

## Sustainability, Equity, and Natural Resource Development in Northwest Siberia and Arctic Alaska

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*Today, the search for new energy sources continues unabated throughout the North. At the same time, scientists are increasingly concerned over the degradation of the Arctic and sub-Arctic environment stemming from fossil fuel and other large-scale energy projects already underway. Similar apprehensions are expressed by indigenous peoples who have often suffered from the impact of such development. While the most dramatic evidence of environmental devastation and social disruption is found in the Russian North, serious problems are by no means confined to that area alone. Nor are these negative effects necessarily limited to the borders of the country in which they originated. Indeed, the deleterious environmental impact of our global industrial economy has become sufficiently profound that social analysts are beginning to ask whether development strategies that cause such harm to the Arctic and sub-Arctic region should continue; and if not, what should replace them. This article addresses these issues as they relate to questions of sustainability, equity, political empowerment, and human rights in northwest Siberia and northern North America.*

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**KEY WORDS:** sustainable development; social equity; natural resources; northwest Siberia and Arctic Alaska; indigenous peoples.

### INTRODUCTION

In recent years, scientists have become increasingly concerned over damage to the Arctic environment caused by petroleum, hydroelectric, mining, and other large-scale development projects. Additional apprehensions are expressed as the Circumpolar North becomes a major depository for

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organic pollutants and heavy metals derived from sources both within and outside the Arctic. Thinning of the ozone layer with a corresponding increase in UV-radiation is expected to have significant effects on biological organisms in the region, which in turn, will promote further disturbance in the atmosphere. The impact of human activities encourages melting of the northern permafrost, thereby creating the potential for destroying large portions of tundra ecosystems. Risks associated with the release of radionuclides into the environment have also multiplied, of which extensive military dumping of nuclear wastes into the Arctic Ocean is but one example.<sup>3</sup>

While the most dramatic evidence of environmental devastation and rising health problems is found in the Russian North, serious threats are by no means confined to that area alone. Nor are the negative effects limited to the borders of the countries in which they originated. Indeed, the deleterious ecological impact of our global industrial economy has become sufficiently profound that growing numbers of policymakers are beginning to ask whether present natural resource development strategies causing such harm to the Arctic should continue, and if not, what should take their place.<sup>4</sup>

Apprehension over this environmental damage extends well beyond the policymaking communities. In Russia during the 1980s, extensive public discussion and protest followed new scientific reports addressing the overwhelmingly negative ecological impact of industrial development on the land and peoples of Siberia, the Far East, and other regions of the former Soviet Union (Pika and Prokhorov, 1989; Taksami, 1989; Arikayen, 1991; Roginko, 1992). Popular pressure was also influential in bringing about the cancellation of the large-scale hydroelectric project in the Chukchi Autonomous Okrug (Andreeva, 1989), and postponement of the massive gas development in Yamal Peninsula (Sizy, 1988).

In Alaska, similar protests resulted from the massive oil development at Prudhoe Bay which destroyed thousands of acres of wildlife habitat, caused declines in wildlife populations, and left hundreds of open pits containing millions of gallons of oil industry waste (U.S. Fish & Wildlife Service, 1987; NRDC, 1991). The concern was of sufficient magnitude that it led the director of the federal agency regulating the TransAlaska pipeline to warn in a 1993 Congressional subcommittee hearing of a potentially disastrous accident stemming from a disregard for safety regulations, poor

<sup>3</sup>Several recent conferences have dealt directly with these matters, including the *Workshop on Arctic Contamination*, convened by the U.S. Interagency Arctic Research Policy Committee (IARPC, 1993); and *Global Change and Arctic Terrestrial Ecosystems* (Norwegian Institute for Nature Research, 1993).

<sup>4</sup>See, for example, the proceedings of the 1992 policy conference, *New Perspectives on the Arctic: The Changing Role of the United States in the Circumpolar North* (Anonymous, 1992); and the summary of the second international Ministerial Conference on the Protection of the Arctic Environment (Thing, 1993).

management, and “. . . a repressive atmosphere at Alyeska [pipeline company] that punished or intimidated those who are aware of problems or try to shed light on them for corrective action” (Salpukas, 1993).

These problems have stimulated in the U.S. an extensive debate over wilderness preservation vs. the proposed exploration of petroleum deposits on the coastal plain of the Arctic National Wildlife Refuge in northeast Alaska (Westermeyer, 1987; Watkins, 1988; U.S. Fish and Wildlife Service, 1988; BP Exploration, 1991). Discovery of a new oil field in the Beaufort Sea adjacent to the wildlife refuge has raised further questions about the dangers of offshore oil drilling under fragile Arctic conditions (Fararo, 1993; Miller et al., 1993; Tyson, 1993).

So too in Canada, and particularly in the region surrounding Hudson Bay, efforts to dramatically expand hydro-electric power projects are facing challenges from opposing parties who perceive such developments as highly detrimental to the flora and fauna of this sub-Arctic region (Beyea et al., 1990; Behmann, 1991; Hyde, 1993). In Greenland and Scandinavian Lapland, comparable debates are occurring over what constitutes proper utilization of natural resources in these areas (Heininen, 1992).

A second issue, less thoroughly analyzed but also of vital importance, concerns the environmental and social impact of natural resource development on northern indigenous peoples and their response. A long history of land usurpation and environmental degradation has left these populations and their subsistence economies highly vulnerable to human rights abuse. Particularly acute has been the impact of assimilationist policies of North American and European governments which for years denigrated native language and culture, eventually culminating in a substantial loss of cultural diversity as well as ecosystem integrity. As for the nonrenewable resources contained in their land, by far the largest portion has been appropriated by regional and federal governments to be used by these entities or made available to private or state corporations that extracted its resources with relatively little if any of its wealth being directly returned to improve the economic and social well-being of the people from whence it came.

In a recent effort to address these twin problems of environmental degradation and social inequity, the ministerial representatives of the eight Arctic-rim countries sat down and discussed the need for an Arctic Environmental Protection Strategy. At the close of the meeting, it was agreed that all would cooperate in ensuring “. . . the protection of the Arctic environment and its sustainable and equitable development, while protecting the cultures of indigenous peoples” (IARPC, 1991, p. 30). It must be acknowledged, however, that although this initial effort at multilateral cooperation produced a number of positive recommendations, including observer status for indigenous nongovernmental organizations and scientific monitoring of changing environmental conditions, the

delegates were unwilling to address problems associated with the utilization of the Arctic's natural resources or the environmental effects of military activities — both topics perceived by key participants as being too politically sensitive for international discussion, let alone collective response (Tennberg, 1992).

It appears, therefore, that while environmental threats to the northern ecosystem and its peoples continue to grow, competing economic and political interests, along with conflicting ideological and cultural outlooks, seriously hamper additional multilateral activity. On the other hand, if the constraints are reduced, more effective national and international efforts can be expected. Under the circumstances, deepening our grasp of these constraints becomes an important first step.

### NORTHERN DEVELOPMENT AND THE GLOBAL ECONOMY

Most would agree that the ecological and social problems of the North are closely linked to global economic activities associated with the industrial countries of Western Europe, North America, and the former Soviet Union. These activities not only include largely unrestrained nonrenewable resource development, but also the overharvesting of renewable resources more rapidly than they can be regenerated. Under the hallmark of "industrial progress," this degradation has been promoted by American and European capitalist economies and by the command economies of the former Soviet Union.

However, no policymakers in either East or West have adequately addressed the problem from a holistic ecological perspective.<sup>5</sup> Instead, both economies have devoted most of their attention to a drive to accumulate capital, expand production, and develop greater technical means of exploiting nature. Indeed, the recent demise of the Soviet Union can be traced in part to its failure to accumulate at a rapid pace, resulting in serious consumer shortages and a loss of political legitimacy.<sup>6</sup> Under such circumstances, the effort to limit economic activity damaging to the Arctic comes in direct conflict with the requirements of continued growth essential to capitalist development.

If this analysis is correct, the obvious solution to the problem of environmental destruction caused by past and present development practices in

<sup>5</sup>By holistic, we mean a view which rejects the separation of nature and society into two distinct realms with its objectification and domination of the former, in favor of a perspective that lays greater stress on human actions being part of the natural world.

<sup>6</sup>In that the Soviet Union based its continued existence on capital accumulation no less than private enterprise economies, it has been suggested by some that such a political entity would be better designated "state capitalist" rather than socialist or communist. The ease with which many former Soviet leaders in city and countryside have assumed the mantle of capitalist entrepreneurs would appear to support such a claim (for further analysis, see Resnick and Wolff (1992, 1993)).

technically advanced Arctic-rim countries is to reduce the present "ecological demand" at both the *input* end (economic growth) and *output* end (waste). However, success in such an endeavor requires a basic transformation in the economies of these countries whereby the profit motive is diminished in favor of one more broadly attuned to the needs of the civil society and the environment in which its members reside. Given this magnitude of change at this point in time, such an effort is difficult even to envision.

Instead, government and industrial leaders promote the view that new technical knowledge will eventually overcome our ecological problems thereby enabling the continuation of economic growth with fewer environmental penalties. But even a brief look at the past suggests that in many instances, the seeking of scientific breakthroughs — rather than solving problems associated with a deteriorating environment — actually distance us from addressing those problems (Leiss, 1990). While technological improvements are certainly to be encouraged, they appear not to offer a final solution to the problem of how best to develop northern resources. Thus, the search for other alternatives continues to be important.

One substantial effort in this regard is the enormous attention being directed to the concept of sustainable development — referred to in the oft-quoted 1987 United Nations report, *Our Common future*, as development which "... meets the needs of the present without compromising the ability of future generations to meet their own needs." A particularly appealing feature of the concept is that it brings together in a common framework the limits which nature imposes on human beings and the potential for new directions in social development that is contained within those limits. On the negative side, there is a strong tendency to view this process as a simple compromise between economic growth and environmentalism, a perspective which largely disregards the fact that sustainability entails societal as well as natural limitations.<sup>7</sup>

Sustainable development is also a rather ambiguous term open to numerous interpretations with varying degrees of compatibility. Indeed, quite different rationales often underlie commonly stated commitments to promote sustainable forms of natural resource utilization in the North. Under such circumstances, satisfactory resolution of conflicts associated with environmental policy decisions requires that these differing rationales be recognized and addressed, including discussion of the premises and special interests that help to shape them.

The most common rationale underlying present-day approaches to sustainable development is the perceived need to balance economic

<sup>7</sup>For example, one problem long associated with a market-structured economy is that commodities are largely reproduced for those who can buy them rather than for those who need them — a process that actively encourages artificial demands, produces waste in the production process, and promotes inequalities in the distribution of the benefits and burdens within society.

growth with protection of the environment. The appeal of economic growth for governments is multifaceted: it clearly serves as a crucial bulwark for the maintenance of national power. It also reduces the pressure to reallocate national income to combat social deprivation. Thus, as stated by the economist Herman Daly (1977, p. 8): "It offers the prospect of more for all with sacrifice for none" — a rather attractive proposal, particularly in these times of increasing economic insecurity.

A more culturally-oriented rationale for the sustainable utilization of the Arctic's natural resources can be found in statements of northern indigenous groups such as the Inuit Circumpolar Conference. In their 1992 position paper outlining a Comprehensive Arctic Policy, they stress that "Northern development must refer to more than economic growth. It must allow for and facilitate spiritual, social, and cultural development" (ICC, 1992, p. 32). This emphasis on the spiritual, social, and cultural, interjects a new human ecological perspective to environmental issues often lacking in other approaches associated with sustainability. But it still does not address the finiteness of Arctic resources. As the economist Robert Costanza (1991) has stated, economic growth, which is an increase in quantity, cannot indefinitely be sustained on a finite planet. He goes on to suggest that a distinction be made between growth and development in which the latter represents an improvement in the quality of life without necessarily causing an increase in quantity of resources consumed.<sup>8</sup> This cultural approach provides a worthy challenge to the mainstream views of sustainable development in the Arctic and elsewhere. But for it to have any chance of success, it must also be viewed in relation to the second major problem referred to earlier: the formidable unequal distribution of wealth drawn from the region's natural resources.

### PETROLEUM DEVELOPMENT IN NORTHWEST SIBERIA AND ARCTIC ALASKA

Over the past several years, we have been exploring this latter issue as it relates to the impact of natural resource utilization in northwest Siberia and Arctic Alaska. Both localities are experiencing large-scale petroleum development actively backed by their federal governments. Both have indigenous populations with diverging views of the soundness of this

<sup>8</sup>For a closely related perspective offered by two Russian scientists, see Leskin and Andreeva (1993).

development. And both have received the attention of environmental organizations sharply critical of government and corporate (or state ministerial) policies as being environmentally damaging, economically wasteful, and culturally harmful.

Although the biological and physical features of these two regions are relatively similar, any social and ecological comparison faces several problems. One difficulty stems from the impact of the dramatic globalization of economy referred to earlier. Another is the breadth of ecological and climatological changes brought on by the exponential growth in world consumption of fossil fuels and other energy sources. In both instances, as clearly recognized environmental and national boundaries lose their definitive character, the ability to draw comparisons between them becomes more difficult.

At a sociopolitical level, a similar pattern emerges. On the one hand, Arctic Alaska and northern Russia are sparsely populated areas whose fate has been largely in the hands of political decision-makers and private or state corporate industrial managers residing in distant lands — individuals and agencies experiencing few incentives to focus on the specific circumstances of the far north in making their decisions. These regions are also similar in that they constitute homelands for indigenous peoples whose aboriginal rights have never been completely extinguished and whose leadership has grown increasingly sophisticated in asserting claims both to land and natural resources and to self-determination.

More negatively, there has been a tendency among those who study the political economies of North America and Russia to treat the capitalist structure of the former and the former socialist structure of the latter as distinct “models” existing independently, whereas in fact, within the twentieth century, capitalism and socialism have been formed in interaction with one another, making any effort at comparison considerably more complex.

A more immediate problem in comparing contemporary Arctic environmental and social policies and practice in the two regions has to do with the rapidity and extent of change occurring in Russia as a result of recent political and economic upheavals; followed by that country's decision to increase oil and other natural resource exports to obtain much needed hard currency. Given these methodological difficulties, we nevertheless felt that a comparative study of petroleum development in northwest Siberia and north Alaska would provide a sufficient number of valuable insights to make such an endeavor worth pursuing.

## Gas Development in Yamal Peninsula

In western Siberia, oil and gas development has expanded dramatically over the past several decades. Stretching from the Ural Mountains in the west to Novosibirsk in the south, this region produces 78% of the Russia's oil and 84% of its natural gas; and it is expected to increase its petrochemical industry significantly within the next decade. The area is also inhabited by seven indigenous native populations as well as a much larger number of immigrant workers. The Yamal-Nenets and Khanty-Mansi Autonomous Regions, situated within the Tyumen *Oblast* [province], represent the center of this development, producing many billions of cubic meters of gas and millions of tons of oil annually. However, the ecological and social costs have also been tremendous as existing oil, gas, and other forms of industrial production pollute air, water, and land to an almost unimaginable extent (Ziegler, 1987; Pryde, 1991; Peterson, 1993).

Our research was largely focused on the Yamal-Nenets Autonomous *Okrug* [region], including Yamal Peninsula, a large parcel of land jutting out into the Kara Sea above the Arctic Circle. Today, the total population of the *okrug* is approximately one half million of which indigenous Nenets and Khanty represent a little over 30,000.<sup>9</sup> Yamal Peninsula's physical structure is unique with permafrost over 300 meters deep in some areas. Lakes and rivers are rich with fish, and on the tundra reside over 210,000 reindeer, the majority of them under the control of several state farms. The peninsula is also the location of Russia's largest known untapped gas reserves.<sup>10</sup>

The earliest sedentary peoples of Yamal hunted caribou on the tundra, harpooned seals, walruses, and beluga on the waters and ice of the Kara Sea, and caught white fish in thousands of tundra rivers and lakes. About 1000 years ago, Nenets moved into the area. Eventually assimilating the earlier inhabitants, they followed a nomadic lifestyle based on reindeer breeding, as did a number of Khanty who also settled in the region. Arctic pastoralists, the Yamal Nenets and Khanty traveled great distances up and down the peninsula, moving from northern tundra pastures in summer to the more protected subarctic taiga in winter. By 1900, a few families had amassed thousands of reindeer, but most herds were much smaller, ranging from several dozen to several hundred. The culture and technology of the Nenets and Khanty were well adapted to the

<sup>9</sup>The exact population is 495,200 of which the indigenous peoples are 30,226 or 6.4%. The largest of these are the Nenets with a little over 19,000, most of whom live in rural areas and engage in traditional occupations such as reindeer breeding, hunting, and fishing (Harachi, 1992).

<sup>10</sup>Residing on the peninsula itself are approximately 7000 Nenets and a few Khanty along with another 7-10,000 non-native "newcomers." In peak periods of exploration and construction, as many as 10,000 temporary non-indigenous workers, engineers, and geologists may also be present in the region of the Bovanenkovo gas field and railroad.





Fig. 1. Yamal-Nenets autonomous region.

nomad pastoralist lifestyle of this Arctic environment. Traditional social institutions based on clan membership allowed them to share animals and food, unite and divide herds, and use all nearby resources. Religion and other cultural beliefs stressed respect for the land and its wealth (Fig. 1).

Beginning in the early 1930s, Yamal and other regions of the Russian north underwent a dramatic series of changes.<sup>11</sup> Following Stalin's vision of socialist development, the Soviet government forced Nenets and Khanty reindeer breeders on to newly established collective farms (*kolkhozy*) while prosecuting the rich *kulak* owners. Boarding schools were also established, first for children of nomadic families, and later for those of settled villagers as well. Turning children over to state-run schools eventually led to serious adjustment problems for young people who, after 10

<sup>11</sup>For an excellent brief overview of these events, see Vakhtin (1992).

or more years of Soviet education, retained little knowledge of their parent's traditional subsistence economy, family life, and native language. Three decades later, the collective farms were transformed again into state-owned "soviet farms" (*sovkhozy*). Deprived of their lands, subsistence rights, and reindeer, most Nenets of Yamal became hired workers in reindeer breeding state enterprises, although about 1750 indigenous residents, comprising 343 households, still have small private herds, living on the tundra and more southern taiga largely separate from the collective economic system.

It should be noted, however, that prior to the discovery of huge gas deposits in Yamal, the region's economy had once again become stabilized. This included the establishment of sustainable fishing and hunting enterprises along with the reindeer breeding industry. Severe problems of tuberculosis among the young were also largely brought under control. And while boarding schools brought adjustment difficulties for parents as well as children, the latter did have the opportunity to continue their education beyond the primary level. Special incentives including financial support enabled indigenous students with demonstrated academic abilities to enter higher level educational institutes and universities as well.<sup>12</sup>

In the early 1980s, Bovanenkovo and several other major gas fields were discovered in the west-central sector of Yamal Peninsula making the region a prime target for future development. Given their immense potential, large numbers of non-native "newcomers" were soon drawn to the area by offers of high wages and improved housing associated with the expanding petroleum industry. At this same time, a law was passed replacing national minority *okrugs* with autonomous ones, removing in the process all reference to native peoples. Election to these new administrative bodies was by equal suffrage, which meant that the indigenous population, by now a small minority, were excluded from any meaningful participation in the political decision-making process. As a result, when construction began on a railroad in southern Yamal that eventually destroyed 594,000 hectares of pasture and more than 24,000 reindeer, local indigenous leaders were unable to mount effective resistance (Vakhtin, 1992, p. 24).

While giving little attention to the needs of the Nenets, Khanty, and other indigenous peoples, the Yamal-Nenets Okrug administration did demand from regional and central government authorities compensation

<sup>12</sup>At the conclusion of their schooling, approximately 50% of male students returned to their home region whereas only 10% of female students did so. Given the important responsibilities carried by women in tundra life, this decision by young women raised serious economic and social problems in rural settlements.

for the steadily expanding land utilized by the oil and gas ministries for railroad and pipeline construction. Their appeals, however, met with little success. By 1987, without an environmental impact assessment, and largely bypassing the demands of the local administration and indigenous population, preliminary construction began in the Bovanenkovo gas field. Work was also begun on building a railroad and adjacent series of pipelines that would travel down the center of the peninsula and then west, across the Kara Sea basin at Baidaratskaya Bay, eventually reaching the industrial centers of eastern and western Europe. Recognizing that these efforts would seriously disrupt the Nenets and Khanty subsistence-based economy, the regional and Moscow-based gas ministries acknowledged that some compensation should be given to local native residents — although no specific amount was ever decided upon.

Two years later, after assessing the extremely high costs of the project, all activities aimed at the immediate “all-out-development” of Yamal were temporarily suspended.<sup>13</sup> Other factors influencing this decision included opposition by the newly formed State Committee for Environmental Protection, along with protests by local administrative bodies, indigenous peoples, and various environmental organizations (Vitebsky, 1990). These protests had been initiated when it became obvious that development of this new region, the last resource reserve of the Tyumen North, would be affected by the same ecologically destructive industrial methods as had been practiced in the nearby Urenogy, Zapolarny, and Medvezhy fields of the Pur-Tazov district.

Just to the south of Yamal in the Khanty-Mansi autonomous region, an earlier petroleum development had had a similar devastating impact on the Nenets and Khanty people living in that area.<sup>14</sup> In some localities, as much as a third of summer pasture had been taken over by oil ministries for construction purposes, forcing greater overgrazing on the remaining tundra. Those engaged in commercial fishing on the Ob River basin had seen their waters seriously contaminated by pollutants flowing north from southern industrial centers. Funds designated by Moscow state planning agencies for improved housing, education, health services, and vocational retraining of the rural indigenous populous, were regularly siphoned off by local and regional administrations and then reallocated to larger towns and cities to be used for construction of administrative buildings, recreational centers, and the like. Special laws and decrees designed to protect the interest of the Nenets and Khanty were also disregarded.

<sup>13</sup>By 1992, the estimated cost to implement the total Yamal gas energy development project (*Yamalgazenergo*) had risen to \$15 billion (U.S.) (Knott, 1993, p. 36).

<sup>14</sup>For a vivid portrayal of this devastation, physical and cultural, see Pika and Prokhorov (1989). For an early analysis of inter-agency conflicts, see Prokhorov (1989).

With the breakup of the Soviet Union in 1991, and Russia facing an extremely difficult economic transition to a more capitalist-oriented economy, Yamal's role as a key national resource again received major attention. Unfortunately, a combination of factors, including continuing problems of financing, outmoded technology, complex hydrologic and permafrost conditions, a difficult working environment, and the central government's demand for rapid construction, may well bring about a serious deterioration in the environment and equally significant economic and social problems for its indigenous peoples — a very high price to pay for a short-term economic return.<sup>15</sup>

In 1988, responding to earlier threats to their subsistence economy and cultural survival, the Nenets formed Yamal *Potomkan* ("Yamal for Future Generations"), an indigenous organization designed to work with legal and executive bodies in the region to improve their economic and social conditions as well as strengthen their political autonomy. However, with little experience and no recognized legal base, its political power is severely limited. The 1993, disbanding of the local Yamal-Nenets legislative council further hindered its political development. Now, other administrators are responsible for making major decisions over land and resource use. In most instances, these administrators, together with their higher level ministerial counterparts in Moscow, are committed to initiating full scale gas extraction in Yamal Peninsula at the earliest possible moment.

A new scientific feasibility study offering precise recommendations for sound environmental protection as well as addressing the interests of the region's native people is now being submitted to the government for consideration. Proposed recommendations include the utilization of special methods of construction in biologically sensitive localities; the building of houses, schools, and hospitals in native settlements; the offering of increased social services; and the establishment of special protection areas enabling the indigenous population to continue reindeer herding and similar forms of traditional subsistence. The region's gas ministry [*Nadymgazprom*], has also encouraged local residents to become direct participants in its economic development by obtaining shares in the nearby industrial enterprises. Whether this effort will turn potential adversaries into active supporters remains to be seen. Certainly shares held by indigenous residents will be far too small in number to influence government policies in any meaningful way.

<sup>15</sup>Due to the lack of necessary equipment and transport vehicles within Russia, the laying of six large parallel pipelines (1420mm in diameter) is being undertaken with the active involvement of many foreign firms. This in turn will significantly reduce Russian profit making it even more difficult to fund sound environmental and social policies.

The most serious problem is where to find the funds to put these recommendations into effect. Even if they might be so inclined, the newly elected deputies of the State Duma are unable to exert much influence. Nor does the economic crisis in Russia appear to be subsiding. Under the circumstances, it is quite likely that Yamal's future gas production will be undertaken with minimal attention focused on the rights and needs of its indigenous population; or a few urban indigenous elites, strongly influenced by regional bureaucrats and powerful industrial managers, will sign documents that fail to solve the problems of the land, resources, and compensation in an equitable manner (Pika and Chance, 1993). If this turns out to be the case, Nenets and Khanty will continue to live under conditions of increasing turmoil and social deprivation, while the natural resources from their land provide new wealth to those holding the reins of power.

### Oil Development in Arctic Alaska<sup>16</sup>

Land has always been the centerpiece of Arctic Alaska. Economic developers, aware of its immense natural wealth, call for maximum accessibility of petroleum, gas, zinc, lead, coal, and similar nonrenewable resources contained within its borders. From their perspective, a major problem limiting the state's growth is land withdrawal — millions of acres having been placed into restrictive categories associated with federal and state parks and forests, military reserves, wildlife refuges, and wilderness areas. The land and surrounding sea also play an important role in America's defense strategy, including protection of Alaska's large petroleum complex located along the coast of the Beaufort Sea at Prudhoe Bay. Other military activities involve the manning of powerful radar stations, backed up by airborne warning and control system aircraft, support for army ground forces, and naval patrols of Arctic waters by missile-carrying nuclear submarines.<sup>17</sup>

However, these industrial and military developments have not gone unchallenged. Powerful environmental organizations such as Greenpeace, Natural Resources Defence Council, Wilderness Society, and the Sierra Club, each supporting large lobbying staffs based in Washington, regularly challenge any congressional legislation or military appropriation that is perceived as threatening the preservation of Alaskan wildlife refuges and wilderness areas. From their perspective, the fate of Alaska's Arctic wildlands can be assured only if the forces advocating oil, gas, and other nonrenewable resource development in these areas are soundly defeated.

<sup>16</sup>A more detailed analysis of this process can be found in Chance (1990, 1994) from which some of the following material is drawn.

<sup>17</sup>Significantly, under Russia's new nuclear energy policy, the reactors of their submarines and surface vessels are now being harnessed for civilian purposes, turning them into underwater and floating power stations for regions along the Arctic coast of Siberia and the Far East where delivery of fuel is very expensive (Medvedev, 1993).

As the region's predominant residents, the Iñupiat Eskimo have equally strong views as to how the land should be used. Wanting the economic advantages that stem from local petroleum extraction, they nevertheless fear the possible outcome. To what extent will oil and gas development increase the likelihood of a major oil spill? Such an accident could easily bring about a change in the annual migration route of the bowhead whale, driving it farther north away from coastal villages. The loss of this animal to a sea mammal-oriented society would be highly significant, not only in reducing an important source of nutritional sustenance, but in weakening their cultural identity as well.

Subsistence-oriented Iñupiat and neighboring Gwich'in Athabascan Indians see a similar danger from prospective oil exploration in the northeast corner of Alaska where the Porcupine Caribou Herd, one the largest in the world with approximately 160,000 animals, has its calving grounds on the coastal plain of the Arctic National Wildlife Refuge. As stockholders of large regional corporations with land rights in the refuge, many Iñupiat want to benefit from the leasing of this potentially rich land to oil companies. But as hunters, they are concerned over possibly losing an important part of their traditional economic livelihood.<sup>18</sup>

Attempting to arbitrate conflicts between these rival groups are the various agencies of the federal, state, and local governments. Yet, here too, conflicting interests are the norm. One governmental agency such as the Interior Department's Mineral Management Service may actively promote nonrenewable resource development, while another, e.g., the U.S. Fish and Wildlife Service, tries to protect the environment. Similar competing priorities characterize relations between governments. Although the federal government is a significant owner of petroleum producing property in Alaska (including offshore localities), its general revenue needs are only minimally tied to these lands. Thus, its perspective on oil extraction is more likely to address national energy levels, international trade, and foreign policy issues.

The revenue base of the State of Alaska, on the other hand, is intimately connected to oil. The Prudhoe Bay field, the largest single accumulation of crude oil ever discovered in North America, is located on lands owned by the state. In the first 15 years following that discovery in 1968, the proportion of the state budget utilizing petroleum revenues rose from an annual average of about 12% to over 90% (Morehouse, 1984, p. 3). Still, whether the focus is political or economic, national or regional, both the federal and state governments have important vested interests in developing Alaska's mineral resources and assisting those corporations extracting them, for revenues from companies such as these are central to their financial welfare.

<sup>18</sup>A recent study by wildlife biologists addressing the impact of oil development on caribou calving in the Prudhoe Bay area gives support to this concern (see Cameron et al., 1992).

The economic, political, environmental, and cultural issues raised by these competing interests recently culminated in an intense debate within the United States whether to permit oil exploration in the coastal region of the Arctic National Wildlife Refuge [ANWR]. This effort, strongly urged by the petroleum companies and supported by the executive branch of the federal government under the Bush Administration as well as the Governor's office of Alaska, has drawn the full scale opposition of many of the most powerful environmental organizations in the United States.

The essence of the conflict lies in two facts: (1) the estimate that ANWR is one of the best remaining prospects for significant oil discovery in the United States, and (2) that the refuge contains some of the last remaining true wilderness in the country. Since the federal government is responsible for the refuge, the U.S. Congress must decide whether or not to open up the coastal area for oil exploration.<sup>19</sup>

Environmentally speaking, the oil industry's basic argument is that less than one percent of the wildlife refuge (12,700 acres on the coastal plain) will be damaged by oil drilling and production. The Department of Interior's report estimates the possibility of finding up to 3.4 billion barrels of oil in the region as one in five, rather good odds given the potentially high return. If a discovery was made soon, perhaps by the year 2005, the field could reach peak output of 800,000 barrels a day, 10% of all U.S. production.<sup>20</sup>

The counter argument of the environmentalists is that oil is a non-renewable resource. Once oil and gas are extracted from the land, it will be gone. And if the government's national security objective is to limit reliance on foreign oil imports and create a sustainable long range energy policy, there are better ways of achieving it such as improving the fuel efficiency of motor vehicles. Holding relatively constant the production of automobiles, a gradual increase in fuel economy standards from 27.5 miles per gallon to 40 could reduce demand by two million barrels a day by the year 2005 — far more saved than could be produced in the same time period by extracting oil from the coastal plain of the Wildlife Refuge.<sup>21</sup>

<sup>19</sup>This is referred to as the "1002 area" because section 1002 of a previous legislative act required the Secretary of the Interior to prepare a report to Congress on the renewable and nonrenewable resource potential of the area and recommend whether further oil and gas exploration should be allowed. The report of the Secretary did recommend exploration. Hence, the continuing debate in Congress.

<sup>20</sup>For further elaboration, see the series of reports *On Top of ANWR*, published by ARCO Alaska, Inc.

<sup>21</sup>Recent studies by environmental organizations addressing these concerns include *Oil in the Arctic: The Environmental Record of Oil Development on Alaska's North Slope* (Trustees for Alaska et al., 1988); *Tracking Arctic Oil: The Environmental Price of Drilling the Arctic National Wildlife Refuge* (NRDC et al., 1991); and Greenpeace's *Oil in Arctic Waters: The Untold Story of Offshore Drilling in Alaska* (Miller, Smith, and Miller, 1993).

The issue has yet to be resolved by Congress. In 1992, the U.S. Senate Energy Committee was defeated in its effort to bring a new bill to the full Senate which included approval to drill for oil in ANWR. Thus far, the Clinton administration has chosen not to address the matter although earlier statements have been made opposing the leasing of ANWR for exploratory drilling. The administration has also rejected instituting any mandatory motor vehicle fuel efficiency standards at this time.

If the future of oil development in Arctic Alaska remains unclear, the question of Inupiat Eskimo involvement is not. In 1971, the U.S. Congress passed a native land claims settlement act providing compensation in cash and land holdings to all of Alaska's native peoples in exchange for extinguishment of aboriginal claims to land — including oil-rich Prudhoe Bay. Significantly, the act also obligated Alaska's native organizations to establish regional profit-making corporations (and over 200 village corporations) to serve as vehicles for the ownership and management of the land and money which then became corporate assets. By this enactment, Congress strongly rejected the concept of tribal government where land could be held "in trust" by the Department of Interior, seeing such an arrangement as a serious impediment to native assimilation.

Following federal passage of the settlement act, the North Alaskan Inupiat immediately formed the North Slope Borough, a city form of government that stretches from Point Hope on the west to the Canadian border on the east — geographically speaking, the largest city in North America (Fig. 2). Much to the frustration of the oil companies, the Borough's Inupiat leaders then proceeded to tax oil revenues from Prudhoe Bay. It drew as well on funds for city services, and sold municipal bonds on Wall Street. Soon millions of revenue dollars enabled the Inupiat to obtain the benefits of a modern lifestyle once limited to communities far to the south. The Borough also hired any Inupiat wanting to work in construction, maintenance, and municipal services, at high wages with sufficient flexibility that they could take time off to engage in subsistence hunting and fishing.

With this new wealth, the Inupiat continue to maintain a strong tradition of subsistence whaling, fishing, and hunting along with participation in the wage economy. However, state and federal wildlife regulations have consistently interfered with these subsistence endeavors, and this is especially true in the villages.<sup>22</sup> Following passage of the land claims settlement

<sup>22</sup>Federal laws recognizing the right of Alaska Natives to use wildlife for their subsistence have existed ever since 1870 when a federal act exempted the Aleuts from the killing of fur seals on the Pribilof Islands as long as the animals were used for food and clothing. This policy was reinforced with the Marine Mammal Protection Act of 1972 in which Natives again were allowed to hunt walrus, polar bear, sea otter, beluga, sea lion, and five species of seal for subsistence purposes without restriction. Other regulations, however, have been more stringent, such as those associated with the Fur Seal treaty, where Native harvesting is limited to "traditional means," excluding the use of firearms and power boats.



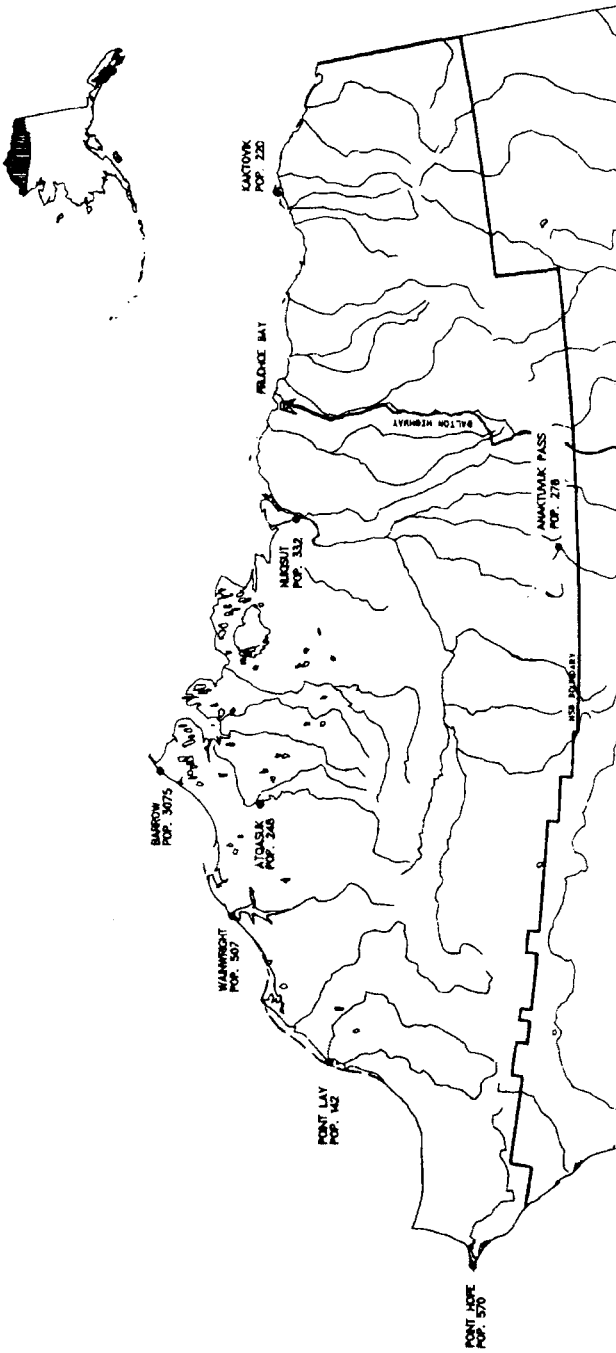


Fig. 2. The north slope borough.

act, aboriginal hunting and fishing rights were extinguished throughout Alaska. This enabled the state's Department of Fish and Game to enforce its rules for restricting hunting and fishing without regard to the cultural heritage of its citizens. In 1976, for example, following the study of a decline in the northern caribou population, state Fish and Game officials issued a moratorium on caribou hunting for all of the North Slope and much of Northwest Alaska. While such action had little effect on sports hunters, its impact on the Inupiat was considerable.

A more far-reaching crisis occurred a year later when the International Whaling Commission [IWC] proposed a moratorium on the hunting of the bowhead whale. This action was taken partly as a result of the demands of several national conservation organizations, which, given an apparent decline in the whale population, demanded that the IWC oppose any hunting of the bowhead at all. Recognizing the immense economic and cultural importance of this animal to North Slope whaling communities, the Borough administration, together with the Arctic Slope Regional Corporation, organized a major campaign designed to get the IWC to rescind the moratorium. Films and recordings emphasizing the economic and cultural importance of whaling were produced by the Borough and made available to schools and television stations. Press releases were sent to the major news services. Native organizations from western Canada to Greenland met and handed out statements stressing that the aboriginal harvest of the bowhead by Arctic peoples was a basic human right taking precedence over any national or international agreement. Influential environmental organizations such as the Sierra Club and Friends of the Earth offered their active support as well.

Called to a meeting in Barrow, 70 whaling captains from the nine Arctic whaling villages formed the Alaska Eskimo Whaling Commission (AEWC). This Commission, working closely with the Borough and the Regional Corporation, challenged the IWC moratorium policy. Detailed biological studies utilizing the latest bio-acoustic technology were undertaken by the AEWC to determine the actual number of whales migrating along the northern coast. The results suggested that the bowhead population included between 10,000 and 12,000 whales rather than the less than 1000 previously estimated. Members of the Commission also attended international meetings of the IWC, contributing this and other scientific data to assist the Commissioners in their deliberations.

Finally, in 1978, at a special session of the IWC conference in Tokyo, the United States delegation, with members of the AEWC at their side, persuaded the Commission to lift the moratorium in exchange for an agreement by Alaskan Eskimos that they would limit their annual subsistence hunting to a total of 12 bowheads killed, or 18 struck. The AEWC agreed, conditional upon the establishment of a cooperative management plan dealing with federal and

AEWC regulations; research on improved equipment; AEWC participation in IWC decisions; and a U.S. commitment to seek full restoration of the subsistence harvest. Still, in the minds of the Inupiat (and St. Lawrence Island Yup'ik whale hunters as well), the subsistence harvest of these animals should not be constrained by federal laws or international conventions.

While these negotiations were going on, the Borough was also opposing the 1979 Joint Federal/State Beaufort Sea Oil and Gas Lease Sale. Finally successful in restricting offshore leases to within the barrier islands, the Borough nevertheless paid a substantial penalty by becoming the target of a massive public relations campaign by the oil and gas industry. Utilizing television, newspapers and radio, their publicity departments depicted the Borough as being opposed to development, disinterested in the nation's national security needs, and generally obstructionist in blocking the efforts of the petroleum corporations to provide new energy resources for the American people.

In 1980, with the strong support of native and environmental lobbying organizations, Congress passed the Alaska National Interests Lands Conservation Act, a law that explicitly provided federal protection for subsistence hunting and fishing on federal lands.<sup>23</sup> One premise underlying this act was of crucial importance to the Inupiat and other native Alaskans in that it distinguished between native *cultural* and non-native *social* subsistence needs — a difference placing federal and state policies at odds with one another.

Today, federal law continues to provide a preference for subsistence uses of fish and game by rural Alaskans, whereas the state constitution forbids such geographical criterion. This condition has forced the federal government to assume control over fish and wildlife resources under its jurisdiction (representing two-thirds of the state) until the state either changes its constitution or yields to federal law. In the minds of native leaders throughout Alaska, this is a historic issue of human rights and cultural survival which will significantly influence the quality of native life in Alaska well into the next century.

## CONCLUSION

This brief comparative study demonstrates how the sharing of wealth from natural resource development can bring substantial benefits to northern native peoples. In contrast to the severe difficulties facing the Nenets and Khanty of Yamal, oil development in Arctic Alaska has enabled the Inupiat Eskimo to affirm their cultural heritage and achieve a form of

<sup>23</sup>The state had passed its own legislation pertaining to subsistence rights two years earlier, but without distinguishing between native and non-native residents. This was done partly in response to impending federal legislation.

political empowerment quite unforeseen a few short decades ago.<sup>24</sup> Of course, existing political, economic, legal, and social arrangements in Alaska have been more advantageous in addressing native claims on the land. Indigenous voices demanding active protection of and control over resources and territory have also been more effective. This influence was felt at both the federal and state legislative level; and with the assistance of environmental organizations and petroleum companies, in the mass media as well.<sup>25</sup> Later on, co-management programs such as those exemplified by the Alaskan Eskimo Whaling Commission's work with the International Whaling Commission further demonstrated that common interests, *when based on mutual respect and equitable political relations*, can provide a firm foundation for cooperative supervision of a region's renewable resources.

By contrast, the scale of resource development in northwest Siberia has been much larger, thereby insuring greater environmental and social devastation for failed policies. So too, Russia's political and economic crisis has raised extremely serious problems throughout the country further complicating sound environmental and social decision-making. Nor has northern Alaska had the immense influx of non-indigenous newcomers that characterizes the Yamal-Nenets region of Siberia; a greatly increased labor force demanding political attention by the government which has far exceeded comparable demands by non-native northerners elsewhere.

Thus, the difficulties confronting natural resource development in northwest Siberia are of a much greater magnitude than in Arctic Alaska. Additional time as well as increased funds and new perspectives are needed if the complex technological, social, cultural, and environmental questions are to be addressed in a sustainable manner. Given such an approach, Russia's gas reserves on Yamal Peninsula should be able to provide crucial energy needs to that country and other parts of Europe for 35 to 50 years or more. Furthermore, they can also be utilized to insure a viable and equitable cultural enhancement of its northern indigenous citizens.

<sup>24</sup>A similar opportunity is now occurring in northwest Alaska where royalties and new wage income from the Red Dog zinc mine, the second largest in the world, are being utilized in creative ways by the Northwest Boroughs and its Inupiat regional corporation (see Shively, 1992; Hamilton and Seyfrit, 1993). For a brief commentary on problems of air quality and other health hazards, see Reller (1992).

<sup>25</sup>The assistance of the petroleum companies was particularly significant in the 1971 Congressional debate over the Alaska Native Settlement Claims Act. Recalling that oil could only be extracted from Prudhoe Bay after the claims issue was settled, these companies eventually exerted considerable pressure on the government to pass the Act.

In our view, the following measures will greatly assist in achieving these goals:

First, broad-based, comparative studies need to be undertaken in which collaborating colleagues representing different disciplines and cultures design and carry out joint projects, the results of which encourage new modes of thinking regarding sustainable development and resource utilization in the regions concerned.

Second, indigenous representatives must be involved in the policy, planning, implementation, and evaluation level of every large-scale development project being undertaken in localities where they reside. Successful wildlife co-management practices in Alaska are but one example of the fruits of such an endeavor.

Third, more attention must be given to resolving existing environmental crises by promoting social changes now rather than relying on hoped for technological solutions in the future.

Fourth, so-called economic "externalities" associated with natural resource development must be internalized, thereby more adequately reflecting the true costs of such development.

Fifth, the vast intellectual divide presently separating physical and biological scientists from those involved in social science research must be bridged. Environmental impact assessment projects offer an excellent starting point for such endeavors. In place of the present preoccupation with procedures, ecologically-oriented biological and social scientists have a holistic orientation enabling them to confront the substantive issues associated with conflicts over development policy far more effectively than those involved in narrower specialties.

And finally, it is essential to analyze in depth those aspects of the political economy that contribute to the present harm. To do otherwise is to promote increased competition over increasingly scarce resources, in which ever greater environmental risks are taken, only to generate greater differences between those who reap the benefits and those who carry the burdens. Thus, we not only need to address the limits which nature imposes on human beings. We also need to find more egalitarian forms of social development that are contained within those limits.

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