

Technical Guidance for Health Impact Assessment (HIA) in Alaska

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Acronyms

ADHSS	Alaska Department of Health and Social Services
ANTHC	Alaska Native Tribal Health Consortium
ATDSR	Agency for Toxic Substances and Disease Registry
BOEMRE	Bureau of Ocean Energy Management, Regulation and Enforcement
CDC	U.S. Centers for Disease Control
CFR	Code of Federal Regulations
CHAP	Community Health Aide Program
DSS	Demographic Surveillance Systems
DHSS	Department of Health and Social Services
DNR	Alaska Department of Natural Resources
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
HEC	Health Effects Categories
HIA	Health Impact Assessment
ICMM	International Council on Mining and Metals
IPIECA	International Petroleum Industry Environmental and Conservation Association
IFC	International Finance Corporation
IGAP	Indian Environmental General Assistance Program (EPA)
KPI	Key Performance Indicator
NEPA	National Environmental Policy Act of 1969, as Amended
NGO	Non-Governmental Organization
PAC	Potentially Affected Communities
SDH	Social Determinants of Health
SIA	Social Impact Assessment
STI	Sexually Transmitted Infection

Introduction

What is Health Impact Assessment (HIA)?

HIA is a structured planning and decision-making process for analyzing the potential positive and negative impacts of programs, projects, and policies on public health.

The HIA process has several key characteristics:

- ◆ A focus on a specific policy, program, or project proposal
- ◆ A comprehensive consideration of potential health impacts
- ◆ A population-based perspective that considers multiple dimensions of health
- ◆ A multidisciplinary approach that uses information from many different health sectors and allied technical fields, e.g., environmental and socio-economics.
- ◆ The flexibility to allow use in a variety of settings.
- ◆ Although this HIA toolkit focuses on how to evaluate health impacts from large natural resource development projects, it can also guide evaluation of public policies and programs and other types of development activity. Certain sections of this toolkit may be useful to those who conduct environmental (EIA) and social impact assessments (SIA).

In Alaska, the HIA may be:

- (i) A stand-alone document,
- (ii) Integrated within a separate SIA,
- (iii) Part of an integrated environmental, social and health impact assessment (ESHIA).
- (iv) An appendix to an ESHIA with key technical sections summarized and integrated into the appropriate chapters.

Alaska law does not require an HIA for major resource development projects, new programs, or policies. Nevertheless, there is a recent trend among federal agencies to promote the inclusion of an HIA as part of the environmental impact process under the National Environmental Policy Act (NEPA). This trend has generated both an interest in HIAs and a corresponding concern about proper HIA methodology. The goal of this toolkit is to inform the production of appropriate HIAs when they are initiated by a government agency or a stakeholder. “Government agency” refers to federal, state, local or tribal. A stakeholder could be a non-governmental organization (NGO) or other advocacy group.

The Alaska HIA Guidance provides technical information; however, it is not a set of regulatory or legal requirements.

Government agencies may include federal, state, local and tribal.

Why perform Health Impact Assessments for Alaskan Projects?

Many Alaskan projects occur on a very large scale. The potential for impacts on health outcomes is affected by the local environmental, cultural, and social living conditions.

Alaska's unique environmental, cultural, social and health settings vary by region. Even within a single region there can be highly divergent rural and urban socio-cultural structures, seasonal variability in regional demographic composition, stark differences in rural and urban economic realities, and a variety of region-specific subsistence lifestyles that depend on very specialized techniques for harvesting indigenous flora and fauna. It is widely accepted that individual and community health outcomes are influenced by these living conditions and by a combination of individual factors, such as heredity and personal behavior. These living conditions and choices are sometimes referred to as social determinants of health (SDH) in public health research.

Large development projects – such as oil and gas development, large mines, and transportation projects – may contain features that affect many SDH. Decisions based on appropriate health information can help maximize the potential benefits for communities and minimize unanticipated harms.

Alaska has a unique and complex environmental and social setting that interacts with and influences health outcomes.

What is the history of HIA in Alaska?

Historically, HIA has been practiced mostly in Western Europe and has focused on assessing government-initiated policies and programs. A limited number of HIAs have been performed on large industrial projects, particularly in the resource development sector (i.e., oil & gas, mining, and energy projects). These industrial HIAs have primarily occurred in the developing world.

In the United States, HIA practice remains limited even though there is a growing “HIA movement.” HIAs have been completed in the U.S. for urban development projects and public policies, but few HIAs exist for resource development projects on the scale encountered in Alaska.

An increasing number of large natural resource development projects in Alaska have produced requests for an HIA. The earliest HIAs in the state were related to an extension of the Red Dog Mine and a federal permit for the National Petroleum Reserve Alaska (NPR-A). These HIAs revealed the importance of health considerations in project permitting and they revealed the need for technical guidance to support future HIAs in the state.

On September 8th – 10th, 2008, the Alaska Native Tribal Health Consortium (ANTHC), State of Alaska Department of Health and Social Services (DHSS), and U.S. Centers for Disease Control and Prevention (CDC) jointly hosted a workshop on HIA in Anchorage, Alaska. ANTHC staff, state regulatory agencies and DHSS staff, University of Alaska health researchers, and federal health and regulatory agencies active in Alaska natural

resource development attended. At the conclusion of this workshop, attendees were invited to participate in a working group, which convened regularly to guide the development of this HIA guidance document (aka the “Alaska HIA Toolkit”). A wide variety of scientific literature and HIA guidance documents were reviewed, including the International Finance Corporation (IFC) “HIA Toolkit”, which is a template for several sections of this guidance. Where needed, the working group included sections on Alaska-specific concerns, such as subsistence nutrition and stakeholder engagement.

To meet an operational need to maintain and update the HIA toolkit and coordinate the working group, the DHSS and the Alaska Department of Natural Resources (DNR) volunteered to accept a leadership role by jointly funding an HIA program. This program has been developed to ensure that the health and safety of all Alaskans is carefully considered during the permitting process for large resource development projects in the state. DHSS maintains the Alaska HIA Toolkit and provides the most current version on the department website. While DHSS and DNR have committed significant resources in order to serve in this organizational leadership role, the HIA program relies on full participation from all partners affected by any given HIA.

The Alaska HIA Guidance has been developed by a collaborative technical work group that involved federal, state, local and tribal health organizations.

The State of Alaska has designated the DHSS as its technical lead for HIAs.

How does HIA integrate with the NEPA process?

HIA occurs alongside all the other components of the NEPA process. The HIA team may conduct baseline research that can include field studies. Once a specific project plan is released, the formal HIA document process can begin.

Procedurally, the State of Alaska HIA program creates a “stand-alone” HIA. This document can be used by those writing the overall Environmental Impact Statement (EIS) as the technical basis for the health sections in the “affected environment,” “environmental consequences” and “alternatives including proposed action” chapters. The HIA program also helps the EIS authors to fact-check and coordinate the health input with other critical sections (e.g., transportation, socio-economics, subsistence, etc). The HIA team may be involved from the earliest stages in screening and scoping meetings with members of the environmental, social, and economic impact teams to provide an opportunity for health input into the creation of “alternatives.” There is no separate set of meetings or agendas for HIA, but the HIA may be integrated as completely as possible into the NEPA process.

How does HIA overlap with Economic and Social Impact Analyses?

Because human health depends on a web of economic, social, and personal issues, there will be overlap between an HIA and the typical environmental (EIA) and social impact assessments (SIA). Whenever possible, this toolkit provides practical solutions to prevent duplicative efforts. Two obvious areas of overlap are the analysis of (i) Social Determinants of Health (SDH), and (ii) release of potential contaminants of concern. Both of these areas will be analyzed in subsequent sections of the guidance. While the HIA will discuss features of the SIA or EIA relevant to health (e.g. change in income, change in cultural cohesion), it will only rate human health impacts and will rely on research performed by other subject matter specialists (e.g. economic trends, subsistence practices and cultural cohesion, social and demographic changes). For example, the HIA team would rate the risk of a change in access to health care relative to changes in healthcare infrastructure promoted by economic growth. The HIA team would rely on the economic analysis to quantify and rate the likelihood of economic growth.

What are the objectives of this HIA Toolkit?

- ◆ To present methodologies for assessing the potential community health impacts of resource development projects in the State of Alaska.
- ◆ To help HIA programs or independent practitioners develop a scope of work and/or specific work plans when asked to conduct in an HIA.
- ◆ To allow the inclusion of human health impacts during the social and environmental impact assessment process.
- ◆ To define the roles and responsibilities of project proponents in the overall health impact process.
- ◆ To provide broadly accepted, technical, good practice information that could be used for a variety of projects covered under existing State of Alaska and federal requirements.

What are the limitations of this toolkit?

- ◆ The toolkit does not address “inside the fence” occupational health issues such as workplace safety or various occupational exposures, since these issues are governed by rigorous state and federal laws. The toolkit does address “cross-over issues”: workplace policies and practices (e.g., work schedules that potentially affect subsistence activities, drug/alcohol testing and counseling) that could potentially affect household- and community-level health outcomes.
- ◆ The toolkit currently focuses on resource development projects as opposed to general policy or program impact assessment. The toolkit is a living document and will be continuously upgraded and enhanced in subsequent releases in order to cover emerging issues and topics.
- ◆ This toolkit is designed to be used in conjunction with existing regulatory or planning processes and is not intended to replace or supersede established protocols.

Alaska HIA Guidance has a defined set of objectives but also important limitations.

Who is the intended audience of the HIA Toolkit?

The guidance is primarily intended as a technical resource for HIA practitioners. Nevertheless, focus group meetings revealed that the HIA toolkit helped a variety of interested readers and potential stakeholders to understand and participate in the HIA process. This includes federal and state regulatory agencies; local, state, tribal, and federal health agencies; non-governmental entities considered stakeholders in the outcome of a permitting process; project proponents; and members of the public with health concerns surrounding a particular project. Even though many proponents are experienced with HIA through their work in other regions of the world, this guidance will help inform their thinking about potential health impacts in the Alaskan context. Similarly, communities can use this guidance as both an information source and as a mechanism for actively participating in the HIA process.

About This Document

Section 1 addresses a general background of the overall HIA practice. The critical role that the State of Alaska and the relevant tribal health organizations play in the overall process is described. General definitions of the different types of impacts (direct, indirect and cumulative) within a health analysis are discussed.

Section 2 discusses how to decide whether to conduct an HIA. Some of the critical project features that can potentially produce health impacts are presented.

Section 3 describes the different types of HIAs. This section also discusses how to determine which type of HIA is appropriate for a given project. How the HIA fits into the overall EIA and SIA processes is also presented.

Section 4 describes key health effect categories. These categories are similar to the environmental health areas (EHAs) concept that is widely discussed in the published international HIA literature. Health effects categories are a key framework for organizing and analyzing the most likely types of potential impacts from a project. “Alaska-specific health effects” were developed as part of the collaborative work group effort.

Section 5 describes the scoping process for HIA, including developing an appropriate work plan.

Section 6 is concerned with baseline data issues, particularly issues related to community surveys. The profound and ongoing baseline demographic shifts that are occurring in rural and urban Alaska are reviewed. The implications for positive or negative health impacts are considered. Available databases are presented along with their strengths and limitations.

Section 7 considers the important role of health-specific stakeholder engagement., Advanced planning with the environmental and social teams is essential to avoid duplication of effort.

Section 8 is focused on assessing and ranking health impacts and presents a standard qualitative model that is typically used in HIA. A standard toxicological paradigm is presented that can be used for analyzing relevant contaminant release concerns and issues. The section also describes the more quantitative aspects of chemical risk assessment used by toxicologists and other health professionals. In some circumstances, fully quantitative chemical risk assessment techniques may potentially have a limited role in the overall HIA analysis.

Section 9 discusses mitigation, the process of developing measures to avoid, minimize, rectify, reduce or compensate for impacts. Mitigation efforts need to be transparent, open and considered throughout the overall HIA. . The development of a health action plan is described. All three types of mitigation, i.e., regulatory driven, negotiated commitments and voluntary health contributions are described in the health action plan. In addition, the health action plan may present the verification processes that document success or failure in the achievement of key performance indicators (KPIs).

Section 10 is a general discussion of monitoring and evaluation (M&E). The development of a reasonable and appropriate set of KPIs is a complex and difficult task that often requires technical assistance from the relevant public health authorities.

Section 11 focuses on the resources needed for conducting HIAs.

Additional information is included in the technical appendices.