Drilling in the Arctic National Wildlife Reserve: A Policy Issue Worth Rethinking

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The current debate on proposals to allow energy development in the Arctic National Wildlife Refuge (ANWR) is highly polarized. In this sense, it fits the mold of the classic environmental debate, in which human economic benefit is seemingly at odds with environmental health and well-being. Those who advocate opening the refuge for drilling argue that ANWR oil would reduce U.S. dependence on foreign oil supplies, and would bring new jobs and more revenue to Alaska and the lower 48 states. Those opposed to drilling believe that oil exploitation in the ANWR would result in the irreversible degradation of the ecosystem, endangering not only the flora and fauna but also native peoples whose livelihoods depend greatly on local wildlife. By discussing the issue, the stakeholders, and the effects on the environment, recommendations can be made on policy issues keeping in mind the need for sustainable development.

**History and Overview**

The Arctic National Wildlife Refuge (ANWR) is the largest refuge and probably one of the most densely diverse areas in the National Wildlife Refuge System. Despite all of this, it is also one of the most highly sought after oil reserves currently being looked into by the Republican administration.

Oil exploration began in Alaska in the early 1900s when oil seepage was discovered along the coast. In 1923, it
became known as the Naval Petroleum Oil Reserve no. 4 and later named the National Petroleum Reserve – Alaska (NPR – A) with the purpose of securing oil for use by the US government (USFWS 2001) (Figure 1). By the 1960s, 43 million acres of the coastal area were zoned for multiple uses including oil and gas exploration. The Northeast corner became a refuge as it was deemed most appropriate to do so (USFWS 2001). In 1968, the Atlantic Richfield (ARCO) and Humble Oil and Refining Company (now Exxon) discovered Prudhoe Bay as the largest oil field in North America. At this time, these companies were pushing to drill in the refuge for even more potential oil exploration (Defenders of Wildlife 2003). After much debating in Congress in the late 1970s, President Carter signed in the Alaska National Interests Lands Conservation Act (ANILCA) in 1980, renamed the area the Arctic National Wildlife Refuge and designated most of the area as wilderness (Montgomery 2003; USFWS 2001).

The area left to dispute is the one of concern – Area 1002 (See Figure 1). Area 1002 is a 110 square mile coastal portion of the ANWR. It is only 10% of the actual refuge and is only 4% of the coastal plain (USFWS 2001). However, additional information was needed before the area could be zoned and is under the control of the ANILCA (USFWS 2001). Under the act, congress has the right to determine the fate of the area. In the 1980s, geologic work was done by the Fish and Wildlife Service as well as by private oil companies, and the information received was used to develop a Legislative Environmental Impact Statement that concluded that the area had a delicate ecosystem (USFWS 2001). Previous attempts to drill have been denied, but in more recent news, President Bush has suggested drilling in area 1002 as a method in his Energy Bill to curb the US’s dependence on foreign oil.

Due to the small relative proportion of oil capable of being extracted from area 1002 and the projected extensive impacts to wildlife, drilling for oil is clearly unsustainable. Because a lot
of the drilling would take place during the winter months, considerable damage would be done to
the polar bear population due to human disturbance. Even a 5% decrease in the mortality rate of
newborns can have severe consequences (Lentfer 2001). The Porcupine Caribou also uses this
area as a breeding ground, and close to 130,000 caribou come to area 1002 to breed. Newborn
calves are extremely sensitive to human disturbance (Whitten 2001), and drilling would cause a
severe decline on the herds (up to 40%). Many Native Americans in the area depend on these
herds. In addition to these animals, drilling would have dire effects on snow geese, sandpipers,
muskoxen, wolves and grizzly bears as well as the delicate tundra vegetation (Defenders of

Currently at Prudhoe Bay (Figure 2), there has
been on average of one oil spill a day and frequent
leaks in the Trans-Alaska pipeline system, which
transports the oil from northern Alaska to southern
Valdez, Alaska, where it gets shipped by tanker.
Furthermore there are frequent permit violations at
Prudhoe Bay. In 1998 and 1999, BP Amoco was
fined close to $6 million for spills in Alaska.

Nitrous Oxide also gets sent into the air as a result of drilling. Along with these issues,
infrastructure problems exist with the existence of hundreds of miles of roads, feeder pipelines,
refineries, living quarters, landfills, water reservoirs, docks, causeways, production plants, gas
processing facilities, seawater treatment plants, power plants, and gravel mines (Anonymous,
“To Drill or Not to Drill?” 2004). Especially with what little oil is in the reserve, the short-term
benefits of drilling do not outweigh costs.
Policy and Stakeholders

The Alaska National Interest Lands Conservation Act (ANILCA), finalized in December of 1980, designated the 19 million acre Arctic National Wildlife Refuge (ANWR) as part of the national Wilderness Preservation System (Sierra Club, “The Threat of Oil Drilling” 2004). The law creating the refuge, however, did not designate the land as a protected wilderness area, and instead gives Congress the power to authorize gas and oil exploration in the 1.5 million acres of the coastal plain (Defenders of Wildlife 2003).

The possibility of further oil development on Alaska’s coastal plain has been a crucial aspect of energy policy propositions. Congress failed to pass Bush’s 2002 energy bill, which would have provided $34 million in subsidies to the oil industry and included a provision opening the 1.5 million acre coastal plain of the ANWR to development (Kriz 2002). Some energy interests are pressuring government leaders to push for legislation similar to this one; focusing on domestic oil development as a solution to a declining Middle Eastern supply (Anonymous “Drilling for Votes” 2003; Kriz 2002). After much debate, on March 19th of this year, the portion of the bill stating that there would be drilling in area 1002 was dismissed by a close 52 – 48 vote (Anonymous, “Senate votes against drilling in Alaska” 2003). Lobbyists from energy interests pushing for profits will continue influencing government officials to support oil development on ANWR’s coastal plain. Government officials echo pro-drilling sentiments with emphasis placed on enhanced federal revenues and bolstered economies as a result of increased oil revenues and revenues from lease rentals and taxes. Certain oil interests, like BP, have received repeated fines for violating pollution control laws, even though they claim that safe technologies are in place (Miller 2003). State officials like Alaska senator Linda Murkowski emphasize benefits to local peoples as a result of jobs created by drilling efforts and forsake
environmental concerns (LaDuke 2003). Some local peoples, such as the Inupiat tribe from Kaktovik have a history of involvement in oil development and support future development due to the direct economic benefits to their people (LaDuke 2003).

Drilling proponents argue that there are 16 billion barrels of oil under the refuge’s coastal plain, enough to significantly supplement current extraction from other oil ventures at Alaska’s North Slope and Prudhoe Bay (NRDC 2003, Sierra Club, “Crude Behavior” 2004; Sierra Club, “Threat of Oil Drilling” 2004). The Defenders of Wildlife, the Wilderness Society, the Natural Resources Defense Council, the Sierra Club and others have all released major campaigns attacking the proposal to open the arctic preserve (Kriz 2002). Many forewarn that if the refuge is opened to drilling it will be subject to the same extensive environmental stresses that have been observed at adjacent Prudhoe Bay oil fields (Miller 2003). Environmentalists cite past environmental damage caused by drilling on Alaska’s north slope, identify major oil companies with poor environmental track records, give evidence that new horizontal drilling techniques are not able to minimize harm, and urge that Americans look elsewhere for a solution to our dependence on Mid-East oil.

The portion of the coastal plain that industry is pushing to open is the principal calving ground of the 130,000-strong migratory Porcupine caribou herd, the second largest caribou herd in the United States. It is a key source of food, clothing and medicine for the Gwich’in Indians, one of the world’s few remaining subsistence cultures (Sierra Club, “Crude Behavior” 2004). Evon Peter, Chief of the Gwich’in Nation from Arctic village has joined with hundreds of other Alaska natives to form the Alaska Native Oil and Gas Working Group (LaDuke 2003). They are challenging the oil industry in Alaska, due to the threat it poses to their culture and way of life.
Noah Matson of the Defenders of Wildlife warns that oil industry interests are influencing certain politicians. Senator Norm Coleman of MN was allegedly promised a coal reprocessing facility worth billions in exchange for his vote on the refuge. Some legislators, however, realize the need to protect the refuge from development. On February 13, 2003, a bi-partisan bill was introduced to protect the coastal plain of the Arctic National Wildlife Refuge from oil drilling. The bill was introduced by Rep. Edward Markey (D-MA) and Rep. Nancy Johnson R-CT) with 131 co-sponsors including a total of 5 Republicans. The bill, officially known as the Morris K. Udall Arctic Wilderness Protection Act, would designate the coastal plain as wilderness, permanently protecting this ecologically sensitive habitat from oil development. Oil interests, however, prevented the bill from passing (Defenders of Wildlife 2003).

**Integrated Theory in Relation to the ANWR**

As Mazmanian and Kraft outlined in *Toward Sustainable Communities*, there are three epochs in the management of environmental resources. Epoch one is marked by top-down “command and control” approaches, epoch two is a market based “efficiency” approach, and epoch three is where sustainability is reached when local and super-local agencies work in tandem to deal with environmental shortcomings (Mazmanian and Kraft 2001). The Arctic National Wildlife Refuge (ANWR) provides a very clear example of how different epochs transition and what catalyzes a new approach. The ANWR study is a double movement. On the one hand there are the ever-ready drilling firms that have been gaining little by little with each congressional modification. On the other, are the Native rights groups that petitioned for the “freeze” on theses federal lands to be lifted and their way of life preserved (Chance 1990).
In a typical “commons” approach to resource management the 92nd US Congress established the Alaska National Interests Land Claims Act (ANILCA) to remove from the public sphere much of the land that we now know as the ANWR. Even the native tribes were excluded as Congress declared, “no provision…shall constitute a precedent for reopening, renegotiating, or legislating upon past settlement… with any Native organizations” (43 USC 1601). As the decade progressed more pressure came to congress not only to allow Native land claims but also to open the region up to petroleum exploration. Epoch one of the ANWR case was brought to a close.

Although ANILCA was never repealed it has been revised beyond recognition over the past 20 years. Beginning in the late sixties, aboriginal groups in Northern Alaska sought to gain control over their tribal and ancestral lands and founded the Alaska Federation of Natives (AFN) to petition local and national agents (Chance 1990). “In the beginning, regional associations were basically grass-roots organizations, formed by local villager leaders as a means of resisting serious threats to their subsistence-oriented way of life” Norman Chance explains (1990). As time went along and the better educated, more urban Natives took control of the organization, they began working closer with the State and Federal governments than with the local peoples whom they were representing (Arctic Circle 2003). By the time of the energy crisis, the AFN settled for a compromise that resulted in the next epoch of ANWR, the era of oil exploration and expansion (Berger 1985).

What exists today in the ANWR is a delicate mixture of Epochs one and two. There is still a freeze existing over what is not being explored and now Native groups find themselves defending what is left of their lands. Oil companies exploited the newly acquired aboriginal lands by hiring natives or buying their land for exploration. The state and federal governments
have since placed limits on the companies coming in but many native groups today support drilling due to their personal gain. Still there remain some grassroots organizations in places that seek to expand awareness about the degrading ramifications that drilling has both ecologically and environmentally (Chance 1990). Any emergence of Epoch three would require this cultural benefit to be seen as a tangible advantage since as it stands right now, the “Indian culture” is seen as a “special handicap” that places economic development at odds with cultural longevity (Naske 187).

The Brundtland Commission states “In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations” (Dryzek 1997).

Sustainable development may seem like a contradiction of terms to some people, and in the case of the ANWR controversy, it would be nearly impossible to drill oil in a sustainable manner. Evidence from the U.S. Geological Survey shows that the amount that could be recovered economically is roughly only 3.2 million barrels (a six-month U.S. supply). Moreover, results show that the oil in the refuge is not concentrated in any single large reservoir, but rather spread out in more than 30 small deposits (Energy Information Administration 2004; NRDC 2004). Findings have shown that the infrastructure necessary to support this kind of drilling would fragment habitat and have devastating effects on wildlife. “The Arctic refuge's primary mandate is to
protect the wildlife and habitats of this area for the benefit of people now and in the future” (Environmental Media Services 2003). Drilling on the coastal plain would indisputably result in a large ecological footprint and the destruction of the ecosystem and numerous wildlife habitats. Sustainable alternatives to drilling would decrease the exploitation of resources and encourage the direction of investments toward renewable sources of energy.

Ninety percent of coastal Alaska is already open to drilling, and the practices there are clearly unsustainable. In an area near to the ANWR, called Prudhoe Bay, there are spills of oil products and hazardous substances every day. As a result of the infrastructure, pipelines, and drilling, there is increased noise and air pollution. Long-term environmental effects could be felt from the millions of gallons of waste from oil and gas operations disposed of in open pits, injected into the subsurface, frozen into the permafrost, and discharged directly into the air and water. Birds, polar bears, Porcupine caribou, grizzly bears, wolverines, wolves, and numerous other species’ habitats will be affected. Their nesting places, denning areas, and calving grounds are crucial to their species survival (Leaveitalone.org 2003).

While it is clear that drilling on the coastal plain is not ecologically responsible, sustainability aims to merge ecological, economic, and social concerns. Economically, the state of Alaska relies heavily on the production of oil for income and the residents of Alaska have been told that drilling on the coastal plain will create over 700,000 jobs, according to a decade old study by the American Petroleum Institute. In fact, in the private sector about one in four jobs in Alaska, which is more than twice those in the petroleum, mining and construction industries and almost $2.6 billion in annual income depends on a clean environment (Alaska Conservation Foundation 2001). Oil production will provide only a temporary increase in jobs during the initial phases of exploration and construction after which the number of jobs will
significantly decrease. There are economic and social benefits for long-term job growth, which could be attained through the development of renewable energy. A report by the World Wildlife Fund found that energy efficiency policies and the development of renewable energy resources could result in 750,000 new jobs nationwide over the next nine years and 1.3 million new jobs by 2020 (2001). There are also numerous examples of ways to reduce the United States’ demand for oil. These solutions are economically and ecologically based, however their implementation and success ultimately comes from society as a whole. The development of renewable energy is a sustainable practice that addresses current and future needs by encouraging economic growth, protecting the ANWR ecosystem, and providing the social benefit of united success.

**Recommendations and Conclusions**

At peak production, the EIA study estimates that 876,000 barrels of oil would be extracted from the ANWR reserves daily. Considering that we’re dealing with a world oil market that generates 75 million barrels daily, ANWR oil would represent a little over 1 percent, or what one of the author’s of the study called, “a drop in the bucket” (Anonymous 2004).

Realizing that American’s cannot rely on oil from the ANWR for any significant long-term contribution, and the damage to the existing ecosystem would be dire, it is important to look elsewhere for solutions to the energy problem. Today we export approximately 50,000 – 90,000 barrels of oil to Asian countries every day (Sierra Club 2004). If we potentially restricted the amount of exported oil to foreign countries, we can be less dependent on foreign oil ourselves. More simply, we can work with the citizens here to reduce their own consumption. Currently there is a Readers’ Digest/AAA campaign entitled “Save-A-Gallon” (Readers’ Digest 2004). There are 130 million Americans who drive cars. If each just reduced the amount of gas in their cars by one gallon, we would save 130 million gallons of gas (Readers’ Digest 2004). Another
option is to require all cars, including SUVs to meet higher gasoline standards. Currently, the most popular SUVs only get 20 miles to the gallon. Federal regulations on most cars require at least 27 miles to the gallon. According to the Union of Concerned Scientists, raising this standard for all SUVs would save one million barrels of oil per day. In a 10-year period we could save 3.7 billion barrels of oil, which is more then we would receive from the ANWR in a shorter amount of time (Sierra Club 2004). In addition, subsidies could be provided to those that chose more energy efficient option such as hybrid cars or high efficiency vehicles.

Another solution could be increasing investment in renewable energy resources solar energy or hydroelectric power. Congress currently has significantly under-funded proposals for this sort of energy; however it may be a more sustainable option then drilling in our wildlife reserves (Sierra Club 2004). These measures, aiming towards sustainable development, would even generate more jobs than the lofty 735,000 estimated by drilling proponents. In the seventies during the energy crisis, Americans banded together and conserved gasoline and oil. There is no good reason why we cannot maintain that sort of mentality today in order to conserve our non-renewable resources and our pristine wilderness areas.

Oil drilling in the ANWR fails at all levels of sustainable development: it harms the environment, it provides little economic benefit, and is not sustainable in the long run. Many argue that the debate surrounding ANWR is more a political power play than a long-term solution to depleting foreign oil resources. As Noah Matson from the Defenders of Wildlife informed us “It is an interesting issue because the public face of it is a war of facts – both sides have facts that they spin for their own use – wasteland vs. America's Serengeti, 16 billion barrels of oil vs. 3.2. I think the public likely tunes out when you have competing facts. It comes down
to values – do you value a last great place or do you believe our public resources should be "put to use".
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