



Integrating Health Impact Assessments into the Federal Environmental Impact Process with a Focus on Alaska Native Communities

James Berner, M.D., M.S.
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INTRODUCTION

The federal environmental impact statement (EIS) process applies to large projects such as mines and oil and gas development. And, more broadly, the process applies to any federal agency decision with potentially significant environmental impacts. Historically, despite frequent public concerns, EISs rarely included substantial analysis of health effects. This project successfully integrated public health considerations into environmental impact statements for several natural resource development proposals, using the methodology of Health Impact Assessment (HIA.) The project involved a partnership between tribes, regulatory agencies and health professionals to incorporate HIA into the EIS process that applied to oil and gas development and mining in Alaska. This document focuses on integrating HIA into the EIS process as a tool to protect and promote public health.

POLICY/PRACTICE IMPLICATIONS

The National Environmental Policy Act (NEPA) mandates that federal agencies evaluate and publicly disclose the impacts of any federal action that may significantly affect the “human environment” and that they consider alternatives and measures to minimize adverse effects [42 U.S.C. 4321 et seq.]. NEPA applies to a broad spectrum of federal decision-making including, for example, highway construction, large housing developments, agricultural policies, fuel economy standards and the permitting of large natural resource development projects. NEPA standards include health as an effect that should be considered, yet despite the broad implications for health of some NEPA decisions, most EISs do not explicitly address health. Public health is rarely represented in the panels of experts that complete an EIS (40 CFR § 1508.8, § 1508.27; Steinemann, 2000).

In Alaska, tribal communities have expressed concern about potential health effects from neighboring mining and oil and gas proposals. In a review of the cumulative impacts of oil and gas development on Alaska's Arctic Slope, the National Academies of Science drew attention to health effects as one of the concerns in greatest need of additional attention both in research and in planning future development (National Research Council, 2003). Concerns include, for example, pollution contaminating locally harvested fish and game and thereby affecting health; loss of traditional food sources because of wildlife impacts; and rapid social change exacerbating mental health problems, domestic violence, and drug and alcohol problems. Conversely, many tribal communities face severe economic challenges, and project-related revenue is a source of potential family income as well as a source of improvements in infrastructure and services.

In this project, the HIAs that successfully integrated public health considerations into environmental impact statements represent the first HIAs integrated into a federal EIS in the United States (Wernham et al., 2008; Wernham 2007a and 2007b). Including health in the EIS process provides a powerful new avenue to identify and address existing health issues, promote environmental justice and protect communities from avoidable adverse health impacts.

KEY LESSONS

- Federal and state environmental impact assessment work has important implications for public health (Steinemann, 2000; Bhatia and Wernham, 2007).
 - Thousands of federal policies, projects and programs every year undergo some form of environmental impact assessment (EIA), and many states have enacted state EIA rules as well. Collectively, these laws regulate a range of activity that profoundly shapes living conditions, well-being and health in communities around the country. Decisions made through the EIS process affect health determinants such as access to safe pedestrian corridors, bike lanes and open space; exposure to air pollution; traffic flow and safety; employment patterns; housing availability and quality; community demographics; and revenues available to support public health programs, infrastructure and services. As such, EIA represents an important venue for public health (Bhatia, 2007).
- Federal and state EIA laws actually support a more robust evaluation of health impacts than has historically been undertaken by these entities (Wernham, 2007; Bhatia, 2007). For example, NEPA and many related state statutes contain language that supports the inclusion of public health in the EIA process. NEPA regulations instruct agencies to evaluate the “degree to which the proposed action affects public health or safety.” HIA enables the analysis of the impact on the population’s health that is required by law through the use of health-related data gathered from a broad population base. Work in Alaska and San Francisco has demonstrated that the HIA

- HIA provides an effective way for public health agencies to engage policy-makers in other sectors to ensure that health is considered in public decisions (Quigley, 2006; Cole, 2007; Kemm, 2004).

HIA has been defined as “a combination of procedures, methods, and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, programme, or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects.” (Quigley, 2006).

HIA can be an effective means to facilitate a collaborative, cross-sector approach to health in public decision-making. HIA considers health from a broad perspective that accounts for social, economic and environmental influences. By translating health data into practical information for policy-makers in nonhealth sectors, HIA promotes decisions that are responsive to health concerns and priorities (Cole, 2007; Kemm, 2004).

- Implementing HIA recommendations within the EIA framework presents a challenge because many environmental regulatory agencies have limited authority to impose health-based regulations (Bhatia, 2007; Wernham, 2007).

Environmental regulatory agencies often have relatively limited authority to issue new site-specific regulations as a result of an EIS, making it challenging to implement some health-based recommendations. Aside from federal regulation, however, other stakeholders in the EIS process can implement mitigation recommendations as well. For example, local, state or tribal governments can adopt new requirements, public health agencies can implement new monitoring or preventive measures, and communities can negotiate “impact-benefit agreements” directly with industry. The value of the HIA/EIS process, therefore, is to clearly delineate the potential health impacts and to bring stakeholders together to find solutions. According to the Council on Environmental Quality, (CEQ), which is responsible for overseeing 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” (CEQ, 1981).

- Integrating HIA into an EIS can be an effective way to ensure that the regulatory process focuses on issues of greatest concern to impacted communities. Community participation greatly enhances the effectiveness of the EIS process (Bhatia and Wernham, 2007).

Proactive participation on the part of community stakeholders and local public health agencies is the most powerful way to ensure that the EIS accurately evaluates local health concerns. NEPA’s provisions afford many opportunities for public participation, including providing written or oral testimony, government-to-

government consultation between tribes and the lead agency, and “cooperating agency” status, in which a local health agency can participate in drafting and reviewing sections of the EIS (40 CFR § 1501.6, § 1508.5; Executive Order 13084). Concerns raised by affected communities during an EIS often relate directly or indirectly to public health. Whether it is concerns about the effects of pollution on a local vulnerable population or less direct issues such as the way that a new highway might impact social cohesion in neighboring communities, HIA provides a way to focus the EIS process on issues of greatest concern to communities. And HIA uses public health evidence to draw clear, scientifically supported links between the proposed action and community health and well-being.

KEY PEOPLE

Jacob Bell, M.Sc., Health Assessments Program Manager, ANTHC, 907-729-4493, jnbell@anthc.org—Current manager of Alaska Native Tribal Health Consortium’s HIA work.

Jim Berner, M.D., Senior Director for Science, Alaska Native Tribal Health Consortium (ANTHC), 4000 Ambassador Drive, Anchorage, Alaska, 99508, 907-729-3640, jberner@anthc.org—Senior Scientific Oversight on ANTHC’s HIA work.

Rajiv Bhatia, San Francisco Department of Occupational and Environmental Health, rajiv.bhatia@sfdph.org—HIA practitioner and developer nationally and throughout the San Francisco Bay Area.

Hanh Shaw, EPA Region X, shaw.hanh@epa.gov—Led federal contracting for HIA within the EIS processes.

Aaron Wernham, M.D., M.S., Senior Environmental Health Policy Analyst, ANTHC, (Now with Pew Health Group), Washington, AWernham@pewtrusts.org—Main developer of HIA as tool in EIS processes.

REFERENCES

- Bhatia R. “Protecting Health Using Environmental Impact Assessment.” *American Journal of Public Health*, 97(3): 406-413, 2007. Available [online](#). *This article describes an instance of HIA use for land management that informed decision-making through effective analysis and resulted in improved health protection.*
- Council on Environmental Quality. “Memorandum to Agencies: Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations.” 46 *Federal Register* 18026 (1981). Available [online](#). *This guide from the CEQ communicates to federal agencies the appropriate approach to NEPA compliance. This includes some guidance on health impacts.*
- Cole B and Fielding J. “Health Impact Assessment: A Tool to Help Policy Makers Understand Health Beyond Health Care.” *Annual Reviews of Public Health*, (28): 393-412, 2007. Available [online](#). *This review covers the basic methodology of HIA across case studies.*
- Kemm J and Parry J, eds. *Health Impact Assessment: Concepts, Techniques and Applications*. Oxford: Oxford University Press, 2004. *This book also comprehensively covers the HIA field of work.*
- “Executive Order 13175—Consultation and Coordination with Indian Tribal Governments.” *Federal Register* (65)218: 67249-67252, Nov 9, 2000. Available [online](#). *This order outlines appropriate federal actions when working with tribal governments.*
- National Research Council. *Cumulative Environmental Effects of Oil and Gas Activities on Alaska’s Arctic Slope*. Washington: National Academies Press, 2003. Available [online](#). *This report found that the health impacts from resource development on Alaska’s North Slope had been incompletely researched.*
- Quigley R, den Broeder L, Furu P, Bond A, Cave B and Bos R. *Health Impact Assessment. International Best Practice Principles. Special Publication Series No. 5*. Fargo, ND: International Association of Impact Assessment, 2006. Available [online](#). *This document outlines best practice for HIA.*
- Steinemann A. “Rethinking Human Health Impact Assessment.” *Environmental Impact Assessment Review*, 20(6): 627-645, 2000. *This article reviews all of the instances of health consideration in environmental review documents and proposes HIA as a tool to rectify these data gaps.*
- Wernham A. “Inupiat Health and Proposed Alaskan Oil Development: Results of the First Integrated Health Impact Assessment/Environmental Impact Statement of Proposed Oil Development on Alaska’s North Slope.” *Ecohealth*, 4(4): 500-513, 2007. *This article provides a case study concerning the first integration of HIA into EIS processes.*

Wernham A. Public Health subsections (under subheading of “Environmental Justice”). In U.S. Minerals Management Service: Outer Continental Shelf Oil & Gas Leasing Program: 2007-2012 Final Environmental Impact Statement. Washington: Minerals Management Service, 2007. *This is an HIA section from an environmental planning document produced under NEPA.*

Wernham A. “Health Impact Assessment” (under subheading of “Public Health”). In U.S. Bureau of Land Management: Northeast NPR-A Draft Supplemental Environmental Impact Statement. Anchorage, Alaska: Bureau of Land Management, 2007. *This is an HIA section from an environmental planning document produced under NEPA.*

Wernham A. Public Health subsections, In U.S. Department of the Interior Minerals Management Service (2008). *Draft EIS, Beaufort and Chukchi Sea Multiple Lease Sales*. Minerals Management Service: Anchorage, Alaska. 2008. *This is an HIA section from an environmental planning document produced under NEPA.*

Wernham A, Brubaker M, Verbrugge L, Grant J, Heaton S and Rutt C. Public Health subsections. In U.S. EPA (2008) *Red Dog Mine/Aqqaluk Extension Supplemental Environmental Impact Statement*. Seattle, 2008. Available [online](#). *This is an HIA section from an environmental planning document produced under NEPA.*