



Frequently Asked Questions about Integrating Health Impact Assessment into Environmental Impact Assessment

1. What is Health Impact Assessment (HIA)?

Many land use and transportation decisions affect health, even those that may not seem to on the surface. For example, a decision to widen roadways can change noise and air quality for nearby residents. It also may change the safety of pedestrians or bicyclists along the street. Noise, air quality, and pedestrian or bicyclist safety are related to asthma, cardiovascular disease, hypertension, injury, and mortality, among other health issues. Health Impact Assessment (HIA) is a straightforward and cost-effective approach. It aims to assess planning and policy proposals and make recommendations to improve the ways these proposals affect health.

HIA is formally defined by the National Research Council (2011) as follows:

“A combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, 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.”

There are six steps in a typical HIA:

1. Screening – Determine the value and need for HIA
2. Scoping – Clarify and prioritize issues to focus on in the HIA, methods for analysis, and a work plan
3. Assessment – Two parts that include: a) Conducting research on existing conditions; b) Identifying the effects of the project, plan, or policy on health;
4. Recommendations – Identify actions to address any harms identified
5. Reporting – Write a report and communicate its findings and recommendations
6. Monitoring – Track how the HIA affected decision-making processes, the actual decision, and effects of the project on health

For more on Frequently Asked Questions about HIA, visit <http://www.humanimpact.org/faq>.

2. What health issues does a HIA consider?

HIA takes a broad perspective that considers health and wellbeing as well as the environmental, social, demographic, and economic conditions that shape them; what are often collectively referred to as “determinants of health”. Examples of broader conditions are housing, transportation, employment, income, noise, air quality, access to goods and services, access to parks, and social networks, which have well-demonstrated and reproducible links to health.

3. What are benefits to conducting Health Impact Assessment?

There are benefits both to the information from an HIA, and the process used to generate an HIA. Close collaboration between public health experts, affected communities, and the decision-makers on a project leads to practical, evidence-driven recommendations on how a regulatory or decision-making process can address identified health concerns.

Health Impact Assessments can...

- Provide sound data on health and health disparities
- Identify potentially unexpected health consequences and unanticipated costs, with an aim of avoiding them
- Identify design solutions that address the root causes of prominent health problems
- Build consensus and buy-in by engaging in conversation about community concerns about a project and providing practical solutions
- Focus community involvement on real health concerns and on feasible mitigations to those health issues
- Engage community residents in decisions that impact their lives
- Give project proponents a way to recognize positive health contributions of projects on communities
- Give businesses the information needed to distinguish themselves as smart planners and to build positive working relationships with the community
- Help decision-makers by ensuring that any potential concerns about a project are identified and addressed early on

4. Is a comprehensive analysis of health impacts required under NEPA?

As written in “Public Health Analysis Under the National Environmental Policy Act”, a white paper by Wernham and Bear:

The inclusion of a robust, systematic approach to public health is supported by several sources that include: NEPA, regulations issued by the Council on Environmental Quality (CEQ) – the agency in the Executive Office of the President charged with overseeing implementation of NEPA – Executive Orders 12898 and 13045, and available guidance on NEPA and environmental justice.

Congressional Intent of NEPA

In using the term “human environment,” Congress signaled that protection of human communities was a fundamental purpose of the legislation. In the debates leading to NEPA’s enactment, Senator Henry Jackson said, “When we speak of the environment, basically, we are talking about the relationship between man and these physical and biological and social forces that impact upon him. A public policy for the environment basically is not a public policy for those things out there. It is a policy for people.”

Health in NEPA

NEPA mentions health a total of six times. These include the following:

- Among NEPA’s fundamental purposes is: “promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” NEPA § 102 [42 USC § 4321]

- NEPA is intended, furthermore, to: “assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.” [42 USC § 4331]
- And finally to: “attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.” [42 USC § 4331]

Health in the CEQ Regulations

Several general provisions of CEQ’s NEPA regulations support the inclusion of health.

First, agencies respond to substantive public concerns in the Draft Environmental Impact Statement (DEIS) [40 CFR § 1503.4]. When, therefore, an agency can anticipate substantive health concerns based on scoping, it is sensible to include these issues for analysis in the DEIS.

Second, in determining whether an effect may qualify as “significant” (and therefore require analysis in an EIS) one of the factors that agencies should consider is “the degree to which the effects on the human environment are likely to be highly controversial” [40 CFR § 1508.27 (b) 4]. Commonly, health often figures among the strongest concerns expressed by affected communities.

The CEQ regulations also specifically define health as one of the effects that must be considered in an EIS or its preceding Environmental Assessment. In defining “effects,” the regulations say, “Effects includes ecological, aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.” [40 C.F.R. § 1508.8] And, the regulations instruct agencies to consider “the degree to which the proposed action affects public health or safety” in determining significance. [40 C.F.R. § 1508.27]

Health in Executive Orders

Executive Order 12898 instructs agencies to: “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.”

Similarly, Executive Order 13045 states that agencies must: “make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and ... shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.”

Statements relevant to NEPA-based health analysis in Federal Guidance

CEQ guidance on implementing Executive Order 12898 contains several suggestions relevant to public health analysis, including:

- Lead agencies should involve public health agencies and clinics
- Agencies should review relevant public health data (as with any resource)

- Agencies should consider how interrelated cultural, social, occupational, historical, or economic factors may contribute to health effects of the proposed action and alternatives.

5. What is the relationship between Health Impact Assessment, Health Risk Assessment, and Environmental Impact Assessment?

HIA is different from other forms of stand-alone assessment or forecasting methods that may be used within a HIA. One example is Health Risk Assessment.

Health risk assessment (HRA), as practiced, is a quantitative analytic method used to characterize the nature and magnitude of health risks associated with exposures to chemical contaminants and other environmental substances and processes. Health risk assessments are not comprehensive, but health risk assessment conclusions can be used within HIA to forecast effects of specific exposures.

Health Risk Assessments can be included as part of an Environmental Impact Assessment, or outside the process. This is true of their relationship to HIA as well. Theoretically, there is substantial overlap between HIA and the framework for HRA; however, in practice, HIA and HRA differ substantially. HRA is carried out in a more limited way than is allowed for in its theoretical framework.

The following table compares and contrasts the practice of HRA and HIA.

Dimension	Health Impact Assessment	Health Risk Assessment
Purpose	<ul style="list-style-type: none"> • Make evidence-based judgments on how a decision will affect health • Make health-promoting recommendations 	<ul style="list-style-type: none"> • Quantify the health risk from a change in exposure of a particular hazard
Breadth	<ul style="list-style-type: none"> • Broader analysis aims to predict potentially significant health effects resulting from changes in the physical, social, and economic environment • Includes impacts on the determinants of health, such as housing, transportation, employment and income, noise, air quality, access to goods and services, access to parks, and social networks 	<ul style="list-style-type: none"> • More narrow analysis typically analyzes discrete relationships between a single environmental contaminant (e.g., diesel) and a single health outcome (e.g., lung cancer)
Scope	<ul style="list-style-type: none"> • Like the basic pattern in EIA, it starts with an analysis of existing conditions in a community and, in particular, identifies special sub-populations who may be particularly vulnerable, or with significant baseline health inequities • Examines existing burdens to environmental justice communities and assesses impacts cumulatively 	<ul style="list-style-type: none"> • Does not typically consider existing health conditions or disparities

Dimension	Health Impact Assessment	Health Risk Assessment
Methods	<ul style="list-style-type: none"> Both quantitative and qualitative/descriptive methods Will consider a hazard even if quantitative data to the extent needed for an HRA do not exist 	<ul style="list-style-type: none"> Modeling to quantify risk Will not consider a hazard if data do not exist to quantify a prediction, even if strong evidence that the hazard is present. Sufficient data for HRA exist for only a few health-relevant environmental exposures and conditions.
Participants	<ul style="list-style-type: none"> Engages stakeholders, including community residents, and can build consensus 	<ul style="list-style-type: none"> Typically conducted by expert risk assessors
Relationship to NEPA	<ul style="list-style-type: none"> An integrated HIA/EIA approach can comply with the form and process required by NEPA (see question 8) 	<ul style="list-style-type: none"> Can help analyze potential impacts, but does not comply with the form and process required by NEPA
Relationship to Each Other	<ul style="list-style-type: none"> Can include HRA 	<ul style="list-style-type: none"> Can be part of the assessment phase of HIA

6. Does a HIA use qualitative or quantitative data?

The short answer is both. HIA can use quantitative modeling to increase the precision of analysis and to support significance judgments. Quantitative forecasting alone may present a partial or biased account of health effects, though. It also can require substantial data or resources that are diverted from other impact assessment activities.

Qualitative analyses provide valuable data when quantitative analyses are not possible. It is important to note that NEPA regulations do not require quantitative analysis and many predictions in EIA are descriptive. Indeed, it may be more legally defensible to provide simple descriptions of *possible* causal links between the plan or policy and a given outcome than quantitative modeling. Qualitative descriptions can provide valuable insights into differences between the alternatives and potential mitigation measures.

HIA standards include the ethical use of evidence, irrespective of whether it is quantitative or qualitative. This includes the use of evidence from diverse sources, such as available statistics, empirical research, original investigation results, professional expertise, local knowledge, and the findings of well-designed and peer-reviewed systematic reviews. HIA calls for report authors to justify their selection or exclusion of particular methodologies and data sources and the explicit statement of assumptions used in judgments, particularly quantitative estimates of hazards or impacts. Data gaps, uncertainties, and limitations should be identified and stakeholders should be allowed to critique the validity of findings.

7. How would a comprehensive health analysis (e.g., using HIA) differ from what is already done in an EIR/EIS?

Currently, there are three ways that health is incorporated into an EIR/EIS:

1. As a health risk assessment for a discrete exposure (described in question 5)
2. As a discussion of risk factors for health (e.g., air quality, traffic flow), but the link between those risk factors and health often is not explicit
3. As a demonstration of compliance with a health-based environmental regulation, such as the Clean Air Act. These approaches do not fully address the requirement for an analysis of potential public health effects according to the format/process established by NEPA

A more complete analysis of health effects responsive to NEPA would consider all potentially significant direct, indirect, and cumulative health impacts associated with the proposed action and alternatives. The analysis would include descriptions of baseline health status and determinants of health for the affected population. An integrated HIA could achieve this type of analysis through:

- A systematic scoping of potentially significant direct, indirect, and cumulative health impacts
- Analysis of baseline health conditions and determinants of health
- Analysis of direct and indirect health impacts of the project
- Analysis of cumulative impacts related to health outcomes

8. How does HIA fit in with the EIR/EIS process?

The steps of Health Impact Assessment (described in question 1) parallel the steps of Environmental Impact Assessment, enabling the two processes to be integrated in an appropriate context. Doing so can avoid redundancy in data collection and analysis, as information collected in the EIA process provides inputs into the health analysis.

To conduct a HIA as part of an EIR/EIS, one would:

- Scope potential direct, indirect, and cumulative health concerns in the EIR/EIS Scoping stage. HIA Scoping includes stakeholder meetings to ensure the scope is complete and uses stakeholder knowledge and experience to prioritize the health concerns to analyze.
- Assess prioritized health concerns identified during Scoping. This assessment will include:
 - New analyses (e.g., collecting existing data on health conditions and on existing determinants of health; analyzing impacts not previously analyzed as a result of the expanded Scope);
 - Extensions of existing analyses (e.g., using traffic data such as vehicle trips and volume to predict impacts on traffic injuries and physical activity); and
 - Developing potential mitigation measures to address significant health impacts.
- Report and receive public comment on baseline health conditions and determinants of health, the analysis of health impacts, and potential mitigation measures in the Draft EIR/EIS and respond to comments to develop the Final EIR/EIS.

In addition, HIA could include methods that involve stakeholder participation, such as community surveys and focus groups.

9. How do you know when a health impact can or should be addressed or mitigated?

As for any other resource or impact more commonly analyzed in an EIS, the analysis of health effects is generally limited to those deemed potentially significant, as defined by the CEQ regulations (40 CFR § 1508.27). In practice, the HIA team will typically bring a public health-based perspective on significance, which will drive the initial proposed scope of the analysis. The final scope of impacts included in the EIS, however, evolves over the course of the analysis through ongoing collaboration and discussions between the HIA team and the participating agencies, and based on determining which outcomes are best supported by the evidence.

10. Are there other examples of HIAs being done for major projects and policies and as part of EIA?

HIAs have been included in at least five published NEPA documents, all in Alaska.¹ In San Francisco, the health department collaborates with the planning department to ensure the inclusion of health analyses for environmental analysis conducted under CEQA.

HIA also has been applied to other proposals subject to NEPA, such as the I-710 Corridor Project in Los Angeles and the Cap and Trade regulations under the California Global Warming Solutions Act.

11. Are there practice standards for HIA?

Yes, the North American Health Impact Assessment Working Group standards are available at: http://www.humanimpact.org/HIA_PracticeStandards.pdf.

12. Where can I learn more about HIA?

Human Impact Partners (<http://www.humanimpact.org/>) provides information, tools, and resources on Health Impact Assessment. Other good resources are the Centers for Disease Control (<http://www.cdc.gov/healthyplaces/hia.htm>), the Health Impact Project (www.healthimpactproject.org), and the UCLA Health Impact Assessment Clearinghouse Learning & Information Center (<http://www.hiaguide.org/>).

Human Impact Partners thanks Aaron Wernham at the Health Impact Project and Rajiv Bhatia at the San Francisco Department of Public Health for their significant contributions to this FAQ.

¹ Wernham, A. (2007) Inupiat Health and Proposed Alaskan Oil Development: Results of the First Integrated Health Impact Assessment/ Environmental Impact Statement for Proposed Oil Development on Alaska's North Slope. Ecohealth. No. 4, p. 500.