

SUSTAINABLE DEVELOPMENT, NATURAL RESOURCE EXTRACTION, AND THE ARCTIC: THE ROAD AHEAD

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ABSTRACT

Sustainable development has emerged as an integral nexus, linking together critically important global issues including environmental stewardship and economic growth. Understanding sustainable development demands a close analysis of evolving definitions, conceptual applications, and areas of convergence and divergence within international, regional, and domestic institutions. The import and impact of hard law and soft law must additionally be explored to understand the application of sustainable development to the Arctic. This Article suggests a three-tier framework to assist the multiplicity of stakeholders with diverse equities to navigate the socio-economic and legal hurdles and potential associated with Arctic development. First, a trend has emerged where soft law is effectively "hardening." Second, the guiding role of domestic law must not be underestimated. The final tier proposes that multidisciplinary Arctic approaches are integral and yield efficiencies. Taken together, this framework provides guidance for novices and experts alike when considering Arctic sustainable development.

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INTRODUCTION

With climate change affecting and shaping a myriad of human, economic, and geopolitical issues, the import of sustainable development is growing.¹ Sustainable development plays a crucial role in the Arctic, where the evolving climate presents commercial challenges and opportunities.² This Article interprets Arctic sustainable development through domestic and international legal developments, identifies issues important to key Arctic constituencies, and proposes an interpretive framework.

Part I discusses the evolution of sustainable development. The progression of this concept will be reviewed from international and U.S. domestic law perspectives while evaluating the increasing role of energy in sustainable development policy formulation. Part II discusses how sustainable development “fits” within the Arctic legal context, particularly analyzing hard and soft, regional, and U.S. domestic legal drivers. Included is an interpretation of sustainable development initiatives through the interdisciplinary Arctic forum: the Arctic Council. Part III considers certain lenses through which Arctic sustainable development may be viewed (if not measured), including key stakeholder engagement. Increased attention to Arctic sustainable development will, among other things, foster widespread interdisciplinary attention to Arctic studies, assist with the assessment of existing and potential Arctic state strategies, engage parties involved in natural resource development projects, and recognize stakeholder aspirations. Accordingly, this Article notes that public officials, academics, and citizens of the North play an essential role in analyzing the range and effectiveness of Arctic state-sanctioned initiatives and projects.

1. Scientific consensus asserts that a global temperature increase of less than two degrees Celsius by 2050 will maintain a fifty percent chance of forestalling massive climate change impacts. Stuart Bruce, *International Law and Renewable Energy: Facilitating Sustainable Energy For All?*, 14 MELBOURNE J. INT’L LAW 18, 19–20 (2013) (citing KEVIN WATKINS ET AL., HUMAN DEVELOPMENT REPORT 2007/2008 FIGHTING CLIMATE CHANGE: HUMAN SOLIDARITY IN A DIVIDED WORLD 7, 111 (2007)).

2. See generally Edward T. Canuel, *The Four Arctic Law Pillars: A Legal Framework*, 46 GEO. J. OF INT’L L. 735 (2015) [hereinafter Canuel, *The Four Arctic Pillars*] (noting that the growing discipline of Arctic law has been defined as the intersection of hard, soft, domestic, and transboundary private law).

I. UNTANGLING SUSTAINABLE DEVELOPMENT

A. International Perspectives, Definitions, and the Role of Natural Resource Extraction

The term “sustainable development” has been broadly interpreted to incorporate existing and future economic, human development, and social issues and needs. The almost instinctive nature of sustainable development stresses the present and future management and availability of natural resources.³ A perceived lack of universal agreement on the sustainable development’s parameters has precipitated criticism.⁴ Additionally, authors have contended that the broad definition of sustainable development proves difficult to manage.⁵

Sustainable development has increasingly entered into the context of institutions and legal doctrine.⁶ The term was first introduced on the

3. See Irma S. Russell, *The Sustainability Principle*, 4 ENV’T L. & ENERGY L. & POL’Y J. 165, 167 (2009) (“[Sustainable development] goes beyond the context of development, presenting a general principle for action in a world of limited resources. It is the Intergenerational Golden Rule: use the resources but do not use them up.”).

4. See Bruce, *supra* note 1, at 30–31 (citing ALAN E. BOYLE & DAVID FREESTONE, *INTERNATIONAL LAW AND SUSTAINABLE DEVELOPMENT: PAST ACHIEVEMENTS AND FUTURE CHALLENGES* 1, 3 (1999) (“Due to a lack of international consensus, debate continues over the content, legal status, threshold, process and role of sustainable development.”)).

5. See Michael Jacobs, *Sustainable Development as a Contested Concept*, in *FAIRNESS AND FUTURITY: ESSAYS ON ENVIRONMENTAL SUSTAINABILITY AND SOCIAL JUSTICE* 23, 30 (Andrew Dobson ed., 1999) (“It has been suggested that ‘sustainable development’ needs a clearer definition in order to be operational and in order to provide real political leverage.”); Craig R. Kundis & Melinda H. Benson, *Replacing Sustainability*, 46 AKRON L. REV. 841, 861 (2013) (emphasis added) (“At a purely verbal level, sustainability is by definition the ability to sustain *something*: the verb needs an object, and the goal of sustainability needs a particular focus or foci—an ecosystem, . . . extant biological diversity, economic growth, development, human health—but *something*.”).

6. As one proponent of sustainable development observed,

Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon 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.

global stage during the 1970s. In 1972, the U.N. convened the Stockholm Conference on the Human Environment to address the evolving environment.⁷ The Conference witnessed a divide between industrial countries, concerned with global environmental degradation as an imminent threat to humankind, and developing countries, focused on addressing poverty.⁸

International sustainable development⁹ increasingly matured within the late 1980s and further captured both obligatory “hard” and non-mandatory, norm-fostering “soft” law.¹⁰ The landmark Brundtland Commission’s 1987 *Our Common Future* defined sustainable development as meeting “the needs and aspirations of the present without compromising the ability to meet those of the future.”¹¹ The Commission championed economic growth accomplished through

Marie-Claire C. Segger, *Sustainable Development in the Courts: The Role of International Forums in the Advancement of Sustainable Development*, 10 SUSTAINABLE DEV. L. & POL’Y 4, 14 (2009) (referencing Gabcikovo-Nagyamaros Project (Hung. v. Slov.) 1997 I.C.J. 7, 70, 75 (Sept. 25)).

7. This conference resulted in the Stockholm Declaration on the Human Environment. Conference on the Human Environment, *Stockholm Declaration* at 11, U.N. Doc. A/CONF.48/14/Rev.1 (June 16, 1972).

8. Lakshman Guruswamy, *Energy Justice and Sustainable Development*, 21 COLO. J. INT’L ENVTL L. & POL’Y 231, 248 (2010). Guruswamy proposes that dissension between the developing and developed countries at Stockholm emerged; developed countries were barring economic growth of developing countries and asking them to pay for “the clean up, restoration, and conservation of the earth” caused by the developed countries’ resource exploitation. *Id.* Moreover, many developing countries feared that new environmental standards adopted by developed countries would effectively bar the entry of developing country goods into developed country markets. *Id.*

9. See Jude L. Fernando, *The Power of Unsustainable Development: What Is to Be Done?*, 590 ANNALS AM. ACAD. POL. & SOC. SCI. 6, 7 (2003) (“[S]ustainable development has become broader and more integrative. . . [i]t is concerned not only with environmental protection but also extends to social objectives such as equity, human rights, and social justice.”). Fernando also asserts that “sustainable development can be said to be meeting the necessity of ensuring a better quality of life for all, now, and into the future, in a just and equitable manner, while living within the limits of supporting ecosystems.” *Id.*

10. Conference on the Human Environment in Stockholm, *Nairobi Declaration on the State of the Worldwide Environment*, UNEP/GC.10/INF.S (May 19, 1982); Conference on Environment and Development, *Rio Declaration on Environment and Development*, A/CONF.151/26 (Vol. 1), Principle 22 (Aug. 12, 1992) [hereinafter *Rio Declaration*].

11. World Comm’n on Env’t & Dev., *Our Common Future*, ¶ 49, U.N. Doc. A/42/427 (1987) [hereinafter *Our Common Future*] <http://www.un-documents.net/our-common-future.pdf>. But see Matthew F. Jaks, *Putting the “Sustainable” Back in Sustainable Development: Recognizing and Enforcing Indigenous Property Rights as a Pathway to Global Environmental Sustainability*, 21 J. ENVTL. L. & LITIG. 157 (2006) (purporting the Brundtland Commission definition of sustainable development “is notorious for its vagueness, and many have tried to improve it or infuse it with specific operational standards”).

“policies that sustain and expand the environmental resource base.”¹² The Commission also recognized an inextricable link between economic development and environmental issues, cautioning that certain forms of development may “erode the environmental resources upon which they must be based, and environmental degradation can undermine economic development.”¹³ Following the Brundtland Commission’s Report, the 1992 U.N. Conference on Environment and Development in Rio de Janeiro led nearly 180 countries to adopt the *Declaration on Environment and Development* (“The Rio Declaration”) that set out sustainable development principles.¹⁴

The transboundary quality of international environmental law has also evolved. For example, Principle 4 of the Rio Declaration states that “[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.”¹⁵ In addition, Rio Declaration Principle 12 proposes that “unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided.”¹⁶ The Rio Declaration Principles gradually became recognized and accepted within international arbitration. For example, a tribunal under the auspices of the Permanent Court of Arbitration contending with a transboundary environmental controversy between Belgium and the Netherlands held that:

Principle 4 of the Rio Declaration on Environment and Development . . . provides that environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it. Importantly, these emerging principles now integrate environmental protection into the development process. Environmental law and the law

12. *Our Common Future*, *supra* note 11, ¶ 3.

13. *Id.* ¶ 8.

14. See Ved P. Nanda, *Sustainable Development, International Trade and the Doha Agenda for Development*, 8 CHAP. L. REV. 53, 54 (2005) (noting that sustainable development is a paradigm for “reconciling and integrating the goals of economic development, social development, and environmental protection, goals that can often be at odds with one another”). *Rio Declaration*, *supra* note 10. See also U.N. Conference on Environment and Development, *Agenda 21*, U.N. Doc. A/CONF.151/26 (June 1992) (recommending conservation and protection of resources). *But see* Bruce, *supra* note 1, at 30–31 (“The *Stockholm Declaration* and *Rio Declaration* collectively form the contours of sustainable development. Neither declaration defines sustainable development or expressly references energy.”).

15. Barbara Stark, *Sustainable Development and Postmodern International Law: Greener Globalization?*, 27 WM. & MARY ENVTL. L. & POL’Y REV. 137, 151–52 (2002) (citing *Rio Declaration*, *supra* note 10, *reprinted in* 31 I.L.M. 874, 876 (1992)).

16. *Rio Declaration*, *supra* note 10, at Principle 12.

on development stand not as alternatives but as mutually reinforcing, integral concepts, which *require* that where development may cause significant harm to the environment there is a duty to prevent, or at least mitigate, such harm This duty, in the opinion of the Tribunal, has now become a principle of general international law. This principle applies not only in autonomous activities but also in activities undertaken in implementation of specific treaties between the Parties.¹⁷

The Conference led to several other public international law deliverables. For example, Agenda 21 recommended ways to address environmental degradation and further sustainable development.¹⁸ Additionally, in 2006 the UN Millennium Declaration fostered goals that broadened sustainable development to include a significant social dimension and sought to, among other things, (1) eradicate “extreme” hunger and poverty, (2) promote gender equality and female empowerment, (3) combat infectious diseases, (4) guarantee environmental sustainability, and (5) develop a global partnership for development.¹⁹ Moreover, the 2012 Rio+20 United Nations Conference on Sustainable Development produced a declaration reiterating sustainable development principles.²⁰ This outcome document presented a common vision and reaffirmed political commitment to original Rio principles by assessing post-Rio progress, outlining stakeholder engagement, exploring green economy in the context of poverty

17. Segger, *supra* note 6, at 14 (emphasis omitted) (citing Iron Rhine Railway Case (Belg. v. Neth.) Perm. Ct. Arb. 1, 28–29, 49, 67–69 (2005)).

18. AGENDA 21: EARTH’S ACTION PLAN § 38.1 (Nicholas A. Robinson ed., 1993). Agenda 21 has four specific sections: (1) Social and Economic Dimensions, (2) Conservation and Management of Resources for Development, (3) Strengthening the Role of Major Groups, and (4) Means of Implementation. U.N. Secretary-General, *Implementation of Agenda 21, the Programme for the Further Implementation of Agenda 21 and the Outcomes of the World Summit on Sustainable Development: Report of the Secretary-General*, ¶19(a), U.N. GAOR, 66th sess., U.N. Doc. A/66/287 (Aug. 9, 2011).

19. See U.N. DEP’T OF ECON. AND SOC. AFFAIRS, THE MILLENNIUM DEVELOPMENT GOALS REPORT, UNITED NATIONS (2006), <http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2006/MDGReport2006.pdf>; Guruswamy, *supra* note 8, at 231, 252 (“The MDGs signal a conceptual shift with respect to the definitional understanding of [sustainable development]—a shift that moves from the binary environment-economy paradigm to a tripartite understanding that incorporates social development. This new definition of [sustainable development] embraces a more specific overlap among its three components: social development, economic development, and environmental protection.”).

20. See Rio+20 Conference on Sustainable Development, *The Future We Want*, U.N. Doc. A/CONF.216/L.1 (June 19, 2012).

eradication and sustainable development, and providing a framework for action and follow-up.²¹

While the Millennium Development Goals (MDG) from 2006 expired in 2015, the U.N. General Assembly adopted the Resolution *Transforming Our World: the 2030 Agenda for Sustainable Development* (the “2030 Agenda”) on September 25, 2015.²² Building on the MDG, the U.N. outlined seventeen Sustainable Development Goals with 169 associated targets effective as of January 1, 2016 that will guide the UN’s decisions over the next fifteen years.²³ The 2030 Agenda outlines an ambitious set of priorities including ending global poverty, combatting inequalities, protecting human rights, promoting gender equality and empowerment, ensuring the lasting protection of the planet and its natural resources, and creating conditions for “sustainable, inclusive and sustained economic growth,” shared prosperity, and “decent work for all.”²⁴

The sustainable development discussion has also increasingly focused on natural resource extraction and energy issues,²⁵ emphasizing the importance of cleaner hydrocarbon development and an increased role for renewable energy within the international energy mix.²⁶

21. *Id.*

22. See G.A. Res. 70/1, U.N. Doc. A/RES/70/1 (Oct. 21, 2015).

23. *Id.* ¶ 1.

24. *Id.* ¶ 3.

25. See Guruswamy, *supra* note 8, at 231, 234 (arguing energy justice “has been egregiously ignored in international discourse and negotiations about energy and the environment” involving sustainable development); Lincoln L. Davies, *Energy Policy Today and Tomorrow - Toward Sustainability?*, 29 J. LAND RESOURCES & ENVTL. L. 71, 73–74 (2009) (citing Commission of the European Communities, *A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development*, COM (2001) 264 final (May 15, 2001)) (“Examining energy use is one of the most fundamental ways that we can assess our success in obtaining sustainable development’s ‘triple bottom line’: Our extraction, processing, and consumption of energy measures our environmental footprint; the way in which we utilize energy defines our economic development; and access to energy is essential to social justice.”). See also Ann L. MacNaughton & Jay G. Martin, *Practical Impacts of Sustainable Development on Energy Law*, 19 NAT. RESOURCES & ENV’T 33 (2004); Jay G. Martin & Ann L. MacNaughton, *Sustainable Development: Impacts of Current Trends on Oil and Gas Development*, 24 J. LAND RESOURCES & ENVTL. L. 257, 258 (2004); Wayne Norman & Chris MacDonald, *Getting to the Bottom of “Triple Bottom Line,”* 14 BUS. ETHICS Q. 243, 244–45 (2004).

26. The social and economic import of renewable energy in 1981 led to the creation of the Committee on the Development and Utilization of New and Renewable Sources of Energy (as succeeded by the Commission on Sustainable Development), which further transitioned into the United Nations Conference on New and Renewable Sources of Energy. See G.A. Res 36/193, U.N. Doc. A/RES/36/193 (Dec. 17, 1981). Despite gaining wider focus within the U.N. context, certain renewable energy projects have been scrutinized suspiciously. See Guruswamy, *supra* note 8, at 231, 234–44 (criticizing biomass in developing countries based on several factors, including abnormally high health burden

Renewable energy, in particular, is progressively entering into the global sustainable development context,²⁷ especially within the U.N. Framework Convention on Climate Change (UNFCCC).²⁸ Expanded renewable energy generation is endorsed by the U.N. Intergovernmental Panel on Climate Change (IPCC), recognizing that key renewable technologies include bioenergy, direct solar energy, geothermal energy, ocean energy, and wind energy.²⁹ Evidencing the increasing role of renewable energy dialogue, such use by 2035 is suggested to reduce greenhouse gas emissions by twenty-one percent and supply up to forty-five percent of global electricity.³⁰

B. U.S. Sustainable Development: The Evolution of Domestic Law

In the U.S., essayists have interpreted sustainable development law in different ways, notably by including land use controls that recognize the intersection of environmental issues and economic development.³¹

placed on women and children collecting biomass fuel sources).

27. The 2002 *Johannesburg Plan of Implementation* “remains the most extensive soft law instrument supporting renewable energy development, implementation, technology transfer and commercialization.” Bruce, *supra* note 1, at 30–31 (citing *Johannesburg Plan*, U.N. Doc. A/CONF.199/20, 12, 17–19, 45, 47).

28. The UNFCCC requires parties to “protect the climate system on the basis of equity and in accordance with their common but differentiated responsibilities and respective capacities.” United Nations Framework Convention on Climate Change, arts. 3–4, June 4, 1992, S. Treaty Doc. No. 102-38, 1771 U.N.T.S. 107. The UNFCCC Preamble identifies energy as important to developing countries’ economic growth. *Id.* at arts. 2, 4. The principle of common but differentiated responsibility affirms the responsibility of the developed country parties to take the lead in combating climate change and the adverse effects thereof. *Id.* at art. 3. See generally FARHANA YAMIN & JOANNA DEPLEDGE, *THE INTERNATIONAL CLIMATE CHANGE REGIME: A GUIDE TO RULES, INSTITUTIONS AND PROCEDURES* (2004); Steven Ferrey, *The Failure of International Global Warming Regulation to Promote Needed Renewable Energy*, 37 B.C. ENVTL. L. AFF. REV. 67 (2010); Guruswamy, *supra* note 8, at 254. See also Segger, *supra* note 6, at 17 (noting that under UNFCCC, “the right to promote sustainable development appears to refer more directly to the work of the Parties to integrate environmental protection with development processes”).

29. See Press Release, Intergovernmental Panel on Climate Change, Potential of Renewable Energy Outlined in Report by the IPCC (May 9, 2011).

30. INTERNATIONAL ENERGY AGENCY, *WORLD ENERGY OUTLOOK 2010* 282, 394 (2010), www.worldenergyoutlook.org/media/weo2010.pdf; OTTMAR EDENHOFER ET. AL., *TECHNICAL SUMMARY, RENEWABLE ENERGY SOURCES AND CLIMATE CHANGE MITIGATION: SPECIAL REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 27*, 105 (2012). See also Press Release, *supra* note 29 (“[t]he rising penetration of renewable energies could lead to cumulative greenhouse gas savings equivalent to 220 to 560 gigatonnes of carbon dioxide between 2010 and 2050.”).

31. *Our Common Future*, *supra* note 11, ch. 2; HENRY STEINER ET. AL.,

Scholars also acknowledge the key role that comparative law plays. For example, the genesis of U.S. zoning law, emerging at the dawn of the 20th century,³² was arguably influenced by land use planning law from the U.K. and, more notably, Germany.³³

Contemporary sustainable development law is rooted in *Massachusetts v. EPA*.³⁴ In that case, Massachusetts, local governments, and environmental organizations petitioned to review an EPA order that denied a petition for rulemaking regulating greenhouse gases emitted by motor vehicles under the Clean Air Act.³⁵ The Court noted that the EPA's refusal to regulate emissions presented a risk of actual and imminent harm to Massachusetts as the emissions caused rising sea levels that had "already begun to swallow Massachusetts' coastal land."³⁶ Accordingly, the Court recognized that climate change precipitated harmful impacts evidenced in Massachusetts.³⁷ Such impacts include glacier retreat and sea level rise, with scientifically-recognized future climate change results including rising ocean temperatures possibly contributing to hurricanes, increases in diseases

INTERNATIONAL HUMAN RIGHTS IN CONTEXT (2000); Jacobs, *supra* note 5, at 23, 30. See Judith Perhay, *The Natural Step: A Scientific and Pragmatic Framework For A Sustainable Society*, 33 S.U. L. REV. 249, 272 (2006) (citing PAUL HAWKEN, THE ECOLOGY OF COMMERCE: A DECLARATION OF SUSTAINABILITY 139 (1994) (asserting sustainable development "can also be expressed in the simple terms of an economic golden rule for the restorative economy: [l]eave the world better than you found it, take no more than you need, try not to harm life or the environment, make amends if you do")); Stark, *supra* note 15, at 151 (citing *Our Common Future*, *supra* note 11) (stating that sustainability requires "equitable distribution" and defining sustainable development as meeting "the needs of the present without compromising the ability of future generations to meet their own needs").

32. The landmark case *Euclid v. Ambler Realty Co.*, addressed the tension between private ownership rights and the breadth of governmental intervention. 272 U.S. 365 (1926). The *Euclid* court held that separating industrial uses from residential neighborhoods furthered public safety, and that public health was further promoted when large-scale multi-family housing was separated from single-family dwellings. *Id.* at 396. The *Euclid* court reiterated that zoning and nuisance law yielded similar objectives, disallowing land owners from using private property as means to injure others. *Id.* at 390-92. Following *Euclid*, governmental power could be constitutionally used to mold private development—the growing interplay between and among private sector opportunity, regulations, and general environmental considerations characterized subsequent domestic sustainable development law by joining social and economic issues.

33. *Our Common Future*, *supra* note 11, ch. 6.

34. 549 U.S. 497 (2007).

35. *Massachusetts v. EPA*, 549 U.S. at 514.

36. *Id.* at 522.

37. *Id.* at 521.

and “severe and irreversible changes to natural ecosystems.”³⁸ In discerning whether the alleged injury was traceable to EPA’s failure to act, the Court reasoned that the “EPA does not dispute the existence of a causal connection between manmade greenhouse gas emissions and global warming. At a minimum, therefore, EPA’s refusal to regulate such emissions ‘contributes’ to Massachusetts’ injuries.”³⁹ The Court held that “predicted increases in greenhouse gas emissions from developing nations, particularly China and India, are likely to offset any marginal domestic [emissions] decrease,” but found that “U.S. motor-vehicle emissions make a meaningful contribution to greenhouse gas concentrations and hence, according to petitioners, to global warming.”⁴⁰

In another notable case, *Comer, et al. v. Murphy Oil USA, Inc.*,⁴¹ the plaintiffs alleged that the oil company defendants released by-products precipitating and increasing global warming that led to the conditions which formed Hurricane Katrina and ultimately damaged their property. The lawsuit named as defendants numerous oil companies, coal companies, electric companies, and chemical companies.⁴² The plaintiffs asserted public and private nuisance, trespass, and negligence claims, arguing that global warming led to high sea surface temperatures and sea level rise that fueled Hurricane Katrina.⁴³ The *Comer* court recalled the reasoning in *Massachusetts* that “[t]he parties’ dispute turn[ed] on the proper construction of a congressional statute, a question eminently suitable to resolution in federal court,” but that the Supreme Court did not have the expertise or authority to evaluate the policy judgments of the EPA.⁴⁴ Accordingly, the *Comer* court held that:

It is unclear how this Court or any jury, regardless of its level of sophistication, could determine whether the defendants’ emissions unreasonably endanger the environment or the public without making policy determinations that weigh the harm caused by the defendants’ actions against the benefits of the products they produce. Our country, this Court, and even the plaintiffs themselves rely on the products the defendants produce.⁴⁵

38. *Id.*; *Our Common Future*, *supra* note 11, ch. 6.

39. *Massachusetts v. EPA*, 549 U.S. at 523.

40. *Id.* at 524–25.

41. 839 F. Supp. 2d 849, 851 (2012).

42. *Comer*, 839 F. Supp. 2d at 854.

43. *Id.*

44. *Massachusetts v. EPA*, 549 U.S. at 516, 533.

45. *Comer*, 839 F. Supp. at 865.

The *Comer* court specifically noted the economic implications flowing from sustainable development by stressing the value, if not *necessity*, of the defendants' commercial undertakings. While courts may recognize sustainable development considerations, they are resistant to wade into waters which may be interpreted as political issues.

The Academy of Sciences, through the U.S. National Research Council (NRC), also presents an expansive interpretation of sustainable development, focusing on how the natural environment is essential for human survival and well-being.⁴⁶ The NRC evaluation looks to four sustainability drivers: (i) when approaches decreasing existing risks are incapable of averting threats to critical natural resources, (ii) when evolving tools surpass current threat risk management, (iii) when sustainability is used to address social, environmental and economic issues by international bodies in which the U.S. is an active participant, and (iv) when U.S. sustainability optimizes domestic environmental protection as well as social and economic benefits.⁴⁷ One example of NRC's reasoning is the Magnuson-Stevens Fishery Conservation and Management Act,⁴⁸ which delimits a fishery's optimum yield to the maximum sustainable yield.⁴⁹

The federal statutory landscape also includes several laws with sustainable development components. These statutes include the Clean Water Act,⁵⁰ the Comprehensive Environmental Response, Compensation, and Liability Act,⁵¹ the Resource Conservation and Recovery Act,⁵² the Oil Pollution Act,⁵³ the Clean Air Act,⁵⁴ and the Surface Mining Control and Reclamation Act.⁵⁵

II. THE ARCTIC LEGAL FRAMEWORK: INSTITUTIONS, CASES, AND REGULATIONS

In general, Arctic law examines the laws and regulations affecting the Arctic including the rights, responsibilities, and obligations of

46. Kundis & Benson, *supra* note 5, at 845 (citing COMMITTEE ON INCORPORATING SUSTAINABILITY IN THE U.S. ENVIRONMENTAL PROTECTION AGENCY ET AL., SUSTAINABILITY AND THE U.S. EPA 7, 15 (2011)).

47. *Id.*

48. 16 U.S.C. §§ 1801-1884, 1802(33) (2006).

49. Kundis & Benson, *supra* note 5, at 846. Timber in National Forests is similarly managed for maximum sustainable yield. 16 U.S.C. §§ 529, 1604 (2012).

50. 33 U.S.C. §§ 1251-1387 (2012).

51. 42 U.S.C. §§ 9601-9628 (2000).

52. 42 U.S.C. §§ 6901-6992(k) (1976).

53. 33 U.S.C. §§ 2701-2762 (2012).

54. 42 U.S.C. §§ 7401-7671(q) (1977).

55. 30 U.S.C. §§ 1201-1328 (2012).

governmental and private actors.⁵⁶ Arctic law is divided into four distinct components. The first, hard law, is identified as legally binding obligations that define the conduct that they require or advance.⁵⁷ Flowing from hard law is customary law, or norm evolution developed by states creating certain customs, gradually recognized as a legal requirement.⁵⁸ The second, soft law (or the institutionalization of international norms),⁵⁹ is composed of non-legally binding goals and guidelines.⁶⁰ Soft law is innovative and flexible, adapting to evolving circumstances.⁶¹ The third element of Arctic law is domestic law, offering deeper insights into how law is affected and shaped by multiple drivers, all while examining how legal systems function internally.⁶² The fourth and final Arctic law component is transboundary private law. The U.S. Restatement of Foreign Relations Law defines private international law as “directed to resolving controversies between private persons, natural as well as juridical, primarily in domestic litigation, arising out of situations having a significant relationship to more than one state.”⁶³ Private law also guides public international law formation, particularly the principles limiting state jurisdictions to prescribe law.⁶⁴ “Systemic and cultural differences between and among the legal traditions of Arctic states will influence and affect commercial

56. Canuel, *The Four Arctic Pillars*, *supra* note 2, at 735. Arctic law must also consider the diverse cultural factors at stake indicative of comparative law. *See, e.g.*, Rodolfo Sacco, *One Hundred Years of Comparative Law*, 75 TUL. L. REV. 1159, 1176 (2001); Kai Schadbach, *The Benefits of Comparative Law: A Continental European View*, 16 B.U. INT’L L. J. 331, 415 (1998).

57. Kenneth W. Abbott & Duncan Snidal, *Hard and Soft Law in International Governance*, 54 INT’L ORG. 421 (2000).

58. Timo Koivurova et al., *Participation of Indigenous Peoples in International Norm-Making*, 42 POLAR REC. 101 (2006). *See also* U.N. Statute of the International Court of Justice, June 26, 1945, 59 Stat. 1031, art. 38, sec. 1 (requiring that “[t]he Court . . . shall apply . . . international custom, as evidence of a general practice accepted as law”). Ian Brownlie asserts that the elements of custom within the International Court of Justice, which provide a guide to generally analyzing custom, including: (i) duration (although if the “consistency and generality” of a custom are proved, no exact duration is required), (ii) “substantial” uniformity, and (iii) a sense of legal obligation rather than usage, which does not reflect such obligation—such as ceremonial salutes at sea or exempting diplomatic automobiles from parking restrictions. COVEY T. OLIVER ET. AL., *THE INTERNATIONAL LEGAL SYSTEM: CASES AND MATERIALS* 4 (6th ed. 1995) [hereinafter OLIVER ET. AL].

59. Koivurova et al., *supra* note 58, at 101.

60. Abbott & Snidal, *supra* note 57, at 428.

61. Canuel, *The Four Arctic Pillars*, *supra* note 2, at 743.

62. *Id.* at 745.

63. *Id.* at 757 (citing RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE U.S. § 101; RESTATEMENT (SECOND) CONFLICT OF LAWS § 2).

64. *Id.* at 757.

transaction outcomes and contractual interpretations.”⁶⁵ This section will contend with the first three pillars of Arctic law—hard, soft, and domestic law—and how they weave into sustainable development issues, including resource extraction.

A. The Evolving North: The Arctic Council, Soft Law, and Hard Law

Global climate change impacts are particularly evident in the Arctic,⁶⁶ including the effects of black carbon.⁶⁷ The analysis of threats to the sustainable development of Arctic natural resources often focuses on the potential negative impacts on indigenous peoples from an environmental justice vantage point.⁶⁸ These include potential threats to coastal communities from hydrocarbon spills, a disaggregate distribution of economic returns with respect to projected natural resource benefits to indigenous peoples, and the social destabilization of local populations due to the introduction of foreign labor to work on natural resource projects.⁶⁹

Sustainable development is one of the key focal areas of the Arctic Council.⁷⁰ The Council is an intragovernmental forum composed of the eight Arctic states, with membership including the six groups

65. *Id.* at 758.

66. Under U.S. federal law, the “Arctic” is “all United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering, and Chukchi Seas; and the Aleutian chain.” 15 U.S.C. § 4111 (2012).

67. Burning biomass contributes to black carbon, which warms the atmosphere “by absorbing both direct and reflected solar radiation contributing to a significant enhancement of lower atmosphere solar heating.” Guruswamy, *supra* note 8, at 245 (citing Robert F. Service, *Study Fingers Soot as Major Player in Global Warming*, 319 *SCI.* 1745, 1745 (2008)). Black carbon may remain in the atmosphere for less than a year and is shown to interfere with the ice cover “albedo effect,” thus contributing to global warming. *Id.* See also Tami C. Bond et al., *Bounding the Role of Black Carbon in the Climate System: A Scientific Assessment*, 118 *J. GEOPHYSICAL RES.* 5380, 5388 (2013); Kristine J. Beaudoin, *Reducing Black Carbon from Wood Burning in Fairbanks, Alaska*, 31 *ALASKA L. REV.* 87, 92 (2014).

68. E.A. Barry-Pheby, *The Growth of Environmental Justice and Environmental Protection in International Law: In The Context of Regulation of the Arctic’s Offshore Oil Industry*, 13 *SUSTAINABLE DEV. L. & POL’Y* 48, 52 (2012) [hereinafter Barry-Pheby].

69. *Id.* at 48, 51.

70. See Tromsø Declaration, THE NORTHERN FORUM (Oct. 3, 1993), <http://library.arcticportal.org/1767/>; GUIDELINES FOR ENVIRONMENTAL IMPACT ASSESSMENT (EIA) IN THE ARCTIC, FINNISH ENV’T INST. (1997), http://www.unece.org/fileadmin/DAM/env/eia/documents/EIAGuides/Arctic_EIA_guide.pdf. [hereinafter FINNISH ENV’T INST.].

representing the Arctic indigenous peoples.⁷¹ The Arctic Environmental Protection Strategy of 1991 was the predecessor to the Council,⁷² and incorporated into the Arctic Council in 1996.⁷³ The Arctic Council promotes cooperation, coordination, and interaction among the Arctic states, focusing on issues of Arctic sustainable development and environmental protection.⁷⁴

One example of such commitment to sustainable development is the Arctic Council's Sustainable Development Working Group (SDWG).⁷⁵ The SDWG handles a variety of sustainable development-themed projects, which suggests that a "one size fits all" definition is not appropriate.⁷⁶ It has been asserted that the breadth of sustainable development issues is more reflective of the lack of agreement among the Arctic states as to a Council-wide exact definition of that concept.⁷⁷ An increasing focus on energy⁷⁸ is emerging within the Council

71. Permanent Participants consist of the Aleut International Association, the Arctic Athabaskan Council, the Gwich'in Council International, the Inuit Circumpolar Council (ICC), the Russian Association of Indigenous Peoples of the North (RAIPON), and the Saami Council. *Arctic Council*, U.S. DEP'T OF STATE, <http://www.state.gov/e/oes/ocns/opa/arc/ac/> (last visited Jan. 30, 2016).

72. As an article arguing for growth in the north points out,

The AEPS, which predated the Rio Declaration by almost exactly one year, is replete with principles of sustainable economic development in the context of necessary Arctic environmental protection measures. The AEPS recognizes that "[t]he use of natural resources is an important activity of Arctic nations. Therefore, [the AEPS] should allow for sustainable economic development in the north so that such development does not have unacceptable ecological or cultural impacts.'

Samantha J. Fow, *The Arctic Sustainability Principle*, 13 VT. J. ENVTL. L. 537, 545-46 (2012) (citing Arctic Environmental Protection Strategy Introduction, art. 2, June 14, 1991, 30 I.L.M. 1624).

73. The Council is a voluntary organization of the Arctic States with a mandate to promote sustainable development and environmental protection. Declaration on the Establishment of the Arctic Council, pmbl. arts. 1(a), 2, Sept. 19, 1996, 35 I.L.M. 1382 [hereinafter Ottawa Declaration].

74. *Id.*

75. The Sustainable Development Working Group promotes sustainable development, although that term is not explicitly defined. *Sustainable Development Working Group*, ARCTIC COUNCIL, <http://www.sdwg.org> (last visited Jan. 31, 2016).

76. See Robert Huebert et al., *The Arctic Environmental Protection Strategy, Arctic Council and Multilateral Environmental Initiatives: Tinkering While the Arctic Marine Environment Totters*, 30 DENV. J. INT'L L. & POL'Y 131, 152-54 (2002).

77. Timo Koivurova & David L. VanderZwaag, *The Arctic Council at 10 Years: Retrospective and Prospects*, 40 U.B.C. L. REV. 121, 150 (2007).

78. See Guruswamy, *supra* note 8, at 234 (arguing that energy justice "has been egregiously ignored in international discourse and negotiations about energy and the environment" involving sustainable development); *Activities*, ARCTIC COUNCIL, <http://www.sdwg.org/project/> (last visited Jan. 12, 2015)

context.⁷⁹

To grasp the role that sustainable development plays in the Council, a review of environmental impact assessments (EIAs)⁸⁰ through the Council's 1997 Guidelines for Environmental Assessment (Guidelines) proves illustrative.

The Guidelines suggest that sustainable development mechanisms include a wide-scale approach for proposed projects and an overview of Arctic environmental conditions; the Guidelines also emphasize the need for robust local participation in project planning processes when addressing the likelihood and implications of transboundary Arctic projects. The Guidelines further offer important perspectives on the Council as an institution, noting the Council's "soft law" role.⁸¹ For example, the Guidelines discuss the institutional benefits of providing a stakeholder with participatory functions.⁸² The flexibility offered by the Guidelines also allows the recognition of the organic and non-obligatory nature of sustainable development precepts.⁸³ The Guidelines advocate a specific purpose to recognize the impact of human development in the Arctic.⁸⁴

(listing projects and activities relating to SDWG).

79. Brent Carpenter, *Warm is the New Cold: Global Warming, Oil, UNCLOS Article 76, and How an Arctic Treaty Might Stop a New Cold War*, 39 ENVTL. L. 215, 239-42 (2009) [hereinafter Carpenter] (proposing that increased oil and gas development will result in increased oil spills and lead to greater infrastructure adversely affecting the Arctic including the disruption of walrus, seal, polar bear, caribou, and bird habitats, feeding sites and/or migration patterns).

80. The European Union EIA process and the European Union Directive on Environmental Impact Assessments requires that EIAs include: (i) a project description, (ii) considered alternatives to the project, (iii) how environment may be affected by project, (iv) significant effects on environment, (v) mitigation, (vi) the environmental impact statement or non-technical, publically-accessible summary, and (vii) a forecast of technical difficulties. Directive 2011/92/EU of the European Parliament and of the Council of 16 April 2014, 2014 O.J. (L124). The project's scale will determine whether an EIA is necessary. *Id.* Barry-Pheby asserts that EIAs are "a key way of allowing analysis, consultation, research, and public participation." Barry-Pheby, *supra* note 68, at 52.

81. Soft law has been defined as the institutionalization of international norms. Koivurova et al., *supra* note 58, at 101; Pierre-Marie Dupuy, *Soft Law and the International Law of the Environment*, 12 MICH. J. INT'L L. 420, 421 (1991).

82. "EIA provides opportunities for local people to participate and communicate with developers and administrators, and to have a say in matters that affect their environment." FINNISH ENV'T INST., *supra* note 70, at 3.

83. "These guidelines are not intended to replace existing procedures adopted by international, national or provincial laws, land claim agreements, regulations or guidelines. As they do not recommend any particular procedure for EIA, these guidelines are applicable across jurisdictional boundaries and in different EIA processes." *Id.* at 5.

84. "EIA is a process of identifying, communicating, predicting and interpreting information on the potential impacts of a proposed action or

The steps in the EIAs are: (i) the application of an EIA, (ii) scope of the assessment, (iii) baseline information, (iv) impact prediction and evaluation, (v) mitigation, (vi) monitoring, (vii) the environmental impact assessment document, (viii) public participation, (ix) traditional knowledge, and (x) transboundary impacts.⁸⁵ Despite the organic development of forging EIAs in the Arctic, the Guidelines do provide certain structural assistance. The EIA should be multidisciplinary, flexible, allow for wide-ranging stakeholders, cumulative, and precautionary.⁸⁶ For example, where there are threats of serious or irreversible damage, the lack of full scientific certainty should not postpone cost-effective measures to prevent environmental degradation.

Addressing the impacts of Arctic development, the Guidelines discuss mitigation measures that further stress the critical public participation role. Arctic-specific mitigation measures include: (i) plans for oil-spill clean-up and containment, (ii) minimal impact to habitats of migratory birds, (iii) consultation with indigenous peoples to minimize impacts to their fishing and hunting, and (iv) mitigation measures to reduce permafrost impacts.⁸⁷ The Guidelines devote a full section to public participation, with an expansive definition of the public: “the individuals, indigenous groups, peoples, organizations, or communities that have an interest in or could be affected by proposed action.”⁸⁸ Public participation “provides the affected and interested public an opportunity to influence planning, assessment, and monitoring of projects . . . [and] includes public hearings, public meetings, public access and public right to comment.”⁸⁹ The Guidelines also confirm the human element of sustainable development, including the role of traditional knowledge.⁹⁰

The Guidelines further recognize the transboundary implications of Arctic development⁹¹ and the key social development roles held by

development on the environment, including humans, and to propose measures to address and mitigate these impacts.” *Id.* at 5-6.

85. *Id.* at 6.

86. *Id.* at 8-9.

87. *Id.* at 26.

88. FINNISH ENV'T INST., *supra* note 70, at 32.

89. *Id.* at 32-33.

90. “Traditional knowledge is defined as accumulated knowledge held by indigenous people on the Arctic environment, and the management of its resources for present and future generations.” *Id.* at 37. Traditional knowledge is recognized as a key element of sustainable development by the Arctic Council. *Id.*

91. The Guidelines recognize these transboundary implications as follows:

When a proposed project may lead to impacts across jurisdictional boundaries, the country of origin and the project developer should

indigenous peoples of the North.⁹² The interrelationship between Arctic state governments and indigenous peoples has been criticized by a legal scholar.⁹³

Still, the SDWG is not the only Arctic Council forum for sustainable development discussion. The Arctic Council's Protection of the Arctic Marine Environment (PAME) created Arctic Offshore Oil and Gas

ensure that the affected country and its citizens within the area of likely impact are given the opportunity to participate in an environmental impact assessment. The country of origin should thus provide information on the assessment at an early stage in the assessment process, when a decision to apply an EIA is made or when the scope of the assessment is determined. Open dialogue and information exchange should be established between the country of origin and affected country or countries.

Id. at 40.

92. As noted in the analysis of the discrimination against indigenous people:

[T]he Inuit culture has a very acute and sophisticated concept of climate which feeds directly into regional climate change policy. Social systems in the Arctic revolve around seasonal and daily climates both as a matter of necessity and as a result of cultural identity. Concisely, the Inuit culture conceptualizes climate as a universal force that is manifested as physical reality, either by means of the weather or by means of human behavior.

Special Rapporteur on the Problem of Discrimination Against Indigenous Populations, *Study of the Problem of Discrimination Against Indigenous Populations*, vol. V., ¶ 379, UN Sub-Commission on Prevention of Discrimination and Protection of Minorities, UN Doc. E/CN.4/Sub.2/1986/Add.4 (1986); JAMES ANAYA, INTERNATIONAL HUMAN RIGHTS AND INDIGENOUS PEOPLES: THE MOVE TOWARD THE MULTICULTURAL STATE (2009), reprinted in DEFENDING DIVERSITY: CASE STUDIES 1 (Chandra Roy ed., 2004). See also Fow, *supra* note 72, at 539 (citing NICOLE STUCKENBERGER, THIN ICE: INUIT TRADITIONS WITHIN A CHANGING ENVIRONMENT 31-33 (2007)). The United Nations defines indigenous peoples as "those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of societies now prevailing in those territories, or parts of them . . . [and which] form at present non-dominant sectors of society and are determined to preserve, develop, and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal systems." Jaksa, *supra* note 11, at 157 n.2.

93. Aleksandr Shapovalov, *Straightening Out the Backward Legal Regulation of "Backward" Peoples' Claims to Land in the Russian North: The Concept of Indigenous Neomodernism*, 17 GEO. INT'L ENVTL. L. REV. 435, 465-66 (2005) ("[Current commercial agreements in the Russian North] are primarily concluded between companies and federal, regional, or municipal authorities. With regards to indigenous peoples, these agreements should be referred to as 'paternalistic' . . . For example, compensation provided for oil drilling to the reindeer herders of the *Druzhiba narodov* collective farm in Nenets Autonomous Okrug was around 300 rubles per person (around U.S. \$ 10). This amount is absurdly low, considering that oil transportation and the building of pipelines will hurt reindeer breeding and might lead to extinction of the reindeer population.").

Guidelines that suggest governments should be “mindful” of sustainable development commitments concerning offshore Arctic hydrocarbon activities.⁹⁴ PAME’s Offshore Oil and Gas Guidelines also reference the need for public participation⁹⁵ in the hydrocarbon development process.⁹⁶ PAME additionally addresses nonemergency pollution prevention.⁹⁷ The Emergency Prevention, Preparedness and Response (EPPR) Working Group formulates Arctic environmental emergency preparations.⁹⁸ Arctic biodiversity and conservation are focal points of Conservation of Arctic Flora and Fauna (CAFF). The Arctic Contaminants Action Program (ACAP) focuses upon pollution reduction within the Arctic.⁹⁹ “The Arctic Monitoring and Assessment Programme’s (AMAP) objective is to provide information and nonbinding advice to Arctic States regarding Arctic environmental conditions and threats.”¹⁰⁰

Criticism of Arctic sustainable development law has included concerns about the lack of a “hard law” Arctic treaty.¹⁰¹ In addition, it has been asserted that Arctic soft law has limitations, failing to consider certain constituencies who see Arctic natural resource development as integral.¹⁰² With respect to soft law instruments, many of the relevant

94. ARCTIC COUNCIL, PROTECTION OF THE ARCTIC MARINE ENVIRONMENT WORKING GROUP, ARCTIC OFFSHORE OIL AND GAS GUIDELINES (2009), http://www.pame.is/images/03_Projects/Offshore_Oil_and_Gas/Offshore_Oil_and_Gas/Arctic-Guidelines-2009-13th-Mar2009.pdf [hereinafter OIL AND GAS GUIDELINES].

95. Commentators have asserted that one example of insufficient public participation outlets involved villagers in Kaktouik, Alaska, who contended that their concerns with hydrocarbon extraction issues were not addressed. ARCTIC OIL AND GAS SUSTAINABILITY AT RISK? 162–63 (Aslaug Mikkelsen & Oluf Langhelle eds., 1st ed. 2008).

96. OIL AND GAS GUIDELINES, *supra* note 94, at 6–13.

97. *Protection of the Arctic Marine Environment (PAME)*, THE ARCTIC COUNCIL, <http://www.arctic-council.org/index.php/en/about-us/working-groups/pame> (last visited Jan. 31, 2016).

98. *Emergency Prevention Preparedness and Response*, ARCTIC COUNCIL, <http://arctic-council.org/eppr/> (last visited Jan. 31, 2016).

99. *Arctic Contaminants Action Program*, ARCTIC COUNCIL, <http://www.arctic-council.org/index.php/en/acap-home> (last visited Jan. 31, 2016).

100. Carpenter, *supra* note 79, at 244.

101. Note that it has been asserted that no hard law focuses on protecting the entire Arctic region. See Donald R. Rothwell, *International Law and the Protection of the Arctic Environment*, 44 INT’L & COMP. L.Q. 280, 280 (1995) (“There is no comprehensive legal regime in the Arctic.”). *But see* Agreement on the Conservation of Polar Bears, Nov. 15, 1973, 27 U.S.T. 3918, 13 I.L.M. 13.b (recognizing the responsibilities of *circumpolar* countries for coordination of actions to protect polar bears).

102. Barry-Pheby, *supra* note 68, at 57. Note, for example, that only Denmark (through Greenland) and Norway are participating signatories of The OSPAR Convention. *Id.* at 51. OSPAR deals with sustainable maritime area

international and regional agreements do not have unanimous Arctic state support.¹⁰³ Examples include the 1973 International Convention for the Prevention of Pollution from Ships and its 1978 Protocol (MARPOL),¹⁰⁴ the 1990 International Convention on Oil Pollution Preparedness, Response and Co-Operation,¹⁰⁵ the 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage,¹⁰⁶ the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora,¹⁰⁷ the 1979 Convention on Long-Range Transboundary Air Pollution¹⁰⁸ and the 1985 Vienna Convention for the Protection of the Ozone Layer.¹⁰⁹

B. U.S. Public Law: The Arctic Landscape

Arctic-specific public law instituting the U.S. Arctic policy was first introduced during the 1970s. On December 22, 1971, Security Decision Memorandum 144 was issued, which charged the State Department with leading the interagency Arctic Policy Group (APG).¹¹⁰ The APG mission includes “overseeing the implementation of U.S. Arctic policy

development, including related offshore industry regulations which regulate certain discharges, including synthetic fluids. *See generally* Convention for the Protection of the Marine Environment of the North-East Atlantic, Sept. 22, 1992, 32 I.L.M. 1069, 2354 U.N.T.S. 67 [hereinafter OSPAR Convention]; OSPAR Decision 2000/3 on the Use of Organic Phase Drilling Fluids (OPF) and the Discharge of OPF-Contaminated Cuttings, Annex 18, Ref. § 7.8, June 26–30, 2000.

103. *See* David VanderZwaag, *International Law and Arctic Marine Conservation and Protection: A Slushy, Shifting Seascape*, 9 GEO. INT’L ENVTL. L. REV. 303, 304 (1997) [hereinafter VanderZwaag] (“The Arctic legal regime may aptly be described as ‘slushy.’”).

104. Nov. 2, 1973, 34 U.S.T. 3407, 1340 U.N.T.S. 184 (as modified by Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, Feb. 17, 1978, 17 I.L.M. 546, 1340 U.N.T.S. 61) [hereinafter MARPOL].

105. International Convention on Oil Pollution Preparedness, Response and Co-operation, Nov. 30, 1990, 30 I.L.M. 733, 1891 U.N.T.S. 51.

106. The Convention Concerning the Protection of the World Cultural and Natural Heritage, Nov. 23, 1972, 11 I.L.M. 1358, 1037 U.N.T.S. 151.

107. Convention on International Trade in Endangered Species of Wild Fauna and Flora, Mar. 3, 1973, 27 U.S.T. 1087 [hereinafter CITES].

108. Convention on Long-Range Transboundary Air Pollution, Nov. 13, 1979, 18 I.L.M. 1442, 1302 U.N.T.S. [hereinafter LRTAP].

109. Convention for the Protection of the Ozone Layer, Mar. 22, 1985, 26 I.L.M. 1529, 1513 U.N.T.S. 323 [hereinafter Vienna Convention]. *See generally* VanderZwaag, *supra* note 103. *See also* Richard J. Ansson, Jr., *The North American Agreement on Environmental Protection and the Arctic Council Agreement: Will These Multinational Agreements Adequately Protect the Environment?*, 29 CAL. W. INT’L L.J. 101, 117–20 (1998).

110. NAT. SEC. COUNCIL, NATIONAL SECURITY DECISION MEMORANDUM 144 (1971), <https://fas.org/irp/offdocs/nsdm-nixon/nsdm-144.pdf>.

and reviewing and coordinating U.S. activities and programs in the Arctic, with the exception of purely domestic Arctic-related matters internal to Alaska.”¹¹¹ The Arctic Research Policy Act emerged on July 31, 1984, which created the U.S. Arctic Research Commission to “promote Arctic research and to recommend Arctic research policy.”¹¹² The Interagency Arctic Research Policy Committee (IARPC) was also established to “develop a national Arctic research policy and a five year plan to implement that policy.”¹¹³ On January 9, 2009, NSPD-66/HSPD-25, the Presidential Directive served as the Arctic policy primary framework.¹¹⁴ This Directive affirms, among other things, that: (i) the United States is an Arctic nation, (ii) rapid climate change profoundly affects the Arctic, (iii) conservation and responsible resource management are essential across the region, (iv) the Arctic’s indigenous communities should participate in circumpolar policymaking, and (v) scientific research and information sharing will enhance domestic and international management and governance of the Arctic.¹¹⁵ The National Arctic Strategy of 2013 refined NSPD-66, with goals including: (i) advancing United States security interests, (ii) seeking to pursue responsible Arctic Region stewardship, and (iii) strengthening international cooperation.¹¹⁶ The Strategy adheres to three guiding principles: (i) safeguarding peace and stability, (ii) pledging to make decisions using the best available information, (iii) pursuing innovative arrangements, and (iv) consulting and coordinating with Alaska Natives.¹¹⁷ A January 21, 2015 Executive Order was recently issued (Enhancing Coordination of National Efforts in the Arctic) seeking to strengthen a cohesive approach to federal efforts.¹¹⁸

111. *Id.*

112. 15 U.S.C.A. § 4101 (West 2016).

113. *Id.*

114. President George W. Bush, *National Security Presidential Directive 66*, THE WHITE HOUSE, 25 (2009), <http://fas.org/irp/offdocs/nspd/nspd-66.pdf>.

115. *Id.*

116. THE WHITE HOUSE, NATIONAL STRATEGY FOR THE ARCTIC REGION (2013), http://www.whitehouse.gov/sites/default/files/docs/nat_arctic_strategy.pdf.

117. *Id.*

118. Exec. Order No. 13,689, 80 Fed. Reg. 4,191 (Jan. 21, 2015).

As the Arctic has changed, the number of Federal working groups created to address the growing strategic importance and accessibility of this critical region has increased. Although these groups have made significant progress and achieved important milestones, managing the broad range of interagency activity in the Arctic requires coordinated planning by the Federal Government, with input by partners and stakeholders, to facilitate Federal, State, local, and Alaska Native tribal government and similar Alaska Native organization, as well as private and nonprofit sector, efforts in the Arctic.

There are several strategies outlining U.S. military security policy within the Arctic. The 2013 Coast Guard Strategy¹¹⁹ presents goals, including: (i) improving awareness (fostering interagency collaboration), (ii) modernizing governance (i.e. promulgating collaborative efforts) and (iii) broadening partnerships (advancing regulatory and international collaborative forums). The U.S. Department of Defense Arctic Strategy (2013)¹²⁰ includes advocating for “a secure and stable region where U.S. national interests are safeguarded, the U.S. homeland is protected, and nations work cooperatively to address challenges.” Additionally, the U.S. Navy Arctic roadmap¹²¹ asserts several strategic objectives, including: (i) ensuring U.S. Arctic sovereignty and providing homeland defense, (ii) providing ready naval forces to respond to crisis and contingencies, (iii) preserving freedom of the seas, and (iv) promoting partnerships within the U.S. government and with international allies and partners.

The State of Alaska has issued key strategies and laws discussing sustainable development, including devising an Arctic policy implementation plan.¹²² Natural resource extraction plays an essential role in Alaskan regulatory frameworks. Undeniably, the estimated mineral resources in Alaska are vast.¹²³ The Alaska Constitution seeks to address mineral management. Notably, Article 8 of the Alaska Constitution contends exclusively with natural resources.¹²⁴ For example, Section 4 of that Article specifies *Sustainable Yield* as: “[f]ish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses.”¹²⁵ While Article 8 does not exclusively deal with Arctic development, several concepts crucial to Arctic natural resource

Id.

119. U.S. COAST GUARD, ARCTIC STRATEGY 9–10 (2013), http://www.uscg.mil/seniorleadership/DOCS/CG_Arctic_Strategy.pdf.

120. U.S. DEP’T OF DEF., ARCTIC STRATEGY 2 (2013), http://www.defense.gov/Portals/1/Documents/pubs/2013_Arctic_Strategy.pdf.

121. U.S. NAVY, CHIEF OF NAVAL OPS., THE UNITED STATES NAVY ARCTIC ROADMAP FOR 2014 TO 2030 3 (2014), http://www.navy.mil/navydata/documents/USN_artic_roadmap.pdf.

122. See ALASKA ARCTIC POLICY COMM’N, FINAL REPORT OF THE ALASKA ARCTIC POLICY COMMISSION (2015), http://www.akarctic.com/wp-content/uploads/2015/01/AAPC_final_report_lowres.pdf.

123. See generally ALASKA DEP’T OF NAT. RES. DIV OF GEOLOGICAL & GEOPHYSICAL SURVEYS, ALASKA’S MINERAL INDUSTRY 2013 SPECIAL REPORT 69 (2013), <http://pubs.dggsalaskagov.us/webpubs/dggs/sr/text/sr069.pdf>.

124. ALASKA CONST. art. VIII.

125. *Id.* § 4.

extraction are covered, including the sale or grant of state lands,¹²⁶ the exploitation of minerals within state jurisdiction,¹²⁷ and the grant of leases for coal, oil, gas, oil shale, phosphate and other minerals.¹²⁸

C. U.S. Case Law: Indigenous Rights and Environmental Concerns

A discussion of U.S. Arctic case law necessarily involves a focus on Alaska. Within the U.S., Arctic law frequently involves a discussion of the unique status and relationship of indigenous peoples.¹²⁹ The federal government's general interaction with tribes is, as famously held by Justice John Marshall,¹³⁰ similar to a trust relationship.¹³¹ This trust requirement¹³² mandates that a federal agency consider tribal interests¹³³

126. *Id.* § 9.

127. *Id.* § 11.

128. *Id.* § 12.

129. See Canuel, *The Four Arctic Pillars*, *supra* note 2, at 746–52 (discussing U.S. tribal law).

130. See *Worcester v. Georgia*, 31 U.S. 515, 561 (1832) (holding that the Cherokee nation is a “distinct community” only the federal government can regulate).

131. Compare Roger Flynn & Jeffrey C. Parsons, *The Right to Say No: Federal Authority over Hardrock Mining on Public Lands*, 16 J. ENV'T'L L. & LITIG. 249, 271–72 (2001) (stating that federal agencies are like a “guardian” to tribes and that federal actions are subject to a “trust responsibility”), with Mary Christina Wood, *Fulfilling The Executive's Trust Responsibility Toward the Native Nations on Environmental Issues: A Partial Critique of The Clinton Administration's Promises and Performance*, 25 ENV'T'L L. 733, 735 (1995) (“Tribal interests play two unique roles in environmental policy. First, the government has a fiduciary obligation under federal Indian law, known as the trust responsibility, to protect the tribes’ property, treaty rights, and way of life . . . Second, the vast majority of native nations retain aboriginal or treaty rights to land, water, and wildlife. These legal rights determine the allocation of increasingly scarce natural resources shared between the federal sovereign and the native sovereigns; such rights also create important constraints on the Executive’s authority to regulate tribal activities affecting those resources.”). See also *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep’t of Navy*, 898 F.2d 1410, 1420 (9th Cir. 1990) (stating that the Secretary of Interior had a “fiduciary duty” to protect tribe’s fishery). *But see North Slope Borough v. Andrus*, 642 F.2d 589, 612 (D.C. Cir. 1980) (identifying no special trust duty to protect Inupiat subsistence use).

132. See Wood, *supra* note 131, at 735 (“The ‘trust responsibility,’ is one of the ‘primary cornerstones’ of federal Indian law. Its central thrust recognizes a federal duty to protect tribal lands, resources, and the native way of life from the intrusions of the majority society. As a doctrine that evolved judicially, the trust responsibility stands independent of treaties and inures to the benefit of all tribes, treaty and nontreaty alike.”).

133. See *Who We Are, Interior Organizational Chart*, U.S. DEP’T OF THE INTERIOR, <https://www.doi.gov/whoweare/orgchart/> (last visited Jan. 31, 2016). The U.S. Department of the Interior (DOI) includes federal agencies that significantly impact tribes, including: the Bureau of Indian Affairs, the U.S. Fish and Wildlife Service, the Bureau of Reclamation, and the Bureau of Land Management. *Id.*

in planning and decision-making processes.¹³⁴ Multiple executive orders and agency directives have furthered meeting such tribal trust responsibilities.¹³⁵

The Obama Administration established a White House Council on Native American Affairs to advance the sustainable development of tribes, particularly concerning energy.¹³⁶ The EPA's relationship with the Alaskan tribes evidences a mandated consultative role.¹³⁷ The EPA Region 10 Tribal Consultation and Coordination procedures dated October 5, 2012¹³⁸ require that each EPA office in this region (an area which includes Alaska) "must interact with tribes on a government-to-

Additionally, the U.S. Fish and Wildlife Service, the U.S. Department of Agriculture, the Environmental Protection Agency, and the U.S. Department of Energy are agencies with equities in relation to indigenous peoples' issues. See *Useful Links*, U.S. DEP'T OF THE INTERIOR, INDIAN AFFAIRS, <http://www.indianaffairs.gov/WhatWeDo/Knowledge/UsefulLinks/index.htm> (last visited Jan. 31, 2016) (referencing various other agencies).

134. See U.S. ENVTL. PROT. AGENCY, *Sustainable Energy Opportunities: Best Practices for Alaska Tribes* (2012). The EPA's Tribal Trust and Assistance Unit is a planning and coordination resource for Alaskan tribes interested in designing a community energy plan. *Id.* at 3. Weatherization, biomass, and waste-to-energy, wind, solar, geothermal, and hydrokinetic projects are all discussed in the Guide. *Id.* See also Wood, *supra* note 131, at 739 ("Nearly all Indian land is held in trust by the United States, with the beneficiary interest residing in the tribe or individual Indian allottee. Such trust title has given rise to an extensive land management role on the part of the Executive.").

135. See generally U.S. ENVTL. PROT. AGENCY, EPA REGION 9 EMPLOYEES' INDIAN PROGRAM RESOURCE MANUAL, SECTION I: NATIONAL POLICY I-17 (1995); U.S. ENVTL. PROT. AGENCY, MEMORANDUM, INDIAN POLICY IMPLEMENTATION GUIDANCE (1984); Exec. Order No. 13,084, 63 Fed. Reg. 27,655 (May 19, 1998) [hereinafter *Exec. Order 13,084*]; Walter E. Stern, *Cultural Resources Management in the United States: Tribal Rights, Roles, Consultation and Other Interests (A Developer's Perspective)*, ROCKY MT. MIN. L. INST. 20A-1 (2013). See also *Government-to-Government Relations with Native American Tribal Governments*, 59 Fed. Reg. 22,951 (Apr. 29, 1994) (requiring all federal agencies and departments to implement programs in ways respectful of tribal sovereignty); Exec. Order No. 12,898, 59 Fed. Reg. 7,629 (Feb. 11, 1994) (directing all federal agencies to protect populations that rely on fish for subsistence consumption since it is a traditional reliance of many tribal peoples); Tribal Self-Governance Act of 1994, Pub. L. No. 103-413, 201-204, 401-407, 108 Stat. 4270 (1994) (redirecting federal funding to tribes and assisting tribal governments so that they may administer their own programs on tribal reservations).

136. Exec. Order No. 13,647, 78 Fed. Reg. 39,539 (June 26, 2013). For an additional Executive Order contending with cultural issues within the indigenous peoples context, see Policy Concerning Distribution of Eagle Feathers for Native American Religious Purposes, 59 Fed. Reg. 22,953 (May 4, 1994), EPA Policy on Consultation and Coordination with Indian Tribes, U.S. ENVTL. PROT. AGENCY (May 4, 2011), <http://www.epa.gov/sites/production/files/2013-08/documents/cons-and-coord-with-indian-tribes-policy.pdf> [hereinafter *EPA Policy on Consultation*], and *Exec. Order 13,084*, *supra* note 135.

137. *EPA Policy on Consultation*, *supra* note 136.

138. *Id.*

government basis consistent with the inherent sovereignty of each tribe.”¹³⁹

The intersection of tribal and sustainable development law has received growing case law treatment. In *Native Village of Kivalina v. ExxonMobil Corporation*¹⁴⁰ an Alaskan native village sought damages. The Inupiat village asserted that global warming resulting from the twenty-four oil, energy, and utility company defendants reduced Arctic sea ice and threatened the community’s existence.¹⁴¹ Alleged federal and state law breaches included public and private nuisance and civil conspiracy.¹⁴² The District Court for the Northern District of California dismissed the public nuisance claim as a political and not legal question, and held that the court would otherwise have an impossible duty of balancing the social utility against the harm of the defendants’ actions.¹⁴³ The opinion explains that the fact that plaintiffs were not seeking injunctive relief would not relieve the court of the unmanageable duty of balancing the social utility of defendants’ conduct with the harm it inflicts.¹⁴⁴ The *Kivalina* court held that the plaintiffs were pressing them to “make a political judgment” that the defendants were responsible for the town’s damages because the defendants “are responsible for more of the problem than anyone else in the nation . . .”¹⁴⁵ The court specifically noted that climate change was “a matter appropriately left for determination by the executive or legislative branch in the first instance.”¹⁴⁶ The court further stated that “[p]laintiffs essentially concede that the genesis of global warming is attributable to numerous entities which individually and cumulatively over the span of centuries created the effects they are now experiencing.”¹⁴⁷ Accordingly, the court held that the village could not show that any of the defendants’ conduct caused its injuries.¹⁴⁸

139. *EPA Region 10 Tribal Consultation and Coordination Procedures* U.S. ENVTL. PROT. AGENCY (2012), <http://nepis.epa.gov> (select the date range and search for “EPA Region 10 Tribal Consultation and Coordination Procedures”).

140. 663 F. Supp. 2d 863 (N.D. Cal. 2009).

141. *Id.* at 868–69.

142. *Id.*

143. *Id.* at 872.

144. *Id.* at 863; *Our Common Future*, *supra* note 11, at ch.6.

145. *Native Vill. of Kivalina*, 663 F. Supp. 2d at 877.

146. *Id.*

147. *Id.* at 880.

148. *Id.* at 881.

III. THE PATH AHEAD: FURTHERING ARCTIC SUSTAINABLE DEVELOPMENT

The totality of diverse interested stakeholders, evolving Arctic law, and social-economic factors suggest that an informal framework exists when analyzing – and advancing – Arctic sustainable development.

A. Actors Increasingly Recognize and Support Arctic Law's Evolution and the Hardening of Soft Law

Transboundary law has affected domestic Arctic activities with states entering into a growing number of multilateral environmental instruments.¹⁴⁹ An impetus for this trend has been “the need for collective efforts to resolve the trans-boundary impacts of domestic activities—the ‘cornerstone of international environmental law’ choices.”¹⁵⁰ The injection of international law *requirements* that sovereign natural resources be responsibly developed has been broadly interpreted, further suggesting that growing Arctic-wide sustainable development agreements can be undertaken while simultaneously recognizing the domestic legal constraints of each Arctic state.¹⁵¹

The trend of creating certain Arctic binding obligations is most pronounced within the Arctic Council's recent deliverables. For example, the Council's Arctic member states executed the 2011 Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic (SAR Agreement),¹⁵² specifying *obligations* across the Arctic.¹⁵³ These obligations include that Arctic states must provide rescue assistance to individuals¹⁵⁴ and share information on capabilities

149. ENERGY LAW IN EUROPE: NATIONAL, EU AND INTERNATIONAL LAW 13, 143 (Martha Roggenkamp et al., eds., 2007). *But see* Texaco Overseas Petroleum Co. and Cal. Asiatic Oil Co. v. Gov't of the Libyan Arab Republic (1977) 53 I.L.R. 389, 491-92 (noting the “inalienable right” of states to, in their national interests, “dispose of their natural wealth and resources”); G.A. Res. 1803 (XVII), U.N. GAOR, 17th Sess., 1194th plen. mtg., Agenda Item 39, U.N. Doc. A/5217 (Dec. 4, 1962).

150. Bruce, *supra* note 1, at 23.

151. PHILIPPE SANDS ET. AL, PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW 210-16 (2d. ed. 2012).

152. Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, May 12, 2011, 50 I.L.M. 1119 [hereinafter *Arctic SAR Agreement*].

153. The SAR Agreement's Arctic maritime and aeronautical coverage and response concerns an area of approximately 13 million square miles. *Secretary Clinton Signs the Arctic Search and Rescue Agreement with Other Arctic Nations*, U.S. DEP'T OF STATE (May 12, 2011), <http://www.state.gov/r/pa/prs/ps/2011/05/163285.htm>.

154. *Arctic SAR Agreement*, *supra* note 152, arts. 3, 5-6.

and data.¹⁵⁵ The Council's 2013 *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic* also sets forth state obligations.¹⁵⁶ The "intensification" of instruments once the exclusive "jurisdiction" of soft law presents a signaling effect affirming the commitment of Arctic states to consider binding arrangements.

Given the increasing focus on Arctic commercial development, such "hardening" of soft law, particularly with energy development considerations, furthers commercial certainty. By simultaneously promoting smart, sustainable energy resource development through both soft and hard legal instruments, a broad coalition of various stakeholders emerges. This coalition fosters trust while inviting to the table indigenous peoples, commercial actors, and others with indelible Arctic equities. The Guidelines, for example, provide frameworks which reflect common Arctic governance precepts across the Arctic states.

Thus, Arctic sustainable development soft law exists and has proven successful. As sovereigns, states "have jurisdiction to regulate the conduct and consequences of activities within their territory, including energy activities, unless prohibited by international law."¹⁵⁷ One scholar asserts that such sovereign rights create tensions involving internationalizing "essentially" domestic issues, natural resources, "permanent" sovereignty, and environmental law "principles."¹⁵⁸ The interplay of the three evidences the tension of establishing international law to regulate domestic energy supply mixes.¹⁵⁹ Tackling energy supply issues within the Arctic context—in harmony with domestic law—may be viewed as a further step forward in hardening Arctic soft law.

Even if the obligatory nature of hard law exists, the aspirational value of soft Arctic Council instruments contending with the sustainable development of Arctic energy resources offers flexible responses, directs attention to important issues, and creates the path to hard law

155. *Id.* art. 9.

156. See *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic*, U.S. DEPT. OF STATE, (May 15, 2013), <http://www.state.gov/r/pa/prs/ps/2013/05/209406.htm>. Obligations include each Arctic state undertaking oil spill monitoring activities. *Id.* art. 8.

157. Bruce, *supra* note 1, at 23; James Crawford, *Sovereignty as a Legal Value*, in *THE CAMBRIDGE COMPANION TO INTERNATIONAL LAW 117* (James Crawford & Martti Koskeniemi eds., 2012).

158. Bruce, *supra* note 1, at 23.

159. "If renewable energy obligations were to be established on the international plane, states would be obliged under substantive international law to achieve them—or else risk being held internationally responsible—but would nonetheless retain jurisdiction over domestic energy activities, including related policy and technology choices." *Id.* at 6.

development.¹⁶⁰ This can be seen with the increasing importance of economic development within the Arctic Council, as evidenced by the creation of business fora and renewable energy development.¹⁶¹ Discussing sustainable development soft law plays a central role in creating consensus over certain principles and furthers identifying and building alliances to contribute to future sustainable development hard law.

B. Know Thy Jurisdiction: Domestic Law Guides and Affects Regional and International Sustainable Development

Norm development plays a key role when creating an Arctic governance framework. That said, domestic law considers what will invariably trump soft—or even hard—international law.¹⁶² Take, for example, U.S. law concerning tribal rights. National interests may conflict with tribal interests, and the fluid nature of case law may affect outcomes.¹⁶³ Thus, the legal landscape may shift. This is evidenced in a non-Arctic case, *Northern Cheyenne Tribe v. Hodel*.¹⁶⁴ In that case, Cheyenne tribe plaintiffs challenged a federal decision to allow the leasing of public lands adjacent to the tribal reservation for coal extraction.¹⁶⁵ The Cheyenne argued that such extraction adversely impacted tribal lands.¹⁶⁶ Alternatively, the U.S. Interior Secretary asserted that a pervading national interest—in this instance, the coal field development—superseded federal trust responsibilities to the Cheyenne.¹⁶⁷ The *Hodel* court disagreed, holding that

[t]he Secretary's conflicting responsibilities . . . do not relieve him of his trust obligations. To the contrary, identifying and

160. Dinah Shelton, *International Law and 'Relative Normality,'* in *INTERNATIONAL LAW 122* (Malcom D. Evans ed., 3d. 2010).

161. ARCTIC ECONOMIC COUNCIL, <http://arcticeconomiccouncil.com/> (last visited Feb. 1, 2016).

162.

"The U.S., like most countries, generally complies with its international treaty and customary law obligations. But, as is the case with almost every other country, problems of compliance occasionally arise, particularly in situations where international norms appear to conflict with what are perceived as national security or other vital national interests."

OLIVER ET. AL, *supra* note 58, at 26.

163. Wood, *supra* note 131, at 747.

164. *N. Cheyenne Tribe v. Hodel*, 851 F.2d 1152 (9th Cir. 1988).

165. *Id.* at 1154.

166. *Id.*

167. *See id.* at 1156 (arguing that the lower court should balance equities).

fulfilling the trust responsibility is even more important in situations such as the present case where an agency's conflicting goals and responsibilities combined with political pressure asserted by non-Indians can lead federal agencies to compromise or ignore Indian rights.¹⁶⁸

Note that the case did not end in 1980: the Court in *Northern Cheyenne Tribe v. Lujan*¹⁶⁹ found that the defendants were entitled to a return of their lease payments, which were effectively still held by the Secretary of the Interior and amounted to unjust enrichment.

The court arrived at a different answer in *North Slope Borough v. Andrus*.¹⁷⁰ In *Andrus*, the Secretary was held to have discretion to balance subsistence needs of the Alaskan Inupiat people against other conflicting public interests.¹⁷¹ The court noted that:

Plainly, the imposition of a drilling moratorium during which time replicas of the structures planned for deep water use are measured against the region's actual conditions bespeaks sensitivity for the particular environmental needs of the Beaufort Sea. There is no question that the frigid Arctic temperatures and the powerful movements of ice sheets make for great danger in the area requiring careful preparations and special measures. The Secretary has responded thoughtfully in reconciling the quest for oil with meaningful deference to nature. This, the accommodation of two social objectives, is the national policy as willed by Congress.¹⁷²

The *Andrus* court studied the Secretary's trust responsibilities within the context of the ESA and affirmed tribal considerations. Specifically, the Court held that the Secretary was aware of drilling's "cumulative impacts and assimilate[d] within his decision-making any synergistic threats to the environment."¹⁷³ The impact of often conflicting laws from

168. *Id.*

169. 804 F. Supp. 1281, 1287 (D. Mont. 1991).

170. 642 F.2d 589, 612-13 (D.C. Cir. 1980).

171. *Id.* at 611.

172. *Id.* at 597.

173. *Id.* at 600. The Court further held that the Secretary complied with the Endangered Species Act (ESA) requirements:

But the Secretary, even aside from his imputed role of trustee, does not have a free hand to neglect the environment. All of the environmental statutes, particularly ESA, structure and prescribe for the Secretary a solicitous stance toward the environment. Hence, where the Secretary has acted responsibly in respect of the environment, he has implemented responsibly, and protected, the parallel concerns of the Native Alaskans.

different legal traditions when analyzing transboundary transactions cannot be undervalued. Public perception also plays a strong role: Arctic issues increasingly capture the attention of Arctic state residents and the international community at large.¹⁷⁴ This bolsters the awareness and importance of Arctic sustainable development and increases commercial awareness of possible deal opportunities.¹⁷⁵

Studying foreign jurisdictions also provides insights as to how sustainable development may accrue within a domestic context. The bottom line is that domestic law may be *influenced* by legal precepts from other legal jurisdictions or families—particularly the export of legal norms. Take, for instance, the German and UK influences which shaped the U.S. land use planning regime. New York planners, in particular, studied the German model, which allowed municipalities certain powers, including purchasing land to control real estate speculation and rein in development, while offering zoning mechanisms to encourage diverse land uses and mixed socio-economic populations.¹⁷⁶ Similarly, the Guidelines, despite their explicit delimitation to each state's regulatory and legal requirements, provide valuable insights into how Arctic governments perceive the role of public participation.

Id. at 612.

174. The Vanishing North, THE ECONOMIST, (June 16, 2012), <http://www.economist.com/node/21556921>; ARCTIC HUMAN DEVELOPMENT REPORT: REGIONAL PROCESSES AND GLOBAL LINKAGES, (Joan Nymand Larsen et al. eds., 2004); Heather A. Conley et al., *A New Security Architecture for the Arctic: An American Perspective*, CTR. FOR STRATEGIC AND INT'L STUDIES (Jan. 2012), http://csis.org/files/publication/120117_Conley_ArcticSecurity_Web.pdf; *A Thawing Arctic*, COUNCIL ON FOREIGN RELATIONS, http://www.cfr.org/polar-regions/emerging-arctic/p32620#!/?cid=otr_marketing_use-arctic_Infoguide#! (last visited Feb. 8, 2016).

175. Examples include the off-and-on popular focus of energy issues. See Davies, *supra* note 25, at 341 ("Energy policy-making in the United States is a cyclical enterprise. When energy prices rise rapidly because of limited supplies, energy dominates the political agenda. When supplies are plentiful and prices stable, it fades into the background."); Judith Kimberling, *Indigenous Peoples and the Oil Frontier in Amazonia: The Case of Ecuador*, ChevronTexaco, and Aguinda v. Texaco, 38 N.Y.U. J. INT'L L. & POL. 413, 470 (2006) (discussing the impact of environmental audits in case contending with legal and technical compliance, suggesting that social impacts should be considered).

176. See COMPENDIUM OF LAND USE LAWS FOR SUSTAINABLE DEVELOPMENT (John R. Nolon ed., 2006) (compiling land use laws from countries on each continent that attempt to achieve sustainable development); see generally *Our Common Future*, *supra* note 11.

C. Encourage Multidisciplinary Approaches When Examining Arctic Sustainable Development

Louis Pasteur famously wrote that “[s]cience knows no country, because knowledge belongs to humanity, and is the torch which illuminates the world.”¹⁷⁷ Arctic law provides an integral frame to explore, analyze, and develop sustainable development initiatives in the Arctic—but legal studies cannot exist in a vacuum. Rather, the challenges of Arctic development mandate the time, energy, and efforts of multiple researchers spreading across disciplines to tackle the many challenges emanating from Arctic development. For example, natural science impacts affect business development decisions, and governmental policies are influenced by social concerns. Arctic policy must necessarily accommodate many voices bringing together unique, multidisciplinary perspectives.

The field of international relations may additionally provide interesting insights into the socially construed identity of the Arctic states and the aspirations of Arctic indigenous peoples. For example, the role that the theoretical tradition of constructivism plays in shaping state behavior through norms and identity has spurred extensive scholarship.¹⁷⁸ Further, the tradition of neoliberal institutionalism may offer insights into how institutions and organizations (perhaps such as the Arctic Council) influence and forge state behavior.¹⁷⁹

The Arctic is undergoing a renaissance of commercial activity—present and planned—with a growing focus on how to advance business opportunities while simultaneously recognizing and abiding by sustainable development precepts.¹⁸⁰ With vast mineral and hydrocarbons estimated, the stakes and opportunities are high, despite recent downturns in hydrocarbon and mineral prices.¹⁸¹ Concerning

177. RENÉ DUBOS, LOUIS PASTEUR: FREE LANCE OF SCIENCE 62 (2d. ed. 1986).

178. See generally Ian Hurd, *Constructivism*, THE OXFORD HANDBOOK OF INTERNATIONAL RELATIONS, 299–313 (Christian Reus-Smit & Duncan Snidal eds., 2008); Alexander Wendt, *Constructing International Politics*, 20 INT’L SEC. 71, 73 (1995); Alexander Wendt, *Collective Identity Formation and the International State*, 88 AM. POL. SCI. REV. 385 (1994).

179. Joseph Nye, *Liberalism Revived*, INTERNATIONAL POLITICS: CLASSICAL AND CONTEMPORARY READINGS 82–83 (Scott Handler ed., 2013).

180. Observe the ever-increasing number of regional business organizations with international members, from small to mid-size enterprises to international conglomerates. See, e.g. ARCTIC BUS. FORUM, <http://arcticbusinessforum.com/> (last visited Feb. 1, 2016); ARCTIC BUS. COUNCIL, www.arctic-business.com/conference/arctic-business-council (last visited Feb. 1, 2016); ARCTIC ECON. COUNCIL, www.arctic-council.org/index.php/en/arctic-economic-council (last visited Feb. 1, 2016).

181. For example, a 2010 U.S. Geological Survey report estimated 896 million

private sector Arctic engagement, choice of law provisions and a multitude of issues, including disparate legal systems and traditions, will affect a potential transaction's likelihood of success and enforceability. Also, encouraging the inclusion of commercial actors in the Arctic dialogue is an important Council trend that garners increasing support.¹⁸² It is increasingly relevant to show how Arctic state renewable energy projects (and markets) make business sense for commercial actors committed to sustainable development.¹⁸³ Such high-visibility projects deal with complex transboundary issues.¹⁸⁴

Throughout these steps forward,¹⁸⁵ the invaluable role of studying

barrels of undiscovered oil and 53 trillion cubic feet of undiscovered gas within the federally-owned National Petroleum Reserve-Alaska and adjacent state waters. *USGS Oil and Gas Resource Estimates Updated for the National Petroleum Reserve in Alaska (NPR)*, U.S. DEP'T OF THE INTERIOR (Oct. 10, 2010), <http://www.usgs.gov/newsroom/article.asp?ID=2622#.VMzmp7Ao7IU>.

182. Note that there remains criticism with respect to commercial aspects of sustainable development. Kundis & Benson, *supra* note 5, at 853-54 ("Perhaps the most popular critique of sustainability and its actual implementation in society—essentially, a critique that sustainability goals have been incompletely implemented or even co-opted—are the increasingly common charges that sustainability claims are often a form of 'greenwashing'... [defined as] 'disinformation disseminated by an organization so as to present an environmentally responsible public image.'").

183. Dee Spagnuolo et al., *Sustainable Energy Development in Emerging Markets*, 24 U. PA. J. INT'L ECON. L. 759, 820-23 (2003) (arguing that U.S. investors considering renewable energy project investments abroad seek a country with a codified system of behavior for contractual counterparties, customers, and suppliers, the sanctity of written contracts, recognition of property rights, courts with authority to make independent rulings of law, renewable energy technology in the targeted market, a culture that accepts American capitalism, a country with a freely convertible currency, a minimum level of corruption in keeping with the U.S. Foreign Corrupt Practices Act, neutral attitude towards American culture and business practices, liquid debt and equity markets, transparency in transactions, lack of civil unrest, and laws and regulations allowing for an encouraging foreign investment).

184. Segger, *supra* note 6, at 4 ("In certain sectors of natural resource development, where the common resource has a clear transboundary nature and can be studied scientifically (such as fish stocks or perhaps shared watercourses), common problems are clearer and create very practical imperatives for States to negotiate rational common management regimes. In other areas, however, particularly where impacts are diffuse, global, and cumulative over time (such as depletion of the common atmosphere, loss of global biological diversity, and depletion of soil or seed resources), it is much more difficult to find common starting points to develop agreements. The concept of sustainable development emerged to help countries find solutions to these dilemmas and has become a key objective of many important international economic, environmental, and social agreements and regimes today.").

185. The Arctic Council Project Support Instrument (PSI) is a financial initiative focusing on actions to prevent and mitigate pollution of the Arctic. The instrument is administered by Nordic Environment Finance Corporation (NEFCO) and the fund provides financing for priority projects approved by the

multiple Arctic disciplines—such as identity, economics, and law—continues. There is, for example, no “one-size-fits-all” approach, and researchers should continue to expand robust cooperation.¹⁸⁶ Examining how to ensure a voice for indigenous peoples, commercial actors, and other stakeholders necessitates this interdisciplinary approach. Take, for example, the codification of sustainable principles under domestic and emerging regional Arctic law. The U.S. Outer Continental Shelf Lands Act of 2000¹⁸⁷ is an example of providing certain limitations on Arctic commercial development. Under the Act, hydrocarbon explorations licensed under the 2007-2012 Outer Continental Shelf Leasing program cannot, for example, create pollution, adverse (unsafe or hazardous) conditions, unduly harm aquatic life in the affected area, or disturb historically significant structures.¹⁸⁸ As Arctic resource development evolves both onshore and offshore, in light of recent Obama Administration initiatives,¹⁸⁹ research cooperation tracing these initiatives would prove useful for analyzing regional and domestic Arctic natural resource sustainable development.

Balancing the many stakeholder interests and research needs within Arctic sustainable development studies is challenging. Cooperation, however, helps. Social and natural sciences, as Pasteur asserts, know no country. An increasing number of Arctic research centers and institutional cooperative agreements may increase the necessary interdisciplinary cooperation to encourage robust scholarship and provide a further layer of cooperation. For example, Aarhus University’s Arctic Research Centre¹⁹⁰ and the U.S. Military Academy at West Point are negotiating a bilateral Memoranda of Understanding that proposes areas of joint scholarship, researcher exchanges, and forging

Arctic Council. ARCTIC COUNCIL PROJECT SUPPORT INSTRUMENT, NORDIC ENV’T FIN. CORP., http://www.nefco.org/financing/arctic_council_project_support_instrument (last visited Feb. 1, 2016).

186. See Fow, *supra* note 72, at 549–50. For example, the Inuit Circumpolar Conference has noted support of onshore oil development due to related benefits for the Arctic indigenous peoples. *Id.* That said, other indigenous peoples object to offshore development due to related disruptions of subsistence and traditions. *Id.*

187. 43 U.S.C. § 1340(g)(3) (2006).

188. *Id.* § 1344(a)(3).

189. Shawn Donnan, *Obama Challenges Congress on Arctic Oil*, FIN. TIMES (Jan. 25, 2015), <http://www.ft.com/intl/cms/s/0/440e7466-a4ca-11e4-8959-00144feab7de.html#axzz3UHMIFzZY>; Kate Sheppard, *Interior Department Roles out First Rules for Arctic Drilling*, THE HUFFINGTON POST (Feb. 20, 2015), http://www.huffingtonpost.com/2015/02/20/interior-arctic-drilling-rules_n_6723974.html.

190. See ARCTIC RESEARCH CTR., <http://arctic.au.dk/> (last visited Feb. 1, 2016) (describing the Centre and its broad interdisciplinary faculty).

student networks.

Such cooperation and coordinated research will produce results. For example, in the Arctic Council's important and groundbreaking work, continuing accountability and Council support of effective, feasible initiatives proves essential. Tracking and evaluating the successes, or improvement areas, related to governmental initiatives, private sector programs and discussions with the Arctic states prove invaluable. Such cooperation, in part advanced through the growing number of Arctic research centers, would encourage a continuum of organic interdisciplinary, international collaborations.