Canada is motivated by strong economic demand.

About one-third of Canadian seal products are exported to the EU market. Whereas Canada has laid great stress on its concern for conservation, parading its commitment to the sustainable use of seal resources, the EU has deplored the use of inhumane and cruel seal hunting methods. Against this background,<sup>10</sup> the European Parliament issued a Declaration banning seal products in the European Union (the “Declaration”) in September of 2006. The Declaration called for a full ban on all trade in harp and hooded seal products, apart from limited products from traditional Inuit community hunting.<sup>11</sup> On September 16, 2009, the European Parliament and the Council of the EU (“EC”) adopted Regulation No. 1007/2009 of the European Parliament and of the EC Council of September 16, 2009 on trade in seal products (the “Seal Ban Regulation” or SBR) to ban the import, export and sale of all seal products.<sup>12</sup> The SBR has been in force since November 20, 2009, and its Article 3 (titled “Conditions for placing on the market”) took effect on August 20, 2010.<sup>13</sup>

On November 2, 2009, Canada requested World Trade Organization (“WTO”) consultations on the EU seal products ban under the *EU Seal Ban Regulation* (“SBR”) and subsequent amendments, replacements, extensions, implementing measures and other related measures.<sup>14</sup> In

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9. *Overview of Atlantic Seal Hunt*, *supra* note 3, § 4.

10. Bans on seal products have a long history under the EU import regime since it was already prohibited by a directive adopted by the EU in 1983. See Maurizio Gambardella, *European Union Ban on Seal Products: Some Customs and WTO Open Questions*, *GLOBAL TRADE & CUSTOMS J.*, Apr. 2010, at 145.

11. See Declaration on Banning Seal Products in the European Union, *supra* note 8, § H.1.

12. Council Regulation 1007/2009, art. 3, 2009 O.J. (L 286).

13. On the EU decision-making process, see Julien Chaisse, *Adapting the European Community Legal Structure to the International Trade*, *EUR. BUS. L. REV.*, Nov.-Dec. 2006, at 1615–21.

14. Request for Consultations by Canada, *European Communities—Measures Prohibiting the Importation and Marketing of Seal Products*, WT/DS400/1 (Nov. 4, 2009). Following the complaint lodged by the Canada, Norway also requested consultation with the EC concerning the EC seal regime. See Request for Consultations by Norway, *European Communities – Measures Prohibiting the Importation and*

Canada's view, the SBR aims to prohibit the importation and marketing in the customs territory of the EC of all seal products, and it "appears to be inconsistent with the EC's obligations under the General Agreement on Tariffs and Trade ("GATT") 1994 and the Agreement of Technical Barriers to Trade Agreement."<sup>15</sup> Canada's request for consultations is linked to an existing dispute over bans by Belgium and the Netherlands on seal products, also initiated by Canada.<sup>16</sup> Canada hopes that "all issues related to seal bans in Europe will be resolved through the new consultations."<sup>17</sup> This is perhaps a forlorn hope, as the EU is seeking an outright ban on seal products through the adoption of common harmonized rules "that are directly applicable throughout the EU."<sup>18</sup> The SBR is an important step towards the goal of ending "a thoroughly documented, consistent and unacceptable level of cruelty in industrial-scale seal hunting."<sup>19</sup>

The structure of this paper is as follows. Section 2 enumerates the specific provisions that Canada alleges have been violated by the EU. Section 3 demonstrates how the flawed nature of the WTO Dispute Settlement Mechanism ("DSM") prevents the EU's real concerns under the SBR from being addressed in the request for consultations and the terms of reference of the panel. Section 4 discusses Canada's specific complaints. Section 5 expounds on the specific contentions between the EU and Canada; the concerns raised by Canada are trade-related, while the EU focuses on the issue of cruelty to animals. The material reasons why the EU bans seal products are also discussed thoroughly in Section 5. Section 6 considers the implications of "public morals" and the optimal instrument for protection of public morals concerning the dispute over the EU's SBR. Section 7 examines the differences between the risk assessment mechanisms in the Agreement on Technical Barriers to Trade ("TBT Agreement")<sup>20</sup> and the Agreement on the Application of Sanitary

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*Marketing of Seal Products*, WT/DS401/1 (Nov. 10, 2009).

15. Request for Consultations by Canada, *supra* note 14.

16. Regarding the Belgian legislation in particular, see Galantucci, *supra* note 5, at 281–312.

17. ICTSD, *Canada Launches WTO Complaint over EU Seal Ban*, BRIDGES WEEKLY TRADE NEWS DIGEST, Nov. 4, 2009 available at <http://ictsd.org/i/news/bridgesweekly/58533/>.

18. *European Union Vote Would Lead to Ban on Seal Products*, J. OF THE EUR. VEG. UNION, 2009, Issue 1, at 11, available at <http://www.euroveg.eu/lang/fr/news/magazine/pdf/2009-1.pdf>.

19. Press Release, U.S. Humane Soc'y, European Parliament Declaration Calls for Ban on Harp and Hooded Seal Products (Sept. 6, 2006), available at [http://www.hsus.org/press\\_and\\_publications/press\\_releases/european\\_parliament\\_declaration\\_ban\\_seal\\_products.html](http://www.hsus.org/press_and_publications/press_releases/european_parliament_declaration_ban_seal_products.html) [hereinafter U.S. Humane Soc'y].

20. See Agreement on Technical Barriers to Trade, Apr. 15, 1994, Marrakesh

and Phytosanitary Measures (“SPS Agreement”);<sup>21</sup> section 7 also critically reviews why the sealing ban dispute sprang from the outcomes of the risk assessment under both Agreements. Section 7 then demonstrates that “risk characterization emanating from a risk assessment exercise is likely to be the outcome of a combination of scientific evidence and value judgments”.<sup>22</sup> Finally, section 8 predicts the outcome of the dispute between Canada and the EU.

## II. THE ISSUES RAISED IN CANADA’S COMPLAINT

In its request for consultations, Canada lodged a complaint against, inter alia, the EU’s SBR. Canada argues that the SBR “prohibits the importation and the placing on the market in the customs territory of the EC of all seal products,” and is therefore inconsistent with the EC’s obligations under the TBT Agreement, the GATT 1994, and the Agriculture Agreement. In Canada’s view, the EU’s SBR is in breach of the following articles: (1) Articles 2.1 and 2.2 of the TBT Agreement, (2) Articles I:1, III:4 and XI:1 of GATT 1994, and (3) Article 4.2 of the Agriculture Agreement.

Article 2.1 of the TBT Agreement and Articles I:1 and III:4 of GATT 1994 deal with the principles of Most Favored Nation (“MFN”) and national treatment. Article XI:1 of the GATT 1994 and Article 4.2 of the Agriculture Agreement both relate to quantitative restrictions. Article 2.2 of the TBT Agreement is concerned with the issue of “unnecessary obstacles to trade,” which is the most sensitive issue in the seal ban dispute.

The main point requiring clarification is whether the EU’s SBR can be classified merely as a technical regulation or more broadly as a TBT measure. As the EC-Asbestos dispute panel observed, whether a measure is a “technical regulation” is a threshold issue. This is “because the outcome of this issue determines whether the TBT Agreement is applicable”.<sup>23</sup>

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Agreement Establishing the World Trade Organization, Annex 1A, Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, 33 I.L.M. 1125, ¶ 1 (1994) [hereinafter TBT Agreement].

21. See Agreement on the Application of Sanitary and Phytosanitary Measures, Apr. 15, 1994, 1867 U.N.T.S. 493 [hereinafter SPS Agreement].

22. Lee Ann Jackson & Marion Jansen, *WTO Staff Working Paper on Risk Assessment in the International Food Safety Policy Arena—Can the Multilateral Institutions Encourage Unbiased Outcomes?*, at 8, ERSD-2009-01 (Jan. 2009).

23. Appellate Body Report, *European Communities—Trade Description of Sardines*, WT/DS231/AB/R, ¶ 175, (Sept. 26, 2002).

Annex 1 to the TBT Agreement defines a technical regulation as a:

Document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.<sup>24</sup>

According to the analysis of the Appellate Body in the EC-Asbestos dispute, a document must meet three criteria to fall within the definition of a “technical regulation” as understood by the TBT Agreement.<sup>25</sup> First, the document must apply to an identifiable product or group of products. Second, the document must demonstrate one or more characteristics of the product, such as features, attributes, or other distinguishing marks. Third, compliance with the product characteristics must be mandatory.<sup>26</sup> In the light of the rule of precedent applicable in the WTO DSM, we will ascertain whether the SBR is a TBT Agreement measure according to these three criteria.

Article 3.1 of the SBR, titled “Conditions for placing on the market”, provides that:

The placing on the [EU] market of seal products shall be allowed only where the seal products result from hunts traditionally conducted by Inuit and other indigenous communities and contribute to their subsistence.<sup>27</sup>

In other words, this provision is applied to seal products (meeting the first criterion above) traditionally hunted by the Inuit and other indigenous communities (meeting the second). The third mandatory criterion is certainly met because the preamble of the SBR states that the SBR aims at harmonizing “the rules across the Community as regards commercial activities concerning seal products, and thereby prevent the disturbance of the internal market in the products concerned, including products equivalent to, or substitutable, for seal products.”<sup>28</sup> Consequently, the SBR meets all the criteria for a technical regulation under the TBT Agreement.

The EU's SBR self-evidently restricts the import of seal products from Canada and other countries. Compared to the definition of the technical regulation in the TBT Agreement, the sealing “traditionally

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24. TBT Agreement, *supra* note 20, ¶ 1.

25. See Appellate Body Report, *supra* note 23, ¶¶ 66–70.

26. *Id.* ¶¶ 66–70, 175–76.

27. Seal Ban Regulation, *supra* note 12, at art. 3.1.

28. *Id.* at pmbl. (8).

conducted by Inuit and other indigenous communities” is fully a production method that “may deal exclusively with terminology, symbols, packaging, marking or labelling requirements.”<sup>29</sup>

In sum, the SBR is first and foremost a technical regulation. Indeed, in the eyes of its opponents, it constitutes a TBT. Finn Karlsen, the Minister of Fisheries, Hunting and Agriculture of the Greenland Home Rule Government, said in his letter dated September 11, 2006, to Commissioner Mr. Marlos Kyprianou of the European Commission that: “A ban on the import of sealskin is a Technical Barrier to Trade.”<sup>30</sup>

However, in accordance with a determination of the Dispute Settlement Body (“DSB”) in the previous dispute of *EC–Biotech Products*, measures intended for the protection of the environment on the level of animal life and health can be classified as SPS measures.<sup>31</sup> The ban on commercial seal hunting under the SBR might be considered as protecting the environment on the level of animal life and health. Moreover, the panel in the case of *EC–Biotech Products* found that “a measure applied to prevent damage to “biodiversity” may qualify as a measure applied to protect animal or plant life or health”<sup>32</sup> from risks thereby arising, and thus “risks to biodiversity are covered by the SPS Agreement.”<sup>33</sup> In consequence, the SBR can be conceptualized as a multi-purpose measure and, in some respects, resembles an SPS measure.

The matters raised in the Canadian complaint do not address the EU’s real concerns. Therefore, the final findings and recommendations made by the Panel and Appellate Body, in particular focus on the points enumerated by Canada above, will further complicate this dispute, particularly as the rulings and recommendations of the panel and Appellate Body are obviously in favor of Canada.

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29. TBT Agreement, *supra* note 20.

30. Letter from Finn Karlsen, Minister of Fisheries, Hunting and Agriculture, Greenland, to Marlos Kyprianou Commissioner of the European Commission (Sept. 11, 2006), at 7, *available at* [http://www.inatsisartut.gl/upload/labu/sporgsmal%202006/nr.%202006-79,%20jbfir\\_s%C3%A6lskind\\_dk\\_svar\\_bilag1\\_eng.doc](http://www.inatsisartut.gl/upload/labu/sporgsmal%202006/nr.%202006-79,%20jbfir_s%C3%A6lskind_dk_svar_bilag1_eng.doc).

31. For instance, pursuant to the *EC — Biotech Products* panel, measures intended for the protection of environment on the level of animal or plant life and health (or other environmental damage if it results from entry, establishment or spread of pests) are classified as SPS measures. *See* Lukasz Adam Gruszczynski, *The SPS Agreement within the Framework of WTO Law: The Rough Guide to the Agreement’s Applicability* 10 (Eur. Univ. Inst. Law Dep’t, Working Paper, June 28, 2009), *available at* <http://ssrn.com/abstract=1152749>.

32. Panel Report, *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, ¶ 7.372, WT/DS291/R-WT/DS293/R (Sept. 29, 2006) [hereinafter *EC – Biotech Products*].

33. *Id.*; *see also* Gruszczynski, *supra* note 31, at 6.

### III. FLAWS IN THE WTO DISPUTE SETTLEMENT PROCEDURES

The flaws in the WTO Understanding on Rules and Procedures Governing the Settlement of Disputes (the "Dispute Settlement Understanding" or "DSU")<sup>34</sup> can be summarized as follows:

(1) There are contradictions between transparency requirements, broad participation of interested parties and prompt settlement of disputes;

(2) There is no integrated mechanism for the application of panel and Appellate Body determinations;

(3) The DSU is bound to certain provisions in the nature of principle and declaration, which give no reference to the specific contents nor to the applying and assessing ways; and

(4) The WTO's self-contained dispute settlement system makes the performance of the DSB rigescent.<sup>35</sup>

Article 4.2 of DSU of the WTO states that the respondent shall take account of "any representations" made by the complainant in its request for consultation, and the request for consultations submitted by the complainant is treated as the foundation for the whole range of dispute settlement procedures under the DSU.<sup>36</sup> In other words, when WTO dispute procedures are invoked, the initiative lies with the complainant. By contrast, the respondent's concerns may not be fully reflected in the complainant's consultation request.

#### *A. The Partial Sympathy Mechanism in Consultation Procedures*

The DSU emphasizes the importance of consultations between or among relevant parties to the dispute so as to secure a prompt resolution. Article 3.7 of the DSU provides that a solution mutually acceptable to

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34. Understanding on Rules and Procedures Governing the Settlement of Disputes, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401 [hereinafter Dispute Settlement Understanding].

35. For more details, see Xinjie Luan, *DSM Reforms and China's Proposal-Taking "Right" as a Keystone*, 37 J. WORLD TRADE 1097 (2003).

36. The WTO legislative and judicial functions contribute to ensure members' compliance with international disciplines. For a discussion of the political features and underpinnings of these two functions, see Julien Chaisse & Debashis Chakraborty, *Implementing WTO Rules through negotiations and Sanctions: The Role of Trade Policy Review Mechanism and Dispute Settlement System*, 28 U. PA. J. INT'L ECON. L. 153, 153-85 (2007).



the parties to a dispute “is clearly to be preferred.”<sup>37</sup> Article 4.5 further stipulates that before resorting to further action under the DSM, WTO Members shall attempt to obtain a satisfactory adjustment of the matter in the course of consultations.<sup>38</sup> Indeed, a mutually agreed solution between the EU and Canada through consultations would be conducive to the prompt settlement of the SBR dispute, thereby avoiding the time-consuming panel and appellate proceedings under the current DSM. However, the precondition for reaching a mutually agreed solution is to give due regard to, or even directly demonstrate, the contentious points or common concerns in Canada’s request for consultations.

Canada, the complainant in the SBR dispute, has the right to “exercise its judgement as to whether action under these procedures would be fruitful”<sup>39</sup> before bringing the case. Naturally, it would be preferable if the dispute could be settled by consultation. In this regard, the specific consulted matters are the most important part of the request for consultations. Moreover, any request for consultations shall “give the reasons for the request, including identification of the measures at issue and an indication of the legal basis for the complaint.”<sup>40</sup> However, it is up to Canada to decide which matters to bring forward in its request for consultations, while the EU is required merely to “accord sympathetic consideration to and afford adequate opportunity for consultation.”<sup>41</sup> Under this kind of partial “sympathy” mechanism, the key issues of cruelty and inhumanness in the Canadian seal hunt, which form the justification for the EU’s SBR, can be excluded from the consultations under the current WTO DSM, and the EU has no opportunity to adjust or supplement the issues proposed by the complainant.

### *B. The Exclusion Mechanism in Panel Procedures*

As a general rule, any request for the establishment of a panel should include the reasons for the request, including “identification of the measures at issue and an indication of the legal basis for the complaint.”<sup>42</sup> The request is the same as that set forth in the consultation proceedings in Article 4.4 of the DSU. The matters complained of by one party to the dispute are also explicitly listed in the request for the establishment of the panel. More seriously, the terms of reference of the

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37. Dispute Settlement Understanding, *supra* note 34, at art. 3.7.

38. *Id.* at art. 4.5.

39. *Id.* at art. 3.7.

40. *Id.* at art. 4.4.

41. *Id.* at art. 4.2.

42. *Id.* at art. 4.4.

panel precisely rely on these matters enumerated in the panel establishment request. Therefore, there is a possibility that the complainant's concerns are reflected at full stretch, whereas the concerns of the complained party are thoroughly neglected.

*1. Insufficient Weight is Given to the Defendant's  
Concerns*

In the absence of a mutually agreed upon solution to the SBR dispute in the consultations between the EU and Canada, Canada—rather than the EU—is entitled to request the establishment of a panel.<sup>43</sup> Canada also has the discretion to determine the scope of the matters to be addressed by the panel, which it must list in the request for the establishment of the panel. Complainants are unlikely to include matters prejudicial to themselves in such cases. The EU's stance counts for little, even though the EU is convinced that its SBR is justified by public morals, animal welfare, and environmental concerns.<sup>44</sup> Hence, a proposition of “protection of public morals,” advanced by Diana Wallis, a rapporteur for the Committee on the Internal Market and Consumer Protection, would be invalid and not brought into the standard terms of reference of the panel, unless such a concrete issue as whether the EU's full ban on trade in seal products is necessary to protect public morals<sup>45</sup> has been clearly listed in the request for the establishment of the panel:

As regard a possible WTO Panel, the rapporteur believes a ban can be justified under article XX(a) of the GATT (protection of public moral), since moral concerns of the European public have been widely demonstrated and documented and there is no viable less trade-restrictive measure available which would address these concerns in an adequate way. . . .<sup>46</sup>

If the EU concerns similarly appear in the specific terms of reference of the panel, other than standard terms of reference,<sup>47</sup> the final findings and determinations of the Panel or the Appellate Body might be beneficial to the EU, at least to a certain extent. It is not clear whether the EU has noted this point.

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43. *Id.* at art. 4.3.

44. *Report on the Proposal for a Regulation of the European Parliament and of the Council Concerning Trade in Seals Products*, at 33-34, COM (2008) 0469 (Mar. 5, 2009).

45. Simon Lester, *The WTO Seal Products Dispute: A Preview of the Key Legal Issues*, 14 AM. SOC'Y OF INT'L L. INSIGHTS 1, 2 (Jan. 13, 2010), available at <http://www.asil.org/files/insight100113pdf.pdf>.

46. Dispute Settlement Understanding, *supra* note 34, at 34.

47. *Id.* at art. 7.3.

## 2. *Undue Weight is Given to the Complainant's Concerns*

Article 6.2 of the DSU provides the form and contents of the request for the establishment of a panel:

2. The request for the establishment of a panel shall be made in writing. It shall indicate whether consultations were held, identify the specific measures at issue and provide a brief summary of the legal basis of the complaint sufficient to present the problem clearly. In case the applicant requests the establishment of a panel with other than standard terms of reference, the written request shall include the proposed text of special terms of reference.<sup>48</sup>

This provision seems to give the complainant the right to supplement the complaint without considering the consultations that have already taken place. In other words, the matters that appear in the request for the establishment of the panel may be not the same as those in the request for consultations. The standard terms of reference of the panel can also be replaced by special terms of reference. Even so, the EU may still have no opportunity to add its own specific concerns to the request for the establishment of a panel.

Article 7.1 of the DSU defines a panel's terms of reference as follows:

To examine, in the light of the relevant provisions in (name of the covered agreement(s) *cited by the parties to the dispute*), the matter referred to the DSB by (*name of party*) in document . . . and to make such findings as will assist the DSB in making the recommendations or in giving the rulings provided for in that/those agreement(s).<sup>49</sup>

Here, the terms of reference of panels are referred to as the "standard terms of reference," which require that the panels "address the relevant provisions in any covered agreement or agreements *cited by the parties to the dispute*."<sup>50</sup> Note should be taken of such an expression as "cited by the parties to the dispute."<sup>51</sup> Certainly, the defendant (*i.e.*, the EU in the seal products dispute) has been accorded the de jure right to raise any point relating to the dispute when the terms of reference of the panel are being drawn up. Also, Article 7.3 of the DSU explicitly states that: "In establishing a panel, the DSB may authorize its Chairman to draw up the terms of reference of the panel *in consultation with the*

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48. *Id.* at art. 6.2 (emphasis added).

49. *Id.* at art. 7.1 (emphasis added).

50. *Id.* at art. 7.2.

51. *Id.*

*parties to the dispute.*"<sup>52</sup> If this were indeed the case, practical terms, rather than standard panel terms of reference, would have been agreed upon and the EU's justifications for banning the import of seal products would have also been taken into consideration in Canada's request for the establishment of a panel.

Nevertheless, the "name of party" under the aforesaid provision of standard terms of reference only represents the complainant(s), in this case Canada. The defendant is not accorded the right to refer its matters of concern directly to the DSB. Nor is it possible for the EU to raise its grounds of argument in Canada's written request for the establishment of panel. Simply put, procedures for a request for consultations and a request for the establishment of a panel in respect to the current DSM of the WTO are unreasonably weighted in favor of the complainant.

Here, we take the case of *EC-Biotech Products* as an example. On May 14 and 15 of 2003, the United States, Canada and Argentina respectively requested consultations with the EC with regard to certain measures taken by the EU and its member-states affecting products of biotechnology. After failing to reach a mutually satisfactory resolution of the matters under dispute, Canada requested that "a panel be established at the meeting of the Dispute Settlement Body to be held on 18 August 2003."<sup>53</sup> But special regard should be paid to Canada's additional requirement that "the panel have *the standard terms of reference* as set out in Article 7.1 of the DSU."<sup>54</sup>

The DSB established a single panel at its meeting on August 29, 2003. The document WT/DS292/17 became, as the Canadians had undoubtedly hoped, an integral part of the standard terms of reference of the panel, which reads:

To examine, in the light of the relevant provisions of the covered agreements cited by the United States in document WT/DS291/23, Canada in document WT/DS292/17 and Argentina in document WT/DS293/17, the matter referred to the DSB by the United States, Canada and Argentina in those documents, and to make such findings as will assist the DSB in making the recommendations or in giving the rulings provided for in those agreements.<sup>55</sup>

The focus is solely on Canadian concerns, though Canada's request for the establishment of a panel goes into greater detail than its request

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52. *Id.* at art.7.3 (emphasis added).

53. Request for the Establishment of a Panel by Canada, *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, WT/DS292/17 (Aug. 8, 2003).

54. *Id.* (emphasis added).

55. *EC –Biotech Products*, *supra* note 32, at 2.

for consultations. These matters mainly deal with some provisions of the TBT Agreement and the SPS Agreement. Indeed, the EU's suspension of applications consideration for approval of biotech products and granting of approval for products have to comply with EU commitments under both TBT and SPS agreements. The specific provisions include, respectively:

(1) TBT Agreement:

- Request for consultations: Articles 2.1, 2.2, 2.8, 5.1, and 5.2;
- Request for the establishment of a panel: Articles 2.1, 2.2, 2.8, 2.9, 2.11, 2.12, 5.1, 5.2.1, 5.2.2, 5.2.3, 5.6, and 5.8;<sup>56</sup>

(2) SPS Agreement:

- Request for consultations: Articles 2.2, 2.3, 5.1, 5.5, 5.6, 7, 8, and Annexes B and C;
- Request for the establishment of a panel: Articles 2.2, 2.3, 5.1, 5.2, 5.5, 5.6, 7, 8, and paragraphs 1, 2 and 5 of Annex B, and paragraphs 1(a), 1(b), 1(c), and 1(e) of Annex C of the SPS Agreement.<sup>57</sup>

Thus, it is evident that the matters referred to the panel are not precisely the same ones covered in the request for consultations. As with the current SBR dispute, Canada also used the legal options available under the DSM to circumscribe the scope of the panel's determination by cherry-picking its most favorable complaints. These complaints included the EU's breach of the principles of MFN treatment, elimination of quantitative restrictions, avoidance of unnecessary obstacles to trade, etc., as stated below.

#### IV. ANALYSIS OF CANADA'S COMPLAINTS

As argued above, the rights conferred under the well-established DSU to the EU and Canada in the SRB dispute are non-equivalent, thereby making it almost impossible to achieve the goal of maintaining "a proper balance between the rights and obligations" of both sides.<sup>58</sup> Turning to the points raised by Canada in its request for consultations, the EU may indeed have breached the corresponding provisions in the TBT and other relative agreements, and Canada may therefore have a *prima facie* case for filing a consultation request for the withdrawal of the SRB. After all, "the first objective of the dispute settlement mechanism is usually to secure the withdrawal of the measures

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56. Request for the Establishment of a Panel by Canada, *supra* note 53.

57. *Id.*

58. Dispute Settlement Understanding, *supra* note 34, art. 3.3.

concerned if these are found to be inconsistent with the rules of any of the covered agreements.”<sup>59</sup> The following section further discusses these issues.

### *A. Canada's Trade-Related Arguments*

Like many other WTO Agreements, the TBT Agreement stipulates the principles of both MFN and national treatment. Article 2.1 of the TBT Agreement requires that “in respect of their technical regulations, products imported from the territory of any Member be accorded treatment no less favorable than that accorded to like products of national origin.”<sup>60</sup> A similar statement can be found in Article III:4 of the GATT 1994, which reads in part:

4. The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use.

Article 2.1 of the TBT Agreement also provides that the products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favorable than that accorded “to like products originating in any other country.”<sup>61</sup> This provision is also in compliance with the principle of “General Most-Favoured-Nation Treatment” under Article I:1 of the GATT 1994, which provides that:

1. With respect to customs duties and charges of any kind imposed on or in connection with importation or exportation or imposed on the international transfer of payments for imports or exports, and with respect to the method of levying such duties and charges, and *with respect to all rules and formalities in connection with importation and exportation*, and with respect to all matters referred to in paragraphs 2 and 4 of Article III, any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties.<sup>62</sup>

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59. *Id.* at art. 3.7.

60. TBT Agreement, *supra* note 20.

61. *Id.*

62. General Agreement on Tariffs and Trade, Apr. 15, 1994, 1867 U.N.T.S. 187, at art. I:1 (emphasis added) [hereinafter GATT 1994].

As far as “elimination of quantitative restrictions” is concerned, a full ban on imports can be treated as one kind of quantitative restriction under Article XI:1 of GATT 1994 and Article 4.2 of the Agriculture Agreement. Article XI:1 of the GATT 1994 and Article 4.2 of the Agriculture Agreement read, respectively:

1. No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licenses or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party.<sup>63</sup>

2. Members shall not maintain, resort to, or revert to any measures of the kind which have been required to be converted into ordinary customs duties . . . .<sup>64</sup>

According to these provisions, it is obvious that quantitative restrictions, including a tough ban on importation, shall not be prepared, adopted, or applied in any manner.

Does the EU’s SBR conflict with the principles of MFN treatment, national treatment, or the elimination of quantitative restrictions? Both MFN and national treatment are designed to prevent discrimination against a particular region or country. The EU’s SBR does no such thing. The SBR defines both “seal” and “seal product.”<sup>65</sup> “Seals” are defined as specimens of all species of pinnipeds; and “seal product” means all products; either processed or unprocessed, deriving or obtained from seals; including meat, oil, blubber, organs, raw fur skins and fur skins; tanned or dressed; including fur skins assembled in plates, crosses and similar forms, and articles made from fur skins.<sup>66</sup> As the SBR does not define “seal” and “seal product” based on geographical factors, and its provisions apply to all seal products from all countries, the SBR cannot reasonably be held to discriminate against a particular region or country.

“Inuit exceptions” to the total ban contained in the SBR are contentious, as they seem to conflict with the principle of MFN treatment. It is well known that the Inuit and other aboriginal communities have a traditional sealing culture, and their seal products

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63. *Id.* at art. XI:1.

64. Agreement on Agriculture, Apr. 15, 1994, art. 4.2, Marrakesh Agreement Establishing the World Trade Organization, Annex 1, 1867 U.N.T.S. 410 (1994) (entered into force Jan. 1, 1995).

65. Seal Ban Regulation, *supra* note 12, at art. 2.

66. *Id.*

may be traded for cultural, educational, or ceremonial purposes.<sup>67</sup> In effect, the "Inuit exception" demonstrates that the EU respects the culture, tradition, and subsistence lifestyle of Inuit and other aboriginal communities. Those who object to the "Inuit exception" aim not to eliminate it but rather to extend that preference to other areas and countries, subject to the restrictions of the SBR on trade in seal products. Therefore, it is not clear that the Inuit exception is in breach of the principle of MFN treatment. If the exception were put aside, then a ban on trade in seal products, applied equally to all EU Member States and third parties, would certainly not be discriminatory.

As to the national treatment, the preamble of the SBR states:

(13) In order to ensure that the harmonised rules provided for in this Regulation are fully effective, those rules should apply not only to seal products originating from the Community, but also to those introduced into the Community from third countries.<sup>68</sup>

Compared to the general national treatment provided by Article 2.1 of the TBT Agreement and III:4 of the GATT 1994, the national treatment here can be called "adverse national treatment," *i.e.*, seal products either originating in the EU or exported from third countries are granted identical, non-preferential treatment. Even so, this provision *per se* complies with the principle of national treatment.

As mentioned above, a full ban on seal products can be treated as one kind of quantitative restriction. That is certainly the thrust of the SBR. For instance, Article 3 of the SBR stipulates that seal products can only be placed on the EU market in very few exceptional circumstances:

1. The placing on the market of seal products shall be allowed only where the seal products result from hunts traditionally conducted by Inuit and other indigenous communities and contribute to their subsistence...

2. By way of derogation from paragraph 1:

(a) The import of seal products shall also be allowed where it is of an occasional nature and consists exclusively of goods for the personal use of travellers or their families. The nature and quantity of such goods shall not be such as to indicate that they are being imported for commercial reasons;

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67. *CANADA EU Vote Could Lead to Tight Ban on Seal Products*, RES. CTR. FOR THE RIGHTS OF INDIGENOUS PEOPLES, <http://www.galdu.org/web/index.php?odas=3730&giella1=eng> (last updated Mar. 3, 2009).

68. Seal Ban Regulation, *supra* note 12, at pmbl. (13).



(b) The placing on the market of seal products shall also be allowed where the seal products result from by-products of hunting that is regulated by national law and conducted for the sole purpose of the sustainable management of marine resources. Such placing on the market shall be allowed only on a non-profit basis. The nature and quantity of the seal products shall not be such as to indicate that they are being placed on the market for commercial reasons.<sup>69</sup>

Article 3 of the SBR is clearly inconsistent with the principle of “elimination of quantitative restrictions” under the GATT 1994 and the Agriculture Agreement.<sup>70</sup> The issue of “protection of public morals” was not included in the request for consultations and is unlikely to be considered in any subsequent request for the establishment of a panel. Therefore, in the SBR dispute, “protection of public morals” cannot be treated as a “general exception” under Article XX of the GATT 1994. As a result, the provisions for the “elimination of quantitative restrictions” will work against the EU.

### *B. The Principle of Avoidance of Unnecessary Obstacles to Trade*

As far as the principle of avoidance of unnecessary obstacles to trade is concerned, Article 2.2 of the TBT Agreement states:

2.2 Members shall ensure that technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade. For this purpose, technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create. Such legitimate objectives are, inter alia: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment...

Is the outright ban on seal products in the EU more trade-restrictive than necessary to fulfil the objective of forbidding cruel sealing in Canada? Can the full ban be replaced by less trade-restrictive labeling requirements? The preamble to the SBR deals squarely with these issues:

(3) Those [seal] products are sold commercially on different markets, including the Community market. Given the nature of those products, it is difficult or impossible for consumers to distinguish them from

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69. Seal Ban Regulation, *supra* note 12, at art. 3.

70. GATT 1994, *supra* note 62, at art. XI:1; Agreement on Agriculture, *supra* note 64, at art. 4.2.

similar products not derived from seals.<sup>71</sup>

(7) The existence of such diverse [national] provisions [governing the trade, import, production and marketing of seal products] may further discourage consumers from buying products not made from seals, but which may not be easily distinguishable from similar goods made from seals, or products which may include elements or ingredients obtained from seals without this being clearly recognisable, such as furs, Omega-3 capsules and oils and leather goods.<sup>72</sup>

As it is difficult or impossible for consumers to distinguish the seal products from similar products not derived from seals, attaching identifying or descriptive labels might meet the demands of the consumers. In this regard, the SBR further states:

(12) It is also clear that other forms of harmonised rules, such as labelling requirements, would not achieve the same result. Additionally, requiring manufacturers, distributors or retailers to label products that derive wholly or partially from seals would impose a significant burden on those economic operators, and would also be disproportionately costly in cases where seal products represent only a minor part of the product concerned. Conversely, the measures [of seal product ban] contained in this Regulation will be easier to comply with, whilst also reassuring consumers.<sup>73</sup>

More seriously, in the EU's view, "given the conditions in which seal hunting occurs, consistent verification and control of hunters' compliance with animal welfare requirements is not feasible in practice or, at least, is very difficult to achieve in an effective way."<sup>74</sup> In other words, poor weather conditions make effective monitoring and enforcement by the EU's responsible authorities virtually impossible. It is well recognized, however, that the management of origin is at the core of the labeling system. Logically, the EU has no alternative but to impose a full ban on trade in seal products with a limited exemption for Inuit and other aboriginal communities. Indeed, in 2008, rapporteur Diana Wallis Member of the European Parliament ("MEP") proposed an alternative labeling scheme, but her alternative was rejected by fellow MEPs on the Parliament's internal market committee.<sup>75</sup>

Regardless, it is not clear whether implementing labeling

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71. Seal Ban Regulation, *supra* note 12, at pmbl. (3).

72. *Id.* at pmbl. (7).

73. *Id.* at pmbl. (12).

74. *Id.* at pmbl. (11).

75. Jennifer Rankin, *MEPs Approve Ban on Trade in Seal Products*, EUROPEANVOICE.COM (May 5, 2009), <http://www.europeanvoice.com/article/2009/05/meps-approve-ban-on-trade-in-seal-products/64783.aspx>.

requirements would have been sufficient to end to cruel and inhumane sealing methods.<sup>76</sup>

In any case, the provisions complained of by Canada are not those that primarily concern the EU, and which it intends to resolve under the SBR. As a result, this dispute will inevitably proceed to the succeeding panel procedures under the DSU.

## V. POINTS OF CONTENTION BETWEEN THE EU AND CANADA

As mentioned earlier, Canada lodged a compliant challenging the EU's ban on the trade, import, production, and marketing of seal products.<sup>77</sup> Predictably, the Canadian complaint avoids the issue of the cruelty involved in hunting seals. This issue, however, is at the heart of the EU's concerns and was the main motivation for its decision to introduce the SBR.

### *A. The Aims of the EU'S SBR*

According to Article 3 (titled "Conditions for placing on the market") of the SBR, only the following seal products are allowed to be placed on the EU market:

- (i) Products that "result from hunts traditionally conducted by Inuit and other indigenous communities and which contribute to their subsistence;"
- (ii) A product that "is of an occasional nature and consists exclusively of goods for the personal use of travellers or their families," and the nature and quantity of such goods "shall not be such as to indicate that they are being imported *for commercial reasons*;" and
- (iii) Products that "result from by-products of hunting that is regulated by national law and conducted for the sole purpose of the sustainable management of marine resources," and furthermore, "such placing on the market shall be allowed only on a non-profit basis and the nature and quantity of the seal products shall not be such as to indicate that they are being placed on the market *for*

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76. This is the key point of the SBR dispute, and Section 6 of this paper, *infra*, considers this issue in more detail.

77. See *supra* Section 1.

*commercial reasons.*"<sup>78</sup>

These provisions reflect the objective of the SBR, namely "the elimination of obstacles to the functioning of the internal market by harmonising national bans concerning the trade in seal products at [the] Community level."<sup>79</sup> The rationale behind the EU's decision to ban seal products was clearly set out in the preamble 1 to the SBR:

(1) *Seals are sentient beings that can experience pain, distress, fear and other forms of suffering.* In its declaration on banning seal products in the European Union, the European Parliament requested the Commission immediately to draft a regulation to ban the import, export and sale of all harp and hooded seal products. In its resolution of 12 October 2006 on a Community Action Plan on the Protection and Welfare of Animals 2006–2010, the European Parliament called on the Commission to propose a total import ban on seal products. In its Recommendation 1776 (2006) of 17 November 2006 on seal hunting, the Parliamentary Assembly of the Council of Europe recommended inviting the Member States of the Council of Europe practising seal hunting to *ban all cruel hunting methods which do not guarantee the instantaneous death, without suffering, of the animals, to prohibit the stunning of animals with instruments such as hakapiks, bludgeons and guns, and to promote initiatives aimed at prohibiting trade in seal products.*<sup>80</sup>

Preambles 4 and 11 also make reference to the cruelty involved in hunting seals:

(4) The hunting of seals has led to expressions of serious concerns by members of the public and governments sensitive to animal welfare considerations due to the pain, distress, fear and other forms of suffering which the killing and skinning of seals, as they are most frequently performed, cause to those animals.<sup>81</sup>

(11) Although it might be possible to kill and skin seals in such a way as to avoid unnecessary pain, distress, fear or other forms of suffering, given the conditions in which seal hunting occurs, consistent verification and control of hunters' compliance with animal welfare requirements is not feasible in practice or, at least, is very difficult to achieve in an effective way, as concluded by the European Food Safety Authority on 6 December 2007.<sup>82</sup>

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78. Seal Ban Regulation, *supra* note 12, at art. 3 (emphasis added).

79. *Id.* at pmbl. (21).

80. *Id.* at pmbl. (1) (emphasis added).

81. *Id.* at pmbl. (4).

82. *Id.* at pmbl. (11).

Preambles 5, 9, and 10 also point out that “animal welfare” considerations should be fully contemplated.<sup>83</sup> Based on the language used in these preambles, the SBR was introduced by the EU as an animal welfare measure. By banning the import of Canadian seal products, the EU seeks to demonstrate its distaste for the cruel methods used in commercial seal hunting in Canada.

A similar conclusion can be inferred from the Declaration, one of the most important legislative foundations of the SBR. The Declaration states that the European Parliament requested that the EU commission “immediately draft a regulation to ban the import, export and sale of all harp and hooded seal products”, because “more than one and a half million harp seal pups have been slaughtered in the North West Atlantic over the last four years and the vast majority of these animals were less than three months old” and “a team of international veterinarians concluded that 42% of the slaughtered seals they examined may have been skinned whilst still conscious.”<sup>84</sup> Unusually, 425 members of the European Parliament endorsed the Declaration, the highest number of signatories to any Declaration in the history of the European Parliament.<sup>85</sup>

The SBR represents an important first step by the EU towards the ultimate goal of the elimination of large-scale commercial seal hunting. In this respect, the EU has aligned itself with the United States and Mexico, who have also banned all trade in marine mammal products.

### *B. Canada’s Justification for Seal Hunting*

Canada refuses to recognize that its commercial sealing operations are “inherently cruel” and “inhumane,” and has insisted that “the EU’s decision to ban the importation of seal products is based neither on science nor on facts.”<sup>86</sup> Canada also stresses the economic importance of the seal hunt. Gail Shea, Canada’s Minister of Fisheries and Oceans, has promised that the Canadian government “will continue to defend the interest and livelihoods of Canadian sealers.”<sup>87</sup> This clearly demonstrates the divergence in attitudes toward seal hunting between the EU and Canada.

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83. *Id.* at pmbl. (5), (9), (10).

84. Declaration on Banning Seal Products in the European Union, *supra* note 8, ¶ A.

85. Press Release, U.S. Humane Soc’y, European Parliament Resolution to Ban Harp and Hooded Seal Products Achieves Historic Record Number of Signatories, (Sept. 18, 2006), available at [http://www.hsus.org/press\\_and\\_publications/press\\_releases/european\\_parliament\\_resolution\\_ban\\_seal\\_products\\_record\\_signatories.html](http://www.hsus.org/press_and_publications/press_releases/european_parliament_resolution_ban_seal_products_record_signatories.html).

86. ICTSD, *Canada Launches WTO Complaint over EU Seal Ban*, *supra* note 17.

87. *Id.*

### 1. *The Economic Value of Commercial Seal Hunting*

On August 1, 2008, the Canadian DFO stated: "While the value of the seal hunt may appear negligible to some, it is tremendously valuable to those individuals who use it as a source of income at a time of year when economic opportunities are limited in many remote, coastal communities."<sup>88</sup> A bit further in the same document, Canadian DFO underscored that "[m]ost sealers are fishers who participate in other fisheries. The seal hunt provides them with the income needed to pay expenses such as insurance and fishing gear."<sup>89</sup>

The Canadian government's concern for the maintenance and development of its sealing industry seems to be based on the considerations that "[r]emote fishing communities offer few employment opportunities" and "[m]any sealers would be forced to leave their homes if unable to hunt seals."<sup>90</sup> Sealing can provide for more than 6,000 sealers from Canada's rural communities with "as much as 35% of a sealer's annual income," or approximately €15,750.<sup>91</sup> The Canadian government seems indifferent to the argument that "[g]lobal markets for seal products are fast closing, and an end is now in sight for Canada's commercial seal hunt."<sup>92</sup> Canada's commercial seal hunt has been described as "the world's largest slaughter of marine mammals."<sup>93</sup>

A report from the Canadian DFO entitled "Public Views on Commercial Hunting and Current Federal Seal Hunting Policy" was released on February 23, 2005.<sup>94</sup> This report released the results of a national survey conducted as part of the Ipsos-Reid Express Poll, a weekly omnibus poll of 1,000 Canadian adults nationwide.<sup>95</sup> It is apparent that Canada treated the survey as providing statistically reliable results for every major region of Canada.<sup>96</sup>

Responses to the survey were collected by telephone interviews during the period from February 18–21, 2005. Two sealing-related questions were included in the Topline Questionnaire:

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88. *Socio-economic Importance of the Seal Hunt*, *supra* note 4, at 1.

89. *Id.*

90. *The Canadian Seal Hunt - A Way of Life*, DFO OF CANADA, [http://www.dfo-mpo.gc.ca/fm-gp/seal-phoque/seal\\_hunt-chasse\\_phoque-eng.htm](http://www.dfo-mpo.gc.ca/fm-gp/seal-phoque/seal_hunt-chasse_phoque-eng.htm) (last updated Aug. 26, 2008).

91. *Id.*

92. U.S. Humane Soc'y, *supra* note 19.

93. *Id.*

94. *Public Views on Commercial Hunting and Current Federal Seal Hunting Policy*, DFO OF CANADA (Feb. 23, 2005), [http://www.dfo-mpo.gc.ca/por-rop/fp\\_858\\_seal-eng.htm](http://www.dfo-mpo.gc.ca/por-rop/fp_858_seal-eng.htm) [hereinafter *Public Views*].

95. *Id.*

96. *Overview of Atlantic Seal Hunt*, *supra* note 3, § 6.5.4.

1. Using a scale of strongly agree, somewhat agree, somewhat disagree, strongly disagree, please tell me whether you agree or disagree with the following statement: Hunting animals for commercial purposes is an acceptable practice, *when it is carried out in a humane manner*?

2. Under the current federal policy, seal hunting is only permitted under the following conditions: no nursing seals are hunted, *the hunt is done in a humane manner* and quotas are set to ensure that seal populations are sustained. In general, would you say that you strongly support, somewhat support, somewhat oppose, or strongly oppose the current policy?<sup>97</sup>

In answer to the first question, fifty-five percent of surveyed Canadians either “strongly agreed” (nineteen percent) or “somewhat agreed” (thirty-six percent), that “hunting animals for commercial purposes is an acceptable practice when it is carried out in a humane manner.”<sup>98</sup> By contrast, forty-four percent either “somewhat disagreed” (sixteen percent) or “strongly disagreed” (twenty-eight percent).<sup>99</sup>

In answer to the second question, sixty percent of Canadians either “strongly supported” (twenty-two percent) or “somewhat supported” (thirty-eight percent) the current federal policy for hunting seals (which is qualified by the restriction that “the hunt is done in a humane manner”).<sup>100</sup>

It seems to be true that a large majority of Canadians support seal hunting. However, what should be mentioned is that thirty-nine percent either “strongly opposed” (twenty-three percent) or “somewhat opposed” (sixteen percent) Canada’s current seal hunting policy, regardless of the qualification of humane hunting.<sup>101</sup> It is presumable that more Canadians would have opposed commercial seal hunting in Canada had it not been for the “humane hunting” qualification to the questions asked in the Topline Questionnaire.

In contrast to Canada’s general support for sealing, public opinion polls conducted in two member states of the EU in the same year showed high levels of opposition to commercial seal hunting. For example, according to an Opinion Research Business poll conducted for Respect for Animals in November 2005, seventy-nine percent of United Kingdom residents believed that the annual Canadian seal hunt should be stopped

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97. *Public Views*, *supra* note 94 (emphasis added).

98. *Id.*

99. *Id.*

100. *Id.*

101. *Id.*

and seventy-three percent supported an import ban on seal products.<sup>102</sup> In the Netherlands, a remarkable ninety-five percent of respondents polled considered the Canadian commercial seal hunt to be unacceptable, and ninety-two percent supported a Netherlands ban on the trade in seal products.<sup>103</sup>

Clearly, public opinion in certain EU member states and in Canada differs widely on the issue of banning commercial seal hunting. As stated above, it is likely that more Canadians would have opposed commercial seal hunting in Canada had it not been for the "humane hunting" qualification to the questions asked in the Topline Questionnaire. Even so, the fact that forty-four percent of Canadians polled opposed seal hunting regardless of this qualification suggests that Canadians are reluctant to adopt Canada's old, well-established seal hunt policy.<sup>104</sup>

## 2. *The Sustainability of Sealing*

Under the current sealing mechanism, the Canadian government treats seal hunting as an integral part of its policy for the sustainable use of fisheries resources, with conservation as the paramount consideration. On March 15, 2006, Canada's DFO announced the multi-year Atlantic Seal Hunt Management Plan (2006–2010) ("Management Plan").<sup>105</sup> The objective of the Management Plan is to "facilitate a market-driven hunt that will enable sealers to maximize their benefits without compromising conservation."<sup>106</sup> This results in the current sealing mechanism, with the Canadian government treating seal hunting as an integral part of its policy for the sustainable use of fishery resources and with conservation as the paramount consideration.

Broadly speaking, sustainability means "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."<sup>107</sup> It requires "the unification of economics and ecology in international relations."<sup>108</sup> There is no reason to doubt the Canadian government's commitment to sustainability in its

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102. *Respect for Animals Canadian Seal Hunt Survey*, OPINION RES. BUS. (Nov. 15, 2005), [http://www.opinion.co.uk/Newsroom\\_details.aspx?NewsId=83](http://www.opinion.co.uk/Newsroom_details.aspx?NewsId=83).

103. *Fast Facts on Canada's Commercial Seal Slaughter*, HUMANE SOC'Y INT'L (CANADA) (Feb. 25 2006), [http://hsi.org/issues/protect\\_seals/research/seal\\_hunt\\_facts.html](http://hsi.org/issues/protect_seals/research/seal_hunt_facts.html).

104. *Public Views*, *supra* note 94.

105. *Overview of Atlantic Seal Hunt*, *supra* note 3, § 1.

106. *Id.* § 1.2.

107. The World Commission on Environment and Development [WCED], *Our Common Future*, Chapter 2: *Towards Sustainable Development*, para. 1, U.N. Doc. No. A/42/427 (Aug. 4, 1987), available at <http://www.un-documents.net/ocf-02.htm>.

108. *Id.* at para. 80.



management of the seal hunt. Since 1995 the Canadian government has introduced certain hunting management measures, including: quantitative restrictions, a requirement for a licence, and a Conservation Harvesting Plan (“CHP”).<sup>109</sup> During the past three decades the harp seal population has nearly tripled in size.<sup>110</sup>

Currently, Canada uses an Objective-Based Fisheries Management (“OBFM”) approach to manage the seal population in the interests of a market-based hunt. As far as the OBFM approach for harp seals is concerned, it specifically sets out the applicable conditions of certain management measures in accordance with the seal population, as represented in Figure 1 on the next page.<sup>111</sup>

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109. *Overview of Atlantic Seal Hunt*, *supra* note 3, § 2.

110. *Id.* § 1.2.

111. *Id.*

FIGURE 1: APPLYING CONDITIONS OF CERTAIN MANAGEMENT MEASURES

	Highest known abundance (HKA)	5.82 million
More flexible	Below 70% of HKA	4.07 million
More stringent	80% chance*	Below 4.07
Very stringent	Below 50% of HKA	2.91 million
Closure**	Below 30% of HKA	1.75 million
Management measure	Applying condition	Specific seal population

Source: Compiled by the authors.

\* "80% chance" means more stringent management measures would be taken if they have at least an eighty percent chance of bringing the seal population back above that seventy percent level within ten years in the event that it falls below 4.07 million animals;

\*\* "Closure" means closure to all harp seal hunting if the seal population drops to the level of thirty percent (1.75 million) of its highest known abundance.

As Canada's DFO has said, the Management Plan "provides a management framework to support the long-term, sustainable commercial and subsistence hunt of seals on the Atlantic coast."<sup>112</sup> Moreover, this hunt provides sealers, aboriginal, and northern residents of Atlantic Canada with an opportunity to "use adult and self-reliant juvenile seals to provide economic benefits and food for their families and communities."<sup>113</sup> It is thus demonstrated that conservation and

112. *Id.* § 6.2.

113. *Id.*

sustainability, under the Canadian OBFM approach, does not ban seal hunting per se.

Canada's OBFM approach applied in Canada's fishery may enrich the connotation of the foregoing "sustainability," because this management model uses the specific control rules and reference points to establish management measures.<sup>114</sup> However, reading between the lines of Canada's 2006–2010 Management Plan, we can find whether the precautionary approach or the ecosystem-based management that Canada has taken note of serves the ends of ensuring "hunt opportunities at the present time and in the future" and of facilitating "a market-driven hunt."<sup>115</sup> This is utterly in conflict with the EU's position of thorough termination of any commercial sealing activity, except that which is "traditionally conducted by Inuit and other indigenous communities and contributes to their subsistence."<sup>116</sup> In the EU's eyes, Canada's misleading ends makes its entire means unjustified.

### 3. *The Issue of Humaneness*

Compared with the detailed OBFM approach, relatively little space is given in the existing Management Plan to make the Canadian seal hunt more humane.<sup>117</sup> However, the Plan does invoke the provisions with respect to humane hunting methods in the Canadian Marine Mammal Regulations ("MMR"):

Section 8 of the *MMR* stipulates that persons can only dispatch marine mammals in a manner designed to do so quickly. The *MMR* also stipulates that seals may be killed only by the use of high powered rifles, shotguns firing slugs, clubs, and hakapiks. Further requirements pertaining to the size, weight, muzzle velocity, and gauge of weapon are specified in subsection 28(1) of the *MMR*.<sup>118</sup>

Canada also amended its legislation on hunting practices in 2003 to establish "a clearer determination of death before bleeding and skinning," and defined such a determination as that recommended by the

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114. According to *Overview of Atlantic Seal Hunt*, reference points are pre-established population levels that trigger specific management actions if they are reached. Control rules are specific, pre-established actions that are triggered at certain reference points. DFO is committed to maintaining a high likelihood that the population remains above the seventy percent reference point. Control rules include measures such as a lower TAC, changes to season length, and area closures. *Id.* § 1.2.

115. *Id.* §§ 1, 1.2.

116. See Seal Ban Regulation, *supra* note 12, at art. 3.1.

117. *Overview of Atlantic Seal Hunt*, *supra* note 3, § 6.3.

118. *Id.*

Canadian Veterinary Medical Association ("CVMA").<sup>119</sup> In 2005, the Independent Veterinarians' Working Group ("IVWG") on the Canadian Seal Hunt examined seal hunting methods and made recommendations to further improve humaneness in the hunt as detailed below.<sup>120</sup>

"Humaneness" is commonly defined as "the quality of compassion or consideration for others (people or animals)."<sup>121</sup> It is difficult to discern this quality in the methods used in large-scale commercial sealing. Even though seals are supposedly given a fast death in bulk, they may still suffer pain, distress, and fear. It is also difficult to see how this kind of hunting avoids the abuse and exploitation of animals, which is at the heart of the philosophy of animal welfare.<sup>122</sup> Respect for the principal of humaneness underlies the EU's SBR, which is conceptualized as an animal welfare measure.

Canada has also accused the EU of using misleading information supplied by interest groups. Gail Shea, Canada's Minister of Fisheries and Oceans, said that the Government of Canada would continue to counter the misinformation campaign by the anti-seal hunt lobby groups. As far as the DFO is concerned, the hunting of seals in Canada is subject to strict and extensive control measures, and the use of hakapiks and rifles is a humane method of killing seals.<sup>123</sup> A study conducted by well-respected veterinarians found that the number of seals killed by inhumane methods accounted for less than two percent of the total catch.<sup>124</sup> Furthermore, the Canadian authorities "are constantly working on ensuring that all seals are killed as humanely as possible."<sup>125</sup>

However, seals are part of a complex marine ecosystem, and they prey on fish and invertebrates. The DFO has conducted studies for several years under the Management Plan to obtain "a better understanding of predation on fish and invertebrate stocks by seals and

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119. *Id.*

120. *Id.*

121. *Humaneness*, THE FREE DICTIONARY, <http://www.thefreedictionary.com/humaneness> (last visited Nov. 1, 2010).

122. In Saunders Comprehensive Veterinary Dictionary, animal welfare is defined as "the avoidance of abuse and exploitation of animals by humans by maintaining appropriate standards of accommodation, feeding and general care, the prevention and treatment of disease and the assurance of freedom from harassment, and unnecessary discomfort and pain." *Animal Welfare*, THE FREE DICTIONARY, <http://medical-dictionary.thefreedictionary.com/Animal+welfare> (last visited Nov. 1, 2010), citing SAUNDERS COMPREHENSIVE VETERINARY DICTIONARY (3d ed. 2007).

123. *Overview of Atlantic Seal Hunt*, *supra* note 3, § 6.3.

124. GREENLAND DEP'T OF FISHERIES, HUNTING & AGRIC., MANAGEMENT AND UTILIZATION OF SEALS IN GREENLAND 15 (Nov. 2006).

125. *Id.*

how seals interact with other components of their ecosystem.”<sup>126</sup> These studies have lent some technical support for Canada’s commercial seal hunt. Specifically, reducing the internal competitiveness of the seals is one of the reasons why seals are hunted in Canada.<sup>127</sup>

## VI. PUBLIC MORALS AS A LEGAL ISSUE

Undoubtedly, the main goal of the EU’s SBR is protection of public morals, including animal welfare. The meaning and scope of this term has yet to be explored in practice. It has mainly been invoked in state practice to restrict importation or exportation of products banned under religious rules, in particular alcoholic beverages and meat. Similarly, restrictions of pornographic products operate under this provision.<sup>128</sup> The SBR’s protection of public morals incorporated in the Declaration is evident in two aspects: (1) the Inuit exception, and (2) the elimination of inhumane seal hunting practices.

As said at the outset of this paper, the initial document proposing to prepare, adopt, and apply the SBR is the Declaration. The Declaration is a crucial step in obtaining legislation concerning a seal products ban. As a programmatic document, the Declaration’s proposed SBR should not impose a restriction on traditional Inuit seal hunting. Considering “the hunt is an integral part of the culture and identity of the members of the Inuit society, and as such is recognised by the United Nations Declaration on the Rights of Indigenous Peoples,” the SBR provides an exemption for seal products harvested by Inuit and other aboriginal hunters.<sup>129</sup> That is to say, the seal products from Inuit and other indigenous communities are permitted in European markets.

Regardless, public feeling in the EU is hostile to seal hunting in any form. According to Ms. McCarthy MEP, Chair of the European Parliament’s Committee on the Internal Market and Consumer Protection (IMCO), “A clear majority of citizens across the European Union are horrified by the cruel clubbing to death of thousands of seals every year. They do not want these products on sale in the EU and today the IMCO

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126. *Overview of Atlantic Seal Hunt*, *supra* note 3, § 5.4.

127. *Id.* § 5.3.1.

128. To date, the provision has never been brought before a GATT 1947 or WTO panel. It is of particular significance in the context of increasing linkage of trade and human rights as it may serve as a basis of trade restrictions motivated by human rights considerations. See SIMON LESTER ET AL., *WORLD TRADE LAW: TEXT, MATERIALS AND COMMENTARY* 389-90 (2008).

129. Seal Ban Regulation, *supra* note 12, at pmbl. (14).

Committee has backed citizens' demands for a ban."<sup>130</sup> Yet, a moody and sentimental—rather than data-based—argument inevitably leaves a loophole. Furthermore, there is a different viewpoint even in the EU that the Declaration concerning a seal hunt ban will not achieve the animal welfare considerations intended by its authors.<sup>131</sup> Diana Wallis, a rapporteur in the IMCO Committee, said she “feels it important that, at the draft report stage, the Parliament takes the opportunity to consider fully the policy options and their consequences. This is particularly so in relation to the Internal Market consequences and the International or *WTO ramifications of any proposed ban*.”<sup>132</sup>

GATT 1994 makes it possible for a country to impose quantitative restrictions on trade for “protecting public morals” and/or “protecting human, animal or plant life or health.”<sup>133</sup> The EU's SBR has been justified in this way.<sup>134</sup> However, in order to justify the sealing ban on the grounds of the protection of public morals and animal welfare, it must be shown that the outright bans are all “necessary” to achieve the protection aims. Unfortunately, no ban has been systematically and effectively tested in the EU.

A labeling system might offer an alternative to an outright ban and it would probably be less offensive in the eyes of the WTO DSB than a total ban. However a labeling system would be difficult to implement effectively because consistent verification and control of hunters' compliance with animal welfare requirements under the EU labeling system “is not feasible in practice or, at least, is very difficult to achieve in an effective way.”<sup>135</sup> Most commercial seal hunting takes place outside the EU, in Greenland, Namibia, Canada and Russia, and is therefore difficult for the EU to monitor. Although a stringent ban on all trade in seals and pinnipeds (*i.e.*, sea lions and walruses) would be more effective than the labeling option, it is unlikely to succeed given the difficulties the EU would face in monitoring seal hunting. The EU would find it difficult to decide whether a labeling scheme would impose fewer restrictions on the trade in seal products than a total ban. Generally speaking, labeling is a relatively modest instrument and indirectly impinges upon seal hunting practices through market demand and

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130. Press Release, Internal Mkt. and Consumer Prot. Comm. of Eur. Parliament, Internal Market and Consumer Protection Committee Chair Announces Strong Committee Vote in Favour of a Ban on Seal Products in the EU (Mar. 2, 2009).

131. *Report on the Proposal for a Regulation of the European Parliament and of the Council Concerning Trade in Seals Products*, *supra* note 44, at 17.

132. *Id.* at 28 (emphasis added).

133. GATT 1994, *supra* note 62, at art. XX.

134. *See generally* Galantucci, *supra* note 5, at 281–312.

135. Seal Ban Regulation, *supra* note 12, at pmbl. (11).

consumer pressure.

Finally, there is no guarantee that EU consumers would respond as desired to the introduction of a labeling scheme. The EU consumers might indeed decide only to buy products originating from seals that were dispatched in a humane manner as opposed to those seal products that do not meet the “humaneness standard.” However, they might equally well decide to shun all seal products.<sup>136</sup> As a result, a labeling system cannot be considered as a sufficient and satisfactory alternative to the ban that remains the only way for the EU to achieve its goal.

## VII. COMPLEXITY OF THE ASSESSMENT OF RISKS

The dispute between the EU and Canada on the banning of seal products deals with a complex issue of risk assessment. Risk assessment is used to “characterize the nature and magnitude of health risks to humans (e.g., residents, workers, recreational visitors) and ecological receptors (e.g., birds, fish, wildlife).”<sup>137</sup> Thus, risk assessment is primarily a rational scientific basis for regulatory action, supported by scientific evidence. Logically, it should not be a policy exercise involving social value judgments of political bodies.<sup>138</sup> However, assessing the sufficiency of scientific evidence “is not a simply scientific task but it also has a normative dimension where judgments of the experts reflecting their attitude toward particular risks (less or more cautious) and values of their community play an important role.”<sup>139</sup> It

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136. On May 4, 2009, the Humane Society International (HSUS) stated that millions of Europeans, Members of European Parliament (MEPs) and a Qualified Majority of EU Member States “all agree the only way to stop the cruelty is to stop these [seal] products from being placed on the EU market,” and the HSUS called for the MEPs’ vote on the plenary session for a strong prohibition on seal product trade with a slogan: “MEPs! MAKE HISTORY: STOP THE TRADE. END THE CRUELTY.” For details, see *Ban the Cruel Seal Trade*, HUMANE SOC’Y INT’L (May 4, 2009), available at [http://www.hsus.org/about\\_us/humane\\_society\\_international\\_hsi/seal\\_trade\\_ban/press\\_room/europe\\_news/vote\\_yes\\_this\\_week.html](http://www.hsus.org/about_us/humane_society_international_hsi/seal_trade_ban/press_room/europe_news/vote_yes_this_week.html).

137. *Basic Information on Risk Assessment*, U.S. ENVTL. PROTECTION AGENCY, <http://epa.gov/riskassessment/basicinformation.htm#arisk> (last updated Aug. 19, 2010).

138. The Appellate Body rejected the Panel’s view that risk assessment is not a “policy” exercise involving social value judgments made by political bodies. For details, see Appellate Body Report, *European Communities – Measures Concerning Meat and Meat Products*, XI: A, WT/DS26/AB/R, WT/DS48/AB/R (Jan. 16, 1998) (*adopted* Feb. 13, 1998).

139. See Adam Lukasz Gruszczynski, *SPS Measures Adopted in Case of Insufficiency of Scientific Evidence - Where Do We Stand after EC-Biotech Products Case?*, in 2 *ESSAYS ON THE FUTURE OF THE WORLD TRADE ORGANIZATION - THE WTO JUDICIAL SYSTEM: CONTRIBUTIONS AND CHALLENGES* 91, 139 (Julien Chaisse & Tiziano

seems that the factor of social value judgments has also been soaked into the risk assessment of both the EU and Canada.

As we will demonstrate, the different procedures under the TBT-RA and the SPS-RA tend to work in Canada's favor. Risk assessment always incorporates four steps, *i.e.*, hazard identification, hazard characterization, exposure assessment, and risk characterization.<sup>140</sup> The importance of risk assessment in the dispute over the EU's SBR lies in the requirement that the implementation of the SBR must have regard for the results of the EU's risk assessment.<sup>141</sup> Conducting a risk assessment, particularly in the inhospitable arctic weather of northern Canada, is a difficult process for the EU, and even for the Canadian government; yet, such an assessment of risks is necessary to define the scope of the issue under dispute and the possible options open to both parties.

#### *A. Divergence of Risk Assessment Regimes Under the TBT and SPS Agreements*

Risk assessment under the TBT Agreement ("TBT-RA") differs somewhat from that under the SPS Agreement ("SPS-RA"), even though the SPS-RA was "negotiated in the Uruguay Round as a companion to the TBT Agreement."<sup>142</sup>

Article 2.2 of the TBT Agreement deals with the issue of risk assessment related to technical regulations, which provides that in assessing "the risks of non-fulfilment" of a legitimate objective such as national security requirements, the prevention of deceptive practices, protection of human health or safety, animal or plant life or health, or the

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Balmelli eds., 2008).

140. Codex Alimentarius Commission, Joint Food & Agric. Org. [FAO]/World Health Org. [WHO] Food Standards Program, *Working Principles for Risk Analysis for Food Safety for Application by Governments*, at 5, CAC/GL 62-2007 (1<sup>st</sup> ed. 2007). For a discussion of the risk analysis process, see Lukasz Gruszczynski, *Risk Management Policies under the WTO Agreement on the Application of Sanitary and Phytosanitary Measures*, 3 ASIAN J. OF WTO & INT'L HEALTH L. & POL. 261, 267-68 (2008).

141. Article 5.1 of the Agreement on Sanitary and Phytosanitary Measures reads that:

1. Members shall ensure that their sanitary or phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations.

SPS Agreement, *supra* note 21, at art. 5.1.

142. Ichiro Araki, *China and the Agreement on Technical Barriers to Trade* 4 (RIETI Discussion Paper Series 02-E-008, July 2002).



environment, the “relevant elements of consideration are, *inter alia*: available scientific and technical information, related processing technology or intended end-uses of products.”<sup>143</sup> Pursuant to this provision, the risks refer to those materially created by the defendant (the EU in the seal products dispute) who does not fulfill one or more of these legitimate objectives in the preparation, adoption, or application of technical regulations.<sup>144</sup> Of course, the risks assessed under the TBT-RA originate *pro forma* from the imperfect technical regulations.

By contrast, the definition of the SPS-RA differs from that of the TBT-RA. If a member adopts and operates a more restrictive measure not conforming to a corresponding international standard, the member is held to conduct a risk assessment and to base the measure on sufficient scientific evidence (with the exception of the precautionary principle).<sup>145</sup> The SPS-RA, by definition, means:

[T]he evaluation of the likelihood of entry, establishment or spread of *a pest or disease* within the territory of an importing Member according to the sanitary or phytosanitary measures which might be applied, and of the associated potential biological and economic consequences; or the evaluation of the potential for adverse effects on human or animal health arising from the presence of additives, contaminants, toxins or disease-causing organisms in food, beverages or feedstuffs.<sup>146</sup>

In other words, the risk-related SPS-RA is:

(a) to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;

(b) to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs;

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143. SPS Agreement *supra* note 21, at art. 2.2.

144. *Id.*

145. Article 3.3 of the SPS Agreement states that:

3. Members may introduce or maintain sanitary or phytosanitary measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by measures based on the relevant international standards, guidelines or recommendations, if there is a scientific justification, or as a consequence of the level of sanitary or phytosanitary protection a Member determines to be appropriate in accordance with the relevant provisions of paragraphs 1 through 8 of Article 5.

SPS Agreement, *supra* note 21, at art. 3.3.

146. SPS Agreement, *supra* note 21, Annex A (emphasis added).

(c) to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or

(d) to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests.<sup>147</sup>

Obviously, the risks under the SPS Agreement are those that the technical regulations are designed to eliminate. However, Article 2.2 of the TBT Agreement further stipulates that “[i]n assessing such risks, relevant elements of consideration are, inter alia: *available scientific and technical information*, related processing technology or intended end-uses of products.”<sup>148</sup> This provision is at least in partial compliance with the basic principle set forth in Article 2.2 of the SPS Agreement, which reads:

Members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without *sufficient scientific evidence*, except as provided for in paragraph 7 of Article 5.<sup>149</sup>

That is to say, all WTO members must establish SPS measures on the basis of an appropriate assessment of the actual risks involved, and in the assessment of risks, account should be taken of available scientific evidence, relevant processes and production methods, relevant ecologic and environmental conditions, etc.<sup>150</sup>

It is thus clear that both kinds of risk assessment under the SPS Agreement and TBT Agreement seem to follow the same principles but actually diverge by the purpose they are serving.

Special regard should be paid to Article 5.7 of the SPS Agreement, which states:

7. In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of *available pertinent information*, including that from

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147. *Id.*

148. TBT Agreement, *supra* note 20, at art. 2.2 (emphasis added).

149. SPS Agreement, *supra* note 21, at art. 2.2. For a commentary, see Andrew T. F. Lang, *Provisional Measures Under Article 5.7 of the WTO's Agreement on Sanitary and Phytosanitary Measures: Some Criticisms of the Jurisprudence So Far* (London Sch. of Econ. Legal Studies Working Paper No. 11/2008, Nov. 11, 2008) (emphasis added).

150. See Caroline E. Foster, *Precaution, Scientific Development and Scientific Uncertainty Under the WTO Agreement on Sanitary and Phytosanitary Measures*, 18 REV. EUROPEAN CMTY. & INT'L ENVTL. L. 50, 51–52 (2009).

the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.<sup>151</sup>

The thrust of this provision is very similar to that in Article 6.8 of the Agreement on Implementation of Article VI of the GATT 1994, where the latter prescribes that anti-dumping determinations may be made on the basis of the best information available (“BIA”).<sup>152</sup> In respect to this provision, the EU is probably on weak ground because it is difficult for it to demonstrate that it has performed a satisfactory risk assessment; particularly as fashionable concerns such as environmental protection and ecological diversity are nearly always given prominence in the assessment of risks.<sup>153</sup>

### *B. Risk Assessment Based On Scientific Evidence*

A risk assessment, whether for a TBT measure or for a SPS measure, must be based on sufficient scientific evidence.<sup>154</sup> In other words, the assessment of risks, particularly risks dealing with sensitive ecosystems and biodiversity, is the first step for the related task force to prepare, adopt, and adapt a TBT or SPS regulation.

In certain cases, only by enforcing a full ban based on available scientific evidence can the aims of protecting natural environment, biodiversity, and/or public morals be achieved. Nevertheless, “basing on scientific evidence” per se is an abstract and ongoing concept. Indeed, a hot debate over scientific evidence arises in the SBR dispute. In Canada’s opinion, a lack of scientific information in the EU’s de facto, ill-formed assessment of risks makes the EU’s arguments for implementing the SBR untenable.

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151. SPS Agreement, *supra* note 21, at art. 5.7 (emphasis added).

152. Marrakesh Agreement Establishing the World Trade Organization, Annex IA: Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994, art. 6.8, Apr. 15, 1994, 1868 U.N.T.S. 145.

153. For instance, risk assessment is widely used in decisionmaking concerning the release of genetically modified (GM) plants into the environment. See Jeffrey D. Wolt et al., *Problem Formulation in the Environmental Risk Assessment for Genetically Modified Plants*, 19 TRANSGENIC RES. 425 (2010).

154. Foster, *supra* note 150, at 54.

### *1. The EU's Risk Assessment*

Article 2.2 of the TBT Agreement requires the EU to evaluate the risks caused by the SBR, as though it were a TBT. The risk-related provisions in the preamble of the EU's Declaration are as follows:

A. whereas more than one and a half million harp seal pups have been slaughtered in the North West Atlantic over the last four years and the vast majority of these animals were less than three months old,

B. whereas the last time the annual number of seals now being killed was slaughtered in the 1950s and 1960s the seal population was reduced by two thirds,

...

D. whereas a team of international veterinarians concluded that 42 % of the slaughtered seals they examined may have been skinned whilst still conscious.<sup>155</sup>

It is true that, in view of the seal hunt occurring "in remote, widespread and poorly accessible areas, under extreme weather conditions and on unstable ice," Canada would need to produce a more detailed assessment of risks of the seal hunt.<sup>156</sup> But, even the EU's necessarily limited practical assessment under the TBT-RA raises some disturbing issues:

1. Is the EU's ban on seal products necessary to safeguard public morals? And is it fair to hunters who derive their main or only source of income from killing seals?

2. Is the EU's ban on large-scale commercial seal hunting instrumental in protecting fish populations from seal predation? Is special regard paid to complex ecosystem interactions in the EU's SBR?

Indeed, the EU ban on seal products provides exemptions for seal products harvested by the Inuit and other indigenous groups but only if the seal products result from "hunts traditionally conducted by Inuit and other indigenous communities and contribute to their subsistence."<sup>157</sup> Chuck Strahl, Canada's Minister of Indian Affairs and Northern Development, stated that Inuit groups feel that the exemptions fail to

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155. Seal Ban Regulation, *supra* note 12, at pmbl.

156. *Report on the Proposal for a Regulation of the European Parliament and of the Council Concerning Trade in Seals Products*, *supra* note 44, at 46.

157. Seal Ban Regulation, *supra* note 12, at art. 3.1.

address the concerns of Canada's indigenous communities because this will "do nothing to protect their access to European markets," and past experiences with such exemptions have demonstrated that "they are not effective."<sup>158</sup> Just as a Chinese proverb says that "Chengmen Shi Huo, Yang Ji Chiyu" (that is, a fire on the city gate brings disaster to the fish in the moat), innocent Inuit people get into trouble on account of other seal hunters' "misfortune." This outcome reflects the imperfection and simplification of EU de facto risk assessment.

It should be admitted that the EU's formulation and establishment of its SRB also takes into account environment and biodiversity concerns. In the view of the EU, the SBR also aims at "the prevention of a decline of the seals population and the possible extinction of certain species" because on the one hand, the EU notes that "the TAC of today's commercial hunt is set above the sustainable limit;" on the other hand, "the new threat of climate change and global warming may lead to an increasing rate of pup mortality."<sup>159</sup> Of course, the risk assessment in this respect is also too simple and informal to be well accepted by Canada.

In the final analysis, the EU's risk assessment, although simple and imperfect, has backed its position that only a full ban can assure animal welfare norms will be obeyed. The EU is therefore in a legal dilemma: how to deter the cruel, Canadian large-scale commercial seal hunt without being in breach of the WTO rules, in particular "elimination of quantitative restrictions." What is more important, as a member of the World Conservation Union (IUCN), the EU should also reconsider whether it should continue to abide by an international resolution adopted by the IUCN in November 2004, in which the IUCN called on its members to put their sustainable use principles into action "by not introducing new legislation that bans the importation and commercialization of seal products stemming from abundant seal populations."<sup>160</sup>

## *2. Canada's Risk Assessment under the Management Plan*

The panel's ruling in *EC-Biotech Products* indicates that "the protection of environment, as far as the life and health of animals and plants is concerned, fall[s] within the scope of the SPS-RA."<sup>161</sup> As a result, numerous types of environmental risks can be qualified as SPS

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158. ICTSD, *Canada, Norway Launch WTO Complaint over EU Seal Ban*, *supra* note 2, at 3.

159. See Lester, *supra*, note 45, at 20.

160. See Gruszczynski, *supra* note 31, at 7.

161. See *EC-Biotech Products*, *supra* note 32, ¶ 7.207.

risks.<sup>162</sup> As seals can be hunted for fish stock management and pest control reasons, this kind of risk assessment can be classified as the SPS-RA, which is rather different from that laid down in Article 2.2 of the TBT Agreement. The EU's actions were actually of the TBT-RA character.

Canada asserted, in its Overview of the Atlantic Seal Hunt 2006–2010, that its seal management is “founded on sound conservation principles to ensure hunt opportunities at the present time and in the future.”<sup>163</sup> Furthermore, Canada's Management Plan emphasizes sustainable hunting.<sup>164</sup> In fact, the Canadian government knew as early as 2006 that the populations of both the harp seal and the hooded seal around Canada and Greenland faced no threat,<sup>165</sup> and the population of harp seal in particular was then estimated to be at its highest level ever.<sup>166</sup>

Regarding the specific risk assessment, Canada's considerations seem to be more profound than the EU's. For instance, the Canadian DFO states that:

DFO is responsible for managing the sustainable use of fisheries resources with conservation as the paramount consideration. The scope and nature of environmental effects are considered when developing management plans. Various management options are weighed against one another based on careful consideration of all information, including traditional knowledge, local knowledge and industry experience, along with the best scientific information available from both DFO and external organizations. This management plan was formulated in consideration of any environmental or habitat concerns.<sup>167</sup>

More importantly, DFO has maintained an active seal research program.<sup>168</sup> According to its explanation, this program is “aimed at better understanding fluctuations in seal populations and the factors that influence numbers and vital rates, as well as the role of seals in marine ecosystems.”<sup>169</sup> DFO further states that:

Recently, most of the research has focused on the population dynamics and the impact of seals on their prey. Research being

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162. See Gruszczynski, *supra* note 31.

163. *Overview of Atlantic Seal Hunt*, *supra* note 3, § 1.1.

164. *Id.* § 5.2.

165. *Id.* § 1.2.

166. *Id.* § 5.1.1.

167. *Id.* § 5.2.

168. *Id.* § 5.4.

169. *Id.*

carried out includes long-term trends in reproductive performance and survival, foraging ecology (seasonal movements and diving behaviour), and diets of seals. . . . Other aspects of the seal science program include the monitoring of the health, growth and condition of seals, and determining stock structure, and parasite loads.<sup>170</sup>

In addition, as a result of recommendations received from the CVMA, a regulatory amendment to improve hunting practices was implemented as early as 2003.<sup>171</sup> “The new regulations include amendments to hunting methods to establish a clearer determination of death before bleeding and skinning as recommended by the CVMA.”<sup>172</sup> Consequently, Canada’s risk assessment was conducted in a more systematic and concrete manner. It stands to reason that Canada accuses the EU of not respecting any considerations relating to the sustainable use of such an abundant renewable natural resource and of failing to base its SBR on the best available data.

Finally, we illustrate with Figure 2 why the different outcomes of risk assessment between the EU and Canada give rise to the dispute over the EU’s SBR.

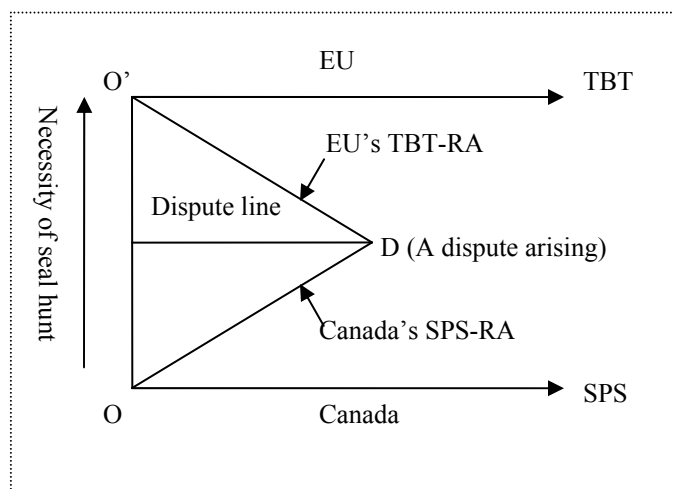
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170. *Id.*

171. *Id.* § 6.3.

172. *Id.*

FIGURE 2: MECHANISM OF DISPUTE RESULTING FROM DIVERGING RISK ASSESSMENTS



Source: compiled by the authors.

In Figure 2, D represents the point when the dispute arose between the EU and Canada.

## VIII. CONCLUDING REMARKS

The EU introduced the SBR in order to demonstrate its distaste for the seal hunting methods employed in the Canadian commercial seal hunt. Canada has responded with a pure free trade defense, accusing the EU of violating regulations on MFN treatment, national treatment, elimination of quantitative restrictions, and avoidance of unnecessary obstacles to trade. In so doing, the Canadian government has merely availed itself of its legal rights.

However, the procedures used have allowed Canada, as the complainant, to narrow the focus of the debate to certain technical aspects of trade policy. That is to say, Canada merely put emphasis on the EU's SBR being in breach of Article 2.1 and 2.2 of the TBT Agreement, Article I:1, III:4 and XI:1 of GATT 1994, and Article 4.2 of the Agriculture Agreement. As a result, the arguably wider issue, the European assertion of the "cruel" commercial seal hunt in Canada, is likely to drop out of sight as the dispute resolution methods are pursued.

There are two fundamental reasons why the EU is unlikely to prevail in its dispute with Canada:



(1) the partial sympathy mechanism and exclusion mechanism in the consultation and panel procedures under the current DSM of the WTO are flawed because in effect they permit the complainant (Canada) to control the agenda; and

(2) the different procedures under the TBT-RA and the SPS-RA also tend to work in Canada's favor.

Putting an end to the seal hunting methods employed in Canada will be a difficult process. Sealing, in the eyes of many people, is inherently inhumane, and the only satisfactory long-term solution is its complete abolition. Short-term alternatives include measures like the EU's SBR, and a labeling system that allows consumers to choose whether to buy seal products that originate from Canada and other countries widely perceived to use cruel hunting methods.

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## Notes & Comments

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# **When Saving the Environment Hurts the Environment: Balancing Solar Energy Development with Land and Wildlife Conservation in a Warming Climate**

**Sarah Pizzo\***

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#### VI. CONCLUSION

## I. INTRODUCTION

Climate change affects all inhabitants of Earth and is the single most urgent threat to the future of wildlife and wildlife habitat.<sup>1</sup> In response to the increasingly visible climate change problems associated with fossil fuel use and the possible depletion of fossil fuel resources, many developed nations have recognized the need to reduce their reliance on these traditional fuel sources. Renewable energy technologies are touted as the best replacement for non-renewable fossil fuels.<sup>2</sup> Recently, the United States has embraced solar power as a key component in reducing the nation's reliance on fossil fuels and has implemented federal programs to encourage development of utility-scale solar energy facilities on public lands.

Solar energy is considered one of the primary solutions to the climate change crisis because it has the potential to produce electricity with no direct air pollution. As such, there is a misconception that solar energy production has fewer environmental impacts than traditional energy sources.<sup>3</sup> In fact, utility-scale solar energy facilities can have serious negative environmental effects, many of which ultimately threaten biodiversity. Thus, as the United States transitions to renewable energy sources like solar power, emergent laws and policies governing renewable energy development must strike a balance between addressing the immediate environmental impacts of solar development and the long-term impacts of climate change on the natural environment and biological diversity.

This Note focuses on solar energy development on federal lands. Part II explains that human dependence on fossil fuels poses serious environmental problems, most notably the threat of climate change. Growing awareness of these problems has encouraged the world's population to reduce its reliance on fossil fuels by transitioning to renewable energy technologies such as solar power. Part III gives an overview of solar technologies and describes the areas of the United States that are most suitable for solar development, a large percentage of which are federal lands. This Part also details the potential negative environmental effects that solar development can have on wildlife and the land. Part IV investigates the existing legal framework for the development and regulation of solar energy on federal lands and then

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1. John Kostyack & Dan Rohlf, *Conserving Endangered Species in an Era of Global Warming*, 38 ENVTL. L. REP. NEWS & ANALYSIS 10203, 10203 (2008).

2. The most popular forms of alternative energy sources today are wind, solar, biomass, geothermal, hydrogen, and ocean power.

3. Victoria Sutton & Nicole Tomich, *Harnessing Wind Is Not (By Nature) Environmentally Friendly*, 22 PACE ENVTL. L. REV. 91, 92 (2005).

examines federal laws that will both shape solar energy development on federal lands and provide litigation tools for challenging solar development on sensitive lands. Finally, Part V concludes with recommendations for solar energy development on federal lands, including ways to mitigate or avoid harm to wildlife and ecosystems.

## II. RESPONSE TO CLIMATE CHANGE: PROMOTING RENEWABLE ENERGY

### *A. Climate Change: Causes and Effects*

Humans have relied heavily on fossil fuels, namely coal, oil, and natural gas, as primary sources of energy since the Industrial Revolution. In 2007, fossil fuels comprised 86.4 percent of the world's total energy consumption.<sup>4</sup> This dependency poses several major problems. First, fossil fuels are nonrenewable resources; they draw on finite reserves that will eventually dwindle and may run out completely.<sup>5</sup> Second, the "global energy trade contributes to inter-country animosity and compromised world market relationships."<sup>6</sup> Third, fossil fuel exploration, extraction, transport, and use cause a number of harmful environmental impacts, both local and global.<sup>7</sup> One major impact is the release of harmful greenhouse gases ("GHGs").<sup>8</sup> GHGs prevent the sun's

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4. *International Energy Statistics*, U.S. ENERGY INFO. ADMIN., <http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=44&pid=44&aid=2> (last visited Nov. 14, 2010).

5. *Learning About Renewable Energy: Renewable Energy Basics*, NAT'L RENEWABLE ENERGY LAB. (Nov. 12, 2010), [http://www.nrel.gov/learning/re\\_basics.html](http://www.nrel.gov/learning/re_basics.html).

6. Sanya Carleyolson, *Tangled in the Wires: An Assessment of the Existing U.S. Renewable Energy Legal Framework*, 46 NAT. RESOURCES J. 759, 759 (2006).

7. Examples of environmental damage caused by fossil fuel *exploration and extraction* include mountain top removal and the April 2010 explosion of British Petroleum's Deepwater Horizon oil well in the Gulf of Mexico, the largest marine oil spill in history. Examples of environmental damage caused by fossil fuel *transportation* include the Exxon Valdez oil spill in 1989 and the Chinese oil ship that rammed the Great Barrier Reef in early 2010.

8. See, e.g., Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,499 (Dec. 15, 2009) ("Human activities are intensifying the naturally-occurring greenhouse effect by adding greenhouse gases to the atmosphere."). The principal greenhouse gases that enter the atmosphere because of human activities are carbon dioxide, methane, nitrous oxide, and fluorinated gases. *Climate Change – Greenhouse Gas Emissions*, U.S. ENVTL. PROT. AGENCY (Oct. 19, 2010), <http://www.epa.gov/climatechange/emissions> [hereinafter EPA, *Climate Change*].

energy from radiating back into space, which traps the heat close to the Earth's surface.<sup>9</sup> The atmospheric concentration of GHGs has increased dramatically in recent decades,<sup>10</sup> and as a result the temperature of Earth's atmosphere is rising above past levels.<sup>11</sup> The global warming trend is altering many aspects of the planet's climate.<sup>12</sup> Observed effects include shrinking glaciers, earlier and increased spring run-off, rising sea levels and temperatures, precipitation changes, extreme weather events, and thawing of permafrost.<sup>13</sup>

Global climate change affects all inhabitants of Earth. The climate change impacts that humans may experience include: reduced food security due to alterations in agriculture and forestry management; imperiled water resources and quality due to changes in run-off and precipitation patterns; threats to human health, including increases in infectious diseases and allergenic pollen; and damage to coastal settlement because of rising sea levels and high-intensity tropical storms.<sup>14</sup>

Climate change also affects the habitat and food supply of many animal and plant species, both terrestrial and marine. Generally, warming causes shifts in the range and distribution of plants and animals, mostly

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9. EPA, *Climate Change*, *supra* note 8.

10. P. Forster et al., *Changes in Atmospheric Constituents and in Radiative Forcing*, in CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 129, 137–43 (S. Solomon et al. eds., 2007). According to this report, the atmospheric concentration of carbon dioxide has increased globally by about 36% over the last 250 years; methane concentrations have increased 25% and nitrous oxide concentrations have increased 11% over the past 25 years.

11. K.E. Trenberth et al., *Observations: Surface and Atmospheric Climate Change*, in CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 235, 241–53 (S. Solomon et al. eds., 2007). According to this report, global mean surface temperatures rose by  $0.74^{\circ}\text{C} \pm 0.18^{\circ}\text{C}$  ( $1.33^{\circ}\text{F} \pm 0.32^{\circ}\text{F}$ ) between 1906 and 2005 and the 11 warmest years on record since 1850 all occurred between 1995 and 2006.

12. The U.S. Environmental Protection Agency notes the difference between “global warming” and “climate change”: “Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). ... Global warming is an average increase in the temperature of the atmosphere...which can contribute to changes in global climate patterns.” Both can occur from a variety of causes, both natural and anthropogenic. *Climate Change – Basic Information*, U.S. ENVTL. PROT. AGENCY (May 10, 2010), <http://www.epa.gov/climatechange/basicinfo.html>.

13. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 26, 31–32 (R.K. Pachauri & A. Reisinger eds., 2007).

14. *Id.*

to higher altitudes and latitudes.<sup>15</sup> Climate change also causes earlier timing of spring events, such as tree blooming, animal migration, and bird egg-laying.<sup>16</sup> Experts predict the current warming trend will also cause extinctions.<sup>17</sup> Numerous plant and animal species, already weakened by pollution and loss of habitat, are not expected to survive the next 100 years.<sup>18</sup>

Another problem with relying on fossil fuels as a primary source of energy is that supplies are finite. As supplies decrease, extraction will become increasingly expensive, environmentally destructive, and harmful to humans.<sup>19</sup> In an industrial society that is highly dependent on the relatively low cost of oil, supply shortfalls and corollary price increases could have negative implications for the global economy. Predictions vary as to what exactly these negative effects would be, but pessimistic forecasts include a global depression and the collapse of global industrial civilization.<sup>20</sup>

### *B. International Response: UNFCCC and the Kyoto Protocol*

In response to climate change, many countries have recognized the need to reduce their reliance on fossil fuels. In 1994, the global community officially recognized the need to address anthropogenic climate change by ratifying the United Nations Framework Convention on Climate Change ("UNFCCC" or "Convention").<sup>21</sup> The Convention recognizes that GHG emissions are affecting the earth's climate and sets

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15. *Id.* at 33.

16. *Id.*

17. U.N. Framework Convention on Climate Change [UNFCCC], *Feeling the Heat - Introduction*, UNFCCC, [http://unfccc.int/essential\\_background/feeling\\_the\\_heat/items/2917.php](http://unfccc.int/essential_background/feeling_the_heat/items/2917.php) (last visited Oct. 24, 2010).

18. *Id.*

19. For example, an April 2010 explosion at the Upper Big Branch coal mine in West Virginia killed 29 workers who were mining for marginal coal seams. Another example is the April 2010 explosion of British Petroleum's Deepwater Horizon oil rig, which killed 11 workers and injured 17 others. The resulting oil spill destroyed marine and wildlife habitats and damaged the fishing and tourism industries in the Gulf of Mexico.

20. Richard C. Duncan, *The Peak of World Oil Production and the Road to the Olduvai Gorge*, Pardee Keynote Symposia at the Geological Society of America's Annual Summit, (Nov. 13, 2000), available at <http://dieoff.org/page224.htm>.

21. See *Status of Ratification of the UNFCCC*, UNFCCC (Oct. 16, 2009), available at [http://unfccc.int/files/essential\\_background/convention/status\\_of\\_ratification/application/pdf/unfccc\\_ratification\\_20091016.pdf](http://unfccc.int/files/essential_background/convention/status_of_ratification/application/pdf/unfccc_ratification_20091016.pdf). The UNFCCC went into force on Mar. 21, 1994 and was ratified by 166 countries; 195 have ratified the UNFCCC to date.

an overall framework for intergovernmental efforts to tackle the challenges posed by climate change. More recently, a number of nations approved an addition to the UNFCCC: the Kyoto Protocol, a legally binding agreement to reduce GHG emissions worldwide.<sup>22</sup> A major feature of the Kyoto Protocol is that it sets binding targets for reducing GHG emissions in participating countries.<sup>23</sup> These countries have taken various approaches to reducing GHG emissions, including the development and production of renewable energy technologies.<sup>24</sup>

### *C. United States Response: Renewable Energy Development on Federal Lands*

Although the United States did not sign the Kyoto Protocol, the nation's leaders have clearly become more proactive in addressing climate change through renewable energy development. For example, President George W. Bush issued an executive order in 2001 requiring federal agencies to "expedite projects that will increase the production, transmission, or conservation of energy."<sup>25</sup> Additionally, in the Energy Policy Act of 2005, Congress ordered the development of non-hydropower renewable energy projects on federal land.<sup>26</sup> In his inaugural address, President Barack Obama called for the expanded use of renewable energy to confront the challenges of energy security and climate change.<sup>27</sup> Observing that "each day brings further evidence that the ways we use energy strengthen our adversaries and threaten our

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22. See *Status of Ratification of the Kyoto Protocol*, UNFCCC, [http://unfccc.int/kyoto\\_protocol/status\\_of\\_ratification/items/2613.php](http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php) (last visited Nov. 14, 2010). The Kyoto Protocol was adopted in Kyoto, Japan, on Dec. 11, 1997 and entered into force on Feb. 16, 2005. One hundred ninety-one Parties to the UNFCCC have ratified the Kyoto Protocol to date.

23. *Kyoto Protocol*, UNFCCC, [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php) (last visited Nov. 14, 2010).

24. See Lara Skinner, *Renewables Play Their Part as Kyoto Protocol Takes Effect*, RENEWABLEENERGYWORLD.COM (Feb. 16, 2005), <http://www.renewableenergyworld.com/rea/news/article/2005/02/renewables-play-their-part-as-kyoto-protocol-takes-effect-22551>.

25. Exec. Order No. 13,212, 66 Fed. Reg. 28,357 (May 18, 2001). This order was not limited to *renewable* energy projects.

26. Energy Policy Act of 2005, Pub. L. No. 109-58, § 211, 119 Stat. 594, 660 (2005) ("It is the sense of the Congress that the Secretary of the Interior should, before the end of the 10-year period beginning on the date of enactment of this Act, seek to have approved non-hydropower renewable energy projects located on the public lands with a generation capacity of at least 10,000 megawatts of electricity.").

27. Barack Obama, Presidential Inaugural Address (Jan. 20, 2009), *available at* <http://www.whitehouse.gov/blog/2009/01/21/president-barack-obamas-inaugural-address>.



planet,” the President encouraged the nation to “harness the sun and the winds and the soil to fuel our cars and run our factories.”<sup>28</sup> The administration’s “New Energy for America” plan calls for renewable energy to supply ten percent of the nation’s energy by 2012, increasing to twenty-five percent by 2025.<sup>29</sup> Putting this promise into effect, the American Recovery and Reinvestment Act of 2009 set aside billions of dollars for clean energy projects.<sup>30</sup> The Department of Energy’s Office of Energy Efficiency and Renewable Energy received \$16.8 billion to support grants and rebates, as well as research, development, and deployment activities.<sup>31</sup>

The Department of the Interior (“DOI”) has also heeded the call. In early 2009, the Secretary of the Interior announced that the production, development, and delivery of renewable energy are top priorities for the DOI.<sup>32</sup> The Bureau of Land Management (“BLM”), an agency within the DOI, has demonstrated its commitment by developing large-scale programs to study the potential for and facilitate the development of renewable energy on federal lands. One such program is the Solar Energy Development Program, initiated by the BLM and the Department of Energy (“DOE”) in 2008.<sup>33</sup> In developing this Program, the agencies will also prepare a Solar Programmatic Environmental Impact Statement, which will identify public lands with a combination of high potential for solar development and low environmental impacts and will determine whether the agencies should establish environmental policies and mitigation strategies for solar development.<sup>34</sup> This study will build upon the Western Renewable Energy Zones project, a joint initiative of the Western Governors’ Association and the DOE, which recently completed

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28. *Id.*

29. Press Release, U.S. Dep’t of Energy, President Obama Calls for Greater Use of Renewable Energy (Jan. 21, 2009), *available at* [http://apps1.eere.energy.gov/news/news\\_detail.cfm/news\\_id=12194](http://apps1.eere.energy.gov/news/news_detail.cfm/news_id=12194).

30. Kevin Eber, *Clean Energy Aspects of the American Recovery and Reinvestment Act*, RENEWABLEENERGYWORLD.COM (Feb. 18, 2009), <http://www.renewableenergyworld.com/rea/news/article/2009/02/clean-energy-aspects-of-the-american-recovery-and-reinvestment-act>. For a more detailed report of how the Office of Energy Efficiency and Renewable Energy is using the funds from the American Recovery and Reinvestment Act, see the agency’s website: <http://www1.eere.energy.gov/recovery/>.

31. *Id.*

32. Press Release, U.S. Dep’t of the Interior, Bureau of Land Mgmt., Secretary Salazar Issues Order to Spur Renewable Energy Development on U.S. Public Lands (March 11, 2009), *available at* [http://www.blm.gov/ca/st/en/info/newsroom/2009/march/DOI0911\\_Salazar\\_spurs\\_renewables.html](http://www.blm.gov/ca/st/en/info/newsroom/2009/march/DOI0911_Salazar_spurs_renewables.html).

33. Notice of Intent To Prepare a Programmatic Environmental Impact Statement To Evaluate Solar Energy Development, 73 Fed. Reg. 30908, 30908 (May 29, 2008) [hereinafter Notice of Intent for Solar PEIS].

34. *Id.* at 30909.

a map of high-quality, developable renewable resource areas in the western United States.<sup>35</sup>

### III. SOLAR ENERGY

Sunlight is the cleanest, most abundant renewable energy source available.<sup>36</sup> More energy from the sun falls on the earth in one hour than is used by everyone in the world in one year.<sup>37</sup> Solar technologies harness the sun's energy and make it available for human consumption. Currently, solar energy satisfies less than one percent of U.S. energy demand<sup>38</sup> and less than 0.1 percent of global energy demand.<sup>39</sup> Despite the relatively small percentage of overall power currently derived from solar energy, solar electricity generation more than tripled between 2000 and 2008, making it second only to wind energy in rate of growth.<sup>40</sup> Projections from the Energy Information Administration forecast a continuing increase in solar powered electricity in the United States.<sup>41</sup> The solar industry aims to provide half of all new U.S. electricity generation by 2025.<sup>42</sup> Solar energy enjoys more popular support than any other form of renewable energy,<sup>43</sup> and the Obama administration is

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35. W. GOVERNORS' ASS'N & U.S. DEP'T OF ENERGY, WESTERN RENEWABLE ENERGY ZONES - PHASE 1 REPORT 2, 12-13 (June 2009) [hereinafter WREZ PHASE 1 REPORT].

36. *Clean Energy Solutions: Renewable Energy*, SIERRA CLUB, <http://www.sierraclub.org/energy/renewables/default.aspx> (last visited Nov. 14, 2010) [hereinafter SIERRA CLUB, *Renewable Energy*].

37. *Learning About Renewable Energy: Solar Energy Basics*, NAT'L RENEWABLE ENERGY LAB. [NREL] (Oct. 7, 2009), [http://www.nrel.gov/learning/re\\_solar.html](http://www.nrel.gov/learning/re_solar.html) [hereinafter NREL, *Solar Energy*].

38. *About Solar Energy - Industry Data*, SOLAR ENERGY INDUS. ASS'N, [http://www.seia.org/cs/about\\_solar\\_energy/industry\\_data](http://www.seia.org/cs/about_solar_energy/industry_data) (last visited Nov. 14, 2010).

39. *Solar Energy*, NAT'L GEOGRAPHIC, <http://environment.nationalgeographic.com/environment/global-warming/solar-power-profile> (last visited Oct. 25, 2010) [hereinafter NAT'L GEOGRAPHIC, *Solar Energy*].

40. SIERRA CLUB, *Renewable Energy*, *supra* note 36.

41. *Renewable Energy Consumption and Electricity Preliminary Statistics 2008*, U.S. ENERGY INFO. ADMIN., [http://www.eia.doe.gov/cneaf/alternate/page/renew\\_energy\\_consump/rea\\_prereport.html](http://www.eia.doe.gov/cneaf/alternate/page/renew_energy_consump/rea_prereport.html) (last visited Oct. 25, 2010).

42. SIERRA CLUB, *Renewable Energy*, *supra* note 36.

43. Press Release, Solar Energy Indus. Ass'n & Schott Solar, For Third Consecutive Year, National Poll Shows More Than 9 out of 10 Americans Want Solar Now 2 (Oct. 11, 2010), *available at* [http://www.us.schott.com/newsfiles/20101011231859\\_Final\\_-\\_SCHOTT\\_Solar\\_Barometer\\_2010\\_release.pdf](http://www.us.schott.com/newsfiles/20101011231859_Final_-_SCHOTT_Solar_Barometer_2010_release.pdf).

focusing most of its renewable energy development efforts on solar energy.<sup>44</sup>

Harnessing solar energy does not come without costs. Current solar energy technology is expensive, compared to most other electricity sources, though dynamic growth rates are spurring technological advances and driving down costs. Currently, the cost of producing one kilowatt-hour of electricity at an industrial-size solar collection unit is 20.56 cents.<sup>45</sup> In contrast, the average price of one kilowatt-hour of electricity for the industrial sector in the United States was only 10.5 cents in July of 2010.<sup>46</sup> Utility-scale solar development also poses significant negative environmental impacts, which are detailed below.<sup>47</sup> This Part provides an overview of the technologies that convert the sun's energy into electricity, the areas of the United States that are best suited to solar energy development, and the environmental effects of solar development on these lands.

### *A. Solar Energy Collection Technologies*

Solar technologies use three principal mechanisms to capture the sun's energy. First, passive solar designs, such as daylighting and space heating, use solar energy to heat or cool buildings.<sup>48</sup> For example, windows placed on the sunny side of a structure allow sunlight to heat absorbent materials on the floor and walls. These surfaces then release the heat at night to keep the building warm. Similarly, absorbent plates on a roof can heat liquid in tubes that supply a house with hot water.<sup>49</sup> Second, solar photovoltaic ("PV") panels, which frequently sit atop buildings, convert sunlight (photons) directly into electricity (voltage) through the photovoltaic effect.<sup>50</sup> As light passes through the silicon

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44. Mark Jaffe, *Colorado at Center of Feds' Bull's-Eye*, DENVERPOST.COM (June 30, 2009, 11:21 AM), [http://www.denverpost.com/energy/ci\\_12717727](http://www.denverpost.com/energy/ci_12717727).

45. *Solar Energy*, RED LODGE CLEARINGHOUSE, <http://rlch.org/content/solar-energy> (last visited Mar. 17, 2010).

46. *Average Retail Price of Electricity to Ultimate Customers by End-Use Sector, by State*, U.S. ENERGY INFO. ADMIN. (Oct. 14, 2010), [http://www.eia.doe.gov/cneaf/electricity/epm/table5\\_6\\_a.html](http://www.eia.doe.gov/cneaf/electricity/epm/table5_6_a.html).

47. See *infra* Part IV.C.

48. NREL, *Solar Energy*, *supra* note 37; *Learning About Renewable Energy: Solar Process Heat*, NAT'L RENEWABLE ENERGY LAB. (Sept. 29, 2009), [http://www.nrel.gov/learning/re\\_solar\\_process.html](http://www.nrel.gov/learning/re_solar_process.html).

49. NAT'L GEOGRAPHIC, *Solar Energy*, *supra* note 39.

50. *Learning About Renewable Energy: Solar Photovoltaic Technology*, NAT'L RENEWABLE ENERGY LAB. (Sept. 29, 2009), [http://www.nrel.gov/learning/re\\_photovoltaics.html](http://www.nrel.gov/learning/re_photovoltaics.html).

panels it creates a current, which in turn generates electricity.<sup>51</sup> Third, concentrating solar power (“CSP”) systems employ a variety of techniques to produce electricity on a larger scale. CSP technologies use large collections of mirrors to reflect and concentrate sunlight onto thermal receivers that convert solar energy into heat. The heat is then used to boil water or another heat-transfer fluid to drive a steam turbine that generates electricity in much the same fashion as coal and nuclear power plants, supplying electricity for thousands of people. In one technique, long troughs of parabolic mirrors focus sunlight on a pipe of oil that runs through the middle.<sup>52</sup> The hot oil then boils water for electricity generation.<sup>53</sup> Another technique uses moveable mirrors to focus the sun's rays on a collector tower, where a receiver sits.<sup>54</sup> Molten salt flowing through the receiver is heated to run a generator.<sup>55</sup>

### *B. Land Areas with Greatest Potential for Solar Development*

Solar technologies can only produce electricity while they receive energy, in the form of light, from the sun.<sup>56</sup> Thus, the ideal locations for solar projects are those that are almost always cloudless and lack objects that block the sun's rays, such as mountains, trees, and buildings.<sup>57</sup> Accordingly, solar energy developers and several government agencies have targeted the Southwest portion of the United States – California, Colorado, Arizona, New Mexico, Utah, and Nevada – as an ideal region for large-scale solar energy development.<sup>58</sup> Much of this area is characterized as flat, hot, dry desert, receiving an average of 340 days of sunshine per year and very little precipitation.<sup>59</sup> Because of the arid conditions, the region contains vast swaths of land that are uninhabited by humans and cannot accommodate large, sun-blocking vegetation.

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51. *Id.*

52. *Learning About Renewable Energy: Concentrating Solar Power*, NAT'L RENEWABLE ENERGY LAB. (Aug. 25, 2009), [http://www.nrel.gov/learning/re\\_csp.html](http://www.nrel.gov/learning/re_csp.html).

53. *Id.*

54. *Id.*

55. *Id.*

56. However, solar energy collected in phase-changing molten salts, which are capable of retaining heat, can be drawn on at night.

57. Another consideration in siting solar power plants is access to transmission lines.

58. Notice of Intent for Solar PEIS, *supra* note 33, at 30908; WREZ PHASE 1 REPORT, *supra* note 35, at 11–12.

59. Michael Riley, *Greens, New-Energy Backers at Odds Over Use of Desert*, DENVER POST.COM (Sept. 3, 2009, 1:00 PM), [http://www.denverpost.com/ci\\_13257517](http://www.denverpost.com/ci_13257517).

Thus, in addition to providing virtually unhindered access to sunlight, this region has the advantage of avoiding a reaction referred to as NIMBYism ("not in my backyard"), a term used to describe the attitude of people and organizations who oppose a project because it is being built in their immediate vicinity.<sup>60</sup>

The federal government owns most of the prime solar development lands in the Southwest, though a small percentage of prime solar lands are in private or state ownership. Most federal lands with solar development potential are managed by the BLM.<sup>61</sup> Accordingly, the BLM is undertaking a major assessment of utility-scale solar development on federal public lands in the Southwest.<sup>62</sup>

### *C. Negative Environmental Impacts*

The potential for solar energy to provide clean, economical, and renewable energy must be weighed against the potential for solar energy development to damage ecosystems and harm wildlife.<sup>63</sup> The public lands in the desert southwest provide ideal climatic and landscape conditions for solar energy collection. These deserts are biologically rich habitats with a vast array of animals and plants that have adapted to the harsh conditions over millions of years. These organisms thrive, in part, because they live in pristine wilderness areas that are isolated from human contact. Any large, artificial structure built in a pristine natural area is likely to have significant negative impacts on the surrounding natural environment. This reality increases in magnitude when the surrounding environment is fragile and slow to recover from disturbance, as most deserts are.

Furthermore, some areas slated for solar development contain rare wildlife and sensitive habitats. Many of these plants and animals exist nowhere else in the world and are listed as threatened or endangered.<sup>64</sup>

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60. Lynne Gillette et al., *Using Collaboration to Address Renewable Energy Siting Challenges*, 56 FED. LAW. 50, 51 (Env'tl. & Energy Law) (June 2009).

61. The BLM controls 14.5% of California, 12.6% of Colorado, 19.6% of Arizona, 16.4% of New Mexico, 43.5% of Utah, and 68.1% of Nevada. See BUREAU OF LAND MGMT. U.S. DEP'T OF THE INTERIOR & ENERGY EFFICIENCY AND RENEWABLE ENERGY, U.S. DEP'T OF ENERGY, *ASSESSING THE POTENTIAL FOR RENEWABLE ENERGY ON PUBLIC LANDS 19-24* (2003), available at <http://www.nrel.gov/csp/pdfs/33530.pdf>; see also, NAT'L RENEWABLE ENERGY LAB. & FOREST SERV., U.S. DEP'T OF AGRIC., *ASSESSING THE POTENTIAL FOR RENEWABLE ENERGY ON NATIONAL FOREST SYSTEM LANDS A-2 – A-15* (2005), available at <http://www.nrel.gov/docs/fy05osti/36759.pdf>. The appendices contain many useful maps.

62. See *infra* Part IV.B.

63. Sutton & Tomich, *supra* note 3, at 94.

64. *Ecosystems-Wildlife: Endangered Species*, DIGITAL DESERT: MOJAVE DESERT,

For example, a proposed solar project site in the Ivanpah Valley of San Bernadino County, California is home to a colony of about thirty threatened California desert tortoises and a number of endangered species of cactus.<sup>65</sup> Another proposed site in Imperial County, California is home to the flat-tailed lizard, which is under study for eligibility as an endangered species,<sup>66</sup> and may be a migration corridor for endangered peninsular bighorn sheep.<sup>67</sup> California's Mojave Desert, also considered an ideal location for solar energy plants, is home to a number of endangered species, including the desert tortoise, the California brown pelican, Least Bell's vireo, Eureka Valley Evening Primrose, and six species of fish, as well as a long list of threatened species.<sup>68</sup>

Solar development will likely have a profound effect on desert ecosystems. Construction and maintenance of utility-scale solar facilities will disturb delicate ecosystems and destroy wildlife habitats. These activities are also likely to cause direct injuries to wildlife. Furthermore, solar plants deplete already-limited water supplies and have the potential to release hazardous pollutants. This section details these environmental impacts.

### *1. Land Use and Ecosystem/Habitat Disturbance*

Development of large-scale solar projects transforms the lands on which they are constructed and precludes most other uses.<sup>69</sup> When used to generate electricity on a commercial scale, solar energy facilities require large tracts of land.<sup>70</sup> The land requirements for CSP systems are

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<http://digital-desert.com/wildlife/endangered.html> (last visited Oct. 25, 2010) [hereinafter DIGITAL DESERT].

65. Louis Sahagun, *Habitat Concerns Cloud the Solar Gold Rush - Environmental Issues and Red Tape Threaten Huge Desert Projects*, L.A. TIMES, Oct. 19, 2009, at 1.

66. Endangered and Threatened Wildlife and Plants, Notice of Reinstatement of the 1993 Proposed Listing of the Flat-tailed Horned Lizard as a Threatened Species and the Reopening of The Comment Period on The Proposed Rule, 66 Fed. Reg. 66,384, 66,385 (Dec. 26, 2001) (to be codified at 50 C.F.R. pt. 17).

67. Sahagun, *supra* note 65.

68. See DIGITAL DESERT, *supra* note 64.

69. See Bureau of Land Mgmt, U.S. Dep't of the Interior, Instruction Memorandum No. 2007-097, Solar Energy Development Policy (2007) [hereinafter Solar Energy Development Policy] (stating that other uses of solar facility sites "are unlikely due to the intensive use of the site for PV or CSP facility equipment").

70. *Solar Energy Development Environmental Considerations*, SOLAR ENERGY DEV. PROGRAMMATIC EIS INFO. CTR., <http://solareis.anl.gov/guide/environment/index.cfm> (last visited Oct. 19, 2010). However, when looking at electricity output per unit of land disturbed, solar power plants disturb less land than hydroelectric dams (including the land covered by the lake behind the dam) and coal plants (including the amount of land disturbed in coal mining).

approximately five to ten acres of land per megawatt of capacity.<sup>71</sup> Thus, a single utility-scale solar plant may occupy up to forty-five square miles, or nearly 29,000 acres.<sup>72</sup> To prepare land for construction of a solar facility, the ground is scraped and, when necessary, re-contoured to produce a level building site void of all vegetation. In addition, many existing utility-scale facilities have a regular program of herbicide application to keep the area under the collection devices free of any growth that may block sunlight from reaching the mirrors.<sup>73</sup> Furthermore, due to the size of utility-scale solar project areas and the extent of landscape disturbance, restoration and reclamation of the project site may not be feasible with current technology.<sup>74</sup>

Construction, maintenance, and operation of utility-scale solar plants can have severe impacts on wildlife through direct habitat destruction and habitat fragmentation. Habitat destruction begins when the land within the solar collection field is scraped in preparation for construction. The site remains unsuitable for wildlife for the life of the project because the large fields of solar collectors interfere with natural sunlight, rainfall, and drainage at the facility, causing microclimate alteration.<sup>75</sup> For example, mirrors shield the ground from sunlight and wind, which reduces temperature and decreases wind speed and evapotranspiration beneath the reflecting mirrors.<sup>76</sup> As one botanist has noted, "nothing will live under the mirrors."<sup>77</sup> Construction and maintenance activities also alter the composition, structure, and microclimate of the land adjacent to the facility.<sup>78</sup> In addition, the reflected light in solar-collecting fields may be increased from thirty percent to fifty-six percent, super-heating the air above and around solar

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71. *Parabolic Trough FAQs*, NAT'L RENEWABLE ENERGY LAB. (Jan. 28, 2010), <http://www.nrel.gov/csp/troughnet/faqs.html#land>. This number varies with the technology and can be impacted by the amount of thermal storage designed into a plant. For comparison, the average U.S. household uses 11.2 megawatt hours per year.

72. Riley, *supra* note 59.

73. Rod Adams, *BLM Applying NEPA to Large Scale Solar Energy on Public Lands*, RED, GREEN, AND BLUE (June 30, 2008), <http://redgreenandblue.org/2008/06/30/blm-applying-nepa-to-large-scale-solar-energy-on-public-lands>.

74. Letter from Nada Culver, Senior Counsel for the Public Lands Campaign, on behalf of The Wilderness Society 6 (Jul. 15, 2008), *available at* <http://wilderness.org/files/SolarScopingFINAL.pdf> [hereinafter TWS Scoping Comments].

75. *Solar Energy Development Environmental Considerations*, *supra* note 70.

76. David Pimentel et al., *Renewable Energy: Economic and Environmental Issues*, BIOSCIENCE, Sept. 1994, at 536, 543.

77. James Navarro, *Green Scene: Solar Power Dreamin'*, DEFENDERS MAGAZINE, Fall 2009 (quoting Jim Andre).

78. TWS Scoping Comments, *supra* note 74, at 20. Changes in composition, structure, microclimate, etc. of the area adjacent to the facility are commonly referred to as the "edge effect."

facilities.<sup>79</sup> These effects are compounded at large facilities due to the number of mirrors that cover and cool the ground while simultaneously reflecting light and heating the air. These habitat alterations have direct and indirect effects on wildlife, which may cause shifts in various plant and animal populations.<sup>80</sup>

Ecosystem disturbance and destruction are especially significant to local organisms that rely on a limited area for sustenance.<sup>81</sup> “Such species often have access to a particular resource in only one area and unless they abandon historical breeding or wintering grounds, [they are] unlikely to find a replacement for the resource.”<sup>82</sup> In addition, construction of solar facilities, roads, and transmission corridors causes habitat fragmentation, which forces wildlife to live on ever-shrinking islands of habitat where it is more difficult for them to find food, water, shelter, mates, and protection from predators.<sup>83</sup> Solar development may also affect migratory populations by cutting off migration corridors and eliminating staging grounds.<sup>84</sup> Habitat fragmentation and migration disruption combine to limit genetic diversity by decreasing available mates and encouraging inbreeding. As a result, wildlife populations become more susceptible to extinction in the event of catastrophic events such as wildfire and disease. Thus, habitat fragmentation inevitably leads to smaller populations of wildlife, and threatens biodiversity by increasing the possibility of extinction for entire populations or species.<sup>85</sup>

## 2. Direct Harm to Wildlife

Beyond habitat disturbance, destruction, and fragmentation, utility-scale facilities may directly harm or kill wildlife. Bulldozing new roads,

79. Pimentel et al., *supra* note 76, at 543 (citing P.E. Mihlmester et al., *Environmental and Health Safety Issues, in SOLAR ENERGY TECHNOLOGY HANDBOOK* 731–62 (W.C. Dickenson & P.N. Cheremisinoff eds., Marcel Dekker 1980)).

80. *Id.*

81. Sutton & Tomich, *supra* note 3, at 98.

82. *Id.* (quoting Morgan Winn Tingley, *Effects of Offshore Wind Farms on Birds, “Cuisinarts of the Sky” or Just Tilting at Windmills?* (2003) (unpublished thesis, Harvard University)).

83. Letter from Peter Nelson, Director of Public Lands Program, Defenders of Wildlife, Response to Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement To Develop and Implement Agency-Specific Programs for Solar Energy Development 11 (Sept. 14, 2009) [hereinafter DOW Scoping Comments].

84. WESTERN GOVERNORS’ ASS’N, WILDLIFE CORRIDORS INITIATIVE REPORT 14 (Sept. 14, 2009), *available at* <http://www.westgov.org/wga/publicat/wildlife08.pdf> (“Staging is the period before a large migration where [animals] gather and put on extra fat reserves.”).

85. DOW Scoping Comments, *supra* note 83, at 11.



scraping solar collection sites, and other construction-related activities destroy endemic plant life and may also kill animals that cannot escape heavy earthmoving equipment. CSP systems, which function by superheating the surrounding air to as much as 800-degrees, are nicknamed "bird-zappers" by environmentalists because birds, bats, and insects passing near the towers can be cooked in flight.<sup>86</sup> Further, improper mirror tracking can focus high temperature beams on plants and animals, causing burns, retinal damage, and fires.<sup>87</sup>

### 3. Impacts on Water Resources

Solar facilities use large quantities of water. CSP systems typically use steam to generate electricity and often consume water for cooling.<sup>88</sup> The amount of water used in these systems is a function of the amount of power produced, the type of cooling system installed, and the highest temperature in the system. CSP facilities require up to 1,000 gallons of water per megawatt hour of electricity produced, which equals or exceeds the amount of water used at water-intensive nuclear and coal plants.<sup>89</sup> In addition, PV panels and CSP reflectors need water for regular cleaning in order to maintain maximum efficiency.<sup>90</sup> The increased water demand could strain the few available water resources in arid environments. Furthermore, accidental spills of cooling water may contaminate and pollute local water resources.<sup>91</sup>

### 4. Hazardous Materials

"Photovoltaic panels may contain hazardous materials, and although they are sealed under normal operating conditions, there is the potential for environmental contamination if they [are] damaged or improperly disposed of upon decommissioning."<sup>92</sup> CSP "systems may employ liquids such as oils or molten salts that may be hazardous, and present spill risks."<sup>93</sup> In addition, most industrial facilities use various fluids,

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86. Riley, *supra* note 59.

87. Pimentel et al., *supra* note 76, at 543 (citing P.E. Mihlmester et al., *Environmental and Health Safety Issues, in* SOLAR ENERGY TECHNOLOGY HANDBOOK 731-62 (W.C. Dickenson & P.N. Cheremisinoff eds., Marcel Dekker 1980).

88. *Solar Energy Development Environmental Considerations*, *supra* note 70.

89. THE WILDERNESS SOCIETY, SOLAR ENERGY DEVELOPMENT ON PUBLIC LANDS 4 (2009), available at <http://wilderness.org/files/Website-Solar%20Energy%20Development%20On%20Public%20Lands.pdf>.

90. Adams, *supra* note 73.

91. *Solar Energy Development Environmental Considerations*, *supra* note 70.

92. *Id.*

93. *Id.*

such as hydraulic fluids, coolants, and lubricants. These fluids may also be hazardous, and present a spill-related risk.<sup>94</sup>

#### IV. REGULATORY FRAMEWORK AND POLICY

Renewable technologies have the potential to produce power with no direct air pollution; thus, many people assume that renewable energy sources have fewer environmental impacts than traditional energy sources.<sup>95</sup> “Because of the misconception that these renewable energy sources do not cause environmental degradation, the regulatory development in renewable energy has been economically driven, and lacks requirements to avoid negative environmental impacts.”<sup>96</sup> Although solar energy development is an important step toward reducing the nation's GHG emissions, the sense of urgency to develop such projects must be tempered by an awareness and consideration of the land use and wildlife protection statutes and regulations that agencies and developers must follow. This Part explains the existing regulatory framework for solar energy development on federal lands and the future of such regulation under the BLM's Solar Energy Development Program and its accompanying Solar Programmatic Environmental Impact Statement. It then outlines the major federal laws that will shape solar development on federal lands and discusses the ways these laws can be used to prevent harm to and destruction of wildlife and ecosystems.

##### *A. Current Regulatory Framework for Solar Projects*

The BLM manages 23 million acres of public lands with solar potential and is responsible for regulating solar energy development projects on the public lands.<sup>97</sup> As of January 2009, the BLM had received more than 220 applications for construction of utility-scale solar energy projects, involving more than 2.3 million acres of land.<sup>98</sup> The BLM has

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94. *Id.*

95. Sutton & Tomich, *supra* note 3, at 93.

96. *Id.*

97. *Renewable Energy and the BLM: SOLAR*, BUREAU OF LAND MGMT., [http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS\\_REALTY\\_AND\\_RESOURCE\\_PROTECTION/\\_energy.Par.28512.File.dat/09factsheet\\_Solar.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION/_energy.Par.28512.File.dat/09factsheet_Solar.pdf) (last visited Oct. 25, 2010) [hereinafter Solar Fact Sheet].

98. Uclia Wang, *The Rush for Gigawatts in the Desert Explodes*, GREENTECHMEDIA (Jan. 9, 2009), <http://www.greentechmedia.com/articles/read/the-rush-for-gigawatts-in-the-desert-explodes-5483>.

been processing these applications on a case-by-case basis under its Solar Energy Development Policy.<sup>99</sup>

The BLM's current Solar Energy Development Policy is designed to "facilitate environmentally responsible commercial development of solar energy projects on public lands."<sup>100</sup> The BLM processes commercial solar energy project applications as right-of-way authorizations under the Federal Land Policy and Management Act ("FLPMA"),<sup>101</sup> and all project proposals require an environmental review under the National Environmental Policy Act ("NEPA").<sup>102</sup> If approved, the applicant must also generate a Plan of Development prior to beginning construction.<sup>103</sup> When the BLM approves the project, the agency issues a right-of-way to the applicant for a specified term (usually twenty to thirty years), and the applicant pays fair market value to rent the property from the Federal government.<sup>104</sup> The right-of-way grant authorizes all facilities necessary for a solar energy project including solar collectors, a tower, a turbine generator, thermal storage, access roads, and transmission facilities.<sup>105</sup> The BLM grants a right-of-way for the smallest amount of land that will still meet the needs of the project.<sup>106</sup> The right-of-way grant includes stipulations related to all aspects of the project including "road construction and maintenance, vegetation removal, natural, cultural and biological resources mitigation and monitoring, and site reclamation."<sup>107</sup>

### *B. Future Regulatory Framework: Solar Programmatic Environmental Impact Statement*

In May 2008, the BLM initiated a joint Programmatic Environmental Impact Statement for solar energy development ("Solar PEIS") with the DOE.<sup>108</sup> The Solar PEIS will help the agencies

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99. See Solar Energy Development Policy, *supra* note 69. This *Policy* should be distinguished from the BLM's Solar Energy Development *Program*, currently under development with the Solar PEIS (see Part III.B).

100. *Id.*

101. *Id.* Right-of-way authorizations are processed according to Title V of the Federal Land Policy and Management Act, 43 U.S.C. §§ 1761–71, and 43 C.F.R. Part 2804.

<sup>102</sup> *Id.*

103. *Id.*

104. *Id.*

105. *Id.*

106. *Id.*

107. *Id.*

108. Notice of Intent for Solar PEIS, *supra* note 33, at 30908.

determine the best management approach to adopt in terms of facilitating solar energy development and mitigating potential impacts. Although the BLM initially announced that it would not accept new solar project applications while preparing the PEIS, it resumed accepting new applications in July 2008.<sup>109</sup> The BLM will continue to process site-specific applications under its existing Solar Energy Development Policy while the BLM and the DOE prepare the Solar PEIS.<sup>110</sup>

The BLM and DOE will use the Solar PEIS to evaluate the environmental, social, and economic impacts of solar energy development on BLM lands in six Western states, develop and implement agency-specific programs for solar development, and amend relevant agency land use plans.<sup>111</sup> Specifically, the DOE hopes to develop a single set of environmental policies and mitigation strategies that will apply to the construction and operation of DOE-supported solar energy projects on federal, state, tribal, and private lands in the six Western states.<sup>112</sup> The BLM is considering whether to establish a Bureau-wide Solar Energy Development Program to supplement or replace its existing Solar Energy Development Policy and whether to amend land use plans in the six-state study area in order to implement such a program.<sup>113</sup>

The agencies have stated that “[e]nvironmental protection and energy production are both desirable and necessary objectives of sound land management practices and are not to be considered mutually exclusive priorities.”<sup>114</sup> The environmental issues that the agencies seek to address in the Solar PEIS include land use (such as proximity to and maintenance of wilderness or other special management areas), soil and geological resources, water resources, air quality and climate, and ecological resources (including threatened, endangered, sensitive, and other native species).<sup>115</sup> The public scoping period was completed on September 14, 2009, and a Draft Solar PEIS is scheduled for release at the end of 2010.<sup>116</sup>

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109. Press Release, Bureau of Land Mgmt., BLM to Continue Accepting Solar Energy Applications (July 2, 2008), *available at* [http://solareis.anl.gov/documents/docs/press\\_release\\_solar\\_applic\\_review\\_02July08.pdf](http://solareis.anl.gov/documents/docs/press_release_solar_applic_review_02July08.pdf).

110. *Id.* (despite the fact that the policy expired on September 30, 2009).

111. Notice of Intent for Solar PEIS, *supra* note 33, at 30908.

112. *Id.* at 30909.

113. *Id.*

114. *Id.* at 30911.

115. *What's in the Solar Energy Development Programmatic PEIS*, SOLAR ENERGY DEV. PROGRAMMATIC EIS INFO. CTR., <http://solareis.anl.gov/eis/what/index.cfm> (last visited Oct. 25, 2010).

116. *Solar PEIS Schedule Update*, SOLAR ENERGY DEV. PROGRAMMATIC EIS INFO.

Through the preparation of the Solar PEIS, the BLM has identified the federal lands that are environmentally suitable for solar energy development and those that are excluded from such development.<sup>117</sup> In June 2009, the BLM released maps of twenty-four Solar Study Areas, specific locations that the agencies have determined are best suited for large-scale solar energy production.<sup>118</sup> Excluded from solar development are lands within the National Landscape Conservation System and lands designated as critical habitats for threatened and endangered species.<sup>119</sup> The Solar Energy Study Areas also exclude lands that the BLM has previously "identified in its land use plans as environmentally sensitive, such as Areas of Critical Environmental Concern or other special management areas that are inappropriate for or inconsistent with extensive, surface-disturbing uses."<sup>120</sup> In promulgating the Solar PEIS, the BLM and DOE must comply with the requirements of a number of federal environmental statutes, most notably FLPMA, NEPA, and the Endangered Species Act ("ESA").

### *C. Federal Land Policy and Management Act*

FLPMA is the principal law governing the manner in which the BLM manages public lands.<sup>121</sup> FLPMA requires the BLM to prepare and maintain land use plans regarding management, protection, development, and enhancement of the public lands.<sup>122</sup> Land use plans must apply the principles of multiple use and sustained yield<sup>123</sup> and must "consider present and potential uses of public lands."<sup>124</sup> Land use plans may allow a wide variety of potential land uses, including commercial activities, public recreation, or conservation; however, public lands and the resources contained therein must be used in a manner that will best meet

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CTR. (Dec. 7, 2009), <http://solareis.anl.gov/news/index.cfm>.

117. *Id.*

118. Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement To Develop and Implement Agency-Specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications, 74 Fed. Reg. 31307 (June 30, 2009).

119. *Id.* at 31308. The National Landscape Conservation System includes National Conservation Areas, National Monuments, Wilderness Areas, Wilderness Study Areas, and Wild and Scenic Rivers.

120. *Id.*

121. Federal Land Policy and Management Act, 43 U.S.C. § 1701 et seq. (2006). Some provisions of FLMPA also apply on National Forest lands.

122. *Id.* § 1712(a).

123. *Id.* §§ 1701(a)(7), 1712(c)(1).

124. *Id.* § 1712(c)(5).

the needs of the American people, while taking into account the long-term needs of future generations.<sup>125</sup> When formulating land use plans, the BLM must consider the relative value of resources without necessarily promoting the uses with the greatest economic return or greatest unit output. Most importantly for the purposes of this discussion, FLPMA requires the BLM to ensure protection of the environmental resources it manages<sup>126</sup> and to provide “habitat for fish and wildlife.”<sup>127</sup>

Solar energy development is a relatively recent use of BLM lands, and the BLM has adopted a policy of “facilitat[ing] environmentally responsible commercial development of solar energy projects on public lands.”<sup>128</sup> The BLM currently regulates solar development on public lands under Title V of FLPMA, which governs rights-of-way across public lands.<sup>129</sup> However, the BLM is currently considering whether to amend or supplement its land use plans to include more comprehensive guidelines for solar development on public lands.<sup>130</sup> Once the BLM issues new land use plans, “[a]ll future resource management authorizations and actions...and subsequent more detailed or specific planning, shall conform to the [land use] plan.”<sup>131</sup>

As solar energy development increases on BLM lands, solar projects have the potential to conflict with other land uses, such as habitat conservation, which might bring about legal challenges to land use plans. Proper land use planning can be a valuable tool in helping to minimize the effects of solar energy development, mitigate potential environmental harms, and provide for co-existence of concurrent and adjoining land uses. On the other hand, if the BLM’s land use planning process opens an area to solar development and is found to be improper or inadequate, the agency might face legal challenges. Further, litigants can challenge new solar development projects on the grounds that the projects are inconsistent with the BLM’s land use plans.

Land use planning provisions are not necessarily the best litigation tools for preventing the construction of new solar projects for three reasons. First, a challenge to land use plans prior to on-the-ground

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125. *Id.* §§ 1702(c).

126. *See, e.g., id.* § 1732(b) (“In managing the public lands the Secretary [of the Interior] shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.”); *see also* § 1702(c) (The public lands must be managed “without permanent impairment of the productivity of the land or quality of the environment”).

127. *Id.* § 1201(a)(8).

128. Solar Energy Development Policy, *supra* note 69.

129. *See* Federal Land Policy and Management Act, 43 U.S.C. §§ 1761–71.

130. Notice of Intent for Solar PEIS, *supra* note 33, at 30908.

131. 43 C.F.R. § 1610.5-3(a).

implementation of the plan may not be ripe for judicial review.<sup>132</sup> Second, the BLM is currently conducting comprehensive studies on lands it has deemed ideal for solar development and will likely promulgate detailed land use plans designating solar development as a high priority use of these lands.<sup>133</sup> Finally, and most importantly, courts generally give a great deal of deference to the manner in which agencies choose to adopt and implement their land use plans.<sup>134</sup>

#### *D. National Environmental Policy Act*

NEPA was the nation's first modern environmental law. NEPA declares a broad national commitment to protecting and promoting environmental quality.<sup>135</sup> To ensure that federal agencies fulfill this commitment, NEPA requires any agency that is contemplating a "major Federal action significantly affecting the quality of the human environment" to assess the environmental impacts of its proposed actions.<sup>136</sup> A broad range of agency actions are considered "major Federal actions" under NEPA, including: issuing regulations; financing, assisting, conducting, or approving public and private actions; making federal land management decisions; and constructing publicly-owned facilities.<sup>137</sup>

To determine whether an agency action will have a significant environmental effect, the agency usually prepares an environmental assessment ("EA").<sup>138</sup> If the conclusion is negative, the agency makes a finding of no significant impact ("FONSI"). But if the agency finds that its action will significantly affect the environment, it must prepare an environmental impact statement ("EIS"). The EIS must consider not only environmental impacts but also the related social and economic effects of the proposed action, and must consider all reasonable alternatives, including a "no action alternative."<sup>139</sup>

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132. *See* Ohio Forestry Ass'n, Inc. v. Sierra Club, 523 U.S. 726, 732–33 (1998).

133. *See* Solar Programmatic Environmental Impact Statement in Part III.B.

134. *See, e.g.,* Natural Res. Def. Council v. Hodel, 624 F. Supp. 1045 (D. Nev. 1985) (holding that BLM is entitled to considerable discretion in reducing grazing on BLM lands). The courts also give deference to other agency decisions.

135. National Environmental Policy Act of 1969, 42 U.S.C. § 4331(a).

136. *Id.* § 4332.

137. COUNCIL ON ENVTL. QUALITY, EXEC. OFFICE OF THE PRESIDENT, A CITIZEN'S GUIDE TO THE NEPA: HAVING YOUR VOICE HEARD 9 (Dec. 2007), *available at* [http://ceq.hss.doe.gov/nepa/Citizens\\_Guide\\_Dec07.pdf](http://ceq.hss.doe.gov/nepa/Citizens_Guide_Dec07.pdf).

138. 40 C.F.R. §1501.4.

139. COUNCIL ON ENVTL. QUALITY, *supra* note 137, at 9.

NEPA is a purely procedural statute; it requires federal agencies to undertake the process of preparing an EIS but does not require a particular outcome.<sup>140</sup> Thus, NEPA does not require an agency to select the most environmentally protective alternative or prohibit adverse environmental effects.<sup>141</sup> The benefit of NEPA is that it forces every federal agency to carefully consider information concerning significant environmental impacts of its actions. Moreover, the agency must put its reasoning and conclusions regarding such actions and impacts into writing, which are then subject to public scrutiny and judicial review.

A NEPA analysis is required for most solar development projects because the projects involve federal agencies in some way—many projects are either located on federal land, receive federal funding, or both. Under the BLM's current regulatory system, owners or operators of proposed solar projects must apply to the BLM for a right-of-way permit.<sup>142</sup> The permitting process requires that the BLM prepare an EA or an EIS to assess the potential environmental impacts of the project, including habitat destruction and species loss.<sup>143</sup> The BLM has proposed replacing this system and streamlining the NEPA process for solar development. The agency is currently assessing alternatives and will present its preferred alternative in the Solar PEIS.

### *1. Potential NEPA Litigation for Solar Energy Development on BLM Lands*

NEPA litigation traditionally falls into two general categories: (1) claims that the agency should have prepared a full EIS and (2) claims that the agency's EA or EIS is inadequate.<sup>144</sup> The first situation may arise either when an agency has prepared an EA and then issued a FONSI rather than preparing an EIS,<sup>145</sup> or when an agency asserts that it does not have to prepare individual EISs for individual projects because it has already issued a programmatic EIS that covers the individual project.<sup>146</sup> In the second situation, litigants may attack the sufficiency of EAs, site-

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140. See e.g., *Robertson v. Methow Valley Citizens' Council*, 490 U.S. 322, 350 (1989) ("the statute does not impose substantive limits on agency conduct").

141. *COUNCIL ON ENVTL. QUALITY*, *supra* note 137, at 10; see also *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227 (1980).

142. *Solar Energy Development Policy*, *supra* note 69.

143. *Id.* The BLM may require the applicant to fund the EIS process.

144. *GEORGE CAMERON COGGINS ET AL.*, *FEDERAL PUBLIC LAND AND RESOURCES LAW* 247 (6th ed. 2007).

145. See, e.g., *Benton County v. U.S. Dep't of Energy*, 256 F. Supp. 2d 1195, 1200 (E.D. Wash. 2003) (holding that an EA was sufficient and an EIS was not required).

146. See *Natural Res. Def. Council v. Morton*, 388 F. Supp. 829, 833 (D.D.C. 1974).



specific EISs, or programmatic EISs on grounds that they fail to adequately consider important environmental effects, cumulative impacts, connected actions, or that they do not adequately discuss alternatives to the proposed action. Judicial review of EIS adequacy tends to be narrower than review of an agency's failure to prepare an EIS.

After its release, the BLM's Solar PEIS can be challenged on several grounds. First, the PEIS may not be sufficiently site-specific, in other words, it may not adequately address the unique environmental impacts of individual proposed solar energy projects. Second, the Solar PEIS (or a site-specific EIS prepared by the BLM in the future) may be inadequate if it does not sufficiently analyze cumulative impacts and connected actions, or if it does not discuss reasonable alternatives. The following sub-sections argue that the BLM must prepare site-specific EISs for individual solar projects, despite the agency's promulgation of the forthcoming Solar PEIS, and that the Solar PEIS must assess and analyze the connected actions and cumulative impacts of solar development as well as reasonable alternatives to the BLM's chosen course of action.

#### a. Need for Site-Specific EISs

NEPA and its implementing regulations recognize the need to prepare *programmatic* EISs in the appropriate circumstances.<sup>147</sup> However, courts generally defer to agencies in determining whether a PEIS is necessary and there are few cases where courts have ordered agencies to complete PEISs.<sup>148</sup> The BLM and the DOE have recognized that broader planning through the use of a PEIS is an effective way to plan and guide large-scale energy resource development and to expedite the review process. The Solar PEIS will evaluate issues that the agencies will need to address for all solar projects: siting decisions, land use plans, transmission corridors, impacts on the general landscape, threats to local plants and animals, cumulative effects, best management practices, and mitigation efforts. Furthermore, the Solar PEIS can serve as a blueprint on which to pattern site-specific EISs, if they are required.<sup>149</sup>

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147. See e.g., 40 C.F.R. § 1502.4(b) (EISs "may be prepared, and are sometimes required, for broad Federal actions such as the adoption of new agency programs"); see also *id.* § 1508.18.

148. See e.g., *Kleppe v. Sierra Club*, 427 U.S. 390, 394 (1976) (Federal agencies were not required to prepare a comprehensive EIS for coal development in the Northern Great Plains where there was no evidence that individual coal development projects undertaken or proposed in the region were integrated into a plan or otherwise interrelated).

149. "Geographic tiering," which describes the relationship between a PEIS and

Despite the fact that the BLM will complete a Solar PEIS, the agency should also be required to conduct a NEPA analysis for each individual solar energy project. Each solar project has unique characteristics and raises site-specific issues. The potential for negative environmental impacts such as soil erosion, wildlife damage, and conflicting land use interests will vary depending on the proposed location of the project and the frequency of human and wildlife use of that location. Solutions to problems at one site may be ineffective at other sites. The BLM has stated that “the intention of the Solar PEIS is not to eliminate the need for site-specific environmental review for individual utility-scale solar energy development proposals.”<sup>150</sup> Thus, the Solar PEIS will likely contain a commitment to conduct site-specific environmental impact analyses for individual projects.

If the BLM fails to prepare individual EISs, it could face challenges on the ground that the Solar PEIS is not sufficiently detailed under NEPA regulations to allow the BLM to authorize individual solar projects. NEPA regulations require agencies to prepare “subsequent [EISs] on major individual actions . . . where such actions have significant environmental impacts not adequately evaluated in the [PEIS],”<sup>151</sup> and courts generally enforce these obligations.<sup>152</sup> For instance, in *Natural Resources Defense Council v. Morton*, the court held that the BLM’s PEIS “did not provide detailed analysis of local geographic conditions necessary for the decision-maker [and the public] to determine what course of action was appropriate,” so the BLM had to assess the specific environmental effects of the permits it issued.<sup>153</sup> While portions of the Solar PEIS may be applied to individual projects, the Solar PEIS does not completely abdicate the BLM’s duty to perform individualized analysis at each proposed development site.

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subsequent site-specific EISs, is a common practice among land management agencies. See e.g., Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States, 70 Fed. Reg. 36651-03 (June 24, 2005).

150. Notice of Intent for Solar PEIS, *supra* note 33, at 30910 (“Site-specific environmental reviews are expected to be tiered to the PEIS and to be more effective and efficient because of the PEIS.”).

151. 40 C.F.R. § 1500.6(d)(1).

152. *Natural Res. Def. Council, Inc. v. U.S. Nuclear Regulatory Comm’n*, 606 F.2d 1261, 1270 (D.C. Cir. 1979) (holding that a PEIS “cannot replace the need for individual project EIS(s) when there are significant and important project-specific environmental issues”).

153. *Natural Res. Def. Council, Inc. v. Morton*, 388 F. Supp. 829, 838, 841 (D.D.C. 1974) *aff’d*, 527 F.2d 1386 (D.C. Cir. 1976) and *aff’d sub nom.* Appeal of Pac. Legal Found., 527 F.2d 1386 (D.C. Cir. 1976).

### b. EIS Content

EIS content is another potential source for litigation, both on programmatic and site-specific issues. NEPA regulations require that an agency consider all connected and cumulative actions in a single EIS.<sup>154</sup> Thus, the Solar PEIS, as well as future site-specific EAs and EISs, should assess the impacts of all activities that are required for the construction of solar power plants, such as road building and construction of electricity transmission corridors. The PEIS must also analyze potential cumulative impacts that could arise if the BLM approves multiple solar plants in any given geographical area. Examples of cumulative impacts include loss of landscapes of a completely wild character, soil erosion and fugitive dust, effects on recreational land uses, and harm to wildlife populations via widespread habitat destruction and fragmentation.

The Solar PEIS must also assess a range of reasonable alternatives, including a “no action” alternative,<sup>155</sup> and the environmental consequences of those alternatives.<sup>156</sup> The Notice of Intent for the Solar PEIS contains three alternatives: a “no action” alternative, a “limited development” alternative, and a “facilitated development” alternative.<sup>157</sup> The National Wildlife Federation, in its comments on the Notice, has recommended that the BLM include additional alternatives to address mitigation measures, such as exclusions to prevent habitat fragmentation and migration corridor disruption, limits on the amount of habitat to be disturbed, and construction in already disturbed areas.<sup>158</sup> If the BLM fails

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154. 40 C.F.R. § 1508.25(a)(1); 40 C.F.R. § 1508.7. Actions are connected if they “(i) automatically trigger other actions which may require environmental impact statements; (ii) cannot or will not proceed unless other actions are taken previously or simultaneously; (iii) are independent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. § 1508.25(a)(1)(i)-(iii). Cumulative impact is defined as the impact on the environment that results from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future action regardless of what agency or person undertakes such other actions. 40 C.F.R. § 1508.7. *See also* Oregon Natural Res. Council v. Brong, 492 F.3d 1120, 1132 (9th Cir. 2007) (explaining that one of the “specific requirements under NEPA is that an agency must consider the effects of the proposed action in the context of all relevant circumstances, such that where several actions have a cumulative . . . environmental effect, this consequence must be considered in an EIS” (quotation marks omitted)).

155. 42 U.S.C. § 4332(2)(C); 40 C.F.R. 1502.14.

156. NRDC v. Morton, 458 F.2d 827, 834, 837–38 (1972).

157. Notice of Intent for Solar PEIS, *supra* note 33, at 30910.

158. Letter from Kathleen Zimmerman, Senior Land Stewardship Policy Specialist, National Wildlife Federation, Scoping Comments for the Programmatic Environmental Impact Statement to Evaluate Solar Energy Development 10 (Jul. 15, 2008), *available at* <http://wilderness.org/files/SolarScopingFINAL.pdf>.

to consider reasonable alternatives that address problems identified in the scoping comments for the Solar PEIS, courts may question the sufficiency of the final Solar PEIS.<sup>159</sup>

While the BLM is required to analyze connected and cumulative impacts in an EIS and address reasonable alternatives, it is unlikely that challenges to the content of the final Solar PEIS will be resolved against the BLM. Courts generally give a great deal of deference to federal agencies regarding the content of an EIS unless the court deems the inclusion or exclusion of a particular issue to be arbitrary and capricious.<sup>160</sup> In general, any conflict concerning EIS content will likely be resolved in the BLM's favor even if there is scientific information contradicting the BLM's position.<sup>161</sup>

In addition, NEPA challenges brought prior to the BLM's implementation of the Solar PEIS may be difficult to sustain because such challenges may not be ripe and challengers may lack standing. NEPA creates no private cause of action, but people adversely affected by a "final agency action"<sup>162</sup> can typically sue under the Administrative Procedure Act ("APA").<sup>163</sup> The PEIS is arguably not a "final agency action," but instead a document prepared in support of possible future agency actions, so litigants may not have standing to challenge the sufficiency or adequacy of the Solar PEIS under the APA. In *Ohio Forestry Ass'n Inc. v. Sierra Club*, the Supreme Court mentioned in dicta that a challenge to a completed EIS is always ripe,<sup>164</sup> but it seems unlikely that the Supreme Court would stand by that notion in a case that directly presents the issue.

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159. See e.g., *Dubois v. U.S. Dep't of Agric.*, 102 F.3d 1273 (1st Cir. 1996).

160. *Dep't of Transp. v. Public Citizen*, 541 U.S. 752, 763 (2004) ("An agency's decision not to prepare an EIS can be set aside only upon showing that it was 'arbitrary, capricious, abuse of discretion, or otherwise not in accordance with law'").

161. See generally *Natural Res. Def. Council v. Hodel*, 624 F. Supp. 1045 (D. Nev. 1985).

162. In order for an agency action to be "final" and subject to review under the Administrative Procedure Act, the action must mark the consummation of the agency's decision-making process, rather than merely be tentative or interlocutory in nature, and action must be one by which rights or obligations have been determined or from which legal consequences will follow. *Bennett v. Spear*, 520 U.S. 154, 177–78 (1997); 5 U.S.C. § 704.

163. *Colorado Farm Bureau Fed'n v. U.S. Forest Serv.*, 220 F.3d 1171, 1173 (10th Cir. 2000).

164. *Ohio Forestry Ass'n, Inc. v. Sierra Club*, 523 U.S. 726, 737 (1998).

### *E. Endangered Species Act*

The Endangered Species Act ("ESA") is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation."<sup>165</sup> Passed in 1973, the purpose of the ESA is to conserve and restore species that have been listed by the federal government as either endangered or threatened ("listed species"), as well as the ecosystems upon which listed species depend.<sup>166</sup> Section 7 requires federal agencies to ensure that their actions will not jeopardize the continued existence of a listed species or adversely modify its critical habitat.<sup>167</sup> Section 9 of the ESA prohibits any person from "taking" a listed species, regardless of whether the federal government is involved and regardless of whether the listed species is located on federal land.<sup>168</sup> This Part describes the basic provisions of section 9 and section 7, judicial interpretations of some of the key provisions of these sections, and the ways in which the ESA can be used to protect listed species from the negative impacts of solar development.

#### *1. Section 9: The "Take" Prohibition*

Section 9 of the ESA prohibits the taking of any listed species by "any person subject to the jurisdiction of the United States."<sup>169</sup> Thus, the "take" prohibition applies to federal agencies, state agencies, organizations, and individuals. The ESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct."<sup>170</sup> Courts grapple with the meaning of "take" because the statute does not further clarify the meaning of the terms included in the definition; but the term has always been understood to apply to individual specimens rather than the entire population or species.<sup>171</sup>

One major issue is the extent to which "harm" includes habitat degradation, which would impose liability for acts that may indirectly

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165. *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 179 (1978).

166. 16 U.S.C. § 1531(a)(4); 16 U.S.C. § 1531(b). The term "species" includes any subspecies of animal or plant, and any distinct population segment of any animal species that interbreeds when mature. 16 U.S.C. § 1532(a)(16). A species is "endangered" if it is in danger of extinction throughout all or a significant portion of its range. 16 U.S.C. § 1532(a)(6). A species is "threatened" if it is likely to become an endangered species within the foreseeable future. 16 U.S.C. § 1532(a)(20).

167. 16 U.S.C. § 1536(a)(2).

168. 16 U.S.C. § 1538(a)(1).

169. *Id.*

170. 16 U.S.C. § 1532(a)(19).

171. COGGINS ET AL., *supra* note 144, at 306.

result in wildlife death. The U.S. Fish and Wildlife Service (“FWS”), the agency responsible for administering the ESA, has defined “harm” to include “significant habitat modification or degradation where it actually kills or injures wildlife by impairing essential behavioral patterns, including breeding, feeding, or sheltering.”<sup>172</sup> The U.S. Supreme Court approved this regulatory definition of “harm” in *Babbitt v. Sweet Home Chapter of Communities for a Greater Oregon*. The Court noted that Congress intended “take” to be construed broadly and to include habitat modification.<sup>173</sup> The majority only briefly addressed the regulation’s requirement that habitat modification “actually kill or injure” listed species, suggesting, but not holding, that habitat modification must be the but-for cause of injuries to particular animals.<sup>174</sup> However, Justice O’Connor, in a concurring opinion, directly addressed the causation issue. Under her interpretation of the regulations, habitat modification must be the proximate cause of “actual, as opposed to hypothetical or speculative, death or injury to identifiable protected animals.”<sup>175</sup> She clarified that impairment of “essential behavior patterns” was included in the definition of harm not because of the impact these behaviors have on the viability of the species, but because “breeding, feeding, and sheltering are what animals do.”<sup>176</sup>

## 2. Section 7: The Consultation and Conservation Duties

Section 7 of the ESA requires every federal agency to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any listed species or damage its critical habitat.<sup>177</sup> This obligation requires every federal agency to assess whether its actions could affect a listed species before taking such actions, regardless of whether such action will occur on federal land. To meet this requirement, a federal agency that is considering taking an action (the “action agency”) must “consult” with the FWS.<sup>178</sup> The first

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172. 50 C.F.R. § 17.3.

173. *Babbitt v. Sweet Home Chapter of Communities For a Greater Oregon*, 515 U.S. 687, 693 (1995).

174. *Id.* at 700 n. 13.

175. *Id.* at 708–09 (O’Connor, J., concurring).

176. *Id.* at 709 (O’Connor, J., concurring).

177. 16 U.S.C. § 1536(a)(2). A “critical habitat” is any area that is essential to the conservation of the species, whether or not the species actually occupies such area. 16 U.S.C. § 1532(a)(5)(A).

178. 16 U.S.C. § 1536(a)(2). The FWS is responsible for land-based species; the National Oceanic and Atmospheric Administration Fisheries Service is responsible for marine life, which are not relevant to this note.

step in the consultation process is to determine whether the proposed project area contains any listed species, species that have been proposed for listing, or designated critical habitats. If the answer is yes, then the action agency and the FWS must assess what impact the proposed action might have on the species or habitat.<sup>179</sup>

If the FWS concludes the action will not adversely affect the species (i.e., a “no jeopardy” finding), the action can go forward.<sup>180</sup> If the FWS concludes the action poses harm that is “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity,” and would not constitute jeopardy, the FWS typically proposes a set of mitigation measures (“reasonable and prudent” measures) that would allow the activity to proceed.<sup>181</sup> It is also possible—though rare—that the action poses risks to listed species or critical habitats and there are no effective mitigation measures. Under this circumstance, the action agency either has to revise its proposal, abandon it altogether, or seek an exemption from the Endangered Species Committee.<sup>182</sup>

### *3. Potential ESA Litigation for Solar Energy Development on Federal Lands*

Courts have enjoined timber harvests, water diversions, water developments, road construction, mining operations, and other projects under the strict directives of the ESA.<sup>183</sup> The principal project-halting ESA case is *Tennessee Valley Authority v. Hill*.<sup>184</sup> In that case, the U.S. Supreme Court suspended the construction of a \$119 million dam to save the critical habitat of the endangered snail darter fish.<sup>185</sup> The Court emphasized that Congress’s intent in enacting the ESA was to make the protection and conservation of endangered species “the highest of

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179. 16 U.S.C. § 1536(c). The action agency may complete this assessment as part of its NEPA process.

180. COGGINS ET AL., *supra* note 144, at 296.

181. 16 U.S.C. § 1536(b)(4). Reasonable and prudent “measures” are intended to minimize incidental takings caused by an agency action that does *not* jeopardize a species or adversely modify its critical habitat. Compare reasonable and prudent “alternatives,” which are possible actions that the FWS proposes that an agency take instead of a proposed action that *would* jeopardize a species or adversely modify its critical habitat.

182. The Committee has been convened only three times and only twice have exemptions been granted. E.G. Willard et al., *Environmental Law and National Security: Can Existing Exemptions in Environmental Laws Preserve DOD Training and Operation Prerogatives Without New Legislation?*, 54 A.F. L. REV. 65, 75 (2004).

183. Robert L. Glicksman & George Cameron Coggins, *Hardrock Minerals, Energy Minerals and Other Resources on the Public Lands: The Evolution of Federal Natural Resources Law*, 33 TULSA L.J. 765, 791–92 (1998).

184. *Tennessee Valley Authority v. Hill*, 437 U.S. 153 (1978).

185. *Id.* at 168.

priorities”<sup>186</sup> and to “halt and reverse the trend toward species extinction, whatever the cost.”<sup>187</sup> In holding that Congress viewed the value of endangered species as “incalculable,” the Court prohibited balancing the utility of an endangered species against any loss associated with enjoining a federal project that could jeopardize the existence of that species.<sup>188</sup>

As explained above, the ideal location for large solar energy projects is the remote desert. Limited human contact in desert areas provides a pristine habitat for native plants and animals, as well as corridors for migrating wildlife. Although the BLM has already indicated that it will not pursue solar development in designated critical habitats, only about twelve percent of listed species currently have designated critical habitats.<sup>189</sup> Thus, many areas slated for solar development likely contain listed species and sensitive habitat.

Many of the negative environmental impacts of solar development constitute “harm” to listed species. As described above, some aspects of solar facility construction and operation can “actually kill and injure” wildlife, such as scraping plants from the earth or burning birds in flight. Further, because of the size of utility-scale solar facilities and the ground disturbance required to construct them, they cause “significant habitat modification” and lead to habitat fragmentation. It is reasonably foreseeable that these impacts can “significantly impair essential behavior patterns” of indigenous and migratory listed species, because resources, namely food, water, shelter, and mates, are so limited in the desert that solar facilities may eliminate or isolate these resources altogether. The resulting changes in “breeding, feeding, and sheltering” behaviors are an immediate threat to the survival of individual animals and endanger the future viability of entire populations of listed desert species. Thus, the harms caused by solar energy development meet the regulatory and judicially-approved definition of “harm” under the ESA. Therefore, the BLM and solar developers may be subject to liability under section 9 if they do not fulfill the consultation requirement of section 7.

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186. *Id.* at 174.

187. *Id.* at 184.

188. *See id.* at 187–88.

189. U.S. Fish & Wildlife Serv., *Critical Habitat: What Is It?*, (May 2000), [http://library.fws.gov/Pubs9/critical\\_habitat00.pdf](http://library.fws.gov/Pubs9/critical_habitat00.pdf).



## V. SOLUTIONS: BALANCING SOLAR DEVELOPMENT WITH WILDLIFE CONSERVATION

As the nation transitions toward a clean energy future, it is imperative to strike a balance between addressing the short-term impacts of large-scale solar development with the long-term impacts of climate change on biological diversity, wildlife habitat, and natural landscapes.<sup>190</sup> The key to ensuring the proper balance is comprehensive planning that minimizes adverse impacts on wildlife and wild lands. Proper planning will require strict guidelines for siting solar energy facilities, government and public involvement at all levels of decision-making, and may require relocating solar energy facilities away from sensitive lands.

### *A. Relocate Energy Production*

Solar facilities can be built on lands that already suffer from environmental degradation. For example, abandoned mines, developed oil and gas fields, decommissioned fossil fuel plants, and other brownfields, which are not being restored, can be replaced with solar power plants without loss of wildlife habitat.<sup>191</sup> Such sites are often close to existing infrastructure, which will minimize construction of new roads and transmission lines.<sup>192</sup> Researchers are also developing ways to generate solar power along existing roadways.<sup>193</sup> Many interstate highways are already leveled and cleared of most sunlight-blocking objects, so PV panels or small CSP facilities could be constructed along the edges of these roads. This solution also eliminates the cost of transmission because many existing transmission lines parallel roadways. Defenders of Wildlife also offers the following options for building sites: lands that have been mechanically disturbed or type-converted from native vegetation; abandoned agricultural lands; public lands of comparatively low resource value located adjacent to degraded private lands; and lands adjacent to urbanized areas, existing transmission corridors, and existing roads.<sup>194</sup>

Instead of building huge solar power plants located hundred of miles from cities where energy is needed, people should “relocalize” by

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190. DOW Scoping Comments, *supra* note 83, at 1.

191. TWS Scoping Comments, *supra* note 74, at 4.

192. *Id.*

193. Leora Broydo Vestel, *Harvesting Clean Energy Along the Road*, N.Y. TIMES BLOG: GREEN INC. (July 23, 2009), <http://greeninc.blogs.nytimes.com/2009/07/23/harvesting-clean-energy-along-the-road>.

194. DOW Scoping Comments, *supra* note 83, at 10.

producing solar energy where it is needed. Locating PV solar panels on the roofs of homes, businesses, and other buildings would reduce the need for additional land and the costs of energy transmission. The United States has 30 billion square feet of commercial rooftop surface that can support PV systems.<sup>195</sup> Placing PV panels on all the buildings would create 150 gigawatts of electricity, which would save 1 million acres of desert from destruction.<sup>196</sup> “Micro” solar plants can also be constructed in parks and over parking lots.

### *B. Mitigation: Solar Energy Facility Siting, Design, and Operation Guidelines*

Where solar facilities cannot be built on degraded lands, careful design and siting can greatly reduce harmful impacts on animals, plants, and their habitats. The BLM can promote such practices through proper land use planning and proper environmental analyses, as mandated by federal statutory provisions including FLPMA, NEPA, and the ESA. The BLM’s Solar PEIS is the first major step toward large-scale planning of solar facility siting on federal lands. Given the magnitude of development being considered, strategic planning at this scale is more likely to lead to more favorable conservation outcomes than would occur through project- or site-specific decisionmaking.<sup>197</sup> The siting criteria outlined in Solar PEIS will affect millions of acres of federal land, so it is of utmost importance that the BLM evaluate all potential environmental impacts of solar development.

As discussed above, the BLM and DOE have already eliminated the following land categories from the Solar Energy Study Areas covered by the Solar PEIS: National Landscape Conservation System lands, designated critical habitat for listed species, and lands that the BLM has previously identified in its land use plans as environmentally sensitive.<sup>198</sup> The agencies should also give special consideration to pristine lands with wilderness characteristics and to ecologically sensitive lands, such as wildlife movement corridors, high integrity terrestrial and aquatic ecosystems, and land with unique habitat features and diverse biological resources.<sup>199</sup> In order to identify additional lands that are not appropriate

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195. *Solar Energy Solutions: Relocalize*, BASIN AND RANGE WATCH, <http://www.basinandrangewatch.org/Solar-TheSolution.html> (last visited Oct. 25, 2010).

196. *Id.*

197. DOW Scoping Comments, *supra* note 83, at 2.

198. Notice of Intent for Solar PEIS, *supra* note 33, at 30910.

199. DOW Scoping Comments, *supra* note 83, at 3, 9; TWS Scoping Comments, *supra* note 74, at 2.

for solar development, the BLM should study wildlife populations on areas proposed for development and surrounding lands. In addition to providing important data regarding the presence of listed, proposed-for-listing, or other sensitive species, these studies will help the agency obtain baseline environmental data for monitoring and managing the impacts of future solar projects.

For areas where solar development is approved, developers and federal agencies must work together to minimize and mitigate the effects on biological resources using principles of adaptive management. The agencies should require detailed monitoring plans for the construction and operation of solar power plants. Applying the principles of adaptive management, such as continued data-gathering and comparisons to baseline data, will allow the agencies to determine whether environmental impacts are consistent with those anticipated or whether additional mitigation measures are necessary before the project can proceed.<sup>200</sup> If environmental impacts vary from initial projections, monitoring plans should require that changes be made to the project in order to ensure that environmental effects do not exceed expected and acceptable levels.<sup>201</sup>

The Solar PEIS should also address reclamation. Reclamation involves re-establishing the natural surface, including soil layers and contours, and re-vegetating areas with native species to return the lands to their previous ecological function. Solar facilities have only a twenty-to thirty-year life span so federal agencies should require solar developers to restore land that has been leveled and scraped for solar development.<sup>202</sup> Bonding must be sufficient to cover the entire cost of restoration.

### *C. Government and Public Involvement*

Each level of government should be involved in critical decisions regarding the siting of solar energy facilities. The BLM should coordinate its planning and management efforts with other energy-related projects in the region. FLMPA requires that the BLM's guidance and management policies shall "be consistent with officially approved and adopted resources related policies and programs of other Federal agencies, State and local governments and Indian tribes."<sup>203</sup> Government

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200. DOW Scoping Comments, *supra* note 83, at 6.

201. *Id.*

202. Dan Frosch, *Citing Needed for Assessments, U.S. Freezes Solar Energy Projects*, N.Y. TIMES, June 27, 2008, at A13.

203. 43 U.S.C. § 1712(c)(9) (2006).

decisionmaking must be consistent and transparent, and this will be aided by the BLM's Solar PEIS.

In addition, public participation in siting decisions should be assured at all stages of decisionmaking. Public involvement provides valuable information to agencies and brings concerns to the agencies' attention, which improves the planning process and helps to avoid controversy. When government agencies make decisions that seem inappropriate, concerned citizens can use the legal requirements of FLPMA, NEPA, and the ESA to prevent the implementation of land-use projects within sensitive ecosystems and the critical habitats of listed species.

## VI. CONCLUSION

Solar energy development on federal lands will create significant climate change benefits. However, it is clear that utility-scale solar projects present their own host of negative environmental impacts, including impacts that may ultimately contribute to climate change.<sup>204</sup> As fossil fuels supplies dwindle, the climate continues to warm, and the demand for energy increases, we must balance the need for solar power with the need to conserve sensitive environments and the species that inhabit them. The BLM will inevitably have to make some sacrifices to create a comprehensive regulatory scheme that encourages solar development while preventing negative environmental impacts. The Solar PEIS will indicate whether the BLM can effectively prioritize the conservation of biological resources in the face of climate change.

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204. For example, desert landscapes have important value as carbon "sinks," which could be lost if they are developed. TWS Scoping Comments, *supra* note 74, at 16, *citing Have Desert Researchers Discovered a Hidden Loop in the Carbon Cycle?*, 320 SCIENCE 1094 (June 13, 2008).

# **Building With Blinders On: How Policymakers Ignored Indian Water Rights to the Colorado, Setting the Stage for the Navajo Claim**

**Jeff Candrian\***

## **I. INTRODUCTION**

On March 14, 2003, the Navajo Nation filed a lawsuit against the U.S. Department of the Interior in an effort to resolve its potentially huge share of the Colorado River.<sup>1</sup> The suit focuses on the tribe's reserved water rights for the western half of its reservation, above Lake Mead in Arizona.<sup>2</sup> It should have come as no surprise.

Millions of people rely on Colorado River water for municipal and commercial purposes in the Lower Basin states of Arizona, California, and Nevada. Billions have been spent in the Southwest based on this reliance, fueling rapid growth and economic prosperity. Yet a heavy cloud of uncertainty hovered over all this development from the beginning. The policymakers who split up and consistently sparred over the river chose to look the other way, however, preferring to focus their eyes on a future full of dollars and dams. Those days are over.

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\* The writer is a 2011 J.D. candidate at the University of Colorado. He wishes to thank Professors Mark Squillace and Charles Wilkinson for their help and advice, as well as Katie Babcock, Daniel Cordalis, and Matt Samelson.

1. Navajo Nation Complaint against U.S. Dep't of the Interior at 1, 2, Navajo Nation v. U.S. Dep't of the Interior, 2007 WL 44005511 (D. Ariz. 2003) (on file with author).

2. *Id.* at 2–3.

"People have known for years that the Navajos have a potentially enormous claim on the Colorado," said David Getches, a water and Indian law expert who is currently dean of the University of Colorado Law School.<sup>3</sup> States simply developed in spite of this knowledge.<sup>4</sup>

Estimates for the tribe's reserved water rights to the Colorado vary wildly, but Stanley Pollack, assistant attorney general for the Navajo, places it around 300,000 acre-feet ("af") of water per year.<sup>5</sup> Some members of the Navajo Nation consider that number to be modest.<sup>6</sup> For a frame of reference, the 1928 Boulder Canyon Project Act ("BCPA") tentatively divided the Lower Basin's annual 7.5 million acre-feet ("maf") share of the Colorado as follows: California, 4.4 maf; Arizona, 2.8 maf; and Nevada, 0.3 maf.<sup>7</sup> If the Navajo's legal strategy is even moderately successful, the Colorado River allocation system, as it exists now, could be completely upended. This reality was not lost on the parties involved, who quickly agreed to stay the complaint and work on a settlement.<sup>8</sup> In fact, the seriousness of the situation is reflected by the names of the intervening parties: the state of Arizona, Arizona Power Authority, Imperial Irrigation District, Metropolitan Water District of Southern California, Southern Nevada Water Authority, and Coachella Valley Water District, to name a few.<sup>9</sup> The Navajo claim threatens those who have benefited most from the Colorado River.

This note's aim is to provide a historical sketch of how existing Lower Basin users undermined their own interests by neglecting to quantify what could be significant water rights to the Colorado River. The focus is on the Navajo, and specifically, on an unfortunate trend that plagued Colorado River management from the beginning: The Navajo, like other tribes, were never at the table while the Colorado was being divvied up. To this day, their senior water rights remain unsettled. As a result, Lower Basin uses of the Colorado River potentially rest on shaky ground.

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3. Matt Jenkins, *The Colorado River's Sleeping Giant Stirs*, HIGH COUNTRY NEWS, Apr. 28, 2003, at 2, available at <http://www.hcn.org/issues/249/13923> [hereinafter *Sleeping Giant*].

4. *Id.*

5. Matt Jenkins, *Seeking the Water Jackpot*, HIGH COUNTRY NEWS, March 17, 2008, at 5, available at <http://www.hcn.org/issues/366/17573> [hereinafter *Water Jackpot*].

6. *Id.* at 6, 9.

7. Boulder Canyon Project Act of 1928, 43 U.S.C. § 617c(a) (1928).

8. Navajo Nation v. U.S. Dep't of the Interior, 2007 WL 4400511 (D. Ariz. 2007) (joint status report).

9. *Id.* The other intervening parties are: the Salt River Project Agricultural Improvement and Power District, the Salt River Valley Water Users' Association, and the State of Nevada and its Colorado River Commission.

The first section of the note analyzes the “Law of the River,” how Indian water rights fit into the current legal system, and the evolution of the Navajo claim. This analysis is limited to certain aspects of Colorado River management that are most relevant to the Navajo claim. The second section discusses the current settlement negotiations and lawsuit, including the legal landscape that may enable the Navajo to finally realize their rightful share of the Colorado. My hope is to draw attention to another chapter of Western history where poor decisions from the past have caught up to us, and help find a path forward for the people of the Southwest.

## II. INDIANS AND THE LAW OF THE RIVER

The “Law of the River” is complex. It is a treaty, two interstate compacts, a federal statute, and a Supreme Court decision that all serve as guidelines for use and allocation of the Colorado River.<sup>10</sup> According to Marc Reisner, author of *Cadillac Desert*, the river is the “most legislated, most debated, and most litigated river in the entire world. It also has more people, more industry, and a more significant economy dependent on it than any comparable river in the world.”<sup>11</sup>

This note, however, focuses on just one of the river’s many management problems: how tribes were left out in the cold when the major allocation decisions were made. The reason for this course of action is difficult to comprehend, especially in the Navajo’s case. After all, the reservation is impossible to miss on any map of the Colorado Plateau—or for that matter, any map of the Southwest. It spans three states, covers over 13 million acres, and is the largest Indian reservation in the United States.<sup>12</sup> More importantly, the mainstream of the Colorado and one of its largest tributaries *literally* flow through Navajo lands.

### A. Navajo Treaty and Executive Orders

On June 1, 1868, the United States and the Navajo signed an agreement providing that war between the parties “shall for ever [sic] cease,”<sup>13</sup> and that lands were to be “set apart for the *use and occupation*

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10. David H. Getches, *Colorado River Governance: Sharing Federal Authority as an Incentive to Create a New Institution*, 68 U. COLO. L. REV. 573, 574–75 (1997).

11. MARC REISNER, *CADILLAC DESERT* 120 (rev. ed. 1993).

12. Navajo Compl., *supra* note 1, at 7.

13. Treaty Between United States and Navajo Tribe, art. I, June 1, 1868, 15 Stat. 667 [hereinafter Navajo Treaty].

of the Navajo tribe of Indians.”<sup>14</sup> The treaty came four years after U.S. forces trapped the Navajo near Canyon De Chelly in Arizona, then marched them hundreds of miles to Fort Sumner, New Mexico, which is known as the “Long Walk of the Navajos.”<sup>15</sup> The 1868 treaty guaranteed to the Navajo a return to their ancestral lands, which are surrounded by four mountain peaks the Navajo consider sacred.<sup>16</sup> In the ensuing years, the government significantly expanded the original reservation through executive orders.<sup>17</sup> The heart of the treaty—especially with regard to reserved water rights—is in Article XIII, which stipulates that the U.S. government and the Navajo agree that the land in question shall serve as the Navajo’s “permanent home.”<sup>18</sup> In the years to come, those two words would strengthen in meaning.

### *B. Winters v. United States*

Over a century ago, in 1908, the U.S. Supreme Court laid the groundwork for the legal doctrine that serves as the backbone for the Navajo’s current Colorado River claim. In a bold decision, the Court held that when the U.S. government created the Fort Belknap Indian Reservation in 1888, making it the Gros Ventre and Assiniboing’s permanent home in Montana, it reserved water rights for their future use.<sup>19</sup> The water rights are exempt from state appropriation laws and reserved to give Indians the “power to change”<sup>20</sup> and control their own destiny. Reserved rights do not evaporate over time,<sup>21</sup> but retain their seniority status even if the tribes never put the water to beneficial use.<sup>22</sup> The Court reasoned that the “lands were arid, and, without irrigation, were practically valueless,”<sup>23</sup> so there was no way that the tribe would

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14. *Id.* at art. II (emphasis added).

15. CHARLES WILKINSON, *FIRE ON THE PLATEAU*, 287 (1999) [hereinafter *FIRE ON THE PLATEAU*].

16. Navajo Treaty, *supra* note 13, at art. II.; *FIRE ON THE PLATEAU*, *supra* note 15, at 58 (The peaks are: “Mount Taylor (*Tsoodzil*), outside of Grants, New Mexico. The San Francisco Peaks (*Dook’ o’ ooslid*) to the south, near Flagstaff. Hesperus Peak (*Dibé nitsaa*) to the west, above Cortez and Durango in the La Plata Mountains. Mount Blanca (*Sisnaajini*) to the north, across Colorado’s San Luis Valley.”).

17. Navajo Compl., *supra* note 1, at 7–9; *see also* *FIRE ON THE PLATEAU*, *supra* note 15, at 288.

18. Navajo Treaty, *supra* note 13, at art. XIII.

19. *Winters v. United States*, 207 U.S. 564, 565, 577 (1908).

20. *Id.* at 577.

21. *Id.*

22. BONNIE G. COLBY, JOHN E. THORSON, & SARAH BRITTON, *NEGOTIATING TRIBAL WATER RIGHTS: FULFILLING PROMISES IN THE ARID WEST* 10 (2005).

23. *Winters*, 207 U.S. at 576.



have voluntarily given up the one resource that made their lands valuable: water.<sup>24</sup>

Today, Indian reserved rights, based on *Winters* and its progeny, are arguably the most sturdy and valuable water rights in the West—at least on paper.<sup>25</sup> The problem, however, is that the *Winters* decision failed to explain how reserved rights were to be measured, or if there were built-in limitations to Indian water claims in the future.<sup>26</sup> But the Court did make one issue very clear: the United States reserved water for tribes “to fulfill the purposes for which the reservations were established.”<sup>27</sup>

The Court’s holding should have forced policymakers to apply caution when they decided to allocate the Colorado River among states, ushering in the “Big Buildup” that forever changed the West.<sup>28</sup> It did not.

### *C. 1922 Colorado River Compact*

When the parties to the Colorado River Compact gathered at the swanky Bishop’s Lodge in Santa Fe, New Mexico, to sort out a division of the river, the participants knew that they were setting precedent—nothing like this type of compact had ever been attempted before.<sup>29</sup> The goals were ambitious and twofold: first, ease controversies that were already brewing among the states with a clear agreement to solve problems associated with Colorado River management; and second, usher in the development of the Southwest by paving the way for massive engineering projects.<sup>30</sup>

Any visitor to the urban sprawls of Phoenix, Las Vegas, or Los Angeles, or the hundreds of thousands of irrigated acres in between these desert oases, knows that the drafters of the Compact were wildly successful in achieving one of their goals, which was to exploit the river for growth. However, that success has to be tempered by the complete failure of their other goal.<sup>31</sup> Instead of peace and clarity they created

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24. *Id.*

25. COLBY ET AL., *supra* note 22, at 10.

26. *See supra* text accompanying note 25.

27. COLBY ET AL., *supra* note 22, at 10–11.

28. FIRE ON THE PLATEAU, *supra* note 15, at 185.

29. NORIS HUNDLEY JR., WATER AND THE WEST: THE COLORADO RIVER COMPACT AND THE POLITICS OF WATER IN THE AMERICAN WEST 3 (2009).

30. Colorado River Compact of 1922, C.R.S. § 37-61-101, art. I; HUNDLEY, *supra* note 29, at 4.

31. HUNDLEY, *supra* note 29, at 5.

standoffs among states, resulting in distrust and legal claims that raged for decades.<sup>32</sup> In addition, the stream flow assumptions that were used to divide the river later proved to be unrepresentative of normal flows, complicating matters further.<sup>33</sup>

The negotiating parties also failed to adequately address the many shares to the river that Indians might feasibly claim as their own.<sup>34</sup> In fact, Indians were not even invited to the discussions, even though the Navajo lived just a short distance to the west.<sup>35</sup> Considering the federal government serves as trustee for Indians and therefore must act on their behalf, which is "one of the primary cornerstones of Indian law,"<sup>36</sup> the federal government—at least when it comes to Colorado River allocations—shirked its duties from the start.

The Compact's major practical accomplishment divided the river between the Upper Basin states (Colorado, New Mexico, Wyoming, and Utah) and the Lower Basin states (Arizona, California, and Nevada) at Lee Ferry.<sup>37</sup> Both Basins were awarded 7.5 maf annually, with the Upper Basin states assuming the burden of making that delivery, regardless if flows were lower than usual or if a drought gripped the region.<sup>38</sup> Further, in Article VIII the commissioners stipulated that "[p]resent perfected rights to the beneficial use of waters of the Colorado River System are unimpaired by this compact."<sup>39</sup> And, "[all] other rights to beneficial use of waters . . . shall be satisfied from the water apportioned to that Basin in which they situate."<sup>40</sup> Forty years later, "present perfected" rights would take on a whole new meaning<sup>41</sup>—one that is safe to say the commissioners did not see coming.

Throughout the eleven articles, Indians are mentioned once, in Article VII.<sup>42</sup> It reads: "Nothing in this compact shall be construed as affecting the obligations of the United States of America to Indian Tribes."<sup>43</sup> Twenty words, that is all.

According to the unearthed minutes of the meetings, including

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32. *Id.* at 4–5.

33. *Id.* at xiv.

34. *Id.* at 4, 211.

35. *See supra* text accompanying note 34.

36. FELIX. S. COHEN, HANDBOOK OF FEDERAL INDIAN LAW 221 (Rennard Strickland ed., rev. ed. 1982).

37. Colorado River Compact, C.R.S.A. § 37–61–101, art. II(c)–(d).

38. *See id.* at art. III.

39. *Id.* at art. VIII.

40. *Id.*

41. *Arizona v. California*, 373 U.S. 546, 600 (1963).

42. Colorado River Compact, C.R.S.A. § 37–61–101, art. VII.

43. *Id.*

those twenty words in the Compact was not a priority, but a mere afterthought if anything.<sup>44</sup> It was Herbert Hoover, commerce secretary at the time and chairman of the negotiations,<sup>45</sup> who suggested that the language be included.<sup>46</sup> Hoover held sway throughout the meetings, not only because he was acting on behalf of President Harding, but also because of his vast engineering experience and well-earned reputation as a problem solver.<sup>47</sup> Hoover felt it politically unwise to ignore the Indians completely in such a monumental agreement, because, “[y]ou always find some congressman . . . who will bop up and say, ‘What is going to happen to the poor indian [sic]?’”<sup>48</sup> Article VII, in his mind, served to appease these soft-hearted lawmakers and their consciences.<sup>49</sup> Still, the words in Article VII are oddly vague, and no sincere effort was made to determine what tribes would be affected in the region, or what their current and future water needs might be.<sup>50</sup> The commissioners were all of the opinion that if there *were* Indian claims to the Colorado, they would be minor, and that Article VII was sufficient to settle any disputes.<sup>51</sup> The commissioners passed Hoover’s suggestion quickly and unanimously.<sup>52</sup>

In hindsight, it is easy to attack the commissioners for their shortsightedness with Article VII. Still, these were smart men who surely must have realized, based on the recent *Winters* decision, that Indians now held cards when it came to water. Delph Carpenter, who served as Colorado’s representative, was, according to one historian, perhaps the “shrewdest water-rights lawyer in the United States.”<sup>53</sup> New Mexico’s representative, Stephen B. Davis, Jr., entered the negotiations with his eyes set on the San Juan River, which gathers strength in northern New Mexico before veering west until it connects with the Colorado in southern Utah.<sup>54</sup> Davis must have known that the river cuts directly through Navajo lands, and considering the *Winters* reserved rights holding, that there was a good chance the tribe also had rights to

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44. See HUNDLEY, *supra* note 29, at 211–12.

45. *Id.* at 139.

46. *Id.* at 212.

47. *See id.* at 2.

48. *Id.* at 212 (Hundley pieced together this quote from minutes taken at a Nov. 19, 1922 Compact meeting. He conceded that he altered the quote “slightly,” but “not the meaning.”)

49. *Id.*

50. *Id.* at 211.

51. *Id.* at 211–12.

52. *Id.* at 212.

53. *Id.* at 139.

54. *Id.* at 142.

some of those flows. What is most striking is that in their efforts to protect their respective interests, the commissioners focused solely on the other states and neglected to consider the Indians, which posed a significant threat to their grand plans.

The Compact was not the final word on Colorado River management—not by a long shot—but it did create the broad allocation guidelines that are still enforced today, even though Arizona was much slower to approve the Compact than the other states.<sup>55</sup> Those guidelines purposely left out the Indians. The irony, of course, is that by including what appeared to be innocuous language in Article VII and Article VIII, the Compact framers inadvertently set the stage for the current Navajo water claim.

#### *D. 1928 Boulder Canyon Project Act*

Six years after the historic Compact, the Lower Basin states still had not reached agreement on how to apportion their 7.5 maf share of the river.<sup>56</sup> The controversy the drafters hoped to avoid now festered on the ground in the Southwest and throughout Washington D.C. hallways; something had to be done.<sup>57</sup> Congress took action with the Boulder Canyon Project Act, which approved the 1922 Compact, authorized the construction of what would later be called Hoover Dam, and *suggested* to Lower Basin states a way to divide the water among themselves annually.<sup>58</sup> The plan included 4.4 maf for California, 2.8 maf for Arizona, and Nevada, which at that time was a far cry from the glitz and games for which it is now known, received 0.3 maf.<sup>59</sup> The split first had to be approved by six of the seven states, but Congress included the numbers so the states could enter into an agreement that already had Congress's blessing, thus saving time.<sup>60</sup> By June 25, 1929, six of the seven states approved the split—enough for President Hoover to declare the statute binding law.<sup>61</sup>

Once again, a plan to ease controversy along the river did anything but. Neither Arizona nor California favored the numbers, so a

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55. See JOSEPH L. SAX, BARTON H. THOMPSON, JR., JOHN D. LESHY, & ROBERT H. ABRAMS, *LEGAL CONTROL OF WATER RESOURCES: CASES AND MATERIALS* 805 (4th ed. 2006).

56. HUNDLEY, *supra* note 29, at 269.

57. See *id.*

58. Boulder Canyon Project Act of 1928, 43 U.S.C. § 617c (2010).

59. *Id.* § 617c(a).

60. HUNDLEY, *supra* note 29, at 270.

61. *Id.* at 281.

détente proved elusive.<sup>62</sup> Instead, Arizona sued California four times over the next thirty years, as it sat and watched its neighbor state boom because of the Colorado water it was now able to put to use, thanks to the Hoover Dam and transportation systems approved in the 1928 law.<sup>63</sup>

Nothing in the legislation mentions Indians,<sup>64</sup> and no contingency or surplus plan was built in to safeguard Lower Basin states from new users who may have more senior rights than the Compact, pursuant to Article VII's "present perfected" clause. The BCPA continued the trend, started by the 1922 Compact, of excluding tribes from major management decisions. Furthermore, the BCPA opened up the federal government's purse to start developing massive engineering projects that greatly benefited non-Indian economies in the region, but did little if anything for the tribes along the Colorado. The Lower Basin states, especially California, were now free to grow rapidly, relying on their respective cuts of 7.5 maf. With the benefit of Colorado River water, plus federal subsidies and related projects ushered in by the BCPA, Lower Basin states now had the power to swiftly change into desert oases. However, this power to adapt and control one's destiny, which water makes a reality in the West, was denied to Indians again in 1928.

#### *E. 1944 United States and Mexico Treaty*

Although not invited to the 1922 Compact negotiations either, it is fair to say that Mexico was more on the minds of the commissioners than Indians.<sup>65</sup> For example, Mexico tried to gain access to the negotiations, but was rebuffed twice—first by the State Department, then by Hoover himself, on the grounds that the negotiations were to focus solely on "domestic matters."<sup>66</sup> Mexico, in Hoover's opinion, had little to fuss about, despite the fact that the Colorado River does not stop at the border, and any apportionment among the states certainly has international implications.<sup>67</sup> During negotiations, the commissioners delayed dealing with Mexico, just as they did with the Indians, inserting language in Article III that Mexico *might* have a "right to the use of any waters of the Colorado River System," should the United States approve

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62. See SAX ET AL., *supra* note 55, at 806.

63. *Id.*

64. See Boulder Canyon Project Act, 43 U.S.C. § 617c (2010); *see also* Colorado River Compact, C.R.S.A. § 37–61–101, art. VII.

65. See HUNDLEY, *supra* note 29, at 175.

66. *Id.*

67. *Id.*

such a right at a later date.<sup>68</sup>

The date came in 1944, over twenty years later.<sup>69</sup> Treaty terms guaranteed Mexico an annual delivery of 1.5 maf,<sup>70</sup> and in “the event of extraordinary drought or serious accident [in the United States] . . . water allocated to Mexico . . . will be reduced in the same proportion as consumptive uses in the United States are reduced.”<sup>71</sup> Carrying out this provision is rife with possible conflicts and administrative difficulties,<sup>72</sup> and many even considered the allocation far too generous.<sup>73</sup> By subtracting 1.5 maf from both Basins’ share of the Colorado, pursuant to Article III(c) in the 1922 Compact,<sup>74</sup> policymakers placed a significant new strain on the river.<sup>75</sup> Furthermore, Mexico’s allotment, considering its authority derived from a congressionally approved treaty, now became the new senior right on the river.<sup>76</sup>

Adding to these difficulties is the fact that Mexico likely needs more than 1.5 maf of freshwater from the river if the Colorado River Delta is ever going to thrive again.<sup>77</sup> The situation in the delta—once a diverse ecosystem in Northern Mexico—deteriorated significantly in the twentieth century as freshwater flows dropped nearly seventy-five percent, caused largely by construction of the Hoover and Glen Canyon dams north of the border.<sup>78</sup> Sadly, the delta is nothing like it was when Aldo Leopold and his brother explored the area by canoe in 1922.<sup>79</sup> During their stay, the wilderness area teemed with wildlife and lush vegetation.<sup>80</sup> Today, however, the “delta’s physical appearance, hydrology, fish, and wildlife have changed markedly since the United

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68. Colorado River Compact, C.R.S.A. § 37–61–101, art. III(c).

69. Treaty Between the United States of America and Mexico Respecting Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, U.S.-Mexico, Nov. 8, 1945 (effective date), 59 Stat. 1219.

70. *Id.* at art. 10(a).

71. *Id.* at art. 10(b).

72. See Charles J. Meyers, *The Colorado River: The Treaty with Mexico*, 19 STAN. L. REV. 367, 414–15 (1967).

73. HUNDLEY, *supra* note 29, at 296.

74. Colorado River Compact, C.R.S.A. § 37-61-101, art. III(c) (“the burden of such deficiency shall be equally borne by the Upper Basin and Lower Basin”).

75. See HUNDLEY, *supra* note 29, at 296.

76. Rudy E. Verner, *Short Term Solutions, Interim Surplus Guidelines, and the Future of the Colorado River Delta*, 14 COLO. J. INT’L ENVTL. L. & POL’Y 241, 255 (2003).

77. See *id.* at 245.

78. *Id.* at 244.

79. ALDO LEOPOLD, A SAND COUNTY ALMANAC AND SKETCHES HERE AND THERE, 141 (Oxford Univ. Press rev. ed. 1987) (1949).

80. See *id.* at 141–45.

States asserted full control over the Colorado River”—a change for the worse.<sup>81</sup>

Hanging over the treaty between Mexico and the United States remained the issue of tribal water rights that had yet to be quantified. Mexico’s 1.5 maf became the senior right, but a Supreme Court decision that had been in the making for decades would soon reinforce the Indians’ reserved rights, placing further uncertainty on Colorado River allocations that states across the Southwest were already betting their entire economies on.

*F. Arizona vs. California: “In the hands of the Secretary”*

After years of resentment and lost court cases, Arizona finally joined the other six states and ratified the 1922 Compact in 1944.<sup>82</sup> Still, a truce between California and Arizona regarding their split of the 7.5 maf remained out of reach, with both states thoroughly dug into their respective positions.<sup>83</sup> Just over ten years prior, Arizona Governor Benjamin B. Moeur had ordered the state’s national guard to its border with California to stop construction of the Parker Dam.<sup>84</sup> Clearly, Arizona was intent on preserving the largest share of the Colorado it could get its hands on, terrified of the prospect that California was in a much better position to put Colorado River water to beneficial use first, thus gaining a right to those flows under the prior appropriation doctrine.<sup>85</sup>

During the World War II era, Arizona still lacked sufficient infrastructure to transport surface water to its rapidly growing metropolitan areas and farmlands.<sup>86</sup> As result, it relied heavily on limited groundwater supplies.<sup>87</sup> This tenuous policy, which threatened the state’s emerging economy, forced it to push proposals that would bring Colorado River water to the state at the earliest possible date.<sup>88</sup> Arizona pinned its hopes on the Central Arizona Project (“CAP”), a canal scheme to send water uphill toward the population centers, such as Phoenix and Tucson.<sup>89</sup> But Congress, aided by strong resistance from

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81. Getches, *supra* note 10, at 605.

82. See HUNDLEY, *supra* note 29, at 295.

83. See *generally id.*

84. *Id.* at 294.

85. See SAX ET AL., *supra* note 55, at 805.

86. See HUNDLEY, *supra* note 29, at 298.

87. *Id.*

88. See *id.*

89. See *id.* at 299–300.

California, refused to approve the billion-dollar project because Arizona's share of the Colorado remained undetermined.<sup>90</sup> A hesitant Congress was not going to fund a canal without assurance that water would actually hit the concrete.<sup>91</sup> Hoping to finally clear things up and receive the much-needed rubber stamp from Congress, Arizona appealed to the Supreme Court in 1952.<sup>92</sup> The Court agreed to take the case not only to settle Arizona and California's rift, but also to clarify another issue that was becoming tougher to ignore: Indian rights to the Colorado River.<sup>93</sup> The federal government, cognizant of the growing human rights movement and no longer blind to the gross inequities between the haves (Whites) and have-nots (Indians) on the river, urged the Court to take the case.<sup>94</sup>

Justice Hugo Black, a Southerner and key member of the Warren Court's liberal bloc, wrote the *Arizona v. California* opinion (*Arizona I*), handed down on June 3, 1963.<sup>95</sup> It is a lengthy opinion, based on a lengthy and costly case.<sup>96</sup> The decision served as victory for both Arizona and the Indians.<sup>97</sup> For Arizona, the Court held that it was entitled to the 2.8 maf recommended by Congress in the 1928 BCPA, which limited California to 4.4. maf.<sup>98</sup> Further, Arizona's tributaries that feed the Colorado, notably the Gila River, are not to be considered part of the state's 2.8 maf share.<sup>99</sup> And finally, the BCPA, not the law of prior appropriation, controls Colorado River apportionments.<sup>100</sup> In other words, just because California put more water to use at an earlier date than Arizona, that does not bestow seniority status and greater rights to the river.

Also of "far-reaching importance," the Court's decision greatly increased the Secretary of Interior's powers,<sup>101</sup> granting the office unprecedented authority to "allocate and distribute the waters of the mainstream of the Colorado River."<sup>102</sup> In times of shortages, no matter

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90. *Id.* at 300.

91. *Id.*

92. *Id.* at 302.

93. *Id.*

94. *Id.*

95. *Id.* at 303; *see generally* JAMES MACGREGOR BURNS, PACKING THE COURT 179–200 (2009).

96. HUNDLEY, *supra* note 29, at 302.

97. *Id.* at 303.

98. *Arizona v. California*, 373 U.S. at 565 (1963).

99. *Id.* at 567–68.

100. *Id.* at 585–86.

101. HUNDLEY, *supra* note 29, at 305.

102. *Arizona v. California*, 373 U.S. 546, 590 (1963).



how they should occur, the Secretary is not bound by the hard-fought formulas laid out in the 1922 Compact or BCPA.<sup>103</sup> The Secretary's methods must only be "reasonable," and honor the present-perfected rights that existed in 1928.<sup>104</sup> In other words, the Law of the River is now "in the hands of the Secretary."<sup>105</sup>

In a fiery dissent, Justice Harlan reasoned that such extraordinary consolidation of power in the Secretary's hands raises "the gravest constitutional doubts,"<sup>106</sup> considering the office is now "vested with absolute control, unrestrained by adequate standards, over the fate of a substantial segment of the life and economy of three States."<sup>107</sup> In a prescient statement, he argued that in time of shortages, the Secretary now assumes the unenviable duty of making a "political decision of the highest order," and the "pressures that will doubtless be brought to bear on the Secretary as a result of this decision are disturbing to contemplate."<sup>108</sup> For example, if existing users' water rights need to be curtailed in order to settle Indian claims.

In a strong affirmation of its earlier holding in *Winters*, the Court then reiterated that the "United States did reserve the water rights for the Indians effective as of the time the Indian Reservations were created."<sup>109</sup> The reservations were "not limited to land, but included waters as well."<sup>110</sup> For the Navajo, this means its reserved rights to the Colorado stretch back to 1868, over half a century before the original 1922 Compact. Their rights vested before the Compact, and should therefore be considered present-perfected pursuant to the language in Article VIII.<sup>111</sup> In sum, Navajo water rights are senior to non-Indian rights appropriated after 1868, even if they have yet to put the water to use.<sup>112</sup>

In terms of measuring Indians' water rights, the Court stated in blunt terms that Indians were not given the most "desirable" lands when the government created reservations.<sup>113</sup> Though referring to the Colorado River Indian Reservation, the language easily applies to the Navajo. The Court reasoned that there was no way, when creating the reservations, that the government was "unaware that most of the lands were of the

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103. *Id.* at 593.

104. *Id.* at 593–94.

105. *Id.*

106. *Id.* at 626 (Harlan, J., dissenting).

107. *Id.* at 603 (Harlan, J., dissenting).

108. *Id.* at 626 (Harlan, J., dissenting).

109. *Id.* at 600.

110. *Id.* at 598.

111. *See id.* at 600.

112. HUNDLEY, *supra* note 29, at 303.

113. *Arizona v. California*, 373 U.S. 546, 598 (1963).

desert kind . . . and that water from the river [the Colorado] would be essential to the life of the Indian people.”<sup>114</sup>

The *Arizona I* decision also created a method of quantifying Indian reserved water rights.<sup>115</sup> Because the Court reasoned that reserved water rights “were intended to satisfy the future as well as the present needs of the Indian Reservations,”<sup>116</sup> reinforcing the “power to change” language in *Winters*,<sup>117</sup> it decided to calculate water rights based on how much water was needed to “irrigate all the practicably irrigable acreage on the reservations.”<sup>118</sup> Thus, the Court created what is today known as the Practically Irrigable Acreage (“PIA”) standard. In applying the standard, the Court calculated the water rights for five tribes located along the mainstream of the Colorado,<sup>119</sup> granting them around 0.9 maf.<sup>120</sup> However, the Court stopped short of quantifying the water rights for dozens of other reservations along the Colorado, including the Navajo.<sup>121</sup> The Court also failed to explore the idea of whether or not Indians may choose to use their water for functions other than agriculture,<sup>122</sup> though it did stress that reserved rights were intended to satisfy the “future as well as the present needs of the Indian Reservations.”<sup>123</sup> After all, the “power to change”<sup>124</sup> rings hollow if it requires a sovereign nation to stick to one way of living and earning revenue.

The Court also failed to clarify whether the PIA standard applied to just the tribes along the Colorado River,<sup>125</sup> and whether Indians have to use all their Colorado River water or if they can sell or lease their water rights to other users.<sup>126</sup> However, the Court was clear on one point that could cause major problems for Lower Basin users: Indian reserved rights, depending on the reservation’s geographic location, are to be

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114. *Id.* at 599.

115. *Id.* at 600.

116. *Id.*

117. *Winters v. United States*, 207 U.S. 564, 577 (1908).

118. *Arizona v. California*, 373 U.S. 546, 600 (1963).

119. HUNDLEY, *supra* note 29, at 303. The five reservations along the river are the Chemehuevi, Cocopah, Yuma, Colorado River, and Fort Mohave.

120. Getches, *supra* note 10, at 592.

121. *See supra* text accompanying note 120.

122. HUNDLEY, *supra* note 29, at 330.

123. *Arizona v. California*, 373 U.S. 546, 600 (1963).

124. *Winters v. United States*, 207 U.S. 564, 577 (1908).

125. Andrew C. Mergen & Sylvia F. Liu, *A Misplaced Sensitivity: The Draft Opinions in Wyoming v. United States*, 68 U. COLO. L. REV. 683, 694 (1997) (draft majority and dissenting opinions reprinted as appendix).

126. *See* HUNDLEY, *supra* note 29, at 331.

borne out of that particular state's Compact share of the Colorado River.<sup>127</sup> For example, if the Navajo were to win water rights for the western half of its reservation in northern Arizona, above Lake Mead, where the Colorado runs along its western border, those water rights would come out of Arizona's 2.8 maf annual share.

If further strains on the river emerge—such as a prolonged drought, shortages associated with climate change, endangered species regulations, or Indian rights that significantly cut into states' shares—it is easy to contemplate the political and practical problems that might land swiftly on the Secretary of the Interior's lap, as Justice Harlan predicted in his dissent. One might think that if policymakers missed the warning flare in *Winters*, the *Arizona I* decision—which, after all, declared Indian water rights to the Colorado River superior to practically all other rights—might force them to reassess past water management decisions and look to remove the cloud of uncertainty on the river. But *Arizona I* did not.

### *G. 1968 Colorado River Basin Project Act*

Five years after the landmark *Arizona I* decision, where the Court granted Indians considerably more bargaining power in Colorado River matters, policymakers saw no reason to rethink their trend of leaving Indians out of major management decisions regarding the Colorado. Again, they chose to ignore the growing Navajo silhouette lurking in the background.<sup>128</sup>

In 1968, Congress authorized Arizona's long sought-after Central Arizona Project,<sup>129</sup> yet approved it with several built-in limitations.<sup>130</sup> First, CAP users are junior to "holders of present perfected rights,"<sup>131</sup> which, according to the recent *Arizona I* decision, includes Indians.<sup>132</sup> Second, should the annual 7.5 maf be unavailable to Lower Basin states, California has a right to its 4.4 maf before any CAP water can flow toward Phoenix, Tucson, and Arizona farmers.<sup>133</sup> The project, which pumps water from Lake Havasu uphill 1,800 feet toward Phoenix then south toward Tucson, cost taxpayers \$4.7 billion.<sup>134</sup> The power to transport CAP water over 300 miles would come from a massive coal

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127. *Arizona v. California*, 373 U.S. 546, 601 (1963).

128. See *Water Jackpot*, *supra* note 5, at 2.

129. Colorado River Basin Project Act, 43 U.S.C. § 1521 (2006).

130. *Id.*

131. *Id.* § 1521(b).

132. *Arizona v. California*, 373 U.S. 546, 600 (1963).

133. See 43 U.S.C. § 1521(b).

134. SAX ET AL., *supra* note 55, at 807.

plant to be built on the Navajo Reservation in Page, Arizona, called the Navajo Generating Station.<sup>135</sup> Lured by promises of much-needed economic development on the reservation, the Navajo agreed to limit use of their Upper Basin Colorado River water rights to make the coal plant a reality.<sup>136</sup> Those promises did not live up to expectations.<sup>137</sup>

With passage of the Colorado River Basin Project Act, Arizona residents and its economy were now increasingly dependent on water that had a low—very low—priority in the Law of the River.

### *H. Building With Blinders On*

Throughout the twentieth century, the stakes have only increased on the river. The federal government poured billions into projects to harness her flows, and states waged bruising battles against one another, fighting for the rights to every last drop—sometimes in court, sometimes in Congress, and sometimes in backrooms of posh resorts. Ironically, policymakers repeatedly based major allocation decision on the false assumption that there would always be 7.5 maf available for each basin.<sup>138</sup> However, since at least 1953, policymakers knew the stream flow estimates that the original compact were based on could be off by as much as 6 maf per year.<sup>139</sup> Furthermore, time and again policymakers neglected to account for Indian rights to the river and failed to contemplate what type of effect a Navajo claim could have on Lower Basin apportionments. Based on these shaky foundations, it is not hyperbole to suggest that panic should have set in across the Southwest long ago. But with blinders on, the magnitude of the situation often remained out of view.

For the Navajo, who have sat by and watched as the Southwest boomed around them, rights to the river may finally be within their grasp. But question marks still linger and some formidable hurdles remain in their way.

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135. FIRE ON THE PLATEAU, *supra* note 15, at 222.

136. David H. Getches, *Competing Demands for the Colorado River*, 56 U. COLO. L. REV. 413, 441 (1985) (The Navajos “agreed to confine their claims to the amount of Arizona’s Upper Basin share of water under the Upper Basin Compact—50,000 acre-feet a year—for the life of the plant or for fifty years, whichever was earlier.”).

137. *Id.*

138. REISNER, *supra* note 11, at 264.

139. *See Id.* at 262–64.

### III. TIME TO ACT: THE NAVAJO TAKE STEPS TOWARD REALIZING THEIR RESERVED RIGHTS TO THE COLORADO RIVER

#### *A. The Navajo Reservation*

For a sovereign nation that holds possibly the best water rights in the West, forty percent of Navajo Nation members currently have no running water in their homes.<sup>140</sup> Considering the reservation spans three states (Arizona, New Mexico, and Utah), members must often drive considerable distances to fill up large drums of water to then haul back home.<sup>141</sup> Per capita income is around \$8,000 per year, and over half of the Navajo living on the reservation are unemployed.<sup>142</sup> This translates into around 125,000 Navajo without jobs, considering the tribe's population is approximately 250,000.<sup>143</sup>

One of the largest economic drivers on the reservation is the Navajo Generating Station in Page, employing hundreds.<sup>144</sup> The large coal plant generates ninety-five percent of the power necessary to pump CAP water from Lake Havasu toward central and southern Arizona,<sup>145</sup> so non-Indians also rely on the coal plant to help sustain their economies.<sup>146</sup> Located just over ten miles from the Grand Canyon, the generating station also contributes to the air pollution in and around the national park.<sup>147</sup> Another large coal plant, in the works for years, remains on the drawing board for western New Mexico.<sup>148</sup> If constructed, it too would create more jobs on the reservation, and, like the Navajo Generating Station, serve as a much-needed source of revenue for the tribal

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140. *Sleeping Giant*, *supra* note 3, at 1.

141. *Water Jackpot*, *supra* note 5, at 1.

142. *See supra* text accompanying note 141.

143. *See* Navajo Compl., *supra* note 1, at 6.

144. Dennis Wagner, *Coal Plants, Power Plant Give Navajos Income, Controversy*, THE ARIZONA REPUBLIC, Nov. 2, 2009, available at <http://www.azcentral.com/news/articles/2009/11/02/20091102navajo1102.html>.

145. *Navajo Station Needs Emission Control Reprieve*, THE ARIZONA DAILY STAR, Oct. 25, 2009, (Editorial), available at [http://azstarnet.com/news/opinion/editorial/article\\_3042114a-6a94-5b5a-941c-44155040f6d5.html](http://azstarnet.com/news/opinion/editorial/article_3042114a-6a94-5b5a-941c-44155040f6d5.html).

146. *Id.*

147. *See id.*

148. Wagner, *supra* note 144.

government and its members.<sup>149</sup>

*B. Clarity and Justice: The Navajo Claim and Settlement  
Negotiations*

Starting in 1989, three developments occurred that brought existing Lower Basin users to the bargaining table and arguably improved the Navajo's chances for a large cut out of Arizona's Compact share of the Colorado River.

*I. "Sensitivity Doctrine" Narrowly Averted*

In 1989, the Supreme Court agreed to review a Wyoming Supreme Court decision that upheld the use of the PIA standard to quantify the Wind River Reservation's reserved water rights.<sup>150</sup> Curiously though, the Court did not release an opinion, but merely affirmed the lower court's decision in a four-four vote.<sup>151</sup> The split resulted from Justice O'Connor's recusal from the case, after argument, and just days before the Court released its decision.<sup>152</sup> Late in the game she discovered that her family's ranching business—in which she held a financial interest—was party to an ongoing stream adjudication involving Indian water rights.<sup>153</sup> For tribes, and especially for the Navajo, this translated into a fortuitous turn of events. Before she recused herself, the vote was five to four, with Justice O'Connor having written the majority opinion that significantly narrowed the PIA standard to the detriment of the tribes by requiring a new "sensitivity" analysis.<sup>154</sup>

Following the *Arizona I* case, which included just one paragraph on how to quantify Indian reserved water rights under the PIA doctrine,<sup>155</sup> the PIA standard evolved through court decisions to require a cost-benefit analysis when measuring Indian reserved water rights.<sup>156</sup> Essentially, "land will be classified as practicably irrigable if it can be shown not only that the land can support the growth of crops, but that

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149. See *supra* text accompanying note 148.

150. Mergen & Liu, *supra* note 125, at 683.

151. *Id.*

152. *Id.* at 684–85.

153. *Id.*

154. *Id.* at 684. The late Justice Thurgood Marshall posthumously made his files available to the public, which included the draft opinions.

155. *Arizona v. California*, 373 U.S. 546, 600–01 (1963).

156. See, e.g., *In re Gen. Adjudication of All Rights to Use Water in the Big Horn River Sys.*, 753 P.2d 76 (Wyo. 1988) (Big Horn I); *New Mexico ex rel Martinez v. Lewis*, 861 P.2d 235, 246 (N.M. Ct. App. 1993).

those crops can be grown economically.”<sup>157</sup> This is a tall order and such a determination “can be easily misused,” especially for tribes like the Navajo who do not have the greatest agricultural lands in northern Arizona or easy access to millions of dollars to build necessary reservoirs and related irrigation projects to make crops profitable.<sup>158</sup> Considering the massive sums of taxpayer dollars the United States spent on extremely questionable irrigation projects for non-Indians over the years, this requirement could certainly be seen as a double standard.<sup>159</sup> The difficulties inherent in a cost-benefit analysis for tribes is one thing; however, had Justice O’Connor not recused herself, the PIA standard would have become an even greater barrier to Indians seeking to win their reserved water rights.

Wyoming’s argument against the Shoshone and Northern Arapaho Indians, who reside on the Wind River Reservation, advanced the position that the PIA standard should be abandoned for three reasons: (1) it gives tribes the chance to win excessive water rights, (2) those rights can in turn be problematic for existing users, and (3) the standard is rife with subjectivity because it is too difficult to prove what land is actually irrigable.<sup>160</sup> According to her draft opinion, made available to the public by the late Justice Thurgood Marshall, Justice O’Connor agreed with the second argument that “reserved water rights must entail sensitivity to the impact on state and private appropriators of scarce water under state law.”<sup>161</sup> Although her opinion retained the PIA standard, the decision would have injected a pragmatic or “sensitivity” analysis into the doctrine, thus easing the blow on existing users.<sup>162</sup> Furthermore, courts would be required to assess the “reasonable likelihood that future irrigation projects . . . will actually be built,” placing a considerably higher hurdle in front of Indians looking to claim reserved rights, with courts now in charge of deciding what appropriations might be passed by Congress in the years to come.<sup>163</sup>

Justice Marshall’s papers also included a draft of Justice Brennan’s strongly worded dissenting opinion. In his view, the sensitivity doctrine proposed by Justice O’Connor was nothing more than a “redistribution of rights at the expense of one of the most disadvantaged groups in American society.”<sup>164</sup> According to Justice

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157. Mergen & Liu, *supra* note 125, at 696.

158. *Id.*; see generally *Martinez*, 861 P.2d at 246.

159. REISNER, *supra* note 11, at 135–36.

160. Mergen & Liu, *supra* note 125, at 732.

161. *Id.* at 706.

162. *Id.* at 738.

163. *Id.*

164. *Id.* at 742.

Brennan, a “reasonable likelihood” test is highly subjective, unworkable, and turns the PIA standard into the “*politically* irrigable acreage” standard.<sup>165</sup> Relying on *Winters* and *Arizona I*, Justice Brennan explained that Court precedent has continually denied an equitable balancing test concerning Indian reserved water rights.<sup>166</sup> Also, introducing “sensitivity” into the analysis in effect favors non-Indians over Indians, placing an “illegitimate thumb on the scales” when weighing what could be the most important decision for a tribe’s future.<sup>167</sup> In closing, Justice Brennan laid it on the table: if the Court wants to overrule *Winters* or *Arizona I*, then say so; if not, “then let us stick to them [the decisions] even if it means the Indians get more water than we think they ‘need.’”<sup>168</sup>

Of course, neither opinion saw the light of day because of Justice O’Connor’s recusal. The existing PIA standard hung on. Barely. However, had this new rule been adopted, the Navajo’s hand today might be significantly weaker. The residents and economies of Arizona, Nevada, and Southern California most likely could have garnered “sensitivity” from the new rule because of their heavy and historic dependence on the Colorado River, limiting the size of the Navajo water claim. But that is not how things played out. Instead of another setback, the legal tide changed for the Navajo.

## 2. *The Gila Case*

Stanley Pollack, assistant attorney general for the Navajo and lead counsel for the current Navajo claim against the Department of the Interior, took part in an important water rights case on behalf of the tribe in 2001, which ended up broadening the PIA standard to the advantage of tribes. The Arizona Supreme Court decision concerned a general stream adjudication for the Gila River,<sup>169</sup> which begins in the New Mexico Mountains and flows west through Arizona, just south of Phoenix. The Gila is south of the Navajo Reservation and the tribe was not seeking water rights to the river. Instead, it participated because of the key question that the court was asked to decide: How should Indian reserved water rights be quantified in Arizona?<sup>170</sup>

The court began by reinforcing the key rules from the *Winters*

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165. *Id.* at 745 (emphasis added).

166. *Id.* at 747.

167. *Id.* at 751.

168. *Id.* at 760.

169. *In re Gen. Adjudication of all Rights to Use water in the Gila River Sys. & Source*, 35 P.3d 68 (Ariz. 2001) (en banc).

170. *Id.* at 72.



decision, reasoning that “the government, in establishing Indian or other federal reservations, impliedly reserves enough water to fulfill the purpose of each reservation.”<sup>171</sup> Indian reserved water rights usually trump other water rights in a prior appropriation system, the doctrine used for surface water in Arizona, because tribal water rights date back to the year of the reservation’s creation (in the Navajo’s case, 1868) and are therefore first in time, first in right.<sup>172</sup> Also, for Indians, priority is not determined by use<sup>173</sup> because the government reserved sufficient water to “fulfill the purpose of each reservation,” now and into the future.<sup>174</sup> Further, the court reiterated its agreement with the *Winters* and *Arizona I* decisions, that reservations were created to provide Indians with a lasting home and a “livable” environment.<sup>175</sup>

The court then took a step beyond prior Supreme Court decisions. It declined to hold that the PIA standard, first created in *Arizona I*, should serve as the exclusive method for quantifying Indian reserved water rights.<sup>176</sup> The court reasoned that it is patently unfair to limit Indians’ use of water to agriculture.<sup>177</sup> After all, other twenty-first-century water users are not forced to use water exactly as their ancestors did in the nineteenth century,<sup>178</sup> so “[n]othing should prevent tribes from diversifying their economies if they so choose.”<sup>179</sup> The PIA standard punished those tribes “who fail to show either the engineering or economic feasibility of proposed irrigation projects,”<sup>180</sup> which could especially harm the Navajo considering the changing topography, broad distances, and arid characteristics of their lands in Northern Arizona. The court concluded that the inequity caused by the PIA standard “is unacceptable and inconsistent with the idea of a permanent homeland.”<sup>181</sup> As discussed earlier, the 1868 Treaty stipulated that the Navajo Reservation is to serve as the tribe’s “permanent home.”<sup>182</sup>

The “power to change,” outlined in *Winters*,<sup>183</sup> is no power at all if tribes are limited to an agrarian economy—especially in northern

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171. *Id.*

172. *Id.* at 71.

173. *Id.* at 72.

174. *Id.*

175. *Id.* at 74 (quoting *Arizona v. California*, 373 U.S. 546, 599 (1963)).

176. *Id.* at 79.

177. *Id.* at 76.

178. *Id.*

179. *Id.*

180. *Id.* at 78.

181. *Id.*

182. Navajo Treaty, *supra* note 13, at art. 13.

183. *Winters v. United States*, 207 U.S. 564, 577 (1908).

Arizona—and unable to innovate or modernize with the times. The PIA standard is inflexible, so the court created a new rule for how to quantify water rights that considers a tribe's history; its culture; the reservation's natural resources, topography, geography, and groundwater supplies; its economic base; the reservation's past water use; and a forecast of the tribe's future population.<sup>184</sup> In conclusion, the court reasoned that as long as the tribe's proposed uses for the water are "reasonably feasible" and "economically sound," its reserved rights should be measured accordingly.<sup>185</sup>

Although this decision came from the Arizona Supreme Court and is not binding precedent on other states or in federal court, it still marked a major departure from the traditional PIA standard. By significantly broadening how reserved water rights can be measured, tribes that historically or currently do not have fertile agricultural lands, or the funds to put the water to use, are not necessarily punished when reserved rights are being measured.

### 3. *San Juan River Settlement*

The Colorado is not the only river that flows through Navajo lands. The San Juan River flows from the east, straddling the Navajo Reservation in northern New Mexico, before it feeds into the Colorado via Lake Powell. The State of New Mexico filed the San Juan Adjudication in 1975, yet after twenty years, the adjudication languished, failing to quantify Navajo rights to the San Juan River.<sup>186</sup> Since the Navajo arguably held one of the most senior rights on the river, which could affect every other right in the basin, the "800 pound Gorilla" lumbered on.<sup>187</sup>

Fed up with the slow adjudication process, around 1996 the tribe shifted gears to a strategy of settlement, realizing that even if they successfully won every drop of the San Juan through a court decree, those rights would be "paper" rights and of little use for drinking or economic development purposes because they would not include the necessary funds to develop or transport the water.<sup>188</sup> Still, before the tribe entered negotiations, it was imperative that non-Indians drop the position that the Navajo waived all of their *Winters* claims to the San

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184. In re Gen. Adjudication of all Rights to Use water in the Gila River Sys. & Source, 35 P.3d 68, 79–81 (Ariz. 2001) (en banc).

185. *Id.* at 81.

186. E-mail interview with Stanley Pollack, Assistant Attorney General for Navajo Nation, Sept. 3, 2010 (on file with the author).

187. *Id.*

188. *Id.*

Juan pursuant to the Navajo Indian Irrigation Project (NIIP),<sup>189</sup> approved by Congress in 1962.<sup>190</sup> In the end, considering the ineffectiveness of the stream adjudication, both New Mexico and the Navajo considered settlement discussions, with an eye on “wet” water rights and not theoretical claims, the most attractive route.<sup>191</sup> The Navajo could garner a fair share of the San Juan, along with the much-needed funding to transport the water to their lands, while New Mexico could clear the cloud of uncertainty hanging over the river, and avoid a costly court case that “may have the effect of unraveling compact allocations upon which western water development has been based.”<sup>192</sup>

On April 19, 2005, while Arizona settlement negotiations were in their early stages, the Navajo reached an initial agreement with New Mexico over water rights in the San Juan River Basin.<sup>193</sup> The agreement included a large number of water rights and considerable funds to build related water supply projects.<sup>194</sup> In exchange, the Navajo agreed to forgo future claims to the river that could adversely impact the New Mexico economy and existing users.<sup>195</sup> However, before the deal could be finalized, Congress first had to give the settlement its stamp of approval. Legislative approval is a recommended course of action for reserved water rights settlements because of the government’s trust responsibilities, its authority over interstate compacts, and its power to appropriate large sums of money to carry out complex agreements.<sup>196</sup>

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189. *Id.*; Stanley M. Pollack, Address at New Mexico Water Resources Institute: Integrated Water Resources Management in the San Juan Basin: The Navajo Perspective, 3 (Sept. 1996) (on file with the author).

190. Act of June 13, 1962, Pub. L. No. 87-4834 (codified at 43 U.S.C. 620-6200). Congress ostensibly approved NIIP to award the Navajo a considerable share of the San Juan River. Still, NIIP practically and legally did not solve Navajo reserved rights to either the San Juan or the Colorado. For a detailed discussion of NIIP and its shortcomings for the Navajo, including its notorious funding issues and unfinished nature, see CHARLES F. WILKINSON, *CROSSING THE NEXT MERIDIAN*, 226-231 (1992). For a detailed discussion on why NIIP did not quantify the Navajo’s *Winters* rights to the San Juan, see Judith E. Jacobsen, *The Navajo Indian Irrigation Project and Quantification of Navajo Winters Rights*, 32 Nat. Res. J. 825 (1992).

191. E-mail interview with Stanley Pollack, *supra* note 186.

192. *Id.*; Stanley M. Pollack, Address at New Mexico Water Resources Institute: Integrated Water Resources Management in the San Juan Basin: The Navajo Perspective, 3 (Sept. 1996) (on file with the author).

193. Executive Summary of the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement, New Mexico Office of the State Engineer (April 19, 2005), available at <http://www.ose.state.nm.us/water-info/NavajoSettlement/NavajoExecutiveSummary.pdf>.

194. *Id.*

195. *Id.*

196. PETER W. SLY, *RESERVED WATER RIGHTS SETTLEMENT MANUAL* 161-66

Joe Shirley Jr., former president of the Navajo Nation, urged lawmakers to approve the settlement, noting that the alternative for the tribe was to pursue a reserved water rights claim in court, which could expose New Mexico to "horrific liabilities even if the Navajo Nation were to obtain only modest water rights."<sup>197</sup> Congress approved the settlement in March, 2009.<sup>198</sup> The final deal handed water rights to the Navajo totaling approximately 600,000 af per year and included over \$800 million in federal funds to build a pipeline that will send San Juan water to Gallup in western New Mexico, greatly increasing drinking water supplies for the eastern portion of the reservation.<sup>199</sup> Importantly, the settlement only dealt with Navajo rights to the San Juan in New Mexico (an Upper Basin state, pursuant to the Compact), not Navajo rights to the Colorado in Arizona.<sup>200</sup>

Though Congress and the president ratified the deal, increased drinking water is still not a reality for the New Mexico side of the reservation. Thus far, President Obama included \$10 million in his 2010 budget to complete the necessary engineering analysis for the Navajo-Gallup pipeline project.<sup>201</sup> It remains to be seen whether additional appropriations will be included in future budgets.

### *C. Navajo Claim and Settlement Discussions*

On March 14, 2003, the Navajo Nation filed a lawsuit against the U.S. Department of the Interior to force the government to quantify its reserved water rights to the Colorado River in Arizona. According to David Getches, the Navajo lawsuit is a "shot across the bow of the non-Indian water users in the Colorado River Basin" and is a "significant claim that has to be reckoned with."<sup>202</sup> For Pollack,

[t]he premise of the case is that every decision the Secretary [of the Interior] makes respecting the management of the river assumes the nonexistence of a Navajo right. Each time the Secretary takes an action with respect to the management of the Colorado River without evaluating the impact on the tribe's unquantified water rights," the federal government "is more or less

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(1988).

197. *Water Jackpot*, *supra* note 5, at 6.

198. Staci Matlock, *Congress Approves Massive Public Lands Bill*, SANTA FE NEW MEXICAN, March 25, 2009, at 1, *available at* <http://www.santafenewmexican.com/Local%20News/Congress-approves-massive-public-lands-bill>.

199. *Id.*

200. *Id.*

201. Phone interview with Stanley Pollack, Assistant Attorney General for Navajo Nation (Mar. 8, 2010).

202. *Sleeping Giant*, *supra* note 3, at 1.

institutionalizing the reliance on unquantified Navajo water by all of the other water users.<sup>203</sup>

In particular, the complaint alleges that, for example, continued CAP allocations, Arizona water banking, and past National Environmental Policy Act (“NEPA”) compliance all failed to consider Navajo claims to Lower Basin Colorado River waters.<sup>204</sup> Thus, according to the claim, the federal government is violating its trust duties owed to the Navajo living on the western side of the reservation, above Lake Mead.<sup>205</sup>

After filing the lawsuit in 2003, the negotiating parties stayed the proceedings to work on a settlement. As of this writing, the settlement talks are still underway, and, according to Pollack, the discussions are increasingly complex.<sup>206</sup> But for the Navajo, the cards seem to be in their favor. First, they have the lawsuit, backed up by the *Winters*, *Arizona I*, and *Gila* decisions as leverage. Based on the reserved rights doctrine, which dates Navajo rights to the river at 1868, an enormous settlement—at least in terms of paper rights—is possible, one that could easily upend the Law of the River. This gives existing users a strong incentive to seek an agreement with the Navajo. It is a safer route for them.

Second, the New Mexico settlement also provides leverage for the Navajo. Congress recently approved legislation awarding the tribe 600,000 af and funds to transport the water. This leaves Arizona with possibly fewer options, considering the Navajo can argue that any settlement in Arizona must at least be in the ballpark of the New Mexico deal, although the circumstances are admittedly quite different. As discussed earlier, and pursuant to *Arizona I*, Navajo water rights would come out of Arizona’s allotment of Colorado River water—that likely means CAP users, such as Phoenix-area residents and farmers, who hold junior priority rights on the river.

The goal of the settlement for the Navajo is to deliver adequate drinking water to the western half of the reservation and provide necessary supplies to sustain their “permanent homeland,” including water for commercial purposes.<sup>207</sup> There are three principal reasons why

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203. *Navajo Sue U.S. to Protect Colorado River Rights*, U. OF ARIZ. C. OF AGRIC. & LIFE SCI. WATER RES. CTR., March–April 2003, available at <http://cals.arizona.edu/azwater/awr/marapr03/feature2.html>.

204. Navajo Compl. *supra* note 1, at 2.

205. *Id.* at 3.

206. Phone Interview with Stanley Pollack, *supra* note 201.

207. *Water Jackpot*, *supra* note 5, at 11–12; Phone interview with Stanley Pollack, *supra* note 201.

the settlement approach, compared to a traditional *Winters* claim, is preferable for tribes, and the Navajo in particular.

First, general stream adjudications that can determine Indian reserved water rights (like the Gila and San Juan adjudications discussed earlier), which occur in state courts pursuant to the McCarran Amendment, often take decades.<sup>208</sup> For the Navajo, where drinking water is in short supply, this route is too little too late. Plus, river adjudications are very expensive, due to the time involved.<sup>209</sup>

Second, a court decision may only deliver "paper" rights, or no reserved rights at all. It is a risky approach, considering once rights are quantified, that is it. The Navajo are very aware of the 1988 *Big Horn I* decision, where the Wyoming Supreme Court granted tribes 500,000 af of reserved water rights.<sup>210</sup> For perspective, this is 200,000 af more than Nevada's entire share out of the Colorado River Compact. The problem, however, is that the tribes had no way to put the paper rights to use after the decree.<sup>211</sup> Two decades have now elapsed since that decision, but the "victory" in court has yet to produce the economic benefits that the reservation had hoped for, thwarting the "power to change" rationale for reserved water rights, first envisioned in the *Winters* decision.<sup>212</sup> Court decrees may award tribes large water rights, but those decisions do not come with the millions of dollars needed to put the water to use.<sup>213</sup> On the other hand, settlements can deliver tangible assets to tribes that they otherwise cannot achieve through litigation, like funds to build transport systems in the San Juan River settlement.<sup>214</sup>

The final reason why settlement is arguably a better option for tribes is because of precedent. Congress has approved over a dozen settlements in the past two decades, including the Navajo's agreement with New Mexico regarding the San Juan.<sup>215</sup> In particular, Arizona is on the front lines trying to work out deals with tribes, where CAP water is used to "lubricate settlement discussions."<sup>216</sup> In fact, a settlement

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208. 43 U.S.C. § 666 (1970); see In re Gen. Adjudication of all Rights to Use water in the Gila River Sys. & Source, 35 P.3d 68, 79–81 (Ariz. 2001) (en banc); see also SAX ET AL, *supra* note 55, at 992–93.

209. See SAX ET AL, *supra* note 55, at 992–93.

210. In re Gen. Adjudication of All Rights to Use Water in the Big Horn River Sys., 753 P.2d 76, 76 (Wyo. 1988).

211. SAX ET AL, *supra* note 55, at 993.

212. *Id.* at 992–93; *Winters v. United States*, 207 U.S. 564, 577 (1908).

213. SAX ET AL, *supra* note 55, at 993.

214. *Id.*

215. *Id.* at 995.

216. *Id.* at n. 6.

awarded just under 200,000 af of CAP water to Arizona tribes in 2004.<sup>217</sup> These are all good signs for the Navajo, showing the willingness of states to negotiate and reach deals.

#### *D. Remaining Hurdles for the Navajo*

Settlements are not free from danger, however. Many Indian settlements, though “final,” are contingent on implementation factors that are far from certain for the parties that sign on the dotted line; the most glaring example is funding limitations.<sup>218</sup> Congressional budgets shift course rapidly. For example, during the Clinton years when Bruce Babbitt headed Interior, the administration made a conscious effort to include a separate line item in the budget solely for Indian water settlements.<sup>219</sup> The idea was to incentivize settlements and limit the siphoning of funds from other Indian accounts.<sup>220</sup> However, the funds never materialized in the budget at the levels originally sought.<sup>221</sup>

Moreover, there is a clash of opinion among administrations and federal agencies in Washington regarding the appropriate level of funding for Indian water settlements. Some believe settlement costs should equal the government’s legal liability if a *Winters* claim were litigated, and no more, while others take a broader view of the government’s trust duties toward tribes, favoring a water settlement that actually helps tribes succeed in the future, even if it is costly.<sup>222</sup>

For the Navajo, any settlement with Lower Basin interests for a share of the Colorado must include funds to help transport the water. In terms of geography, water must be pumped many miles, and in the Navajo’s case, uphill as well.<sup>223</sup> However, the federal government is currently running a budget deficit of \$1.3 trillion.<sup>224</sup> Thus, there is a

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217. Arizona Water Settlements Act, Pub. L. No. 108-451, § 104(a), (2004). The Gila River Indian Community received 102,000 af; the Tohono O’odham Nation received 28,200 af; and 67,300 af went to Arizona Indian Tribes.

218. Daniel McCool, *Indian Water Settlements: Negotiating Tribal Claims to Water*, 107 WATER RES. UPDATE: UNIV. COUNCIL ON WATER RES. 28, 29 (Spring 1997), available at <http://www.ucowr.org/updates/107/index.html>. Examples of Indian settlements that were not “settled” after the actual settlement, include: the San Luis Rey, Fort McDowell, Fort Peck, Yavapai-Prescott, the Southern Arizona Water Rights Settlement Act of 1982 (Tohono O’odham), Colorado Ute Settlement of 1988, Uintah and Ouray Reservation, and the Jicarilla Apache.

219. *Id.* at 29.

220. *Id.*

221. *Id.*

222. *Id.*

223. *Sleeping Giant*, *supra* note 3, at 2.

224. *The Budget and Economic Outlook: An Update*, CONG. BUDGET OFFICE (Aug.

possibility that even if a successful settlement emerges from the talks, funding limitations could delay important provisions down the road. Further, large water projects, such as a pipeline, might run “headlong into environmental laws,” such as NEPA and the Endangered Species Act.<sup>225</sup>

Another problem for the Navajo is that its entire legal strategy is built around the possibility of a large *Winters* claim to the Colorado River in Arizona. But litigation is never a sure thing. According to a former solicitor of the Department of Interior, the validity of a tribe's water rights claim, in terms of PIA, is the starting point for settlement discussions.<sup>226</sup> The goal is to find parameters for talks that include realistic volumes of water, taking into account the geography of the reservation and the risks to existing users and other tribes, as well as funding possibilities.<sup>227</sup> For example, the circumstances for the Navajo in Arizona are a lot different than they were in New Mexico.

Since no two settlements are the same, it is also tough to pinpoint what Interior's trust duties entail when it comes to tribal water rights, as every settlement has different parties, histories, locations, and waters at stake.<sup>228</sup> One can only imagine the complexities involved in the current Navajo settlement discussions, particularly for Interior, which has a trust responsibility to the Navajo, but is also charged by Congress to manage the river and comply with environmental laws.<sup>229</sup> These competing demands can and often do clash.<sup>230</sup>

Still, when weighing settlement negotiations versus a lawsuit, the

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2010), <http://www.cbo.gov/doc.cfm?index=11705>.

225. McCool, *supra* note 218, at 30.

226. Phone interview with John Leshy, Harry D. Sunderland Distinguished Professor of Real Property Law at the Univ. of California, Hastings C. of Law (Sept. 9, 2010). Mr. Leshy served as solicitor of the Department of the Interior throughout the Clinton Administration (notes on file with author).

227. *Id.*

228. *Id.*

229. Navajo Compl., *supra* note 1, at 13. For a detailed discussion of Interior's competing and often clashing duties when representing tribes, see Ann C. Juliano, *Conflicted Justice: The Department of Justice's Conflict of Interest Representing Native American Tribes*, 37 GA. L. REV. 1307 (2003).

230. However, President Obama issued an executive order in 2009, re-affirming President Clinton's Executive Order 13175 of 2000, which charges departments and agencies “with engaging in regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, and are responsible for strengthening the government-to-government relationship between the United States and Indian tribes.” Presidential Memorandum (Nov. 5, 2009), *available at* <http://www.whitehouse.gov/the-press-office/memorandum-tribal-consultation-signed-president>.



risks associated with litigation appear to outweigh the former. A settlement holds the possibility of wet water for a tribe, and by extension, more control over the direction it chooses to take in the future.<sup>231</sup> Water settlements, therefore, represent a “second treaty-making era.”<sup>232</sup> The Navajo’s 1868 treaty and subsequent executive orders concerned land but failed to address water. If the reservation is going to serve as the tribe’s “permanent homeland,” as stipulated in the treaty, it needs water as well as borders.<sup>233</sup>

#### IV. CONCLUSION: A LIVABLE RESERVATION

Indians have a right to control their own destiny. It follows then, that they have a right to sufficient water supplies to ensure that their lands are capable of serving as livable, permanent homes—both today and into the future.

From Mexico’s Colorado River Delta and climate change, to drought conditions and endangered species, significant problems loom for future managers of the river in the Lower Basin states of California, Nevada, and Arizona. But perhaps the biggest source of uncertainty for policymakers—an uncertainty that exists entirely because of their own decisions—are the Navajo reserved water rights to the mainstream of the Colorado River in northern Arizona. For clarity’s sake, but more importantly, for justice’s sake, these rights need to be quantified fairly and as quickly as possible. It is the way forward.

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231. McCool, *supra* note 218, at 31.

232. *Id.*

233. *Id.*

# **First Federal Prohibition on Bioprospecting within a Place of Protection: Time to Spur the Legislative Dialogue**

**Andrea Aseff**

In 2009, the U.S. Fish and Wildlife Service (“Fish and Wildlife”) and the National Oceanic and Atmospheric Administration (“NOAA”) prohibited bioprospecting within the Papahānaumokuākea Marine National Monument<sup>1</sup> relatively quietly, by attaching special conditions to each permit issued for access and sample-collecting research.<sup>2</sup> Generally, previous federal action regarding bioprospecting on public land has

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1. Papahānaumokuākea is the nation’s first marine national monument.

2. U.S. Fish & Wildlife Service, National Oceanic & Atmospheric Administration, & State of Hawaii Dept. of Land and Natural Resources, Papahānaumokuākea Marine National Monument Research Permit Template (2009) [hereinafter “Papahānaumokuākea”]. *See app. 1.*

entailed approval and authorization. This development is, ostensibly, the first federal prohibition on bioprospecting on U.S. public lands.

Bioprospecting involves searching wild plants, animals, and microorganisms—that is, biodiversity—for genetic and biochemical information.<sup>3</sup> The robust, yet still burgeoning bioprospecting industry uses these genetic resources to develop new and improved pharmaceuticals, genetically modified crops, cosmetics, and other commercial products worth billions of dollars each year.<sup>4</sup> Historically, natural resource harvesting on federal lands has encompassed such traditional consumptive uses as timber harvesting, mining, hunting, and grazing.<sup>5</sup> Bioprospecting is fundamentally different because it targets microscopic resources at the genetic and biochemical level, rather than, say, trees or ore bodies at the macroscopic level.<sup>6</sup> But, bioprospecting shares a fundamental risk with traditional commercial extractive uses of public natural resources: consumption-based regulatory regimes create a “Tragedy of the Commons,” by externalizing the costs of environmental depreciation and resource depletion.

While ecologically unique, Papahānaumokuākea Marine National Monument is not idiosyncratic in terms of U.S. public land policy. It was established under a “no take” regime, meaning no access is allowed into the monument unless permitted by its co-trustees: Fish and Wildlife, NOAA, and the State of Hawaii Department of Land and Natural Resources.<sup>7</sup> Although access is generally open to the public in national parks, national monuments, and other public lands, permits are usually required for research activities, such as bioprospecting in Papahānaumokuākea.<sup>8</sup>

Bioprospecting concerns have also been addressed on an international scale. The United Nations Convention on Biological Diversity (the “Convention”) expressed the following values: equitable benefit-sharing with the home country where an outside nation bioprospects that home nation’s natural resources, prior informed

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3. John R. Adair, *The Bioprospecting Question: Should the United States Charge Biotechnology Companies for the Commercial Use of Public Wild Genetic Resources*, 24 *ECOLOGY L.Q.* 131, 132 (1997).

4. *Id.*

5. *Edmonds Institute v. Babbitt*, 42 F. Supp. 2d 1, 5 (D.D.C. 1999).

6. *Id.*

7. Papahānaumokuākea Marine National Monument Management Plan, NOAA ET AL., available at [www.fws.gov/midway/volume%20i%20of%20plan.pdf](http://www.fws.gov/midway/volume%20i%20of%20plan.pdf) (Dec. 2008).

8. National Park Service Regulation, 36 C.F.R. § 5.14 (2009).

consent of the home nation, and preservation of biodiversity.<sup>9</sup> According to the United Nations, the Convention's three main objectives are: (1) to conserve biological diversity; (2) to use biological diversity in a sustainable fashion; and (3) to share the benefits of biological diversity fairly and equitably.<sup>10</sup> The United States is only tentatively committed to these international norms because, although President Clinton signed the Convention in 1993, the Senate has yet to ratify it.<sup>11</sup>

With this unprecedented move by the federal government and the sixteen-year-old international recognition of the need to regulate bioprospecting, this recent development in U.S. public land policy should spur much-needed Congressional dialogue about the regulation of bioprospecting on public lands. This note explores the chief reasons why Congress must undertake this conversation: (1) ripe market opportunities; (2) great loss of biodiversity; (3) patent law enabling ownership of bioprospecting resources; and (4) the current piecemeal legal regime covering bioprospecting. The bulk of this paper will focus on the current, inadequate regulatory regimes of public land agencies by laying out each agency's pertinent statutes and regulations regarding bioprospecting, thereby revealing the meager overall regulatory scheme for bioprospecting on public lands. Additionally, a brief policy proposal to fill the bioprospecting regulatory gap will follow.

## I. RIPE MARKET OPPORTUNITIES FOR THE BIOPROSPECTING INDUSTRY

The current market for bioprospecting is robust and growing, indicating that Congress needs to step in to regulate bioprospecting before its impacts have been felt in a regrettable, and possibly irreversible, manner.<sup>12</sup> The conversation about this market began ten years ago when the media and industry began calling bioprospecting a

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9. Adair, *supra* note 3, at 142–46 (1997); *see generally*, U.N. Convention on Biological Diversity, U.N. Doc. No. 30619 (Dec. 29, 1993), *available at* <http://www.cbd.int/doc/legal/cbd-un-en.pdf>.

10. *The Convention on Biological Diversity: About the Convention*, UNITED NATIONS, <http://www.cbd.int/convention/about.shtml> (last visited Nov. 3, 2010).

11. *The Convention on Biological Diversity: List of Parties*, UNITED NATIONS, <http://www.cbd.int/convention/parties/list/> (last visited Nov. 3, 2010); Adair, *supra* note 3, at 144.

12. Carolyn Marshall, *Bioprospectors Mine Nature For Genetic Gold*, FORBES (May 28, 2000), *available at* <http://www.forbes.com/2000/05/29/feat.html>.

billion-dollar industry.<sup>13</sup> Despite the success of the industry, there is no source for the current rate at which samples are taken because the federal government does not maintain records of bioprospecting activity, and often, samples are taken from federal lands for alleged research purposes without government knowledge.<sup>14</sup>

While assessing bioprospecting profits is difficult due to the lack of data, a look at the most renowned bioprospecting controversy, and the related profits, shows the immense commercial potential and, thus, incentive to bioprospect. The U.S. Supreme Court decided what is arguably the most infamous bioprospecting controversy in U.S. history, *Edmonds Institute v. Babbitt*, ten years ago.

The lead plaintiff, the Edmonds Institute, is a non-profit, public interest organization "committed to the health and sustainability of ecosystems and their inhabitants."<sup>15</sup> It brought a lawsuit against the Department of the Interior ("DOI") and the National Park Service alleging in the complaint that the defendants had violated the public trust doctrine, common sense, and their responsibilities of stewardship in Yellowstone National Park ("Yellowstone" or "the Park") by making agreements with private corporations to access and commercialize the biodiversity of the park.<sup>16</sup> The Edmonds Institute succeeded on two of four holdings in the first phase of the case. Specifically, in 1999, the D.C. District Court held that: (1) the plaintiff organizations and visitor had standing; (2) plaintiffs brought valid claims under the Federal Technology Transfer Act ("FTTA"), National Park Service Organic Act, and Yellowstone Act; (3) organizations and visitors did not state a claim under public trust doctrine; and (4) an environmental assessment of the bioprospecting impacts was required under the National Environmental Policy Act.<sup>17</sup> In December 2009, the National Park Service issued a 600-page Final Environmental Impact Statement ("EIS"), technically fulfilling its requirements per the court's order.<sup>18</sup>

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13. Sandra Bourgasser-Ketterling, *Bioprospecting on Public Lands: Should Private Companies Compensate the Government for Their Use of Public Land Resources?*, 8 J.L. & POL'Y 481, 481 (2000).

14. Adair, *supra* note 3, at 153.

15. *About the Institute*, THE EDMONDS INST., <http://www.edmonds-institute.org/about.html> (last visited Nov. 3, 2010).

16. *Yellowstone Case*, THE EDMONDS INSTITUTE, <http://www.edmonds-institute.org/yellowstone.html> (last visited Nov. 3, 2010).

17. *Edmonds Institute*, 42 F. Supp. 2d at 20.

18. Press Release, Edmonds Institute, Park "Benefits" Sharing Plan a Money-Loser: Secret Royalty Deals Force Parks to Eat High Administrative Costs (Dec. 16, 2009), available at [www.edmonds-institute.org/121609%20Press%20Release.pdf](http://www.edmonds-institute.org/121609%20Press%20Release.pdf).

Critics of this EIS, including The Edmonds Institute, argue that the benefits-sharing plan will cost the park service more than it raises, ultimately proving it impractical to operate and comprising resource protection and equity.<sup>19</sup> Although the dispute has technically ended, the overarching issue in this case and the relevant law is still controversial and somewhat nebulous. Still, the legality of the DOI's decision to enter into a novel agreement allowing Diversa, a private biotechnology company, to bioprospect unique microbial organisms—thermophiles—from geysers and other thermal features in Yellowstone remains unclear.<sup>20</sup>

The agreement between the DOI and Diversa, called a Cooperative Research and Development Agreement (“CRADA”), gave Diversa rights to bioprospect in Yellowstone in exchange for sharing potential financial returns with the Park. This was the first agreement of its kind in a national park.<sup>21</sup> Diversa and the Park agreed to cooperate to research and catalog the Park's biological diversity, primarily in the Park's thermal features such as geysers, hot springs, fumaroles, and mud pots. The agreement also allowed this type of data collection in alpine tundra ecosystems, subalpine forests, riparian habitats, sedge marshes, bogs, swamps, streams, and lakes.<sup>22</sup> From these areas and features, Diversa took raw samples directly from the environment, including biological tissues, soil, sediments, water, and rock. Nucleic acids—that is, genetic material—were isolated directly from these samples and then underwent a process to render them clonable.<sup>23</sup> Diversa then used the constructed library of genetic information as base material for the discovery and cloning of biocatalysts, bioactive materials, and other compounds. After this subcloning into a host, Diversa utilized the resulting gene products to evaluate them for potential commercial application.<sup>24</sup>

These bioprospecting rights proved immensely profitable for Diversa. Despite litigation costs, Diversa valued its potential annual products sales at \$295 to \$430 million in 2000.<sup>25</sup> Litigation notwithstanding, Diversa clearly stood to reap great profits from bioprospecting the thermophiles at Yellowstone.<sup>26</sup> Diversa sold its first commercial product, a heat-loving enzyme designed to increase deep-

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19. *Edmonds Institute*, 42 F. Supp. 2d at 20.

20. *Id.* at 4.

21. *Id.*

22. *Id.* at 5.

23. *Id.*

24. *Id.*

25. Marshall, *supra* note 12.

26. *Id.*

well oil production, in 1999 to Halliburton Energy Services.<sup>27</sup> Diversa has profited on commercialization of this enzyme, which is now being synthetically reproduced and marketed to oil companies as a proprietary hydraulic fracturing fluid.<sup>28</sup> Patented as Pyrolase, the enzyme can be pumped into oil wells to help squeeze out any remaining oil in the fractures.<sup>29</sup> These “fracking” fluids, generally, have been in the public eye lately for their controversial potential effects on the watershed, the environment, and public health.<sup>30</sup>

As for the consideration Yellowstone received in exchange for Diversa’s profitable bioprospecting rights, the court noted that the specifics of the financial agreement were not released to the public or the court.<sup>31</sup> In fact, despite requests from Congress and at least two Freedom of Information Act lawsuits, the consideration remains unknown. However, the Court also stated that the defendants claimed that Diversa would pay \$20,000 a year to the DOI and pay the Park royalties—somewhere between five and ten percent—on any future commercial use or product derived from the company’s bioprospecting activities.<sup>32</sup> In addition to financial compensation, Yellowstone received research equipment and staff training in the latest molecular biology techniques for a number of Park projects.<sup>33</sup> These benefits are highly valuable to national parks with minimal budgets.

In stark contrast, John Varley, head of Yellowstone’s Center for Resources, has said, “[w]e can’t collect a thing.”<sup>34</sup> If the agreement did, in fact, include \$20,000 a year for the Park, that sum amounts to just 1.14 percent of the 2002 operational funding for natural resource management in Yellowstone’s Business Plan.<sup>35</sup> In sum, there is great debate about the Park’s consideration pursuant to the CRADA with Diversa. Arguably, if the Park’s resources are taken and utilized for profit, the Park should

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27. *Id.*

28. Mike Stark, *Park officials, business interests, enviros debate potential pay offs of ‘bioprospecting,’* GAZETTE WYOMING BUREAU, May 28, 2002, available at <http://www.wildwilderness.org/content/view/524/64/>.

29. *Id.*

30. Sarah Hoye & Steve Hargreaves, *‘Fracking’ yields fuel, fear in Northeast*, CNN (Sept. 3, 2010), <http://www.cnn.com/2010/US/09/02/fracking/index.html>.

31. *Edmonds Institute*, 42 F. Supp. 2d at 5.

32. *Id.*

33. KERRY TEN KATE ET AL., BENEFIT-SHARING CASE STUDY: YELLOWSTONE NATIONAL PARK AND THE DIVERSA CORPORATION 21 (1998), available at <http://serc.carleton.edu/microbelife/topics/bioprospecting/resources.html> (click on the Benefits-Sharing Case Study hyperlink).

34. Stark, *supra* note 28.

35. *Feds Seek Share of Profits from Research in U.S. Parks*, ENV’T NEWS SERV. (Jan. 26, 2007), <http://www.ens-newswire.com/ens/jan2007/2007-01-26-01.asp>.

reap a larger share of those benefits. This case illustrates the profitability for bioprospecting companies and the market potential juxtaposed with the consideration issue, which is one of the many reasons Congress needs to take action on bioprospecting now. Other aspects of this seminal case, including the law behind the CRADA and the general issue of consideration, will be further discussed within this note.

## II. GREAT AND ACCELERATING LOSS OF BIODIVERSITY

Bioprospecting is a major concern because, as bioprospectors extract genetic resources, they diminish the biodiversity of the ecosystem, thereby accelerating the current great loss of biodiversity. As a result, bioprospecting could become the next “Tragedy of the Commons,” much the same way that mining, logging, and grazing have often resulted in resource scarcity and other inextricably linked ecological impacts.<sup>36</sup>

Proponents of bioprospecting argue that, when properly regulated, the potential economic value of Earth's genetic resources could fuel viable, market-driven incentives to conserve biodiversity.<sup>37</sup> Yet, this argument hinges on proper regulation, which is currently absent. For bioprospecting to incentivize preservation rather than exploitation, a comprehensive, stringent regulatory scheme is needed. In order to avoid the path of mining and other extractive industries, which lacked regulation for years during the Era of Disposal,<sup>38</sup> bioprospecting

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36. See Greg Brown & Charles C. Harris, Jr., *National Forest Management and the “Tragedy of the Commons:” A Multidisciplinary Perspective*, Policy Review, 5 SOC’Y & NAT’L RES. 67, 73 (1992), available at [http://www.cnrhome.uidaho.edu/documents/National%20Forest%20Management%20and%20the%20Tragedy%20of%20the%20Commons\\_A%20multidisciplinary%20perspective.p.pdf?pid=104578&doc=1](http://www.cnrhome.uidaho.edu/documents/National%20Forest%20Management%20and%20the%20Tragedy%20of%20the%20Commons_A%20multidisciplinary%20perspective.p.pdf?pid=104578&doc=1).

37. Kurt Sternlof, *Bioprospecting Could Fuel Economic Incentives For Biological Conservation*, COLUMBIA U. NEWS, Feb. 23, 2000, available at <http://www.columbia.edu/cu/pr/00/02/bioProspecting.html>.

38. The Era of Disposal was a time when the public lands were used as a substitute for capital in helping to develop and settle the country. Public lands were sold, leased, or given away to individuals, states, and corporations. This era and the mass disposal of public land ended officially when the Federal Land and Policy Management Act was passed in 1976. But, during that lengthy Era of Disposal, natural resource use followed the same general approach: statutes, like the General Mining Law of 1872, mirrored the on-the-ground customs, which codified a “first in time, first in right” approach to natural resource use, often without charge, encouraging rapid use by the masses. Public land and natural resources were inexpensive and easy to obtain and develop during the early years of this nation’s settlement. See, e.g., Ralph Maughan & Douglas Nilson, What’s Old and



regulation is needed sooner, rather than later, to encourage the preservation of limited biodiverse resources.

There is no doubt that the depletion rate of biodiversity continues to rise.<sup>39</sup> A July 2009 International Union for Conservation of Nature ("IUCN") report reveals that more than 800 animal and plant species have gone extinct in the last five-hundred years, and that 17,000 species are currently in danger of extinction.<sup>40</sup> Georgina Mace, vice-chair of the international DIVERSITAS program, reported at its four-day Open Science Conference that species extinction rates are at least 100 times greater than those in pre-human times and are expected to continue to increase.<sup>41</sup>

These statistics indicate that the UN Convention on Biological Diversity will fail to meet its 2010 goal of bolstering biodiversity.<sup>42</sup> At an April 2003 conference of Parties to the Convention, the parties agreed to set 2010 as the International Year of Biodiversity and to meet the following target: "to achieve, by 2010, a significant reduction of the current rate of biodiversity loss at the local, national and regional levels, as a contribution to poverty alleviation and to the benefit of all life on Earth."<sup>43</sup>

Failure to meet the 2010 targets will likely have a reverberating effect on future goals. Mace reported at the 2009 Open Science Conference that:

[w]e will certainly miss the target for reducing the rate of biodiversity loss by 2010 and therefore also miss the 2015 environmental targets within the UN Millennium Development to improve health and livelihoods for the world's poorest and most vulnerable people.<sup>44</sup>

Mace, who develops criteria for listing species on the IUCN Red List of Threatened Species and coordinates biodiversity inputs to the Millennium Ecosystem Assessment, says biodiversity preservation should be a top priority; "biodiversity is fundamental to humans having food, fuel, clean water, and a habitable climate. Yet, changes to

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What's New About the Wise Use Movement, Idaho State University Dept. of Political Science, April 23, 1993.

39. Deborah Zabarenko, *More than 800 wildlife species now extinct- report*, THOMSON REUTERS FOUNDATION, July 2, 2009, available at <http://www.alertnet.org/thenews/newsdesk/N01296862.htm>.

40. *Id.*

41. *Biodiversity Loss Accelerating, UN Target Will Be Missed*, ENVIRONMENT NEWS SERVICE, Oct. 13, 2009, available at <http://www.ens-newswire.com/ens/oct2009/2009-10-13-01.asp>.

42. Zabarenko, *supra* note 39.

43. *Biodiversity Loss Accelerating*, *supra* note 41.

44. *Id.*

ecosystems and losses of biodiversity have continued to accelerate.”<sup>45</sup> In particular, endangered species are the “miners’ canaries” for the health of something larger—Earth and its inextricably linked ecosystems—which we have not yet attempted to protect in a more holistic way.<sup>46</sup>

Despite these warnings, arguments come down on both sides of the bioprospecting and biodiversity issue. On one hand, the dramatic decline in biodiversity theoretically strengthens the market and the argument for bioprospectors to develop pharmaceuticals from public natural resources. This line of reasoning suggests that, with the attenuation of biodiversity, utilization of resources should take place sooner rather than later. This is particularly true in the context of climate change, which is further hastening the decline of biodiversity. Exacerbated by the loss of biodiversity, threats to human health, and increasing demand for cutting-edge medications, pharmaceutical companies are further incentivized to develop new treatments derived from bioprospected resources.<sup>47</sup> These companies and the public are dependent on natural resources and their genetic modifications for their pharmaceutical needs. After all, about eighty percent of people in developing countries depend on traditional plant-based medicines for healthcare, and seventy-five percent of the world’s most heavily utilized prescription drugs include ingredients derived from plants.<sup>48</sup> From this point of view, with natural resources so depleted and still undergoing drastic change, perhaps derivation of genetic material is necessary to fulfill our pharmaceutical needs.

Public health and environmental justice concerns are also implicated in the diminishment of biodiversity. Eric Chivian, director of the Center for Health and the Global Environment at Harvard Medical School, has warned, “[w]e are incredibly lucky to be alive right now . . . because we have been tampering with the Earth’s life support systems in ways we do not understand. Do not underestimate me when I say that we are in deep, deep trouble.”<sup>49</sup> Chivian’s statement could be read to support either side of the issue on whether bioprospecting is needed due to diminishing biodiversity or whether it should be limited, at least on public lands, to preserve biodiversity. Like most extractive commercial activities, bioprospecting, as an unchecked free-for-all, has the potential to threaten

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45. *Id.*

46. Oliver Houck, *Why do we protect endangered species, and what does that say about whether restrictions on private property to protect them constitute takings?*, 80 IOWA L. REV. 297, 301 (1995).

47. Ehsan Masood, *Biodiversity loss ‘poses grave threat to human health’*, SCIDEV.NET (Aug. 24, 2005), <http://www.scidev.net/en/news/biodiversity-loss-poses-grave-threat-to-human-hea.html>.

48. *Id.*

49. *Id.*

biodiversity. Bioprospecting per se does not threaten biodiversity, but as long as the activity lacks a comprehensive regulatory regime that limits misuse of public resources and ensures equitable benefit sharing, bioprospecting is likely to threaten biodiversity and, consequentially, public health.

On the other hand, preservation of biodiversity, as Mace commented, is a must for environmental and public health reasons. There are a multitude of reasons to preserve biodiversity as it naturally occurs.<sup>50</sup> First, biological control agents help us control invasive species without the use of poisons.<sup>51</sup> Second, biodiversity provides food sources and environmental services, such as soil aeration, fertilization, and pollination.<sup>52</sup> Third, biodiversity gives us enjoyment, aesthetics, and other intrinsic benefits like spiritual connection to the natural world.<sup>53</sup> Biodiversity also allows for self-perpetuation, in that biologically diverse ecosystems help to preserve their component species, thereby, reducing the need for future conservation efforts targeting endangered species.<sup>54</sup>

Particularly relevant to the bioprospecting industry, biodiversity also provides genes for hybridization and genetic engineering, indicating that bioprospecting itself may benefit from preservation. Natural products, including the many medicines, fertilizers, and pesticides that are derived from plants and animals, are also a benefit of biodiversity.<sup>55</sup> Additionally, the diversity of life inspires scientific inquiry, including evolutionary science, anatomy, physiology, behavior, ecology, and many other fields.<sup>56</sup> Finally, future potential for additional, currently unknown uses is a benefit of biodiversity; such new discoveries may depend on maintaining current levels of biodiversity. In the modern context of public health concerns and changing climate, new discoveries will need to occur.<sup>57</sup> Based on these factors, and following a precautionary approach to our delicately balanced planet-wide ecosystem, the cost-benefit analysis seems to fall on the side of preservation of biodiversity, particularly in the contexts of climate change, population growth, and a planet full of ecological, anthropogenic harms.

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50. *Why Would We Want to Preserve Biodiversity Anyway?*, *The Relevance of Evolution: Conservation*, UNIV. OF CAL. MUSEUM OF PALEONTOLOGY, <http://evolution.berkeley.edu/evosite/relevance/IHC1Why.shtml> (last visited Nov. 5, 2010).

51. *Id.*

52. *Id.*

53. *Id.*

54. *Id.*

55. *Id.*

56. *Id.*

57. *Id.*

The acceleration of already high levels of biodiversity loss needs to be at the forefront of policy discussions. Erring on the side of less environmental impact is the prudent approach, especially given the potentially severe environmental impacts loss of biodiversity can have on local, national, and global levels. In fact, some conservation biologists have argued that, in the face of uncertainty, scientists who base their work on public natural resources have an ethical obligation to err on the side of preservation.<sup>58</sup> Inevitably, the Congressional discussion will include these debates and others. But, preservation of biodiversity should ultimately guide the policy debate because the benefits of environmental sustainability and preservation outweigh the benefits of extraction and genetic derivation, even if useful products can sometimes be derived.

### III. U.S. PATENT LAW GIVES BIOPROSPECTORS EXCLUSIVE PROPERTY RIGHTS

Bioprospectors' opportunity for profit lies in intellectual property law. Bioprospectors seek to patent the products they derive from genetic material and biodiversity in order to own these exclusive property rights and thereby gain a market monopoly on these products. A patent is the grant of a property right to the inventor, issued by the U.S. Patent and Trademark Office, specifically giving the patent holder "the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States, or importing the invention into the United States."<sup>59</sup> With a patent, the bioprospector has exclusive commercial rights to the genetically derived product for a period of twenty years.<sup>60</sup>

Courts have interpreted genetically derived material as patentable.<sup>61</sup> Under U.S. patent law, man-altered genetic materials—i.e., "compositions of matter"—are patentable and can be owned by a single person or corporation.<sup>62</sup> While business interests have increasingly sought to use U.S. patent law to seize ownership of plants and animals

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58. Reed F. Noss, *Some Principles of Conservation Biology, As They Apply to Environmental Law*, 69 CHI.-KENT L. REV. 893, 897 (1994).

59. *Nature of Patent and Patent Rights, General Information Concerning Patents print brochure*, U.S. PATENT AND TRADEMARK OFF., <http://www.uspto.gov/web/offices/pac/doc/general/nature.htm> (last visited Nov. 5, 2010); *see also*, 35 U.S.C. § 154 (1952).

60. *See generally*, *Patent Facts*, GA. TECH LIBRARY AND INFO. CTR., [http://www.library.gatech.edu/search\\_locate/techres/patentfacts.htm](http://www.library.gatech.edu/search_locate/techres/patentfacts.htm) (last visited Nov. 5, 2010).

61. *See* *Diamond v. Chakrabarty*, 447 U.S. 303, 310 (1980).

62. *Id.*

for use in pharmaceuticals and other biomedical industries, some federal judges have pushed back, saying that such ownership of life forms is inappropriate, even if technically legal under existing patent laws.<sup>63</sup>

Eleven years ago, during the Yellowstone litigation, Judge Lamberth of the U.S. District Court of the District of Columbia noted the vast difference between commercially-motivated and purely scientific activities: "There is an undeniable reality that commercial activity is qualitatively different than scientific and educational activity of a similar nature, due to the very different forces and motivations that drive them."<sup>64</sup> Although he upheld the bioprospecting CRADA between the DOI and Diversa in Yellowstone National Park as an equitable and benefits-sharing agreement valid under the Federal Technology Transfer Act, Judge Lamberth seemed to sense the ethical complications that arise from bioprospecting, particularly in a nationally designated place of protection, compelling him to order an environmental assessment in 1999.<sup>65</sup> In that phase of the litigation, the plaintiffs were challenging the DOI's decision not to undergo environmental review under NEPA as arbitrary and capricious under the Administrative Procedure Act ("APA"). The agency claimed in defense that the authorized bioprospecting activities under the CRADA fell under a categorical exclusion from NEPA, as "day-to-day resource management and research activities."<sup>66</sup>

The court rejected that argument because the DOI did not provide any evidence of making the categorical exclusion determination before finalizing the CRADA, ultimately finding the DOI's decision was arbitrary and capricious. The court touched on the commercial nature of bioprospecting on public lands: "commercial exploitation of natural resources does not strike the Court as logically equivalent to 'day-to-day resource management and research activities.'"<sup>67</sup>

Judge Lamberth was not the first judge to voice concern about bioprospecting's implications. Nearly twenty years earlier, the U.S. Supreme Court had the tough job of deciding whether a live, genetically engineered microorganism was patentable under the U.S. Code, as codified in 1952.<sup>68</sup> The defendant patent examiner, who refused to patent the organism, expressed the various risks of genetically engineered organisms being patentable, including the potential spread of pollution

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63. *Id.*

64. *Edmonds Institute*, 93 F. Supp.2d at 13.

65. *Id.* at 20.

66. *Id.* at 18.

67. *Id.*

68. *Chakrabarty*, 447 U.S. at 309.

and disease, loss of genetic diversity, depreciation of the value of human life, and overall serious risks to the human race. Apparently in agreement with the defendant, the court acknowledged these alarming risks: “These arguments . . . remind us that, at times, human ingenuity seems unable to control fully the forces it creates—that, with Hamlet, it is sometimes better ‘to bear those ills we have than fly to others we know not of.’”<sup>69</sup> Despite these arguments, Chakrabarty, the genetic engineer-plaintiff won the case, with the court declaring that it was simply performing its duty of interpreting the law as Congress has drafted it. The court ultimately held that the microorganism was patentable under the U.S. Code.<sup>70</sup>

Nonetheless, the Supreme Court also made it quite clear that Congress may change the U.S. Code to exclude genetically engineered organisms from patent rights. Interpreting the 1952 drafted U.S. Code, the Court noted that the line for patentability is genetic modification. “[A] new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter . . . . [These are] manifestations of . . . nature, free to all men and reserved exclusively to none.”<sup>71</sup> However, non-naturally occurring organisms—i.e. natural matter that has been tinkered with—are patentable. This is still the line courts are guided by today. Under current U.S. law, genetically modified organisms obtained through bioprospecting are patentable.

Therefore, compositions of matter from public genetic resources may be owned and controlled by a single entity and monopolized for profit. Despite the public trust resource origin, the bioprospector patent holder obtains the exclusive right to profit from, and utilize the composition of, the living matter, at least for twenty years. Although patent law is an incentive system to encourage research and innovation, the patentability of bioprospected resources may hinder public benefits from such innovation. Science generally aims to generate knowledge that is made widely available, whereas the commercially-motivated bioprospecting industry has little incentive to share its scientific discoveries. In fact, patent law incentivizes confidentiality, not public disclosure. Protected public land and natural resources provide the raw material for the bioprospectors, while patent law opens the door for commercial exploitation, inevitably raising concerns about line drawing and the “Tragedy of the Commons” dilemma.

Therefore, the patentability of bioprospected compositions of matter, in the absence of a comprehensive regulatory regime, poses the risk of depletion and degradation to public land and natural resources,

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69. *Id.* at 316.

70. *Id.* at 317.

71. *Id.* at 309 (internal quotations omitted).

notwithstanding the Presidential and/or Congressional protective intent to preserve public land in the first place. In the words of Aldo Leopold, “[w]e abuse land because we regard it as a commodity belonging to us.”<sup>72</sup> This fundamental conflict of bioprospecting on public land—between protection and preservation of public land and patent law’s favoring commercial exploitation of public resources—stands as yet another motivating factor that should spur legislative dialogue on modern, comprehensive regulation of the bioprospecting industry.

#### IV. CURRENT PIECEMEAL REGULATORY REGIME OF BIOPROSPECTING

The current piecemeal regulatory regime regularly authorizes and almost never prohibits bioprospecting, with the rare exception of Papahānaumokuākea Marine National Monument. Contrived interpretations of various laws allow industry and public land agencies to squeeze bioprospecting into the “authorized” box. In fact, a plain meaning interpretation of many applicable statutes and regulations illuminates the prohibited nature of bioprospecting on public lands. These layers of law will be discussed by agencies, as regulations vary more by agency than by land designation. For instance, a national monument may be managed not only by the National Park Service but also by the Bureau of Land Management (“BLM”), the Forest Service, or another public land agency as co-manager. While parks are not co-managed, out of 100 national monuments, five are co-managed by multiple agencies.<sup>73</sup>

While there are nine federal agencies that manage public lands in some capacity,<sup>74</sup> only three public land agencies and their applicable statutes and regulations will be discussed here for the sake of brevity and because these three agencies control the most public land out of the nine agencies. Out of the total U.S. land area of 2.27 billion acres, 643.2 million acres—or about one million square miles—are public land,

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72. ALDO LEOPOLD, *A SAND COUNTY ALMANAC* x (1949).

73. William Robert Johnston, *List of U.S. National Monuments*, JOHNSTON’S ARCHIVE (July 11, 2009), <http://www.johnstonsarchive.net/other/npark6.html>.

74. *Public Lands & the Agencies that Manage Them*, PUB. LANDS INFO. CTR., <http://www.publiclands.org/agencies.php> (last visited Nov. 5, 2010). These nine agencies are as follows: Bureau of Land Management; U.S. Fish and Wildlife Service; National Park Service; Forest Service; National Oceanic & Atmospheric Administration; Department of Defense; Department of Energy; Bureau of Reclamation; and Department of Defense U.S. Army Corps of Engineers.

which is nearly one-third of the nation's entire land area.<sup>75</sup> With the BLM managing 264 million acres and the Forest Service managing almost 200 million acres, they collectively manage the most public land out of the nine agencies.<sup>76</sup> Thus, this note will cover BLM and Forest Service legal regimes affecting bioprospecting. The third agency covered will be the National Park Service, which is third in line, managing 83 million acres, including fifty-four national parks and many national monuments and other areas. The legal discussion will commence with the National Park Service because the seminal Yellowstone case serves as a guide for the other agencies, and bioprospecting opportunities are particularly ripe in national parks and monuments due to the wealth of unique resources available on these lands.

*A. National Park Service Statutes and Regulations:  
Bioprospecting Prohibited?*

This note discusses many applicable layers of law, including the following statutes and regulations: (1) National Park Service Organic Act; (2) National Park Service regulations; (3) National Parks Omnibus Management Act; and (4) American Federal Technology Transfer Act. The seminal bioprospecting on public lands case, *Edmonds Institute v. Babbitt*, will guide the explanation of the two latter statutes and their applicability to bioprospecting on National Park Service land.<sup>77</sup> These statutes and regulations apply to management of the National Park system's 83 million acres, including fifty-four national parks, national preserves, national monuments, national seashores and lakeshores, battlefields, historic trails, and buildings.<sup>78</sup> Some national monuments also have their own regulations, such as Papahānaumokuākea Marine National Monument, which allows the Park Service to prohibit or specifically regulate bioprospecting within the area.<sup>79</sup> Yet, only the co-managers of Papahānaumokuākea—Fish and Wildlife and NOAA—have chosen to prohibit bioprospecting via special conditions attached to each

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75. See *App. 1* for U.S. public land map. Mark Lubell, *Public Land Management: Public Land History*, UNIV. OF CAL. (October 21, 2008), <http://www.des.ucdavis.edu/faculty/lubell/Teaching/ESP172/Lecture1PublicLandHistory.pdf>.

76. *Id.*; see also, *Public Lands & the Agencies that Manage Them*, *supra* note 74.

77. *Edmonds Institute v. Babbitt*, 93 F. Supp. 2d 63 (D.D.C. 2000); *Edmonds Institute*, 42 F. Supp. 2d at 1.

78. *National Parks and Monuments*, PUB. LANDS INFO. CTR., <http://www.publiclands.org/agencies/NP.php?PublicLandsDOTorg=e8b54715e38e0eacd e7cfe013c8f5eab> (last visited Nov. 5, 2010).

79. See 36 C.F.R. § 7.26 (2009); 50 C.F.R. § 404.1 (2009).



specimen-collecting research permit.<sup>80</sup> Thus, site-specific regulations will not be discussed.

### *1. National Park Service Organic Act*

Codified in 1916, the Park Service's Organic Act created the agency and set out its purpose as follows:

The service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified, except such as are under the jurisdiction of the Secretary of the Army, as provided by law, by such means and measures as conform to the fundamental purpose of said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.<sup>81</sup>

Congress' original intent in establishing the Park Service and its jurisdiction over certain public lands was to protect parks by creating a new federal steward of public resources.

A plain meaning construction of the Organic Act shows the express purpose of the National Park Service: to conserve the natural resources therein so as to leave them unimpaired for future generations. The Park Service's mission is to be exercised in the public interest and for the public benefit. Thus, preservation should guide Park Service management, particularly over extraction, consumption, depletion, and exploitation of natural resources—all of which are distinct consequences from bioprospecting.

In practice, however, extraction remains a pervasive problem on Park Service lands where, for example, mining has generally been allowed. Although the 1976 Mining in the Parks Act acknowledged that mining on Park Service land conflicts with its fundamental purpose to preserve the land for public benefit, this Act allows mining operations on National Park Service lands so long as operations are conducted to prevent or minimize damage to the environment and resources. This is a subjective judgment call requiring discretion. In reality, the constraint on mining does not guarantee protection.

Similarly, commodity uses, like logging, grazing, mining, and farming are generally outlawed in the National Park System, though

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80. Papahānaumokuākea, *supra* note 2; *see app. 1*.

81. National Park Service Organic Act, 16 U.S.C. § 1 (Supp. III 2009).

exceptions exist in particular cases.<sup>82</sup> For example, livestock grazing is generally prohibited, unless it is: (1) authorized by a specific Federal statute, (2) required under a reservation of use rights, or (3) designated, when “conducted as a necessary and integral part of a recreational activity or required in order to maintain a historic scene.”<sup>83</sup> Congress has authorized continued livestock grazing use in many parks.<sup>84</sup> Logging is generally prohibited in national parks and monuments, but the Secretary may allow some timber harvesting for disease or pest control.<sup>85</sup> In Wilderness Areas, established pursuant to the Wilderness Act of 1964, commercial enterprises and road-building are generally prohibited, subject to existing private rights and temporary emergency transportation.<sup>86</sup> The Act does provide that “[n]othing in this chapter shall prevent within national forest wilderness areas any activity, including prospecting, for the purpose of gathering information about mineral or other resources, if such activity is carried on in a manner compatible with the preservation of the wilderness environment.”<sup>87</sup>

This is the inherent conflict that exists between the National Park System’s preservation purpose, as laid out in the Organic Act, and the overriding statutory allowances of some resource extraction. In addition to the service’s purpose, the Organic Act provides that National Park Service lands, though distinct in character, are united through their interrelated purposes and resources, included in a single system as cumulative expressions of one national heritage.<sup>88</sup> Thus, the National Park System is meant to embody U.S. legacy, command national dignity and recognition, and benefit and inspire all U.S. citizens.<sup>89</sup> Promotion and regulation must be consistent with this lofty purpose.<sup>90</sup>

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82. 3 GEORGE CAMERON COGGINS & ROBERT L. GLICKSMAN, PUBLIC NATURAL RESOURCES LAW § 23:4 (2d ed. 2010); *see also*, Mining in the Parks Act, 16 U.S.C. §§ 1901–1902 (2009); 36 C.F.R. § 9 (2009).

83. *National Forests and National Parks: What’s the Difference and Why Does It Matter?*, ECO-LINK (Nov. 10, 2008), <http://www.forestinfo.org/products/eco-links/165NationalForestsNationalParks.pdf>; *see also* 36 C.F.R. § 2.60 (2009).

84. COGGINS & GLICKSMAN, *supra* note 82, § 23:4.

85. *Id.*; William J. Chandler & Hannah Gillelan, *The History and Evolution of the National Marine Sanctuaries Act*, 34 ENVTL. L. REP. 10505, 10558 (2004); 3 SHELDON M. NOVICK, LAW OF ENVIRONMENTAL PROTECTION § 20.96 n.7 (2010).

86. Wilderness Act of 1964, 16 U.S.C. § 1133(c) (Supp. III 2009).

87. *Id.* § 1132(d)(2).

88. National Park Service Organic Act, 16 U.S.C. § 1(a)(1) (2009).

89. *Famous Quotes Concerning the National Parks*, NAT’L PARK SERV., <http://www.nps.gov/history/history/hisnps/NPSThinking/famousquotes.htm> (last visited Oct. 31, 2010).

90. *See id.*

The System's lofty purpose of national identity and preservation is at odds with current Park Service policies in the bioprospecting context. The National Park Service promotes research with park resources across the board, erring on the side of authorization.<sup>91</sup> Similar to the Organic Act's lofty mandate meeting tension with present Park Service policies, Director's Order 55 "Interpreting the National Park Service Organic Act" defines the system's fundamental purpose as conserving park resources and values while also providing enjoyment for the American people.<sup>92</sup> In line with the Service's dual mandate, the order interprets "enjoyment" broadly, including deriving benefits like scientific knowledge and inspiration from parks, as well as other forms of enjoyment.<sup>93</sup> Thus, current National Park Service policy interprets bioprospecting as research compatible with the Organic Act's mandates.

While a broad construction of the Organic Act may support bioprospecting, the Service's regulatory regime shows that bioprospecting conflicts with the Service's core purpose of preservation for public benefit. To take raw samples for genetic derivation, private scientific knowledge, and consumer products without adequate environmental consideration appears to be exactly what the Organic Act aims to prevent. This conflict is bolstered by National Park Service regulations that prohibit commercial activity generally. Although commercialism has existed in the national parks for years, the history of the first national parks<sup>94</sup> and the Organic Act laid a foundation based on preservation.<sup>95</sup> The legislative history of the Organic Act and the goal to avoid a Niagara Falls commercial exploitation situation,<sup>96</sup> for instance, provides evidence that national parks were designed initially to promote

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91. E-mail from John Dennis, Deputy Chief Scientist, National Park Service, to author (Sept. 8, 2009) (on file with author).

92. *Benefit-Sharing in the National Parks: The NPS Mission and Bioprospecting*, NAT'L PARK SERV., <http://www.nature.nps.gov/benefitssharing/mission.cfm> (last visited October 31, 2010) [hereinafter *Benefit-Sharing in the National Parks*].

93. *Id.*

94. Although the national parks were set aside "to preserve them for the edification and recreation of the people," some of the parks were soon commercially exploited, which jeopardized their very preservation. See, U.S. DEP'T OF INTERIOR, A BRIEF HISTORY OF THE NATIONAL PARK SERVICE (1940), available at [http://www.nps.gov/history/history/online\\_books/kieley/kieley4.htm](http://www.nps.gov/history/history/online_books/kieley/kieley4.htm) (last visited Dec. 20, 2010).

95. Harmony A. Mappes, *National Parks: For Use and "Enjoyment" or "Preservation?" and the Role of the National Park Service Management Policies in that Determination*, 92 IOWA L. REV. 601, 611 (2007).

96. "The natural wonder of the early frontier Niagara Falls was so commercialized and overdeveloped that the great French traveler Alexis de Tocqueville urged his readers to come see it soon before it's too late." *All Things Considered* (National Public Radio Broadcast Sept. 25, 2009).

preservation, and not commercialism and tourism. Thus, the original, fundamental purpose of national parks was preservation, not commercialism, and does not support bioprospecting on park lands—at least not without prudent regulation and return of benefits to the parks.

## *2. National Park Service Regulations and Agency Policies*

There is no bioprospecting-specific regulation in U.S. public land law. Rather, four different provisions, in conjunction with agency policies, authorize bioprospecting on National Park Service lands, with some conditions.

For all activities, Park Service regulations flatly forbid the sale or commercial use of natural products.<sup>97</sup> Research specimens are not an exception to that regulation. In the Yellowstone case, Park Service officials argued that only the end products developed by the company would be commercialized.<sup>98</sup> Today, the Park Service takes the stance that bioprospecting does not encompass selling biological material.<sup>99</sup> In fact, its website states that “[b]iological material is never sold to researchers, nor may they acquire ownership rights in any other way.”<sup>100</sup>

This viewpoint is fatally flawed. First, bioprospectors may acquire ownership rights. As previously discussed, patent law provides bioprospectors with exclusive intellectual property rights to use, sell, license, import, market, and produce the “composition of matter” derived from the bioprospected natural resources. Second, although bioprospectors do not intend to sell the specimens themselves, they do intend to sell the products derived from the specimens; thus, the activity’s purpose is commercial in nature. Because the purpose is to sell derivations of the biological material, the line between the original biological sample and its lab-produced cousin is fine, at best. Even if an agreement provides consideration to the Park, as an equitable benefit-sharing agreement would under the UN Convention, the park is still clearly selling samples to bioprospectors.<sup>101</sup> Thus, contrary to the Service’s interpretation, commercial prohibition should cover bioprospecting.

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97. 36 C.F.R. § 2.1(c)(3)(v) (2009). Holly Doremus, *Nature, Knowledge and Profit: The Yellowstone Bioprospecting Controversy and the Core Purposes of America’s National Parks*, 26 *ECOLOGY L.Q.* 401, 433–34 (1999).

98. Doremus, *supra* note 97, at 433–34.

99. *Benefit Sharing in the National Parks*, *supra* note 92.

100. *Id.*

101. *Id.*

Because there is no bioprospecting-specific regulation, other regulations are relied upon to determine its legality. Regulations prohibit collection of resources without collection permits, except berry-picking for personal use, which the park may issue for research purposes like bioprospecting.<sup>102</sup> Park superintendents may issue permits only if no adverse impacts will affect public health and safety, environmental or scenic values, natural or cultural resources, scientific research, implementation of management responsibilities, property allocation and use of facilities, or conflict among visitor user activities.<sup>103</sup>

More specific to bioprospecting than general collection, the regulatory prohibition on taking research specimens would seem to cover bioprospecting.<sup>104</sup> Bioprospecting fits under the research rubric, and in addition to collection and prospecting or mining, the taking of plants, fish, wildlife, rocks, or minerals is prohibited.<sup>105</sup> However, the preceding provision qualifies this prohibition by allowing specimen collection permits when certain conditions are met:

A specimen collection permit may be issued only to an official representative of a reputable scientific or educational institution or a State or Federal agency for the purpose of research, baseline inventories, monitoring, impact analysis, group study, or museum display when the superintendent determines that the collection is necessary to the stated scientific or resource management goals of the institution or agency and that all applicable Federal and State permits have been acquired, and that the intended use of the specimens and their final disposal is in accordance with applicable law and Federal administrative policies.<sup>106</sup>

A permit shall not be issued if removal of the specimen would result in damage to other natural or cultural resources, adversely affect environmental or scenic values, or if the specimen is readily available outside of the park area.<sup>107</sup>

This list of conditions is ostensibly stringent and would likely preclude specimen collections for many bioprospecting activities. The superintendent has discretion to include special terms and conditions on each permit, like the Papahānaumokuākea co-managers who have chosen to make individualized determinations on each specimen collection

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102. 36 C.F.R. § 2.1 (2009).

103. 36 C.F.R. § 1.6 (2009).

104. 36 C.F.R. § 2.5(a)–(b) (2009).

105. *Id.*

106. *Id.* § 2.5(b).

107. *Id.*

permit.<sup>108</sup> But, total discretion may also lead to diminished protection. The first provision, the general prohibition, is undercut by the preceding authorization provision, which vests wide discretion in the National Park Service and opens the door to bioprospecting on public land.

The arguments to permit or deny bioprospecting will likely be quite fact-specific. The current regulatory regime affecting bioprospecting is ambiguous. However, the Park Service itself has ostensibly recognized the regulatory ambiguity and the Organic Act's conflicting call for preservation and public benefit. The Service's policies interpret the regulatory regime as generally authorizing bioprospecting. As aforementioned, the Service's website shows general support for bioprospecting on National Park Service lands.<sup>109</sup>

Correspondence with the Service indicates that "[s]cientific research may take place in all units of the National Park Service."<sup>110</sup> Yet as discussed above, bioprospecting is commercial in nature, and bioprospectors may patent their derived composition of matter to gain exclusive property rights. Thus, specimen collection provisions notwithstanding, the prohibition on commercial activities should find bioprospecting incompatible with National Park Service regulations. However, there are other statutes in play, obfuscating the clarity found in the National Park Service regulations and the Organic Act, constructing a piecemeal, contradictory regime as discussed below.

### 3. 1998 National Parks Omnibus Management Act

The National Parks Omnibus Management Act authorizes and directs the Secretary of the Interior to assure that management of the units of the park system is "enhanced by the availability and utilization of a broad program of the highest quality science and information."<sup>111</sup> This statute explicitly authorized the Park Service to consider a request for the use of any unit of the system for purposes of scientific study.<sup>112</sup> Research, however, should only be authorized where consistent with the Organic Act, which has its own flaws, as previously discussed.<sup>113</sup> Furthermore, the Secretary is only authorized to approve those requests

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108. *Benefit-Sharing in the National Parks: What are Some of the Rules for Doing Research in National Parks?*, NAT'L PARK SERV., <http://www.nature.nps.gov/benefitsharing/research.cfm> (last visited Nov. 8, 2010) [hereinafter *Benefit-Sharing*].

109. *Id.*

110. E-mail from John Dennis, *supra* note 91.

111. 16 U.S.C. § 5932 (1998).

112. *Benefit-Sharing*, *supra* note 108.

113. Doremus, *supra* note 97, at 428–29.

that are consistent with laws and policies that pose no threat to park resources or public enjoyment derived from those resources.

Despite these conditions, the explicit Congressional endorsement of and mandate for science in the national parks does not radically change the terms under which scientific research may be permitted.<sup>114</sup> Without setting out guidelines and mandates for how to determine what type of bioprospecting may take place on national park land, this Act does little more than call for science in the national parks. In the end, it only exacerbates the ambiguity of the bioprospecting regulatory regime, even though proponents of bioprospecting may find a requisite intelligible principle from Congress to agencies to guide their delegated authority—a self-fulfilling prophecy.

Bioprospecting agreements, like Diversa's in the Yellowstone case, rely on this statute to allow bioprospecting, in that scientific research permits fall under this regime. However, consistency with all applicable laws includes the Organic Act and regulatory regime—both of which demand preservation over extraction and forbid commercial activities. This statute only amplifies the confusion, by conflating mandates and values and creating an incomplete regime explicitly encouraging, but only weakly regulating, bioprospecting on public lands.

#### *4. American Federal Technology Transfer Act*

Originally codified in 1980, the Stevenson-Wydler Technology Innovation Act established a continuing federal duty “to ensure the full use of the Nation’s Federal investment in research and development” through technology transfer to state and local governments, as well as the private sector.<sup>115</sup> The Act also made technology transfer a mission of all federal agencies engaged in research and development. Its purpose is “to promote the United States technological innovation for the achievement of national economic, environmental, and social goals, and for other purposes.”<sup>116</sup> To achieve that objective, the Act, as amended in 1986 by the Federal Technology Transfer Act (“FTTA”) authorized cooperative research and development agreements (“CRADAs”) between federal “laboratories” and public or private entities.<sup>117</sup> “Laboratory” is defined as “a facility or group of facilities owned, leased, or otherwise used by a Federal agency, a substantial purpose of which is the performance of research, development, or engineering by employees of the Federal

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114. *Id.*

115. *Id.* at 414.

116. Stevenson-Wydler Technology Innovation Act of 1980, 15 U.S.C. § 3701 (1980).

117. *Id.*

Government.”<sup>118</sup> The Act authorizes federal laboratories to enter into research agreements with nonfederal entities, such as bioprospectors.<sup>119</sup>

As in the Yellowstone case, park officials frame bioprospecting agreements as CRADAs authorized by the FTTA. This enables the park to reap financial benefits since the FTTA allows federal laboratories to keep payments received pursuant to CRADAs. While this may benefit underfunded parks, this aspect of the CRADA is undermined in practice—national parks are legally required to remit all revenues they collect to the U.S. Treasury, and only a small portion of those revenues is returned to the park system or the individual park without further legislative action.<sup>120</sup> An equitable benefit-sharing agreement should return the revenues directly back to the individual park or monument, as the individual locale paid the consideration of access and specimen collections. The impacted locale should receive the funds for restoration and other purposes, directly benefiting from its deal. The consideration issue is just one reason why the FTTA does not, in fact, cover and authorize bioprospecting on public land. Thus, the CRADA is not as beneficial for the National Park System as officials may believe.

Secondly, America’s protected national treasures and identity, embodied in irreplaceable, invaluable public land and natural resources, do not qualify as a “federal laboratory,” precluding FTTA authorization of bioprospecting agreements.<sup>121</sup> The above definition of “federal laboratory” is a stretch for national places of protection and preservation, specifically here, national parks and monuments. In the Yellowstone case, the Court found Yellowstone National Park to be a “federal laboratory” under FTTA because it may be considered a “facility” having a “substantial purpose . . . of research” and because Congress intended a broad interpretation.<sup>122</sup>

Deferring to NPS interpretations, the Court rejected claims that bioprospecting was “consumptive” or a “commercial use of natural products.”<sup>123</sup> However, there are some holes in the Court’s reasoning. Protected natural resources and land—meant to be preserved—hardly fit the idea of a “facility.” Generally speaking, a facility implies a man-made structure with equipment. The Merriam Webster Dictionary defines facility as “something (as a hospital) that is built, installed, or

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118. *Id.*

119. GEORGE CAMERON COGGINS & ROBERT L. GLICKSMAN, PUBLIC NATURAL RESOURCES LAW § 23:4 (2d ed. 2010).

120. Doremus, *supra* note 97, at 415.

121. *Id.*

122. 3 GEORGE CAMERON COGGINS & ROBERT L. GLICKSMAN, PUBLIC NATURAL RESOURCES LAW § 23:4 (2d ed. 2010).

123. *Id.*



established to serve a particular purpose.”<sup>124</sup> Although national parks and monuments are established to serve the purpose of preservation for public benefit, these areas—buildings aside, of course—constitute land and natural resources as they naturally occur, prior to and without human involvement and construction. Differing from the common sense understanding of “facility,” preserved public land is unique: unlike most facilities, it is deserving of protection, delicately ecologically balanced and interlinked, and an essential, eons-old component of our existence.

Furthermore, because national parks and monuments do not fit the definition of “federal laboratories,” application of the FTTA to bioprospecting agreements on national park system lands is not permitted. This illustrates the gaping hole in the legal structure for park protection: no statute even remotely governs this situation—hence the necessity to fit national parks and monuments into the narrow definition of federal laboratory.<sup>125</sup> Scholars have commented that monuments and parks are not laboratories, even though a weak argument may be made to the contrary, and that the court’s decision that Yellowstone fit as a federal laboratory was questionable.<sup>126</sup> Thus, the FTTA is not applicable to bioprospecting on national parks—or other protected public land. Congress addressing the issue head on would cease the need to squeeze protected public land into the definition of federal laboratory.

### *B. BLM Statutes and Regulations: Gap Ostensibly Allowing Bioprospecting*

The Federal Land Policy and Management Act (“FLPMA”) of 1976 ended the long-standing Era of Disposal—federal policies to dispose of public land, often for nominal fees—by expressly declaring as new policy that public domain lands would be retained in Federal ownership unless disposal of a particular parcel served the national interest.<sup>127</sup> Called the BLM’s Organic Act, FLPMA also consolidated and articulated BLM’s management responsibilities as a multiple-use agency—meaning that management would be accomplished on the basis of multiple use and sustained yield unless otherwise specified by law.<sup>128</sup>

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124. *Facility*, MERRIAM-WEBSTER, <http://www.merriam-webster.com/dictionary/facility> (last visited November 8, 2010).

125. 3 GEORGE CAMERON COGGINS & ROBERT L. GLICKSMAN, PUBLIC NATURAL RESOURCES LAW § 23:4 (2d ed. 2010).

126. *Id.*

127. *Id.*

128. *The Federal Land Policy and Management Act (FLPMA) of 1976: How the Stage Was Set for BLM’s “Organic Act,”* BUREAU OF LAND MGMT., <http://www.blm.gov/flpma/organic.htm> (last visited Nov. 8, 2010).

As an agency guided by multiple use, sustained yield principles, the BLM must manage the public lands and resources for the greatest good for the greatest number, as Gifford Pinchot, the first head of the Forest Service, expounded.<sup>129</sup> Multiple use involves designating, or zoning, the main land uses (outdoor recreation, range, timber, watershed, and wildlife and fish purposes), while balancing them to allow multiple uses of the land. The BLM still allows much commercial extractive use of land under multiple use principles. For instance, of the 69 million acres of forest or woodland under BLM management, 11 million acres are commercial forestlands.<sup>130</sup> The BLM also permits mining, grazing, and other extractive commercial uses of its land.

There are some limits to the multiple use principle though. For instance, the BLM may not authorize any specimen collecting in Areas of Critical Environmental Concern, Research Natural Areas, and presumably Wilderness Study Areas, for which the BLM must retain their wilderness quality under “interim” policy and guidelines from 1969.<sup>131</sup> Summarily, the BLM manages 148 Research Natural Areas for a non-extractive scientific purpose, unlike bioprospecting.<sup>132</sup> Research Natural Areas are used for non-manipulative research and baseline data gathering on relatively unaltered community types. Natural processes are allowed to dominate there. Such undisturbed areas make for prime harvesting for bioprospectors because of rich biodiversity. But, the richness of these areas also triggers the need to regulate bioprospecting to continue to allow natural processes to dominate without human intervention. As previously mentioned, no collection may take place in these areas.<sup>133</sup> Thus, bioprospecting is de facto prohibited in BLM Research Natural Areas.

Regarding Areas of Environmental Concern and its prohibition on collection, these areas are established because special management attention is needed to protect and prevent irreparable damage to important historic, cultural, and scenic values; fish and wildlife resources; other natural systems or processes; or to protect human life

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129. Mark W. Brunson & James J. Kennedy, *Redefining “Multiple Use”: Agency Responses to Changing Social Values*, in A NEW CENTURY FOR NATURAL RESOURCES MANAGEMENT 143, 146 (Sarah F. Bates & Richard L. Knight eds., 1995).

130. *Forests and Woodlands Management*, BUREAU OF LAND MGMT., [http://www.blm.gov/wo/st/en/prog/more/forests\\_and\\_woodland.html](http://www.blm.gov/wo/st/en/prog/more/forests_and_woodland.html) (last visited Nov. 8, 2010).

131. *Wilderness Study Area*, BUREAU OF LAND MGMT., <http://www.blm.gov/ca/st/en/prog/wilderness/wsa.html> (last visited Nov. 8, 2010).

132. *BLM Guidelines for ACEC’s and RNA’s*, BUREAU OF LAND MGMT., <http://www.blna.com/blm/Overview%20of%20BLM%20ACEC%20and%20RNA%20guidelines.pdf> (last visited Nov. 8, 2010).

133. *Id.*

and safety from natural hazards.<sup>134</sup> Rationally, the special, vulnerable status of these areas explains why no specimen collection—and, as a result, bioprospecting—is allowed there. To some extent, all public federal land, preserved in its natural state where human intervention is intended to be minimized, is a vulnerable resource.

These areas mentioned constitute the only regulation or limitation of bioprospecting on BLM land. The bottom line for bioprospecting on BLM land is embodied in the multiple use and sustained yield mandate: bioprospecting is generally in line with the BLM's allowance of extractive, private commercial use of BLM land. However, as with the National Park Service, the legal regime does not tackle the bioprospecting issue head on. In fact, there is a regulatory gap regarding bioprospecting on BLM land, and although past policies may be read to encompass bioprospecting and to generally allow it, specific regulations and policies need to be set in place, especially when considering the rise in bioprospecting market opportunities and the decline in biodiversity and natural processes.

### *C. Forest Service Statutes and Regulations: Gap Ostensibly Allowing Bioprospecting*

The Forest Service Organic Administration Act of 1897 governs administration of national forest lands.<sup>135</sup> Currently, two other laws—the Multiple-Use Sustained-Yield Act of 1960 and the National Forest Management Act of 1976 (“NFMA”)—define the general allowance of bioprospecting on Forest Service land.

Foremost, the Multiple-Use Sustained Yield Act of 1960 affects management of Forest Service lands as the principle does on BLM lands. Multiple use principles indicate that bioprospecting, like grazing, mining, and logging, is de facto authorized under the applicable statutes.

Secondly, NFMA was passed in 1976 in response to public outcry over Forest Service timber harvesting practices. NFMA established a comprehensive, interdisciplinary land management planning process for each forest, opening that process to public involvement.<sup>136</sup> NFMA endorses multiple use management but also imposes significant environmental constraints on forest management practices and obligates forest planners to coordinate with adjacent federal, state, and local land

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134. *Id.*

135. 16 U.S.C. §§ 473–82, 551 (1897).

136. Robert B. Keiter, *Taking Account of the Ecosystem on the Public Domain: Law and Ecology in the Greater Yellowstone Region*, in ENVIRONMENTAL POLICY AND BIODIVERSITY 111, 126 (R. Edward Grumbine ed., 1994).

managers.<sup>137</sup> Presumably, if a Forest Plan authorizes activity with similar impacts and commercial purposes, meaning that bioprospecting would be consistent with the particular Forest Plan at hand, then bioprospecting is generally authorized as one of many uses.

However, similar to the BLM regime, there are some limitations to the NFMA regime. For one, specimen collection in Primitive, Wilderness, Research Natural, Botanical, or Scenic Areas or Forest Service Campgrounds or Picnic Areas is prohibited.<sup>138</sup> In fact, a Forest Service-BLM Interagency Sensitive Species Program governs the BLM and Forest Service areas where no collection may take place. But, this program also spells out a pro-bioprospecting policy: “ ‘Bio-prospecting’ permits on Forest Service lands are free and are for small collection amounts for research/academia.”<sup>139</sup>

Therefore, aside from some narrow limitations, bioprospecting seems to be permitted for free, theoretically only where small-scale and for research or academic purposes, precluding any consideration for the hosting National Forest. Bioprospectors can claim to be collecting for “research,” without disclosing that this “research” is ultimately commercially motivated. Furthermore, where collections are prohibited in the aforementioned areas, bioprospectors argue not to fit those limitations and that the legality of commercially motivated, private bioprospecting remains an open question. Yet again, the legal framework leaves a regulatory gap. Congressional action to regulate bioprospecting on public land would clarify which land management principles guide the permitting process and enable optimal National Forest land management.

## V. CONCLUSION: PUBLIC TRUST DOCTRINE AND POLICY PROPOSAL

Current public land law does not explicitly authorize or prohibit bioprospecting on public land. In many regards, bioprospecting seems incompatible with public land law, like the protective purpose of the National Park Service Organic Act and the requisite squeezing to fit national monuments under “federal laboratories” within the FTTA. Yet, on some types of public land, like BLM and Forest Service land, where principles of multiple use reign, ostensibly, bioprospecting is generally

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137. *Id.*

138. *Interagency Special Status/Sensitive Species Program*, FOREST SERV. & BLM INTERAGENCY IN THE PACIFIC NORTHWEST, <http://www.fs.fed.us/r6/sfpnw/issssp/inventories/permits.shtml> (last visited Nov. 10, 2010).

139. *Id.*

allowed. But, to muddy the waters even more, the Forest Service permits research-oriented, small-scale bioprospecting activities for free. The presumption follows that the Forest Service would not permit gratis commercial, mid- to large-scale bioprospecting activities.

Furthermore, there is no specific law that directly addresses or clarifies some of the myriad issues of private, commercial bioprospecting. Some of these uncertainties include, but are not limited to, the following: which bioprospecting activities are allowed and where; what principles guide decisions to permit bioprospecting; how much specimen collection becomes ineligible; what is overly intrusive harvesting; and what consideration should be received, and by whom—the host national park or BLM allotment itself, or a general treasury fund, or the supervisory agency.

There are many compromises that may inevitably be made, but a hard line should be drawn for the most protected, vulnerable, and pristine areas, with bioprospecting strictly prohibited in national monuments, wilderness areas, areas of environmental concern, and similar areas.<sup>140</sup> A clear, direct Congressional and/or administrative statutory or regulatory regime, taking this the burgeoning issue head-on, is needed to clarify the rules of bioprospecting on public lands before any irreversible, detrimental impacts to public land and resources, some of which are national treasures and legacy, are incurred.

At the core of this needed policy discussion and action, the fact that public trust resources are at hand deserves emphasis. Public land and natural resources are held in trust for the benefit of present and future generations, managed by federal agencies.<sup>141</sup> As the public's fiduciary, federal public land agencies are charged with the duty to manage these lands and resources in order to maximize the benefits to the public. Thus, federal policies regulating bioprospecting on public lands should be designed with these agencies' duty to present and future U.S. citizens in mind.<sup>142</sup>

Free exploration of public trust resources is akin to the anachronistic free-for-all Era of Disposal laws of the then-settling nation, like the General Mining Law of 1872, still on the books and in force for hardrock

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140. Adair, *supra* note 3, at 150.

141. Louis Blumberg, *Preserving the public trust: public lands management must reflect both local and national priorities*, 14 F. FOR APPLIED RES. & PUB. POL'Y (1999), available at <http://www.questia.com/googleScholar.qst;jsessionid=KnTLMT2TRhhvwhK12nqnpP9nLjwyvhYJJy86jCbDLd9FFcwVZPtD!-1518860985!1058699480?docId=5001900373> (last visited Nov. 8, 2010).

142. Sandra Bourgasser-Ketterling, *Bioprospecting on Our Public Lands: Should Private Companies Compensate the Government for Their Use of Public Land Resources?*, 8 J.L. & POL'Y 481, 511–14 (2000).

minerals. But, FLPMA ended that era in 1976 and simply put—it's not the Wild West anymore. Any statutorily authorized agreements between public land managers and biotechnology companies must reflect equitable benefit-sharing agreements, returning to the likely underfunded public land unit the funds needed to fulfill its statutory purpose.<sup>143</sup> In addition to revenue returning to the public and its resources via fair and competitive royalty rates, modern regulation of bioprospecting will require limitations on the allowed amounts of specimen collection. For example, land agencies and bioprospectors need clear guidance on permitted methods and procedures for specimen collection, authorized public land units themselves, and then guidance on which particularized sites are eligible within a unit. Lines will have to be drawn to modernize bioprospecting, an emerging yet philosophically antiquated extractive use of public land.

Finally, by fleshing out the statutory and regulatory regimes unambiguously and, thus, precluding the need to interpret general, not specifically pertinent law through a modern bioprospecting lens, federal managers, biotechnology companies, and even the public will all benefit from the resulting certainty. Clear statutory and regulatory regimes would also enable avoidance, or at least concrete minimization, of detrimental environmental impacts for the public.

Mere delegation of authority for land managers to include special conditions is not enough. Bioprospecting-specific public land policy should explicitly charge public land managers with the duty to, in some form, deny permit applications where the proposed activity would result in negative environmental or cultural impacts. Specific guidelines, many of which were discussed above, will prevent authorization of bioprospecting that harms public resources. The co-managers of Papahānaumokuākea Marine National Monument took the initiative to set the rules and prohibit bioprospecting there, but other managers may not follow their lead.

In 1872, when the first national park was created, the tenets of its management were preservation for the benefit and enjoyment of the people, regulations aimed at preserving resources in their natural state and returning revenue derived from the park to the park.<sup>144</sup> Nearly a century and a half later, these tenets should still be guiding management and use of protected public lands. Much has changed since then, but

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143. Carla Mattix, *The Debate over Bioprospecting on the Public Lands*, NAT. RESOURCES & ENV'T, SPRING 1999, at 528, 531.

144. AUBREY L. HAINES, YELLOWSTONE NATIONAL PARK: ITS EXPLORATION AND ESTABLISHMENT Part III (1974), available at [http://www.nps.gov/history/history/online\\_books/haines1/ice3c.htm](http://www.nps.gov/history/history/online_books/haines1/ice3c.htm) (last visited Nov. 10, 2010).

protection of public land is one principle and policy that should not. In a society where bioprospecting enterprises are chomping at the bit to utilize public resources for profit, Congress needs to fill this legislative gap and regulate bioprospecting on protected public land—or, at the very least, follow the existing regulatory restrictions and not allow it at all in national parks, national monuments, wilderness areas, and other sensitive or highly protected areas.