

BROKEN PROMISE #9

# Human Health Impacts



Inupiat boys watch their elders in a seal skin boat.

Joel Sartore

## The Promise

Oil development impacts on subsistence are minor and should not affect human health.

## The Reality

Oil development has social, cultural and health effects that disproportionately impact Native people who depend on subsistence.

**A**laska Native people have sustained for generations a relationship with the land, water, and wildlife that permeates every aspect of their lives from basic survival, to social norms, to spiritual beliefs. Industrial scale development on Alaska's North Slope has affected this subsistence way of life and contributed to social and health problems. Although oil revenues have helped fund schools and medical clinics, adverse human impacts are accumulating and could further accrue as development threatens to move into the Beaufort and Chukchi Seas, and Bristol Bay.

## “Our whole way of life as a people is tied to the Porcupine caribou. It is in our language, and our songs and stories.”

Sarah James, Arctic Village<sup>1</sup>

### Subsistence

Subsistence activities are very important to Alaska Native people and communities. In Inupiaq villages along Alaska’s Arctic coast, “individual and community identity is tied closely to the procurement and distribution of bowhead whales.”<sup>2</sup> For the Gwich’in who live further inland, caribou are at the center of cultural traditions. In the Bristol Bay region, salmon are a mainstay for the Aleut, Athabaskan, and Yupik people, representing for some more than half of the wild food consumed.<sup>3</sup> A variety of fish, birds, berries, and other plants are important subsistence resources for all Alaska Native people.

Oil development can impact subsistence resources directly. For example, Native people have reported changes in the size, taste, quality and quantity of fish and caribou in industrial areas.<sup>4</sup> Scientific research supports these claims. For example, one study showed evidence that caribou that spent more time in or near oil fields gained less weight during the summer growing season and had lower pregnancy rates and calf survival than caribou of the same herd that seldom encountered development.<sup>5</sup> Nuiqsut residents have also reported how seismic exploration activities have damaged berries and other plants.<sup>6</sup>

With these direct impacts to subsistence plants and animals comes anxiety that food may not be safe to eat, that game is more difficult to find, and that hunters may not be able to provide for their families.<sup>7</sup> Already, subsistence activities have been affected by the reduction in areas available for hunting as a result of oil field closures, because the high density of roads and pipelines prohibits travel, or simply because hunters are reluctant to enter the oil fields.<sup>8</sup> As oil fields spread, the reduction of hunting grounds will increase.

- ▷ Oil development affects subsistence through direct impacts to wildlife and by interfering with hunters’ access to species.
- ▷ Oil development has brought with it pollution and social changes that have contributed to increased health problems.
- ▷ Impacts to people accumulate with increasing development.

Oil development can also affect migratory routes of caribou, whales, birds, and other species,<sup>9</sup> driving them further from historic ranges and traditional hunting grounds. At the same time, climate change is affecting species migration and hunting access. For example, hunters in search of seals, walrus and whales are encountering thinner sea ice.<sup>10</sup> Oil development impacts could easily compound these problems, forcing hunters to travel farther distances across already treacherous terrain.



Nicole Whittington-Evans

**“The Yupik people depend on seafood caught in Bristol Bay. It’s not just our food, it’s our livelihood, our way of life. It’s everything to us.”**

– Verner Wilson III<sup>18</sup>

## Health

When drilling was proposed just outside the town limits of Nuiqsut in the early 1990s, the oil companies told residents that drilling would not affect the environment or hunting. But residents say “the reality has not matched the promises.”<sup>11</sup> Not only have residents observed and reported changes to subsistence resources and their access to these resources, but environmental impacts have also been affecting their health.

The Bureau of Land Management (BLM) reported in a recent environmental impact statement that cancer and chronic diseases such as diabetes, hypertension and asthma, are increasing among Alaska Natives especially on the North Slope.<sup>12</sup> Observations reported by a health aide working in Nuiqsut support this with reports of asthma increasing more than tenfold between 1985 and 1998.<sup>13</sup>

BLM has acknowledged that pollutants prevalent in oil fields, including nitrogen dioxide, sulphur dioxide, ozone, lead, and carbon monoxide are “causing and exacerbating respiratory illnesses” and “have been associated with...excess overall mortality rates among vulnerable groups.”<sup>14</sup> The agency also noted that increased levels of oil development activity could result in substantial impacts to human health, primarily as a result of restrictions to subsistence.<sup>15</sup>

## Social effects and cumulative impacts

The National Academy of Sciences concluded in its extensive study of cumulative environmental effects of oil and gas development on the North Slope that there has not been adequate attention given to human health and “petroleum development has resulted in major, significant, and probably irreversible changes to the way of life on the North Slope.”<sup>16</sup> The study noted that changes to subsistence resources “affects far more than food supplies.”<sup>17</sup>

"Social and cultural changes inevitably have been accompanied by social and individual pathology,"<sup>19</sup> including increased problems with alcohol and drug abuse, and domestic violence. Those affects accumulate because they arise from several causes, which interact. The Exxon Valdez spill provides an example of what can happen:

*"Several studies documented that the social fabric of many communities essentially fell apart following the spill. There were well documented, often dramatic increases in post-spill anxiety disorders,*

*post-traumatic stress, depression, alcohol and drug abuse, domestic violence, conflict among friends and within families, divorce, and even suicides tied directly to the spill. These impacts came mostly from uncertainty about the ecosystem's future, fear of food contamination, the chaos of the cleanup, and the ongoing fish stock collapses. Many residents have moved elsewhere to avoid the ongoing stress and memory of the spill."*<sup>20</sup>

Perceived risks to culture are already accumulating sources of stress for the Inupiat and Gwich'in people.<sup>21</sup>

**"The central question when considering the cumulative human health effects of ... development is whether it will be possible for the North Slope Inupiat to maintain a culture and way of life based on subsistence. Residents fear that the combination of pressures they now face – modernization, acculturation, global warming and curtailment of subsistence through expanding development threatens the viability of this cornerstone of Inupiat life. Destabilization of the cultural and social systems would be expected to cause serious health consequences. As oil and gas development both on and off shore expands in the region, more villages may face impacts similar to those faced by Nuiqsut."**

U.S. Department of Interior, Bureau of Land Management<sup>22</sup>

<sup>1</sup> Arctic Coastal Plain Leasing: Hearing Before the Committee on Resources of the House of Representatives, 104th Congress at 185 (1995). Cited in Gwich'in Steering Committee brochure. (2005). A moral choice for the United States. P. 6. Retrieved from website: <http://www.gwichinsteeringcommittee.org/GSChumanrightsreport.pdf>.

<sup>2</sup> National Research Council. (2003). Cumulative environmental effects of oil and gas activities on Alaska's North Slope. Washington, DC: National Academies Press. P. 21.

<sup>3</sup> World Wildlife Fund. (2008, May). Unprotected: Bristol Bay, Alaska - World's fish basket. Retrieved from website: <http://www.worldwildlife.org/who/media/press/2008/WWFPresitem8960.html>

<sup>4</sup> Minerals Management Service. 2002. Liberty development and production plan: Final environmental impact statement. Alaska OCS Region MMS 2002-019. Vol. II. Excerpts from Official Transcript – Public hearing, Nuiqsut, Alaska, March 19, 2001. P. VII-268; National Research Council. P. 136.

<sup>5</sup> Whitten, Kenneth R. (2001, July 11). Written testimony for House Committee on Resources. Hearing on Republican energy bill "energy security act." Citing Cameron, R.D. 1995. Distribution and productivity of the Central Arctic Herd in relation to petroleum development: case history studies with a nutritional perspective. Fed. Aid in Wildl. Resp. Final Rept. AK. Dept. Fish and Game. Juneau. 35pp.

<sup>6</sup> U.S. Department of Interior, Marine Management Service. (2001, March 19). Official transcript, public hearing. Draft Environmental Impact Statement for Liberty development and production plan. OCS EIS/EA MMS 2001-001. Nuiqsut, Alaska.

<sup>7</sup> National Research Council. p. 139.

<sup>8</sup> Ibid. p. 156.

<sup>9</sup> Ibid. p. 49.

<sup>10</sup> Wohlforth, Charles. March/April 2004. On thin ice. Orion magazine. Retrieved July 27, 2009 from Orion website: <http://www.orionmagazine.org/index.php/articles/article/138/>

<sup>11</sup> Coile, Zachary. (2006, February 3). Oil and 2 Ways of Life in Alaska. San Francisco Chronicle Washington Bureau.

<sup>12</sup> U.S. Bureau of Land Management. (2007). Northeast National Petroleum Reserve-Alaska Draft Integrated Activity Plan/Environmental Impact Statement. Vol. I. p. 3-185.

<sup>13</sup> Ahtuanguak, Rosemary. Published comments from Liberty Development and Production Plan, Final Environmental Impact Statement. (2002). Vol. II, Sec. VII, p. 277. Nuiqsut public hearing. OCS EIS/EA, MMS 2002-019.

<sup>14</sup> BLM. 2007. Northeast NPR-A Draft IAP/EIS. Vol. 2, P. 4-248.

<sup>15</sup> Ibid. p. 4-255.

<sup>16</sup> National Research Council, p. 156.

<sup>17</sup> Ibid. p. 21.

<sup>18</sup> World Wildlife Fund. (2008). Bristol Bay: Sustainable fisheries, sustainable future [online video]. Last retrieved July 14, 2009 from website: <http://www.worldwildlife.org/what/wherewework/arctic/bristolbayworldsfishbasket.html>.

<sup>19</sup> Ibid. p. 156.

<sup>20</sup> Steiner, Rick. (1999). Oil Spills: Lessons from Alaska for Sakhalin. Russian Regions: Economic Growth and Environment Symposium Proceedings. Slavic Research Center, University of Hokkaido, Sapporo, Japan. Pages 339-357. Last retrieved July 14, 2009 from website: <http://src-h.slav.hokudai.ac.jp/sakhalin/eng/71/steiner6.html>.

<sup>21</sup> National Research Council. (2003). pp. 139, 148.

<sup>22</sup> BLM. June 2007. Northeast NPR-A Draft Supplemental IAP/EIS. p. 4-856