

“WE DIDN’T CROSS THE BORDER; THE BORDER CROSSED US”: INFORMAL SOCIAL ADAPTATIONS TO FORMAL GOVERNANCE AND POLICIES BY COMMUNITIES ACROSS THE BERING SEA REGION IN THE RUSSIAN FAR EAST AND UNITED STATES.¹

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ABSTRACT: Territorially isolated villages along the shores of the U.S. and Russian Bering Sea live with stark political lines dividing a region that shares a common history, heritage, and contemporary existence. It is also a region whose environmental security is threatened by common changes occurring throughout the area but for whom possible responses to these changes are shaped by the policies and politics of the countries in which they reside. This paper is based on the experience from an international observing network, the Community Observing Network for Adaptation and Security (CONAS), which provides rare insights on how political context, across the remote and unique region of the Bering Sea, shapes the realities of a People and how informal social institutions have adapted as a result.

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I. INTRODUCTION

A region culminating in the landless North Pole; a part of eight nation-states, yet apart from those nation-states; the Arctic region is a complex, variably defined area that has, until recently, been largely ignored by much of the world. The Arctic's indigenous peoples have adapted to its harsh environment over thousands of years, but only within the last few centuries has the indigenous population been forced to include the adoption of policies, politics, and cultures of nations claiming sovereignty over northern Arctic lands. The effect of these imposed borders has been different for the distinct Arctic societies, with varying degrees of imposed regulation based upon national perception and politics. Although past politics are inseparable from the current situation of remote populations in the Arctic, the focus of this paper is to explore the role of the present borders and how they affect remote populations, as well as analyze the effectiveness of current international cooperation, governance options, and community-based organizations arising from informal social institutions in providing sustainable and secure livelihoods for remote communities. We will focus upon the remote peoples of the Bering Sea, which will be explored largely through the policies of two nations, the United States and the Russian Federation, and the work of the Community Observing Network for Adaptation and Security (CONAS), an international community-based observation network in the Bering Sea. By examining the effects of recent politics, the past and present realities faced by Arctic peoples will emerge along with various forms of cooperation and governance in support of adaptive capacity in this interdependent, fragile environment. Ultimately the goal is to present an encompassing view of the political influence of Arctic peoples within their respective national context; to show a common determination to adapt to

a changing way of life; and to demonstrate the exclusiveness of an international community at times more receptive to help in that adaptation, and at times more focused than ever on exploiting the riches from an area becoming ever more accessible.

A. The Arctic and its People

To discuss the Arctic, it is first necessary to define its boundaries. While the Arctic is rationally defined by the Arctic Circle, the useable definition of the Arctic is more arbitrary. Because of this paper’s humanistic approach, the general area determined within the AMAP definition will serve as the boundaries of the Arctic.²

Of the approximately four million people who reside in the Arctic, about 400,000 are considered indigenous,³ a number which fluctuates, as do many other indicators in the Arctic, according to the defined boundary of the region.⁴ Ultimately, the Arctic region is comprised mostly of non-indigenous people.⁵ For the purpose of this paper, when speaking of Arctic indigenous peoples, it will be inclusive only of the population of people who existed in the Arctic before those from more Western traditions came. It is defined by those who share a language, history, and culture that is different from the dominant society. It is a group of people who have existed in the Arctic outside of modern political and legal systems and were enveloped within those systems without choice. When addressing remote communities, this will be inclusive of both indigenous peoples and those non-indigenous to the region whom have made these communities their home and are subject to the same climatic challenges.

Indigenous populations in the Arctic are not a single group. They are diverse groups of small populations representing hundreds of different social traditions with as many distinct languages, unique histories, and cultural practices that have

2. ARCTIC MONITORING AND ASSESSMENT PROGRAMME, AMAP ASSESSMENT 2002: HUMAN HEALTH IN THE ARCTIC 2–3 (2003).

3. JOHN McCANNON, A HISTORY OF THE ARCTIC 292 (2012).

4. ROBBIE ANDREW, AMAP, SOCIO-ECONOMIC DRIVERS OF CHANGE IN THE ARCTIC 1, 20 (2014), http://folk.uio.no/roberan/docs/Andrew,%202014%20-%20tr9_aaca_scenarios_2014.pdf.

5. *Id.*

developed over time and, in the past century and a half, responded to the Western culture with which each group of people has come in contact.⁶ What unites these peoples with those non-indigenous to the region, is the relatively extreme environment in which they live, a region largely ignored by governing powers until its land and sea proved to be profitable. Sovereignty was then assumed by modern nation-states, and eventually, all indigenous populations of the Arctic were affected in substantial ways which differed according to which country's border had subsumed them.

As borders were drawn across the Arctic, the residing populations suddenly found themselves to be in unknown territory. For some indigenous populations—notably the Sami now of Sweden, Norway, Finland, and Russia, whose livelihoods revolved around reindeer husbandry—fixed borders in some areas meant the loss of their way of life.⁷ For other indigenous peoples, such as the Inuit of Greenland, being a territory of Denmark and defined within its sovereignty meant little regarding the physical border but would shape indigenous societies through the policies imposed upon them.⁸ Whether Aleut and Siberian Yupik in Alaska and Russia; Athabaskan and Inuit of Alaska and Canada; Sami of Eurasia—they all share resources that are tied to food security and culture.

B. The Bering Sea and its People

The Bering Sea is home to a multitude of indigenous peoples including: the Eastern Unangan Aleut; Western/Aktan Unangas Aleut; Central Yup'ik; Siberian/St. Lawrence Island Yupik; Inupiaq; Koryak; and Chukchi. Currently it is estimated that there are around 100,000 living in Bering Sea coastal communities.⁹ Though peoples of the Bering Sea all

6. Jonathan D. Greenberg, *The Arctic in World Environmental History*, 42 VAND. J. TRANSNAT'L L. 1307, 132526 (2009).

7. See Patrik Lantto, *Borders, Citizenship and Change: The Case of the Sami People, 1751–2008*, 14 CITIZENSHIP STUD. 543 (2010).

8. See Ulrik P. Gad, *Greenland: A Post-Danish Sovereign Nation State in the Making*, COOPERATION & CONFLICT 98 (2013).

9. Maryann Fidel et al., *Subsistence Density Mapping Brings Practical Values to Decision Making*, in FISHING PEOPLE OF THE NORTH: CULTURES, ECONOMICS, AND MANAGEMENT RESPONDING TO CHANGE 193 (Courtney Carothers et al. eds., 2012).

have unique cultural traditions, histories, and languages, they are connected through the shared resources provided by the sea that are becoming more and more threatened by global and environmental change¹⁰ and increasingly, industrial development.¹¹

Despite current fixed locations of these peoples, movement across the North Pacific, Bering, Chukchi, and Beaufort Seas was common historically. During the Cold War, this fluid transfer of people was legally restricted due to the implantation of the “Ice Curtain.”¹² This made it such that indigenous peoples from the same ethnic and cultural background permanently residing on either side of the Bering Sea were separated not just by the waves, but by fixed international boundaries. This primarily affected the Eastern and Western/Aktan Aleut, or Unangas and Unangan, as well as the Siberian Yupik on St. Lawrence Island and the Chukotka Peninsula.¹³ Imposing borders on peoples of shared cultural and ethnic heritage not only functioned as a barrier between families and extended kinship networks, but it also limited the exchange of knowledge, communication, and observations, mechanisms which are critical to the emergence and sustenance of informal social institutions.¹⁴

C. Informal Social Institutions

Informal social institutions can refer to traditional culture, personal networks, corruption, clan organizations, civil society, and a wide variety of behavioral norms, such as perceptions, values, and beliefs. While formal institutions refer to state bodies (courts, legislatures, bureaucracies) and state enforced rules (constitutions, laws, regulations), informal institutions

10. Jacqueline M. Grebmeier et al., *A Major Ecosystem Shift in the Northern Bering Sea*, 311 SCI. 1461 (2013).

11. P. Holthus, C. Clarkin, and J. Lorentzen, *Emerging Arctic Opportunities: Dramatic Increases Expected in Arctic Shipping, Oil and Gas Exploration, Fisheries and Tourism*, 70:2 COAST GUARD J. SAFETY & SECURITY SEA 10, 12 (2013).

12. A. Hills, *Melting the Ice Curtain between Russia and Alaska*, BUS. COMM. REV., Dec. 1993, at 26.

13. RACHEL ROSE STARKS, JEN MCCORMACK & STEPHEN CORNELL, *NATIVE NATIONS AND U.S. BORDERS: CHALLENGES TO INDIGENOUS CULTURE, CITIZENSHIP, AND SECURITY* 73 (2013).

14. *Id.* at 73–77.

encompass civic, religious, and other societal organizations.¹⁵ Informal institutions tend to have socially shared rules that are understood by all within a culture.¹⁶ We propose that they are a critical adaptive practice in the Arctic, which is experiencing rapid social and environmental changes. For example, common-pool resource problems have been solved by voluntary organizations, which often arise from informal social institutions.¹⁷ A common pool resource is defined as a “natural or man-made resource system that is sufficiently large as to make it costly to exclude potential beneficiaries from obtaining benefits from its use.”¹⁷ The large marine resource of the Bering Sea can be defined as a common-pool resource.

An important mechanism that is integral in maintaining natural systems in the Arctic and the Bering Sea is traditional local knowledge (TLK) or “sustained intimacy with the land, its flora, and its animal creatures derived from extraordinarily close attention to the physical world, exquisitely fine-tuned perception, and intuitive decision-making based on the lived awareness of hugely complex empirical data and constantly evolving and changing connections, webs and relationships.”¹⁸ TLK often guides the emergence of informal institutions which are adaptive and important not only for the survival of the cultures of the indigenous peoples, but are also the foundation for natural resource sustainability. TLK helped to preserve small populations of subsistence based societies for thousands of years, conserve plant and animal life, and maintain communal traditions.¹⁹

In the last fifty years, the remote communities of the Arctic have been presented with an unprecedented challenge: a series of dramatic climatic changes with consequences that affect the delicate balance of human and nature in the Arctic

15. Gretchen Helmke & Steven Levitsky, *Informal Institutions and Comparative Politics: A Research Agenda*, 2 PERSP. ON POL. 725 (2004).

16. Helmke and Levitsky go on to describe socially shared rules as rules that are created, accepted, and enforced outside of official channels, and are often unwritten. As formal institutions are openly codified, this distinction helps to differentiate between formal and informal institutions.

17. ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 30 (1990).

18. Greenberg, *supra* note 6, at 1330.

19. *Id.* at 1329.

environment.²⁰ Changing temperatures bring with it a host of challenges including rising sea levels, increased ultraviolet radiation, decreasing sea ice, and melting permafrost. However, some changes, such as decreasing sea ice, also imply opportunities for new shipping routes and economic development.²¹ Changing climate in the Arctic also brings about stresses that threaten the adaptive capacity of some Arctic populations and their ecosystems, such as air and water contamination, overfishing, habitat alteration, increased pollutants from exploitative activities, and growing population demands on the region.²² Remote communities continue to link TLK with scientific observations, allowing room for multiple perspectives on the changes taking place that may lead to more diverse adaptation strategies. Even at times when the two sources for observations are not completely congruent, meaningful insights may be drawn from discrepancies.²³ Overall, by incorporating different informal institutions into both basic and applied scientific inquiry, a more complete picture can be obtained.

II. FORMAL INSTITUTIONS

A. *Arctic Borders*

Borders are coming to mean even more in the Arctic region. Prior to the turn of the century, the Arctic land had been a stage for resource extraction, national sovereignty rights, and military preparedness; the Arctic Sea was a scene for further militarization. Now, however, the diminishing ice cap is redefining the boundary of the Arctic in terms of shipping, oil, and mining,²⁴ particularly when combined with ever-improving technology to extract resources. In response to disputes over national borders within the Arctic, the United Nations

20. SUSAN JOY HASSOL, ACIA, IMPACTS OF A WARMING ARCTIC: ARCTIC CLIMATE IMPACT ASSESSMENT 8 (2004), *available at* <http://www.acia.uaf.edu>.

21. CHARLES EMMERSON, THE FUTURE HISTORY OF THE ARCTIC 274–81 (2010).

22. HASSOL, *supra* note 20, at 11.

23. HENRY HUNTINGTON & SHARI FOX, ACIA, THE CHANGING ARCTIC: INDIGENOUS PERSPECTIVES 6466 (2004), *available at* http://www.acia.uaf.edu/PDFs/ACIA_Science_Chapters_Final/ACIA_Ch03_Final.pdf.

24. Jeppe Strandsbjerg, *Cartopolitics, Geopolitics and Boundaries in the Arctic*, 17 GEOPOLITICS 818, 819 (2012).

Convention on the Law of the Sea (UNCLOS) was signed in 1982 and came into force in 1994,²⁵ allowing countries upon ratification to extend their sovereign rights into maritime areas following two main principles: the Exclusive Economic Zone (EEZ) and the Continental Shelf.²⁶ The EEZ related largely to fishing zones and allowed nations rights to all living and non-living resources as far as 200 nautical miles from a country's juridical coastline.²⁷ The Continental Shelf refers to the extension of a nation's landmass into the sea and relates directly to that nation's sovereign rights to exploit the natural resources found there.²⁸ All Arctic nations as well as 152 other countries, with the exception of the United States, are parties to UNCLOS.²⁹

Amongst the Arctic nations, most have prepared to increase their presence in the region. Norway stated in 2005 that the Arctic was a priority as a main strategic interest, and Canada repeated claims to their Arctic presence.³⁰ The Russian Federation has claimed extraction of Arctic oil as the cornerstone in remaining an energy superpower.³¹ While the United States remains divided on further Arctic exploitation, with politicians at odds over environmental concerns versus energy independence,³² one need not look further than the U.S. Geological Survey's Arctic petroleum assessment to see the intent of future oil extraction.³³ Increasing tensions are emerging as countries with the majority of arctic coastline, Canada, Russia, and Norway, assert their rights to implement potentially conflicting visions. Additional players such as China, France, and Japan only add to uncertainties about what arctic policies may be implemented in the future.

Presently, the reach of nation-states—their influence, borders, and the actions they take regarding the Arctic region—affect remote Arctic regions, as well as indigenous and

25. EMMERSON, *supra* note 21, at 83.

26. Strandsbjerg, *supra* note 24, at 829.

27. *Id.* at 830.

28. *Id.* at 831.

29. *Id.* at 83.

30. Strandsbjerg, *supra* note 24, at 820–21.

31. EMMERSON, *supra* note 21, at 208.

32. *Id.* at 171–72.

33. ANDREW, *supra* note 4, at 14.

non-indigenous peoples alike. The following discussion will develop the recent historical context within the Russian Federation (formerly the USSR) and the United States regarding the relationship between indigenous societies and nation-states. Approaching present day, the discussion will come to include the entire population of remote communities, the environmental challenges they face, and ultimately, the informal governance arising from informal social institutions that are developing out of necessity to allow these communities to take part in policies, national and international, affecting their adaptation to a changing environment.

Historically, the impact of nation-states taking interest and enforcing borders in the Arctic influenced the entire structure of remote indigenous societies. One defining example amongst indigenous, Arctic populations that differentiates them from non-indigenous is that they considered themselves sovereign peoples.³⁴ Unlike the modern state, the borders of the territories for which they claimed sovereignty were not defined lines, but instead a fluctuating boundary necessitated because of the more nomadic lifestyle demanded by the environment. Hunters and gatherers, fishermen, and herders—indigenous peoples throughout the Arctic—balanced a lifestyle according to the ebb and flow of natural forces and found themselves ill-equipped when it came to knowing and respecting political borders.

B. The Alaska-Russia Border

1. Historic Institutions on Each Side of the Border

The United States acquired Alaska from Russia in 1867, simultaneously acquiring a dispersed population of about 60,000 indigenous peoples, at a time when the United States Congress was ending its treaty making policies with Native Americans and beginning an era of assimilation policies.³⁵ Alaska remained a military district until the Organic Act in 1884, which established the precedent for native claims to land, and also treated Alaska Natives as United States citizens

34. Greenberg, *supra* note 6, at 1328.

35. Samuel Gottstein, *An Era Of Continued Neglect: Assessing the Impact of Congressional Exemptions for Alaska Natives*, 55 B.C. L. REV. 1261, 1262 (2014).

without separate sovereignty.³⁶

In contrast, Russia had a much more developed relationship with its indigenous peoples by the turn of the twentieth century. Tsarist Russia was well acquainted with the indigenous population of the North, identifying them as the Small Peoples of the North and encouraging Russian settlement upon entering into the Industrial Revolution.³⁷ As was the basis for Imperial Russian rule, customary law was imposed upon indigenous communities to uphold judicial norms, but this system of indirect rule allowed indigenous communities to administer their affairs with minimal interference from authorities.³⁸ While some communities were hit hard by taxation and resource exploitation, such as the Kamchatka region and the Far East, other indigenous communities, notably the Chukchi, were able to remain relatively autonomous and to diminish the impact of the colonizing culture, economy, and religion being imposed upon neighboring Arctic areas.³⁹

Following the 1917 Bolshevik Revolution, all regions of the U.S.S.R. felt the effects of “Sovietization” as the Kremlin sought out even the most remote communities to incorporate into the national cause⁴⁰ and established rule over indigenous populations.⁴¹ By the late 1920s, all Arctic communities had been brought under the umbrella of socialist collectivization policies, meaning that all property was confiscated and became the property of the State. More specifically, the State expropriated and transferred the reindeer of Arctic communities dependent upon them into larger herds, known as Collective Farms, and drafted native shepherds into “reindeer brigades.” Furthermore, the State quashed religious beliefs

36. Martha Hirschfield, *The Alaska Native Claims Settlement Act: Tribal Sovereignty and the Corporate Form*, 101 *Yale L.J.* 1334, 1335 (1998).

37. MCCANNON, *supra* note 3, at 149, 151.

38. JOHANNES ROHR, IWGIA, *INDIGENOUS PEOPLES IN THE RUSSIAN FEDERATION: IWGIA REPORT 18*, 17 (Diana Vinding & Kathrin Wessendorf eds., 2014).

39. See, e.g., Andrei A. Znamenski, “*Vague Sense of Belonging to the Russian Empire*”: *The Reindeer Chukchi’s Status in Nineteenth Century Northeastern Siberia*, 36 *ARCTIC ANTHROPOLOGY* 19 (1999).

40. Greenberg, *supra* note 6, at 1358.

41. Andrei V. Golovnev, *Indigenous Leadership in Northwestern Siberia: Traditional Patterns and Their Contemporary Manifestations*, 34 *ARCTIC ANTHROPOLOGY* 149, 156 (1997).

and required children to attend boarding schools far from their homelands.⁴² This meant the combining of multiple nationalities and the loss of traditional and social structures as indigenous peoples were organized into Soviet collectives. During the 1930s, the U.S.S.R. was organized into *okrugs* (regions), which would eventually lead to the complete dissolution of indigenous self-governance.⁴³

Three major legislative acts would come to shape today’s indigenous populations in Alaska: The Alaska Statehood Act, The Alaska Native Claims Settlement Act (ANCSA), and The Alaska National Interest Lands Conservation Act (ANILCA).⁴⁴ The Alaska Statehood Act of 1958 allowed the state to choose approximately 104 acres of land not yet claimed as federal land.⁴⁵ In 1971, ANCSA was passed, providing a one-time cash settlement of nearly one billion dollars to some 78,000 Alaska natives, along with forty-four million acres of public land.⁴⁶ The settlement and fee simple titles to the land were distributed through twelve newly created regional Native corporations and approximately 200 village corporations.⁴⁷ ANCSA extinguished aboriginal title to native lands and also dispossessed Alaska Natives of 320 million acres of traditional lands, including land on the North Slope.⁴⁸ The last Act, ANILCA, was passed in 1980 and developed in response to the unaddressed issue of subsistence rights. It gave people living in rural places in Alaska priority to hunt and fish on public lands.⁴⁹ It does not address Alaska Natives specifically and excludes those who live in the few areas classified as urban, allowing all who may be more reliant on subsistence living to have subsistence rights.

The middle decades of the twentieth century constituted an

42. Petra Rethman, *Deadly Dis-Ease: Medical Knowledge and Healing in Northern Kamchatka, Russia*, 23 *CULTURE, MED. & PSYCHIATRY* 197, 202 (1999).

43. Golovnev, *supra* note 41, at 156.

44. Wayne Edwards & Tara Natarajan, *ANCSA and ANILCA: Capabilities Failure?*, 17 *NATIVE STUD. REV.* 69, 82–83 (2008).

45. *Id.* at 82.

46. Lisa Drew, *Here’s Your Land, Now Make Money*, *NATIONAL WILDLIFE (WORLD EDITION)*, Dec. 91/Jan. 92, at 38, 39.

47. Edwards & Natarajan, *supra* note 44, at 83.

48. Jeffrey Aslan, *Building Alaska Native Village Resilience in a Post-Peak World*, 37 *VT. L. REV.* 239, 243 (2012).

49. Edwards & Natarajan, *supra* note 44, at 82.

era of limited autonomy for the indigenous peoples of the Arctic. Perhaps more importantly, these decades brought more substantial change to their ways of life than at any other time in history.⁵⁰ Yet, despite the social, economic, and political transformations, traditional cultural practices exist today.⁵¹ After the pressure to assimilate began to decrease, a revival of culture and identity emerged, in a form that could accommodate for modernity and globalization.⁵² Indeed, in every country where governments allowed for negotiations regarding measures of autonomy and land claims, indigenous peoples promptly presented coherent demands.⁵³

2. *International Arctic Institutions*

In 1989 Finland invited the eight Arctic states—the USSR, the United States, Canada, Denmark, Iceland, Norway, Sweden, and Finland—to Rovaniemi to begin talks on cooperation and environmental protections in the Arctic. In 1991, the Arctic Environmental Protection Strategy (AEPS) was agreed upon, establishing four working groups: the Arctic Monitoring and Assessment Program (AMAP), the Conservation of Arctic Flora and Fauna (CAFF), the Emergency Prevention, Preparedness and Response (EPPR), and the Protection of Arctic Marine Environment (PAME). AEPS was superseded in 1996 by the Arctic Council.⁵⁴

The Arctic Council consists of eight member states (as previously listed); six Permanent Participants made up of indigenous peoples Arctic-wide (the Arctic Athabaskan Council, the Aleut International Association, the Gwich'in Council International, the Inuit Circumpolar Council, the Russian Association of Indigenous Peoples, and the Saami Council); and a host of working groups (the aforementioned plus the Arctic Contaminants Action Program (ACAP) and the

50. Yvon Csonka & Peter Schweitzer, *Societies and Cultures: Change and Persistence*, in ARCTIC HUMAN DEVELOPMENT REPORT 45, 49 (Lassi Heininen & Chris Southcott eds., 2004), available at <http://www.svs.is/en/10-all-languages-content/28-ahdr-chapters-english>.

51. Greenberg, *supra* note 6, at 1329.

52. Csonka & Schweitzer, *supra* note 50, at 52.

53. *Id.* at 50.

54. Torbjørn Pedersen, *Debates over the Role of the Arctic Council*, 43 OCEAN DEV. & INT'L L. 146, 148 (2012).

Sustainable Development Working Group (SDWG)).⁵⁵ The Arctic Council works to promote international cooperation and coordination among Arctic States in environmental protection, including the natural environment as well as the human environment, and sustainable development, including use of natural resources, economic development, and adaptive capacity of local remote communities.⁵⁶

Nations continue to provide a governmental structure to the Arctic largely based on mutual benefit and cooperation, and the Arctic Council is as strong as ever,⁵⁷ displaying its ability to adjust to high-level issues—such as melting sea ice, international shipping, gas and oil exploitation, and migrating fish stocks—that, for many, seemed beyond its capacity.⁵⁸

The Arctic Council is by definition a “high level intergovernmental forum,” which operates on a different scale than the Arctic communities living out the realities of these transformations in their everyday lives—realities that often transcend national borders. Indeed, an Arctic community may have closer ties to communities in other parts of the Arctic beyond the national borders that contain it,⁵⁹ and with similar environmental conditions and culturally-tied peoples, transnational communities within the Arctic may have more relevant information to share with one another than with other communities within its own nation. While the Arctic Council provides an international voice, and nations’ policies now generally work to provide increasing rights to these communities, any legal framework that applies to transnational peoples is not legally binding on nations.⁶⁰ The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) comes closest to addressing such issues in

55. See ARCTIC COUNCIL (2014–2015), <http://www.arctic-Council.org/index.php/en> (last visited May 16, 2015).

56. Waliul Hasanat, *Diverse Soft-Law Cooperation Forms in the Arctic — Do They Complement or Contradict Each Other?*, 14 INT’L COMMUNITY L. REV. 173, 284–85 (2014).

57. Pedersen, *supra* note 54, at 152.

58. Timo Koivurova, *The Arctic Council: A Testing Ground for New International Environmental Governance*, 19 BROWN J. WORLD AFF. 131, 137–38 (2012).

59. Hasanat, *supra* note 56, at 282.

60. Timo Koivurova, *Sovereign States and Self-Determining Peoples: Carving Out a Place for Transnational Indigenous Peoples in a World of Sovereign States*, 12 INT’L COMMUNITY L. REV. 191, 203 (2010).

Article 36, stating:⁶¹

1. Indigenous peoples, in particular those divided by international borders, have the right to maintain and develop contacts, relations and cooperation, including activities for spiritual, cultural, political, economic and social purposes, with their own members as well as other peoples across borders.
2. States, in consultation and cooperation with indigenous peoples, shall take effective measures to facilitate the exercise and ensure the implementation of this right.

But even this proves to be insufficient as such communities are encouraged to maintain contacts, yet UNDRIP still maintains a framework of the sovereign nation-state within which each community must function.⁶² The United Nations Nuuk Declaration goes further, recommending that nation-states take measures to guarantee indigenous peoples' cross-border rights through legally binding conventions.⁶³ Yet a recommendation does not compel compliance, nor does it facilitate coordination between nations. So the question arises, when the Arctic is narrowed down to specific localities, and those localities traverse national borders, what structures are in place to address the shared issues of a transnational region?

3. *Formation of Regional Institutions*

Internally, in the USSR at the breakup of the Cold War, local and regional organizations that had been slowly forming were seen as accessible political forums for individuals from remote communities to approach with concerns ranging from indigenous rights to more localized concerns regarding their livelihoods and community conditions.⁶⁴ Local and regional indigenous organizations would come to function under the Russian Association of the Indigenous Peoples of the North (RAIPON), which was established by the Congress of

61. Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, U.N. Doc. A/RES/66/142 (Sept. 13, 2007).

62. Koivurova, *supra* note 58, at 210.

63. *Nuuk Arctic Declaration on the World Conference on Indigenous Peoples 2014*, 12 FOURTH WORLD J. 69, 74 (Winter 2014).

64. ROHR, *supra* note 38, at 24.

Indigenous Small-Numbered Peoples of the North, Siberia and the Far East held in 1989 and continuing thereafter every four years.⁶⁵ This council structure made up of the regional organizations formed a unifying nationwide decision making body.⁶⁶ With national advocacy and recognition, indigenous peoples could effectively be a part of the national and international scene. Beyond RAIPON, other international organizations were forming ties with Russian indigenous peoples representing overlapping missions: the Saami Council accepted the Russian Kola Saami Association as a member in 1992;⁶⁷ a Russian branch of the Inuit Circumpolar Council Conference was opened;⁶⁸ and, most notably Aleut International Association (AIA) combined with the Aleut associations on the Russian side of the Aleutian Islands in 1998.⁶⁹ AIA became a permanent participant of the Arctic Council in 1998.

Within the United States, Alaska Natives began to advocate for tribal sovereignty in the early 1980s largely to be a part of economic benefits from and decisions regarding extractive developments taking place as well as taking part in affecting hunting and fishing regulation.⁷⁰ While opposed by the state, Alaska Natives were designated by the Department of the Interior as recognized tribes in 1993, receiving the same privileges, immunities, and powers as other tribes recognized by the Federal Government.⁷¹ Divided into regional corporations and tribal villages, both local and regional tribal governments speak for their people and also represent tribal interests in co-managing national resource organizations such as the Alaska Beluga Whale Committee, Ice Seal Committee, Eskimo Walrus Commission, and Alaska Nanuuq Commission.⁷² Alaska has tribal membership in four major

65. *Id.*

66. *Id.*

67. *Id.*

68. *Id.*

69. *Id.* at 24–25.

70. Gottstein, *supra* note 35, at 1265.

71. Aslan, *supra* note 48, at 247.

72. JOEL P. CLEMENT, JOHN L. BENGTSON & BRENDAN P. KELLY, INTERAGENCY WORKING GRP. ON COORD. OF DOM. ENERGY DEV. AND PERMITTING IN ALASKA, MANAGING FOR THE FUTURE IN A RAPIDLY CHANGING ARCTIC: A REPORT TO THE PRESIDENT (2013).

organizations in the Arctic Council: the Arctic Athabaskan Council (formed in 2000 and made up of Alaskan and Canadian Athabaskan), the Aleut International Association (registered in 1998 made up of Alaskan and Russian Aleuts), the Gwich'in Council International (established in 1999 and made up of Alaskan and Canadian Gwich'in communities), and the Inuit Circumpolar Council (founded in 1978 and representing Inuit from Canada, Alaska, Russia and Greenland).⁷³

The end of the Cold War between the United States and the former USSR marked a time when Arctic indigenous organizations could finally take root in a landscape caught in a stalemate between the two influential nations. Prior to the end of the Cold War, forms of cooperation were stymied not only from the Arctic's stifled position during the military build-up, but also from a lack of recognition of the Arctic as a region: it was not generally recognized as a political or geographical destination in the international arena constituting international cooperation.⁷⁴ Yet, it is speculated that cooperation in the form of soft-law bodies is exactly the kind of governance the Arctic needs: its very nature lending itself more readily to adaptation as it involves a much wider spectrum of international players and forms of knowledge than does formal law and policy.⁷⁵

III. INFORMAL INSTITUTIONS

Formal governance is often based on government-sponsored data. However, these data either: a) are not trusted, b) do not reflect the plurality of social contexts on the ground, or c) are incomplete and lack social context particularly at local scales.⁷⁶ In order to develop more comprehensive and reliable ways of knowing, community-based observation networks (CBONs) are emerging as a powerful tool in enhancing local to regional

73. See ARCTIC COUNCIL (2014–2015), <http://www.arctic-Council.org/index.php/en>.

74. Lassi Heininen & Heather N. Nicol, *The Importance of Northern Dimension Foreign Policies in the Geopolitics of the Circumpolar North*, 12 *GEOPOLITICS* 133, 137 (2007).

75. Hasanat, *supra* note 56, at 298.

76. Marc J. Hetherington & John D. Nugent, *Explaining Public Support for Devolution: The Role of Political Trust*, in *WHAT IS IT ABOUT GOVERNMENT THAT AMERICANS DISLIKE?* 134–38 (John R. Hibbing & Elizabeth Theiss-Morse eds., 2001).

social adaptation. A CBON is a distributed array of human sensors in communities throughout a region who are able to observe their environments on a regular basis and, in this capacity, are capable of detecting events that indicate whether the environmental system is operating unusually.⁷⁷ As demands on common-pool resources, such as the industrial and environmental pressures found in the Bering Sea, increase, cooperative institutions arising from informal institutions which are governed and organized by resource users may be especially effective in advancing conservation goals.⁷⁸ Successful common-pool resource governance by local actors is dependent upon many factors. Some of these factors include: conditions that allow local leaders and harvesters to self-organize effective rules, effective communication and trust among users, sharing of common knowledge of the resource and cultural use, and users placing high value on the sustainability of the resource.⁷⁹ Similarities are found across indigenous science practices (which incorporate TLK) throughout the Bering Sea regarding cultural resource use patterns, and the value attached to maintaining indigenous ways of life that revolve around the health of the Bering Sea is extremely high. The United States-Russian border has disrupted effective communication and trust but informal institutions are developing that facilitate positive interaction, re-building camaraderie, discourse, and sharing “lessons learned”.

A. Community-based Observation Networks arising from Informal Social Institutions

In the past, nations have built policy, at least in theory, on scientific consensus related to issues of conservation, mitigation, adaptation and economy—a top-down approach to addressing issues in the Arctic.⁸⁰ Nation-states determine how

77. L. Alessa et al., *The Role of Indigenous Science and Local Knowledge in Integrated Observing Systems: Moving Toward Adaptive Capacity Indices and Early Warning Systems*, SUSTAINABILITY SCI. (2015) DOI: 10.1007/s11625-015-0295-7.

78. OSTROM, *supra* note 17.

79. Elinor Ostrom, “A General Framework for Analyzing Sustainability of Socio-Ecological Systems,” 325 SCI. 419, 419–22 (2009).

80. Tero Mustonen, *Rebirth of Indigenous Arctic Nations and Polar Resource Management: Critical Perspectives from Siberia and Sámi Areas of Finland*, 14(1) BIODIVERSITY 14, 19–27 (2013).

to best govern the region in accordance with international legal obligations and governance institutions; the ultimate voice is that of the eight nation-states.⁸¹

The need for alternative governance models within the Arctic have begun and have been employed. Increasingly, innovative practices within governance are developing in the Arctic that work to include local and indigenous voices in decision-making and research.⁸² Skepticism toward nation-led governance has emerged, viewing top-down approaches as paternalistic and outside-imposed change as counter-productive in the Arctic.⁸³ This view arises from the growing challenges faced by Arctic communities presented by ever-evolving desires by various nations to exploit natural resources, and incites discussion on developing a governance model based on a bottom-up system.⁸⁴ Such a system would rely upon a polycentric approach to governance that depends more heavily upon informal institutions over formal ones, favors non-state actors over state actors, and regulates through soft law organizations rather than hard law.⁸⁵

As with nations' governance decisions, Arctic communities are similarly not flawless in assessments of actions to be taken. Criticism of contemporary Arctic communities includes unsustainable hunting practices, overgrazing of pastures, and a willingness toward development of natural resources for economic advancement.⁸⁶ A change in governance models is simply a call for more decision-making to include local observatories, to develop forums for the exchange of views and knowledge in a meaningful way⁸⁷ and to create policy conditions that facilitate sustainable practices.

Local informal institutions that contribute to governance come about in communities both organically and through

81. Koivurova, *Arctic Council: A Testing Ground for New International Environmental Governance*, 19 BROWN J. WORLD AFF. 131, 132 (2012).

82. NORDEN, ARCTIC HUMAN DEVELOPMENT REPORT: REGIONAL PROCESSES AND GLOBAL LINKAGES 25 (Joan Nyman Larsen & Gail Fondahl eds., 2015).

83. Csonka & Schweitzer, *supra* note 50, at 64.

84. Mustonen, *supra* note 80, at 20.

85. Giliberto Capano, Jeremy Rayner & Anthony R. Zito, *Governance from the Bottom Up: Complexity and Divergence in Comparative Perspective*, 90 PUB. ADMIN. 56, 65 (2012).

86. Mustonen, *supra* note 84, at 4.

87. *Id.* at 3.

organized cooperation as issues requiring attention are identified. Informal governance refers to customary standards of conduct that allow for flexible non-codified forms of interaction,⁸⁸ and is characterized by a lesser degree of institutionalization, cooperation on an ad-hoc basis, and less complex decision making processes and agreements.⁸⁹ Examples of informal governance in the Arctic can range from more organized forms, such as the Alaska Nanuuq Commission which is a native group representing 15 Alaska villages that works with the U.S. Fish and Wildlife Service to advance the conservation of polar bears,⁹⁰ to governance that stems from more cultural norms. Local communities form the roots of informal governance and its structure is embedded with the existing informal social institutions such as customs, traditions, rules of conduct and beliefs within a community.

Acting as a forum for many forms of informal governance, the Arctic Council functions as a bridge between formal and some of the more organized informal forms of governance and is itself a soft-law institution. As mentioned previously, the Arctic Council goes a long way in giving indigenous peoples (though not necessarily actual communities) an international voice with the status of Permanent Participants. This allows representatives of indigenous groups to bring issues and concerns to the table in developing best practices for the region. The Arctic Council presents an effective method of bottom-up solutions that has played an increasingly important role in Arctic governance.⁹¹ However, within the Arctic Council indigenous peoples take a back seat to national actors and organizations because they carry no vote, nor does the Arctic Council have the power of enforcement, and it generally leaves sensitive issues such as territorial questions and fishing rights out of discussion.⁹² Despite these limitations, the Arctic

88. Jan van Tatenhove, Jeannette Mak & Duncan Liefferink, *The Inter-Play between Formal and Informal Practices*, 7 PERSP. ON EUR. POL. & SOC’Y 8, 12–13 (2006).

89. Colette de Roo et al., *Background Paper: Environmental Governance in the Marine Arctic*, ARCTIC TRANSFORM, 4 September 2008, at 18, available at <http://arctic-transform.org/download/EnvGovBP.pdf>.

90. See ALASKA NANUUQ COMMISSION, <http://thealaskananuqcommission.org/>.

91. SCOTT NICHOLAS ROMANIUK, GLOBAL ARCTIC: SOVEREIGNTY AND THE FUTURE OF THE NORTH 69–70 (2013).

92. MCCANNON, *supra* note 3, at 282.

Council's full potential is yet to be discovered⁹³ and the Arctic Council itself is ever-evolving to meet the needs of a fast-changing Arctic.⁹⁴

Adding to the methods of research used increasingly by soft-law organizations,⁹⁵ information gathered by local people can include generational, and geographically and temporally specific knowledge, inclusive of the social context of environmental and global change.⁹⁶ As a result, by including TLK, geographical sensitivity is narrowed, cultural sensitivity is heightened, and perhaps most importantly, the specific needs of a community are identified to help design specific adaptation strategies.⁹⁷

To further explore the role of CBONs in emergent informal social institutions, we will focus on selected villages within the Bering Sea region correlating with the study area of CONAS. This region, shared by the northeastern portion of the Russian Federation and the state of Alaska, is inhabited by diverse yet similar remote communities, which emerged from separate political contexts to face interrelated concerns for adapting to a changing environment. CONAS has partnered with eight indigenous communities bordering the Bering Sea in both the Russian Federation and Alaska, including those of the Siberian/St. Lawrence Island Yupik of the Bering Strait Region, and the Aleut/Unangax of the Aleutian Islands, both of which historically had extended family relations crossing over the present Russian-US border. A closer look at the use of CBONs to explore transnational trends and bring TLK to the forefront with potential to affect both informal governance by facilitating communication and the exchange of ideas, and national policy through bridging forums, such as the Arctic Council, becomes more clear.

It is the historic political separation between the Russian Federation and the United States that adds a unique aspect to the Arctic communities separated by the Bering Sea. As

93. ROMANIUK, *supra* note 91, at 70.

94. See ARCTIC COUNCIL, <http://www.arctic-Council.org/index.php/en/>.

95. Kenneth W. Abbott & Duncan Snidal, *Hard and Soft Law in International Governance*, 54 INT'L ORG. 421, 450 (2000).

96. Jonathan Andrew Ignatowski & Jon Rosales, *Identifying the Exposure of Two Subsistence Villages in Alaska to Climate Change Using Traditional Ecological Knowledge*, 121 CLIMATIC CHANGE 285, 296 (2013).

97. *Id.* at 297.

described earlier, the realities of peoples existing in similar environmental conditions and developing like means of self-sustaining lifestyles, were affected by the political context of the nation in which each community resided. When relations between the two nations began to normalize and communication and cooperation between Russian and Alaskan communities could formally take place, a plethora of relevant knowledge was discovered.

B. Community Observing Network for Adaptation and Security (CONAS)

CBONs have the less inhibited ability to fill a multi-faceted role of coordinating observing for the development of shared adaptation strategies that nation-states are as yet unprepared to coordinate on. Through a regionally focused lens, they explore issues relating to natural resources and environmental security.⁹⁸ These topics are addressed not as a national inquiry, but as local ones, impartially expanding to transnational concerns as necessary. The unique local perspectives that are attained through informal institutions, such as observations from CBONs, can be used immediately to help direct local governance, formal and informal, and also have potential to play a larger role in overall national and international policy regarding the Arctic and providing expanded means of adaptability. The direction of the research is guided by community leaders toward areas of interest and concern, the data are gathered by community members while quality control and data management occurs in partnership with universities and non-governmental organizations in order to create scientifically justifiable data products such as maps, and peer-reviewed reports.⁹⁹ In addition, CBONs create

98. Arctic security issues in this sense relate not to military security but focus most commonly on food security. Security can also include economic, cultural and, in the case of the Arctic, land security. All of these aspects must be sustainable in order to ensure a prosperous community. In the Arctic, these securities are tied to finding appropriate informed adaptation methods for mitigating the impact of eventual changes occurring in the far North. For a summary of threatened securities, see Gunter Weller, *Summary and Synthesis of the ACIA, in ARCTIC CLIMATE IMPACT ASSESSMENT 990* (2005), available at http://www.acia.uaf.edu/PDFs/ACIA_Science_Chapters_Final/ACIA_Ch18_Final.pdf.

99. VICTORIA GOFMAN & MARYANN SMITH, *BERING SEA SUB-NETWORK PILOT PHASE FINAL REPORT* (2009), available at <https://oaarchive.arctic-council.org/handle/11374/>

opportunities for community members and leaders to have face-to-face discussions about issues affecting their communities and how they may act on new knowledge.

The importance of thoroughly documenting information on the borders of transnational areas can be exemplified in recent efforts involving peoples on both the Russian and Alaskan sides of the Bering Sea. Common concerns reveal themselves, through monitoring of subsistence species in the Bering Sea as a priority concern amongst villages situated remotely on its shores,¹⁰⁰ or, conversely, revealing entire areas central to communities' daily lives that are not represented in the changing social, political and environmental climate.¹⁰¹

In a recent study using data collected by CONAS, maps were created to compare seasonal use areas, lifetime use areas and "calorie-sheds" of specified communities in the Bering Sea ecosystem. The interest in defining these areas stems from concerns of potential impact of industrial activity and shipping routes on subsistence species, as well as effects of climate change. The maps were a result of combining biological data with data based in local systematic observations. When comparing the three mapping techniques produced by analyzing data based on different temporal scales the extent and nature of human use of the environment within across borders was resolved. From seasonal use area maps, awareness of the dynamic nature of subsistence patterns can be used to plan for and mitigate disturbances in the immediate future according to current seasonal conditions and can be used to track change over time; lifetime use areas result in a more comprehensive indicator of potential conflicts to be used in planning and regulation; the calorie-shed mapping, defined as where the food consumed in a community may have come from, extends the area of influence for each community even farther beyond current and historic use areas. Comprehensively, mapping out the full temporal range of the relationship between local communities and the species that

206.

100. Maryann Fidel et al., *Walrus Harvest Locations Reflect Adaptation: A Contribution from a Community-Based Observation Network in the Bering Sea*, 37 POLAR GEOGRAPHY 48, 55 (2014).

101. Susan A. Crate, *Elder Knowledge and Sustainable Livelihoods in Post-Soviet Russia: Finding Dialogue across the Generations*, 43 ARCTIC ANTHROPOLOGY 40, 49 (2006).

are most important toward that community’s food security provides a potential opportunity for locals—decision makers and individuals alike—to evaluate whether and how outside activity in both nations might affect harvested species.¹⁰² In this context CBONs are able to contribute the best possible science based on TLK which may inform informal governance and may turn informal practice into a formal policy over time.

At first glance, the scope of this study seems quite specific, and rightfully so. In the study cited above, the Alaskan communities of Gambell, Savoonga and Togiak were chosen as case studies because of harvest data available.¹⁰³ It represents a small piece in the puzzle of intricate relationships that occur within the complex Arctic ecosystem. CBONs like CONAS fills a niche in understanding pan-arctic issues as its coverage area spans the Bering Sea representing communities on both Russian and Alaskan sides. Similarities between the communities include dependence upon a subsistence-based lifestyle from the Bering Sea as each community is not connected to a road system thereby making store-bought food less available and expensive.¹⁰⁴ However, the region affecting these communities easily extends over national maritime borders presenting a clear interrelatedness between the transnational resources.

C. Shared Beringian Heritage Program

There have been strides by both nations to improve cooperative efforts in substantial and innovative ways. One example of this is the Shared Beringian Heritage Program, which is a shared expanse of land envisioned as a transboundary protected area. Beringia, an area consisting of both land and sea that was once the land bridge between the Asian and North American continents, which includes

102. Henry P. Huntington et al., *Mapping Human Interaction with the Bering Sea Ecosystem: Comparing Seasonal Use Areas, Lifetime Use Areas, and "Calorie-Sheds,"* 94 DEEP SEA RES. PART II: TOPICAL STUD. OCEANOGRAPHY 292 (2013).

103. Huntington et al., *supra* note 102, at 294. The availability of subsistence harvest data developed during the Bering Sea Project directed the choice of villages used in the BSSN study. *See also* James A. Fall et al., *Continuity and Change in Subsistence Harvests in Five Bering Sea Communities: Akutan, Emmonak, Savoonga, St. Paul, and Togiak,* 94 DEEP SEA RES. PART II: TOPICAL STUD. OCEANOGRAPHY 274 (2013).

104. Fidel et al., *supra* note 100.

Northeastern Russia, Alaska and a part of Northwestern Canada, provides an unparalleled opportunity for study of the ecology, archaeology, and cultural heritage.¹⁰⁵ While a transboundary protected area has yet to become full reality and its future is affected by fluctuating political climates, collaboration toward such an effort has continued since the mid-1980s, showing a promising cooperation amongst these two nations.¹⁰⁶

D. Bering Strait Messenger Network

Other forms of communication to assist adaptation have also occurred in the region. The Bering Strait Messenger Network (BSMN) is a product of the recognized need for transnational communication outside of national structures. Hosted by the Institute of the North, BSMN provides a topic of discussion monthly open for all interested to call in to listen or participate. Past topics have included, improving Arctic communications, food security, increased Arctic activity, Native language retention and many more topics of interest. Exemplifying the different political and economic cultures under which these groups have developed, and how increased communication can help facilitate successful adaptation the meeting in April 2014 was devoted to sustainable Arctic energy and clearly demonstrated the different environments of the two nations and the desire to learn from each other. While the State of Alaska has spent \$200 million on renewable energy in the past six years working to develop wind, geothermal, hydroelectric and solar energy options to take the place of diesel energy, Russia has invested much less in alternative energy sources relying instead on individual diesel generators and central power plants. Interest in developing alternative energy sources exist, but high costs and uncertainty about methods inhibit exploration. However, developing geothermal energy is a technique gaining interest in Chukotka, especially with the example set in Alaska.¹⁰⁷ On the other side, Russia

105. See *Shared Beringian Heritage Program*, U.S. NAT'L PARK SERVICE, <http://www.nps.gov/akso/beringia>.

106. *Id.*

107. INSTITUTE OF THE NORTH, DRAFT MEETING MINUTES: BERING STRAIT MESSENGER NETWORK MONTHLY THEMATIC MEETING (April 18, 2014), *available at* https://www.institutenorth.org/assets/images/uploads/general/BSMN_April_Meeting_

has focused development into nuclear energy and has expanded its nuclear energy program since 2006, looking to double its nuclear capacity by 2030 and reduce gas power energy.¹⁰⁸ Communities in Alaska would like to learn more about the use of nuclear energies from their neighbors in Russia.¹⁰⁹

E. Culture Camps

The Urban Unangax' Culture Camp is another example of community-based cooperation amongst the peoples of the Bering Sea. Sponsored by the regional non-profit tribal organization Aleutian Pribilof Islands Association (APIA), the yearly Urban Culture Camp brings together youth and adults from the greater Aleutian Islands region to participate in hands-on cultural activities and promote camaraderie amongst the Aleut community. This resurgence of Native pride has increased in the past decades to rekindle cultural heritage suppressed during the prior period dominated by Russian and American influence.¹¹⁰ Today, fewer than a dozen Unangax communities remain within Alaska, which still hosts the majority of Unangax with some 1,700 of the roughly 3,000 tribal members worldwide. Nikolskoye, a community on Bering Island in the Commander Islands of the Russian Federation, is home to 300 Unangax, who the Russians took to the island in the early 1800s.¹¹¹

All of the previously mentioned programs share increased communication and camaraderie across a border that has historically hindered relationships. Effective communication is essential in achieving solutions to shared challenges in resource use¹¹² and can facilitate a sharing of lessons learned

Minutes.pdf [hereinafter DRAFT MEETING MINUTES].

108. SUZANNE OXENSTIERNA & VELI-PEKKA TYNKKYNNEN, RUSSIAN ENERGY AND SECURITY UP TO 2030, 150 (2014).

109. DRAFT MEETING MINUTES, *supra* note 108.

110. See APIA, <http://www.apiai.org/>.

111. See *History*, APIA, <http://www.apiai.org/culture-History/history/> (includes a condensed version of “Unangax: Coastal People of Far Southwestern Alaska,” a chapter written by Dr. Douglas Veltre to be published in *Alaska’s First Peoples*. Dr. Veltre has conducted archaeological and ethnohistorical research in the Aleutian and Pribilof islands since 1971.).

112. Elinor Ostrom, *Coping with Tragedies of the Commons*, 2(1) ANN. REV. POL. SCI. 493 (1999).

while residents are actively adapting. Despite dominance by the powerful nation-states, the remote peoples of the Russian Federation and Alaska are developing their own ways to share information, revitalize culture, and come together in a unified voice to affect the kind of change they want to see. In terms of adaptation, with the goal of thriving in place, this kind of participation is paramount.

IV. FACILITATING EMERGENCE OF INFORMAL INSTITUTIONS

Remote Arctic communities are emerging to form a collective set of voices that extend beyond the borders that have recently defined them. In the Bering Sea region, peoples of the Arctic share common histories linking their future securities and their abilities to adapt in a rapidly changing environment. Identifying opportunities and vulnerabilities faced by these communities allows for proactive, rather than reactive, adaptive responses and the co-production of accurate scientific knowledge, informed by indigenous science, that will aid policy makers and community leaders in developing responsible and equitable Arctic policies.

In an age where forms of communication and complementing forums exist, remote communities have more opportunity than ever to take larger roles in the future securities of their homelands. Envisioning an Arctic without borders for the purpose of best meeting the needs of the Arctic social-ecological system amidst a changing environmental and geopolitical climate may not be realistic given our world political context, but local and soft-law entities have persistently taken larger roles in the pan-Arctic scene, and their contributions are becoming ever more numerous. The peoples of the Bering Sea region rely on their abilities of observation for their livelihoods, allowing for detailed and complex descriptions of local ecosystems through ingrained and generational knowledge.¹¹³ By incorporating this invaluable knowledge into other forms of information gathering and by understanding the means to improve

113. Henry P. Huntington et al., *Local and Traditional Knowledge Regarding the Bering Sea Ecosystem: Selected Results from Five Indigenous Communities*, 94 DEEP SEA RES. PART II: TOPICAL STUD. OCEANOGRAPHY 327 (2013).

adaptive capacity, vulnerability analysis of this and other regions can offer better visions of a coordinated Arctic at both local and global scales.¹¹⁴

A recent effort to facilitate the coordination of informal social institutions is the Arctic Adaptation Exchange Portal (AAEP), which was one of the products of the Canadian chairmanship of the Arctic Council. While several websites are dedicated to arctic issues, the AAEP aims to be accessible to communities “at tundra level.” More specifically, efforts are underway to provide datasets necessary to meaningfully respond to change on a day-to-day basis, as well as to provide a virtual exchange to share lessons learned and to better communicate with policy-makers.

During the U.S. chairmanship (2015-2017), through the Arctic Council’s Sustainable Development Working Group, the AAEP will be further developed as an online space where communities from across the circumpolar north can meet online to access and share adaptation resources and knowledge:

“Coming together is a beginning. Keeping together is progress, Working together is success.” – Henry Ford

Without question, isolated Arctic communities are shaped by their history, influenced by their recent past, directed by current political structures, and changed by the changing landscape that dominates the activities of their lives. Adaptability, both of Arctic communities through the emergence of cooperative efforts arising from informal social institutions and the policies and actions of nations, will determine the resilience of all involved. Ideally this will chart a course for a future Arctic that is based on collaboration rather than conflict.

114. James D. Ford & Tristan Pearce, *Climate Change Vulnerability and Adaptation Research Focusing on the Inuit Subsistence Sector in Canada: Directions for Future Research*, 56(2) CANADIAN GEOGRAPHER 275–87 (2012).