

Building a Statewide Health Impact Assessment Program: A Case Study from Alaska

By Aaron Wernham

Natural resource development projects in Alaska (such as oil and gas projects and large mines) must balance environmental costs against economic benefits. Both sides of the equation carry important implications for public health, yet historically health has not been explicitly factored into the evaluation and permitting process. Over the past five years, Alaska Native communities, health departments, and their partners have developed an innovative approach to integrating public health concerns into environmental planning and regulation.

The Inupiat community of Nuiqsut, previously isolated far from the nearest road on Alaska's North Slope, now lies only a few miles away from a major oil development project, the Arctic oilfield. Nuiqsut was established near a traditional site used by the villagers' ancestors generations earlier. Today, subsistence activities – hunting, fishing, and whaling – continue to provide a large portion of the diet, and the center of the village's social structure.

North Slope communities have typically supported oil development in the region: revenues provide jobs, fund a full spectrum of municipal services and infrastructure, and provide family income in an area where economic development was minimal a few decades ago. Yet as industrial activity expanded to encircle part of the town, residents began to voice concerns. At hearings for planned expansion of leasing and development, people raised health issues ranging from asthma, related to nearby gas flaring, to social problems such as drug and alcohol use related to an influx of non-resident workers. The mayor of the North Slope Borough put it this way:

The benefits of oil development are clear – I don't deny that for a moment. The negative impacts are more subtle. They're also more widespread and more costly than most people realize. We know the human impacts of development are significant and

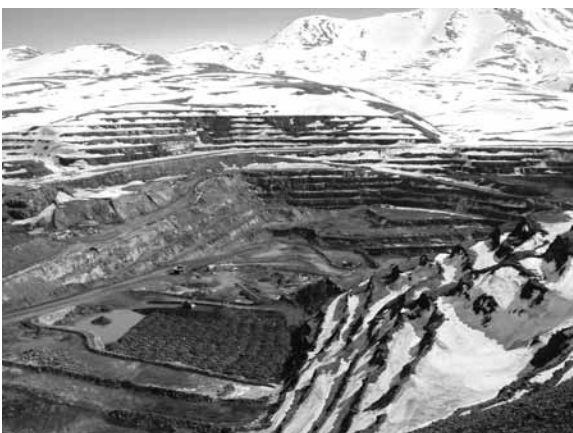
long-term. So far, we've been left to deal with them on our own. They show up in our health statistics, alcohol treatment programs, emergency service needs, police responses – you name it.

There has been little evaluation of these concerns, despite a 2003 National Academy of Sciences report that highlighted human health effects as a research priority for the region. Even more problematic, despite compelling public testimony over nearly a decade, the environmental impact statements (EISs) at the heart of the federal approval process for these projects never addressed these concerns.

The National Environmental Policy Act of 1969 (NEPA) established the EIS process as the foundation of environmental regulation in the US. While NEPA requires federal agencies to evaluate and publicly disclose the likely consequences of any federal decision with a potential for "significant effects on the human environment," historically, this has not included a systematic analysis of potential health effects.

To address this problem, I partnered with tribal communities on the North Slope to use Health Impact Assessment (HIA) for several oil and gas leasing proposals in the region. With a coalition of North Slope Borough (NSB) and tribal representatives, I approached the Bureau of Land Management (BLM) and Minerals Management Service (MMS) regarding three oil and gas leasing EISs that were being developed.

We presented three arguments for including a more robust health analysis in the documents: NEPA and related statutes require the analysis of health effects (these requirements are discussed in greater depth in a 2008 paper by Bhatia and Wernham in *Environmental Health Perspectives*); including health effects would strengthen these EISs by relating environmental impacts to the concerns voiced by the communities; and HIA – a relatively new practice in the US – provides a way to include health effects in EIS analysis that is compatible with the legal requirements of NEPA. These discussions culminated in collaboration between the BLM and the NSB to complete the first integrated HIA/EIS reported in the US.



Above and at right: The Red Dog Mine, an open pit zinc mine in Northwest Alaska. Both photos courtesy Alaska Native Tribal Health Consortium.

With those efforts as a start, a collaborative multi-agency effort has evolved, bringing together tribal and municipal health agencies, the state department of health and social services, and state and federal environmental regulators. This group is working to institutionalize the use of HIA as a part of the permitting and regulation of natural resource development projects.

Since these initial HIAs, interest and participation have grown, and collaboration between tribal, state, and federal health and regulatory agencies is leading toward a well-established practice of HIA for natural resource development proposals in Alaska. Moreover, the efforts in Alaska have begun to change NEPA practice in other states, and these early efforts highlight the promise of the EIS process as powerful tool to address environmental public health concerns. The President's Council on Environmental Quality – charged with overseeing NEPA's implementation – invited me to present on HIA as a tool to incorporate health into federal EIS work at the Federal NEPA Contacts, a gathering of high-level NEPA staff for more than 50 federal agencies. Since then, the Environmental Protection Agency (EPA) contracted with the Alaska Native Tribal Health Consortium to perform an HIA as part of an EIS for a large new coal project (the first contract of its kind in the US). In reviewing other agencies' EIS practice, EPA has now called for HIAs of a number of projects in other states.

The practice of integrated HIA/EIS is at an early stage, and will evolve. The requirements of NEPA support the inclusion of health in the EIS process, and this may be an important venue for environmental health efforts in other states. Based on Alaska's early experiences, we offer three important lessons that may help inform similar efforts elsewhere:

First is the recognition that the EIS process is

an important venue for public health. NEPA applies to a broad suite of activity, including transportation projects, large housing developments, fuel economy standards, and agricultural policies. These projects and policies have broad implications for public health and well being.

Secondly, even when NEPA or a related law does not apply, HIA provides a structured approach that allows public health agencies to evaluate a proposal and provide useful recommendations. Alaska lacks any legal requirement to implement HIA, but has chosen to begin developing an HIA program voluntarily. The state's Large Project Permitting team often develops agreements with industry to address site-specific issues that fall outside of any specific regulation, and there is latitude for the state and industry to agree on site-specific mitigation measures.

Finally, mitigation for public health effects is not always enforceable under existing regulations. The EIS can be seen as a planning document; it provides an opportunity for stakeholders to consider the potential effects of a proposed action and suggest alternatives. According to the Council on Environmental Quality, which oversees NEPA implementation, the EIS should evaluate and disclose all potential mitigation measures, because doing so will "alert agencies or officials who can implement these extra measures, and will encourage them to do so." In practice, aside from federal regulations, mitigation can be implemented through new local, state, or tribal requirements; new monitoring or preventive initiatives initiated by public health; or voluntary agreements with industry. ■

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