IMPACT ASSESSMENT AGENCY OF CANADA

Analyzing Health, Social and Economical Effects under the *Impact Assessment Act*

THIS GUIDANCE IS PART OF THE PRACTITIONER'S GUIDE TO FEDERAL IMPACT ASSESSMENTS UNDER THE *IMPACT ASSESSMENT ACT*

November 27, 2020

The Practitioner's Guide is an evergreen document. Check it periodically, its contents may have been updated because of ongoing engagement and feedback received. If you have feedback, please send it to guidancefeedback-retroactionorientation@iaac-aeic.gc.ca.

Impact Assessment Agency of Canada | Agence d'évaluation d'impact du Canada

Canada

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Disclaimer

This document is for information purposes only. This document is not intended to fetter decision-makers. It is not intended to suggest that the Government can regulate matters of provincial jurisdiction. It is not a substitute for the *Impact Assessment Act* (the Act) or its regulations. In the event of an inconsistency between this document and the Act or its regulations, the Act and its regulations would prevail.

For the most up-to-date versions of the Act and regulations, please consult the Department of Justice website.

1. Introduction

This guidance is for proponents, consultants, and others participating in an impact assessment. The guidance applies to designated projects[1] under the *Impact Assessment Act* (the Act). It does not apply to non-designated projects.

Here, you will find information that helps you assess health, social and economic effects for an impact assessment. This page covers legislative requirements, expected scope, methodologies and examples related to the abovementioned effects.

The Act requires the following:

1. The consideration of health, social and economic effects that may arise from a designated project.
2. Positive effects, as well as adverse effects, must be considered.
3. Health, social and economic effects must be considered for all populations.

This document provides the following tools to help you meet these assessment requirements: basic concepts, definitions, best practices, and examples of integrated assessments that examine health, social and economic effects. This page also references existing technical guidance and best practice documents to help you learn more.

[1] A designated project is a project that includes one or more physical activities that are designated by the *Physical Activities Regulation* (Project List), or one or more physical activities that have been designated by an order of the Minister of Environment and Climate Change.

2. Guidance and tools

This guidance document forms part of the larger *Practitioner's Guide to Federal Impact Assessments under the Impact Assessment Act* (the Practitioner's Guide), which includes in-depth guidance on several aspects of the impact assessment process. This guidance should be used alongside those documents. These include:

- **Tailored Impact Statement Guidelines** – The methods and specific issues that will need to be assessed within a designated project will be prescribed in the *Tailored Impact Statement Guidelines* and a template with illustrative examples can be found in the Practitioner's Guide.
- **Guidance for working with Indigenous peoples** – There is a series of guidance documents focused on Indigenous peoples, which includes the following documents:
  - *Guidance: Assessment of Potential Impacts on the Rights of Indigenous Peoples*
  - *Guidance: Collaboration with Indigenous Peoples in Impact Assessment*
  - *Guidance: Indigenous Knowledge under the Impact Assessment Act: Procedures for Working with Indigenous Communities*
  - *Guidance: Protecting Confidential Indigenous Knowledge under the Impact Assessment Act*
- **Public and Indigenous peoples' participation** – The impact assessment process includes several opportunities for public and Indigenous peoples' participation, which can help identify, assess and characterize the health, social and economic effects of a project. Guidance and tools to encourage meaningful public participation and collaboration with Indigenous peoples can be found in the Practitioner's Guide.
- **Gender-based Analysis Plus** – The Practitioner's Guide also has specific guidance on understanding different effects for diverse subgroups as part of *Gender-based Analysis plus* (GBA+).

3. Key considerations: Effects assessment under the *Impact Assessment Act*

3.1. Health, social and economic effects: Considerations at each phase

Table 1 (below) provides an overview of how a designated project's health, social and economic effects are considered in the impact assessment system.[2]

Table 1: Consideration of Health, Social and Economic Effects throughout Impact Assessment

Phase	Description
Planning phase	• The proponent prepares an **Initial Project Description**. It briefly describes changes that may occur in Canada, as a result of the carrying out of the project, to the health, social or economic conditions of Indigenous peoples of Canada. This description is based on publicly available information or information from engagement with Indigenous peoples. • The Agency prepares a **Summary of Issues**. For this, the Agency considers the initial project description, and comments from Indigenous groups and other participants. The summary would include any issues related to the potential health, social and economic effects that have been identified. Any information provided by federal authorities is also considered. • The proponent responds to the summary of issues in its notice. The notice addresses potential health, social and economic effects identified. It also provides early direction on how the proponent plans to consider these effects. The proponent then prepares a **Detailed Project Description**. • If an IA is required, the **Tailored Impact Statement Guidelines** identifies the health, social and economic effects that require consideration in the impact assessment. It also identifies any methods or tools that the proponent must use when considering these effects. This document is prepared by the Agency (and a lifecycle regulator, where applicable).
Impact Statement phase	• The proponent prepares an **Impact Statement** based on the Tailored Impact Statement Guidelines. It includes an analysis of the potential health, social, and economic effects of the designated project.
Impact Assessment phase	• Federal authorities with expertise in the potential health, social and economic effects identified provide the Agency with information and advice to support the impact assessment. This information might include potential mitigation measures. • Engagement with the public and Indigenous groups on the assessment is ongoing.

[2] Note that this information should be read so as to include opportunities for collaboration and cooperation with Indigenous peoples; please consult the Guidance: Collaboration with Indigenous Peoples in Impact Assessments for further information.

Phase	Description
Impact Assessment phase (continued)	• The **Impact Assessment Report**, prepared by the Agency or a review panel, sets out the health, social and economic effects that are likely to be caused by the project. The report also provides information on how these effects interact with each other and with the other effects caused by the project. • The Impact Assessment Report informs the Decision-Making phase.
Decision-Making phase[3]	• After considering the Impact Assessment Report, the Minister of Environment and Climate Change (the Minister) or Governor in Council (the Cabinet) makes a **public interest determination**. • This determination must be based on the Impact Assessment Report and the five public interest factors set out in the Act.[4] This includes a consideration of the health, social and economic effects of the project as set out in the Impact Assessment Report.

Post Decision phase	• After the public interest determination is made, the Minister issues a **Decision Statement**.
	• If the decision is that the designated project is in the public interest, the Decision Statement will include conditions, the period in which the proponent must substantially begin the designated project, a description of the project, and reasons for the determination.
	• **Conditions** issued by the Minister may include mitigation measures that address adverse health, social or economic effects, or a follow-up program to monitor these effects over time.
	• Complementary measures may also be part of the Decision Statement. Examples include:
	  ○ federal actions to address adverse health, social or economic effects; or
	  ○ impacts to the rights of Indigenous peoples, that are outside the care and control of the proponent.

When assessing health, social and economic effects, practitioners and others involved in the conduct of an impact assessment should take the following considerations into account:

[3] Refer to Section 6 below, and to the Policy Context: Public Interest Determination under the Impact Assessment Act for further information on the public interest determination.

[4] Refer to the "Public Interest Factors" section in the Agency's Policy Context: Public Interest Determination under the Impact Assessment Act.

3.2. Meaningful engagement and consultation

- **Engage with diverse groups within the project area.** Practitioners should meaningfully engage and consult with diverse groups in the project area to ensure their participation in the assessment. Pay specific attention to groups and Indigenous communities within the project area that may be especially vulnerable to the project's adverse impacts.
- **Discuss the starting point for baseline data collection with potentially impacted communities.** For example, a baseline is typically constructed using the most recent data available prior to project construction. For some communities, a historical baseline, several years in the past, or even prior to other environmental changes may be the most appropriate.[5]
- **Discuss community aspirations.** Engagement and consultation should include a discussion about the aspirations of the groups that are potentially affected by the project. This can help inform the analysis and consideration of the positive effects of a project.

3.3. Data and information sources

- **Use a holistic approach** when assessing health, social and economic effects to help understand the positive and adverse effects of the designated project, and the interaction between effects.
- **Be prepared to use a broad range of data collection methods, data sources and analytical techniques.** Different tools may be used in the assessment of health, social and economic effects than for biophysical effects. For example, some effects may demand qualitative or participatory methods for assessment whereas others may be best assessed using quantitative effect modelling.
- **Engage with potentially affected groups to help fill gaps in your data.** Baseline data collection requires gathering information from multiple sources, and in many cases, existing data will need to be supplemented by information and expertise gathered from potentially affected groups.
- **Consider engaging with different authorities on data and information sources.** While a project's Tailored Impact Statement Guidelines will set out requirements for data and information sources, impact assessment practitioners may also wish to consult with the Agency and the relevant provincial, local and Indigenous governments to seek:
  - advice and support on other sources of data and information that may be relevant to the impact assessment; and
  - guidance on working with this data and information.

[5] Impact Assessment Agency of Canada (2018). *Tailored Impact Statement Guidelines: Section 12.1 Physical and Cultural Heritage*. https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/tailored-impact-statement-guidelines-projects-impact-assessment-act.html

- **Seek out sources of existing evidence and expertise from relevant researchers, impact assessment practitioners and previous projects.** This will establish a clear understanding of the baseline and trend-over-time conditions that are needed to accurately assess and analyse existing conditions and scope potential effects.
- **Seek out Indigenous knowledge.** Indigenous knowledge, when provided, can show how health, social and economic effects intersect with impacts to the rights of Indigenous peoples and culture.[6]

3.4. Data and information collection

- **Work with potentially impacted communities (Indigenous and non-Indigenous) to identify indicators and measurement methods.** This ensures that the interests and priorities of the communities are reflected, and takes into account available community and Indigenous knowledge.
- **Engage with Indigenous groups to support data and information collection.** Impact assessment practitioners should consider how information about health, social and economic effects intersects with information about impacts on potentially affected Indigenous communities or rights of Indigenous peoples. Practitioners should also gather data and information on health, social, and economic effects that Indigenous groups identify as needing to be assessed.
- **Engage with potentially affected communities to support data and information collection.** When selecting data collection methods, practitioners should remain flexible and responsive to communities' input, and open to novel or alternative approaches. For example, when working with children and young people, collection methods may include art or visual methods. When gathering information and Indigenous knowledge from Elders, collection may be most effectively done through Indigenous language-based tools or interviews. Practitioners should also consider engaging local experts, organizations and community groups in data and information collection.

[6] When working with Indigenous communities, follow the community's protocols for using Indigenous knowledge. For more on this, consult the Agency guidance *Protecting Confidential Indigenous Knowledge under the Impact Assessment Act*, and *Guidance: Indigenous Knowledge in Impact Assessment*.

3.5. Analyzing and reporting on data and information

- **Use best practices.** The analysis of potential, health, social and economic effects must rely on the best evidence, methods and practices. It must also refer to relevant subject-specific guidelines where available.[7]
- **Take into consideration Indigenous knowledge.** The analysis should take into account and use any Indigenous knowledge and community knowledge that is provided regarding the project.
- **Explain your approach.** Proponents must justify the analytical approach chosen, carefully follow this chosen approach throughout the analysis, provide sufficient evidence and clearly demonstrate how conclusions were drawn.
- As with all data collection, analysis or reporting, proponents, practitioners and individuals involved in impact assessment must follow:
  - ethical protocols for dealing with primary data;
  - protocols for the collection, use and reporting of data[8]; and
  - confidentiality guidelines for disaggregated data from small or unique populations.[9]
- **Follow research ethics protocols for Indigenous communities.**[10][11] Protocols such as the Ownership, Control, Access, and Possession (OCAP®) principles that outline expectations for data ownership and protection must be followed. Individual Indigenous nations may have specific cultural protocols for the collection, analysis and reporting of data from their community members. These protocols must be understood and followed by all parties involved in the impact assessment.
- **Interpret statistics and findings within the broader community context.** This is necessary in order to make findings meaningful. For example, relying on statistical significance to interpret data without reference to the community context may not produce reliable interpretations. The interpretation of findings must consider existing conditions, including potentially existing effects or pressures on social, economic and health conditions, and the

[7] See for example, Bhatia et al, (2014). Minimum Elements and Practice Standards for Health Impact Assessment, Version 3. https://pdfs.semanticscholar.org/040d/8ff2749f8ef2ec8b8233b7bffae9f7a38a12.pdf

[8] Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada (2018). *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*. https://ethics.gc.ca/eng/policy-politique_tcps2-eptc2_2018.html

[9] Statistics Canada (2011). *Data quality and confidentiality standards and guidelines*. https://www12.statcan.gc.ca/census-recensement/2011/ref/DQ-QD/2011_DQ-QD_Guide_E.pdf

[10] Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada (2018). *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans – Chapter 9: Research Involving the First Nations, Inuit and Metis Peoples of Canada.* https://ethics.gc.ca/eng/policy-politique_tcps2-eptc2_2018.html

[11] First Nations Information Governance Centre (2013). *Ownership, Access, and Possession (OCAP) or Self-Determination Applied to Research*. https://fnigc.ca/ocapr.html

potential for additive effects from the designated project. This context must also consider Indigenous knowledge systems, cultural context and world views.

- **Seek to disaggregate data, including by sex, gender, and other identity factors.** This shows how a project might impact groups differently. In particular, disaggregated baseline data can help identify which groups within a community may be particularly vulnerable to the impacts of a project. It may also identify groups that are well placed to take advantage of opportunities created by the project.
- **Use an interdisciplinary approach.** In order to fully capture the complexity and interactions between health, social and economic effects, an interdisciplinary approach that engages individuals with varying perspectives is recommended.
- **Respect scientific integrity.** Throughout the impact assessment process, proponents, consultants and individuals must adhere to principles of scientific integrity, including transparency in analysis and reporting.

4. Identifying health, social and economic valued components

4.1. Valued components: definition and significance

Health, social, economic, and environmental effects are inherently and inextricably connected.[12] They also intersect with effects on Indigenous cultures, and Aboriginal and Treaty rights. Selecting valued components that capture this complexity and reflect the project context is critical to predicting effects. Valued components (valued components) may be identified as having scientific, social, cultural, spiritual, economic, historical, archaeological or aesthetic importance. The Agency, other jurisdictions and federal authorities have a key role in identifying valued components. Once valued components are identified, they become the focus of the impact assessment, and an analysis of impacts to these components is carried throughout the assessment process.

4.2. How changes to a valued component can result in multiple effects

There can be multiple health, social and economic effects that result from changes to a valued component. For example, through engagement and consultation, communities may discuss social or cultural activities—such as hunting, camping, or other outdoor activities—that rely on access to specified areas. The valued components highlighted may be land, specific parks, lakes or rivers. An impact to these valued components may result in:

- health effects, such as:
  - mental health effects from a loss of access to nature; or
  - effects caused by loss of access to healthy foods (e.g., fish, berries).
- a loss of hunting and fishing activities, or changes to river navigation and access, which may have:
  - social effects for communities that gather around harvesting; and
  - economic effects if fish are sold or traded.

[12] Public Health Agency of Canada (2018). *Key Health Inequalities in Canada: A National Portrait*. https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/science-research/key-health-inequalities-canada-national-portrait-executive-summary/key_health_inequalities_full_report-eng.pdf

4.3. Prioritizing valued components

There may be several valued components within an effect pathway (discussed below). Prioritization of valued components that are most important to assess should be informed by engagement with communities or impacted groups. Importantly, diverse subgroups within communities may prioritize different valued components based on their experience and relationships to the potentially impacted environment.

4.4. Effect pathways

The identification of valued components is a standard process in impact assessment, however, valued components themselves are not standardized. The identification of valued components is context-specific, and there may not be a single clear cause-and-effect relationship between the valued components and the effect. For example, in table 2, the activity of construction may have multiple intermediate and longer-term effects that may be experienced differently by diverse subgroups depending on their proximity to the site, their use of the land and their baseline health status. When identifying valued components, practitioners should consider the effect pathway or expected link between the designated project and the valued component. For more information on the selection of valued components under the Act, refer to the Tailored Impact Statement Guidelines template (section 7 – baseline conditions).[13]

Once identified, practitioners should finalize the effect pathways or lines of inquiry for each valued components.

The pathways approach to effects analysis is a systematic way of breaking down a series of proposed cause-and-effect relationships and interactions into steps. The purpose is to understand the route by which health, social, and/or economic effects and their interactions occur. It is critical to understand that the cause-and-effect relationship does not need to be proven. Instead, the cause-and-effect relationship merely needs to be plausible within the context of the project.

4.4.1. Indicators and measurement

After valued components and pathways are identified, specific indicators and ways of measuring those valued components must be developed. As described in section 3, there are key principles to consider when selecting indicators including community validation, ethical measures and tools, and the use of both qualitative and quantitative indicators. Examples of indicators and data resources can be found in Annex 1.

The combined effects along a pathway can be equal to the sum of the individual effects (additive effect) or can be an increased effect (synergistic effect). The effect pathway can provide a visual illustration of these predictive additive or synergistic effects. The effect pathway can also illustrate

[13] Impact Assessment Agency of Canada (2019). *Tailored Impact Statement Guidelines*. https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/tailored-impact-statement-guidelines-projects-impact-assessment-act.html

the interrelations between health, social and economic effects. When developing an effect pathway, consider how a change in one effect (e.g., positive economic effects of job creation) can trigger a change in another effect category (e.g., positive health benefits of increased income).

4.4.2. How effect pathways inform mitigation and enhancement

Clear effect pathways, including consideration of whether an effect is additive or synergistic, also inform effective mitigation and enhancement strategies by identifying specific points along the effect pathway where action can be taken to foster better outcomes, and achieve broad project and community goals. In particular, adverse effects that are additive or synergistic are critical to mitigate in order to avoid the creation (or magnification) of negative feedback to the community and environment.

4.4.3. GBA+ in effect pathways

When developing an effect pathway, it is critical to consider whether the predicted effect and theoretical pathway will be experienced equally for all impacted groups within communities. Applying GBA+ to the theoretical pathway (from project activities to predicted effects) will ensure that a comprehensive analysis is completed.

Table 2: For example, subgroups within the affected population who live closer to the project site, or who use the land, water or other resources more frequently, may experience magnified effects. The pathway from predicted economic effects of new jobs and higher incomes may look different for subgroups in the community (e.g., disabled individuals, racialized communities). Considering these subgroups when constructing effect pathways encourages planning mitigations (e.g., targeted recruitment, accessible applications) to ensure predicted effects are realized. The application of GBA+ is required as part of the Act. Building GBA+ considerations into the development of effect pathways is critical to ensuring GBA+ is carried throughout the impact assessment.[14]

[14] Impact Assessment Agency of Canada (2019). *Guidance: Gender-based Analysis Plus in Impact Assessment*. https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/gender-based-analysis.html

Table 2: Examples of Valued Components and Project Effects

What are the valued components?	What project components or activities could cause changes to environmental, health, social or economic conditions?	What potential health, social or economic effects on the valued components could be caused by those changes?
Migratory Birds (Environmental)	Removal of vegetation resulting in habitat loss and destruction of nests and birds	• Social effects from loss of harvesting activities • Health effects from loss of traditional food sources, impacts to cultural well-being • Economic impacts on ecotourism businesses
Mental Health (Health)	Restricted access in areas due to construction	• Reduced access to areas where recreational activities are practiced, affecting mental health and well-being
Education (Social)	New workers living in the area and new skill development opportunities	• New learning and education opportunities through project-related work • Loss of land-based learning opportunities and potential interference with Indigenous groups' ability to transmit Indigenous knowledge to future generations
Jobs (Economic)	New employment opportunities	• Economic effects such as less financial stress as higher incomes expected • Linked health effects as incomes rise • Linked social effects as communities grow with worker population and investments in infrastructure
Ceremony (Cultural)	Restricted access to cultural/spiritual sites due to construction	• Interference with Indigenous groups' rights to land for traditional purposes • Linked health and social effects with impacts to spiritual and cultural well-being.

5. Assessing health, social and economic effects under the *Impact Assessment Act*: Identifying methods

Methods to analyze health, social and economic effects will vary from project to project. However, they will tend to follow common steps such as:

- scoping;
- establishing relevant baseline and trend-over-time conditions;
- effects prediction;
- identifying enhancement or mitigation measures; and
- monitoring, follow-up and management of predicted effects.

The methodologies highlighted in this guidance are not intended to be prescriptive, nor is the suggestion that they need to be included in every impact assessment. Instead, they are offered to highlight existing guiding principles and best practices while leaving room for innovation in the field. Specific methods, tools or methodological approaches for the assessment of a specific valued components will be presented in the Tailored Impact Statement Guidelines. It is also critical that methods for assessing effects on Indigenous peoples be developed in collaboration with Indigenous peoples to the extent possible, and that cultural considerations be taken into account. For example, social effects may be perceived differently by Indigenous peoples because of different world views.

Furthermore, the methods highlighted below should not be considered comprehensive. Instead, they should function as a starting point for proponents, the Agency, review panels, other jurisdictions, Indigenous peoples, and communities—these are methods to consider when conducting an impact assessment or when engaging in the impact assessment process

5.1. Health effects and the determinants of health framework

Assessing potential positive and adverse health effects may include a consideration of biophysical concerns as well as a consideration of the broader social and economic environments in which people exist (see Figure 1). When assessing health effects, it is important to start from an understanding of health that is holistic. The World Health Organization defines health in the following way:

> ***"A state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity."***[15]

A "determinants of health" approach should be used when assessing changes to health conditions caused by the carrying out of a designated project. The use of a determinants of health approach most accurately reflects the multiple and interacting factors that cause health effects. For instance, communities often identify valued components that affect health but are within broader environments and contexts, such as water, housing, or land and cultural practices (see figure 1). Framing health issues within this broader context allows for clear articulation of how project-related changes can lead to health effects. For example, the impact of quality housing on community health and well-being, and concerns about increased cost or availability of housing with project activities, may lead a community to identify housing as a valued component. In this case, the effect pathway would clearly map any project-related changes that could impact housing and identify the endpoint indicators that will measure potential effects.

Such an approach recognizes that multiple impacts—related to a community's society and economy, as well as to Indigenous culture and rights, and to the environment—all collectively have an effect on human health. Rather than narrowly framing the causes of health outcomes in individual or personal terms, such as lifestyle behaviours (e.g., smoking, diet, exercise) and risk factors (e.g., body weight, genetic predispositions), a determinants of health approach broadens the focus to include the many factors that shape the conditions in which we live, grow, work and age. These conditions, in turn, influence health outcomes, as well as social and economic outcomes tied to health and wellbeing. One way to think about the determinants of health is as the "causes of the causes" of health outcomes. In other words, health is shaped by how resources and opportunities are distributed across society, and how social, economic and political forces influence this distribution.

[15] World Health Organization. (1946). Preamble to the Constitution of WHO as adopted by the International Health Conference, New York, 19 June–22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of WHO, no. 2, p. 100) and entered into force on 7 April 1948. https://www.who.int/about/who-we-are/frequently-asked-questions

5.1.1. Upstream and downstream impacts

Health effects may occur “upstream” or “downstream.”

Upstream impacts are interventions or actions that affect the distribution of health and wellbeing at a societal level by impacting social, economic, political, environmental, or other structural factors. Upstream impacts are focused on addressing the “causes of the causes,” for example, policies to increase affordable housing, work to address the health effects of lack of housing or substandard housing at a structural level.[16]

Downstream impacts are influences to health at the more individual levels, by shaping living, working, and material conditions. For example, targeted actions to increase access to a program or service for a vulnerable subgroup (e.g., by changing hours, location or language of service) can work to address health inequities for this group.

The concepts of upstream, downstream, and determinants of health assist in conceptualizing how health outcomes link to broader pathways related to potential project effects. This may include ensuring that impact assessments, mitigation, and follow-up plans accurately scope and address potential project effects, including the interactions between effects.

When planning the impact assessment, practitioners should consider potential health effects within an upstream/downstream understanding to determine the appropriate point in the pathway to measure effects. For example, when considering housing as a valued component, some communities and proponents may identify housing availability as the best point to measure effects, while other communities may identify a point further downstream in the effect pathway (such as the quality of housing or the perceived impact of housing quality on community health).

5.1.2. Health effects and the Tailored Impact Statement Guidelines

The Tailored Impact Statement Guidelines will outline requirements for the assessment of potential health effects and will provide direction on the inclusion of context-specific determinants of health. The Tailored Impact Statement Guidelines will be specific to the project context and the potentially impacted communities, and the requirements for the assessment of health will reflect this context. The guidelines may specify:

- direction on methods;
- tools that allow for the assessment of health in a holistic manner; or
- requirements to assess specific valued components that have an upstream or downstream impact on health.

[16] National Collaborating Centre for Determinants of Health (2014). *Let’s talk: Moving upstream*. Antigonish, NS: National Collaborating Centre for Determinants of Health, St. Francis Xavier University. http://nccdh.ca/images/uploads/Moving_Upstream_Final_En.pdf

There is no single definitive list or model of the determinants of health. Determinants of health shape the health of all Canadians and many determinants apply to all populations (e.g., socioeconomic status, physical environments, sex and gender). At the same time, some determinants have greater, lesser or intersecting impacts for different groups. For example, for Indigenous communities there are distinct determinants of health, such as self-determination, cultural continuity, the legacy of residential schools, and language[17,18].The health and wellbeing of Indigenous communities are influenced by factors (such as land and the impacts of colonization) that intersect with other determinants in ways that are distinct from non-Indigenous Canadians. Models can assist in visualizing how determinants interact, and lists of determinants can be useful in scoping potential influences on health at different levels. Common to most models of the determinants of health is an understanding that health inequities are tied to wider factors, such as how resources, power and money are distributed within or between populations.[19] Indigenous-specific models of the determinants of health often include emphasis on the interconnections between the land and the spiritual and cultural determinants of health and well-being.[19, 20]

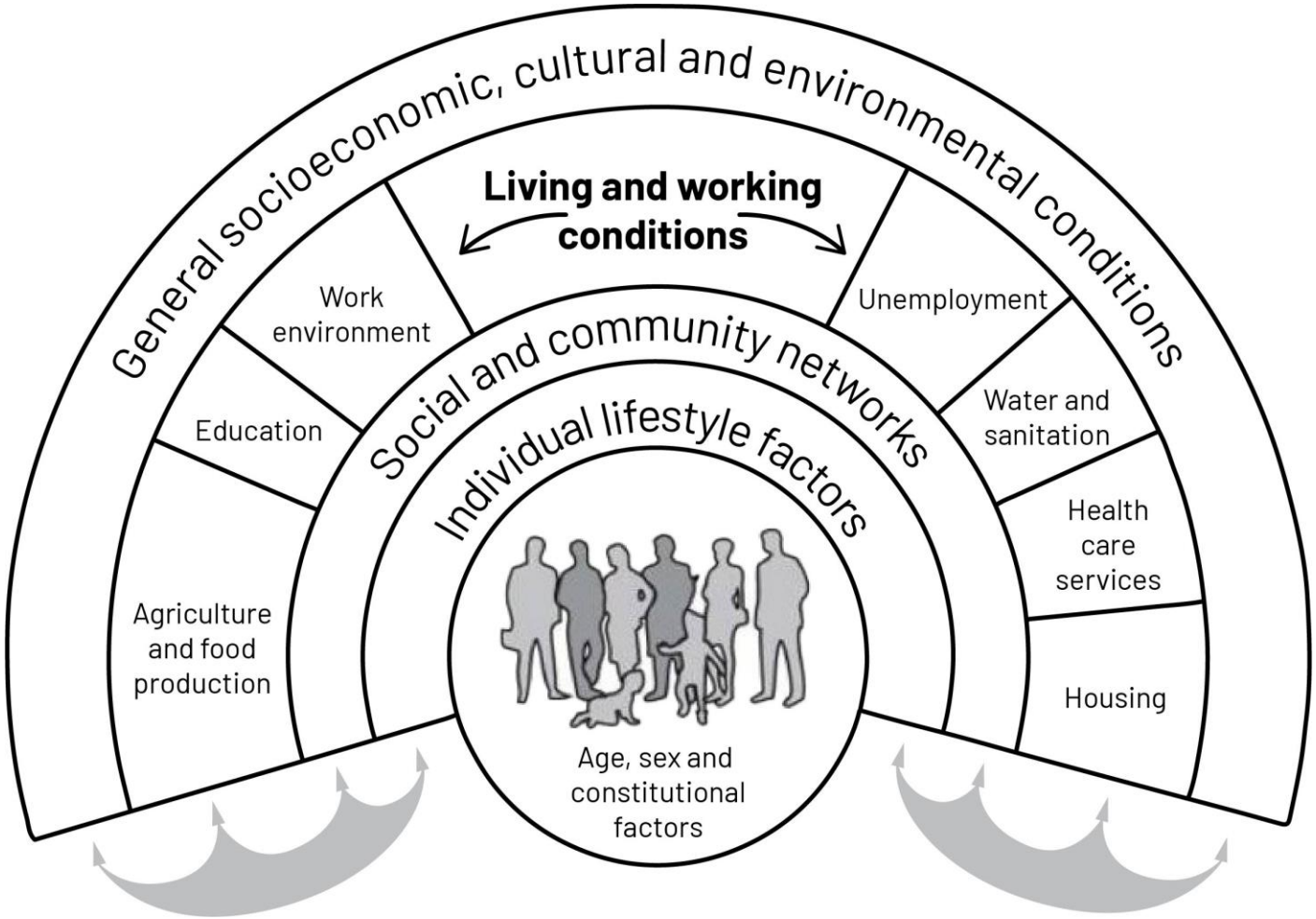
[17] Greenwood M.L., de Leeuw S.N. (2012). *Social determinants of health and the future well-being of Aboriginal children in Canada*. Paediatric Child Health; 17(7):381-384. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3448539/pdf/pch17381.pdf

[18] Reading C.L., Wien F. (2009). *Health inequalities and social determinants of Aboriginal peoples health. National Collaborating Centre for Aboriginal Health*. https://www.nccih.ca/en/publicationsview.aspx?sortcode=2.8.10.16&id=46

[19] World Health Organization (2010). *A conceptual framework for action on the social determinants of health: Social Determinants of Health Discussion Paper 2.* https://www.who.int/sdhconference/resources/ConceptualframeworkforactiononSDH_eng.pdf

[20] Dahlgren G., Whitehead M. (1991). *Policies and Strategies to Promote Social Equity in Health*. Stockholm, Sweden: Institute for Futures Studies.

Figure 1 - Determinants of Health Framework[20]



5.1.3. Methods for assessing health effects

Individual health effects can be assessed in an impact assessment using standard research methods (e.g., surveys, field work, interviews, focus groups). A determinants of health approach can be applied to the assessment of individual health effects by selecting indicators that reflect this broad approach and situating the analysis within a broad understanding of health (Table 3). In some cases, factors that impact health may be assessed by other aspects of the impact assessment, such as the social or economic analysis. Effect pathways are a useful tool to illustrate and investigate these interactions.

The importance of baseline information

- To accurately predict project effects, a baseline community health profile of existing human health conditions—including the current state of physical, mental and social wellbeing—is needed.
- For example, if there are existing high levels of air pollution and, as a result, a higher percentage of people with respiratory issues or other adverse health effects, this must be taken into account when modelling predicted effects.
- Baseline health issues—such as rates of chronic disease (e.g., cancer, diabetes and heart disease), rates of gender-based violence, and mental health issues—are important context for modelling predicted effects of the project, both on its own and in combination with all other physical works, activities, and agents causing cumulative effects.
- Local context and knowledge must be given appropriate consideration in establishing the baseline community health profile.

When multiple health effects are assessed or when health is the central aspect of an assessment, there are two primary approaches used—Health Impact Assessment (HIA) and Human Health Risk Assessment (HHRA). These approaches include multiple tools and methods: their use will depend on the context, specific factors that impact health within project communities, and what health issues are important in those settings. HIAs enable a determinants of health approach by assessing a broad range of factors that contribute to health. In general, an HHRA focuses on biophysical health effects, and uses quantitative models to assess risk. For this reason, an HHRA may not include an explicit consideration of the determinants of health, and therefore may not provide a holistic understanding of health effects. However, findings from HHRA risk models remain important for quantifying risk, which can produce findings that can be situated within a broader assessment of health.

In the context of the impact assessment system, the construction and operation of designated projects can create health effects. From a determinants of health perspective, health effects can be the result of non-health related impacts of the project, such as changes to the environment, changes to local and regional economies, or changes to the social structure of communities.[21] For example, as connections to nature contribute positively to individuals' physical and mental health and well-being, project activities that disrupt access to land can have adverse health

[21] Aalhus M., Oke B. and Fumerton R. (2018). The social determinants of health impacts of resource extraction and development in rural and northern communities: A summary of impacts and promising practices for assessment and monitoring. British Columbia Northern Health and the Provincial Health Services Authority. https://www.northernhealth.ca/sites/northern_health/files/services/office-health-resource-development/documents/impacts-promising-practices-assessment-monitoring.pdf

impacts.[22] Income and health are also closely linked; for example, income relates to the resources available to an individual to maintain their health and access other determinants (e.g., education, child development, housing). However, income inequality can also affect the health of a community[22]by impacting social cohesion or health inequalities, and the operational requirements of major resource projects—such as distance from families and communities and shift-based work—can adversely impact the physical and mental health of workers and their families[23],[24] ,[25]. It is thus important to consider the potential for both positive and adverse health effects that can result from the economic impacts of projects.

There are many ways through which project-related changes that impact health can be placed in an effect pathway, considered as part of the impact assessment, and mitigated or enhanced. For example, communities, proponents and decision-makers may want to understand how worksite schedules will impact health. To aid their understanding, they may include measures such as length of shifts, worksite accommodations (e.g., fly-in/fly-out or in community), job types, and salaries in the assessment of whether jobs will benefit or adversely affect health.

The Agency has guidance for the assessment of effects to the rights of Indigenous peoples and for the inclusion of Indigenous knowledge in the impact assessment process[26]. Practitioners may consult these documents for additional guidance on considering the intersections between health, Indigenous knowledge, and impacts to the rights of Indigenous peoples.

[22] Bratman G.N. et al. (2019). “Nature and mental health: An ecosystem service perspective”, *Science Advances; 5*(7). https://advances.sciencemag.org/content/5/7/eaax0903/tab-figures-data

[23] Lynch J., Smith G.D., Harper S., Hillemeier M., Ross N., Kaplan G. A., and Wolfson M. (2004). “Is income inequality a determinant of population health? Part 1. A systematic review”, *The Milbank Quarterly*, 82(1), 5–99.

[24] Amnesty International (2016). *Out of sight, out of mind: Gender, indigenous rights, and energy development in northeast British Columbia, Canada*. https://www.amnesty.ca/sites/amnesty/files/Out%20of%20Sight%20Out%20of%20Mind%20EN%20FINAL%20web.pdf

[25] Manning S., Nash P., Levac L., Stienstra D. and Stinson J. (2018). *Strengthening Impact Assessments for Indigenous Women*. http://fnn.criaw-icref.ca/images/userfiles/files/Strengthening%20impact%20assessments%20for%20Indigenous%20women.pdf

[26] Nightingale E., Czyzewski K., Tester F., and Aaruaq N. (2017). “The effects of resource extraction on Inuit women and their families: evidence from Canada”, *Gender and Development*, 25(3): 367-385.

5.1.4. Using the Health Impact Assessment method

A **Health Impact Assessment (HIA)** is a systematic process that uses specific steps, standards and principles to examine the possible positive and adverse health impacts to communities, as well as the distribution of those impacts within the population, often including the unintended effects of a designated project.

With HIA, the ways in which health effects are measured will depend on the context of the community where the designated project is planned,[27] and may therefore include various measurement and analytical tools. For example, if traditional language skills are identified as a valued component and a key aspect of health in an Indigenous community, an examination of existing data, a survey, or interviews could determine the extent of language use in the community. Community input would then determine how/if a designated project may impact language and thereby health. Mitigation can include workplace policies at project sites to support the use of Indigenous language and investment in community social projects to protect language. The methods chosen will be context specific and will be dependent on what is to be measured. Proponents should make sure that the assessment of health takes into account community understandings and uses the best available evidence and methods. Assessment of health is linked to, and may overlap with, analysis of social and economic effects. More information on HIA including standard methods, tools and principles can be found in Annex 1 (resource list).

[27] Bhatia R. (2011). *Health Impact Assessment: A Guide for Practice*. Oakland, CA: Human Impact Partners. https://www.pewtrusts.org/~/media/assets/2011/01/01/bhatia_2011_hia_guide_for_practice.pdf

Table 3—Linking health as a valued component to the determinants of health[28]

Determinant	Examples of determinants of health indicators
Health demographics	Birth and death rates; life expectancy; disease-specific mortality rate; unintentional injuries
Health behaviours	Risk-taking behaviours; diet; exercise; drug, alcohol misuse
Mental health and well-being	Well-being; feelings of isolation; remoteness; concern for future; access to services; self-determination; perceived mental health; prevalence of mental health conditions
Housing	Proportion of people who are marginally housed; quality of housing; crowdedness; access to safe housing; social housing; wait lists for affordable housing
Income	Average income; average family income; female lone parent family average income; income inequality; percent of population living below poverty line; consumer price index
Education	Number of residents who completed high school; proportion of youth who complete high school; land-based learning
Social environment	Community safety; social support; community cohesion; food security; governance; violence against women
Culture	Language; cultural practices and traditions; connection to land

[28] Buse C.G., Cornisk K., Parkes M.W., Harder H., Fumerton R., Rasali D., Li C., Oke B., Loewen D. and Aalhus M. (2018). Towards more robust and locally meaningful indicators for monitoring the social determinants of health related to resource development across Northern BC. Report prepared for Northern Health. Prince George, BC: University of Northern British Columbia. https://www.northernhealth.ca/sites/northern_health/files/services/office-health-resource-development/documents/nh-unbc-indicators-report.pdf

5.1.6. Using the Human Health Risk Assessment method

A **human health risk assessment (HHRA)** focuses on biological/physiological aspects of health by examining the risks of exposure to chemicals in the environment (soil, water, air) on humans.[29,30] An HHRA involves four defined steps:

1. hazard identification
2. hazard characterization
3. exposure assessment
4. risk characterization

In impact assessment, it is standard practice to use HHRA to predict risks associated with designated project-related changes to the air, water or soil. For example, when analyzing the health effects of exposure to air emissions, practitioners would consider the results of air quality modeling when describing the baseline and potential adverse effects. HHRAs are also often used to model levels of contaminants in traditional food sources. In these models, it is important to include both quantifiable risk and also perceived risk. For example, risk models may indicate that traditional food sources are not contaminated, but Indigenous communities may alter use and consumption of foods perceived to be contaminated and this can impact spiritual and physical health. As highlighted in the key considerations section of this document, it is critical to analyse and interpret data within the community context. While an HHRA may not explicitly include the full range of determinants of health, biophysical determinants (such as sex and age) are usually included in risk models. For example, predicted risks to vulnerable groups—such as children, those closer to the exposure, or pregnant women—are calculated separately. Findings from HHRA models can be situated within an understanding of the broader determinants of health and in some cases, an HHRA is embedded within an HIA.

For both HHRA and HIA, proponents should work closely with the relevant communities to develop the approach to data collection, indicator selection and data analysis (see Table 2 for example indicators). The decision to conduct both an HIA and HHRA (or one of the two) will depend on the project context and direction provided in the Tailored Impact Statement Guidelines. The Agency, in consultation with expert federal departments and potentially impacted communities, will determine what approach to the assessment of health effects is required. The approach will depend upon the scope of the project, the location and context, and input received in early planning.

[29] World Health Organization (2010). *WHO Human Health Risk Assessment Toolkit: Chemical Hazards.* https://apps.who.int/iris/bitstream/handle/10665/44458/9789241548076_eng.pdf;jsessionid=0D4B8BA77953AC55CF0E8EACE25EA574?sequence=1

[30] Health Canada (2019). *Guidance for Evaluating Human Health Impacts in Environmental Assessment: Human Health Risk Assessment*. www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-evaluating-human-health-impacts-risk-assessment.html

5.2. Social effects

The social effects of a designated project may include any issues associated with changes to the social environment that result from the project—changes that affect or concern people, whether directly or indirectly. The International Association of Impact Assessment defines a social effect as:

> ***"A cognitive or physical effect experienced by an individual person or their community and caused by a change in the social or ecological environment."***[31]

Within the practice of impact assessment, social impact assessment is a distinct practice with various tools and methods. However, within a broad impact assessment that considers the full scope of a project's environmental, health, social and economic effects, as well as impacts on the rights of Indigenous peoples, there is substantial overlap in categories of effects and in the methods and tools used to assess effects. For example, a detailed HIA that takes a determinants of health approach will include the assessment of many social effects, as there is substantial interaction across categories. Indicators like community safety may be addressed as a determinant of health, but it also may be considered a social effect.

Despite the potential overlap between health, social and economic effects within an impact assessment, the proponent must demonstrate that the relevant potential social effects of the project were evaluated as part of the Act. In some cases, this may mean clearly articulating in an effect pathway how a valued components has both social and health effects (e.g., community safety). In other cases, there may be a distinct set of valued components that fall within the category of social effects.

As a best practice, practitioners should begin by defining the social and ecological environments within the context of the project by detailing the biophysical and social components within the study area. The social environment is comprised of the components that define a community and/or a region at the household, workplace, and community/regional level. Examples include the demographics, community services (e.g., policing, maintenance), land use, and institutions (e.g., government, schools) that define a community or region. The ecological environment is comprised of the biophysical components in the air, water and landscape features in the impacted community/region, such as lakes, rivers and forests. Components of the ecological environment are always included in an impact assessment. In this section, the focus is on social effects that can occur with changes to the ecological environment versus general environmental effects (e.g., loss of habitat).

[31] Vanclay F., Esteves A.M., Aucamp I. and Franks D. (2015). *Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects*. Fargo ND: International Association for Impact Assessment. https://www.iaia.org/uploads/pdf/SIA_Guidance_Document_IAIA.pdf

5.2.1. Socially valued components: Categories, examples and contexts

Categories of socially valued components that may be affected by project activities can include the following:

- **Places and resources**, including:
  - related traditional and current land use by Indigenous and non-Indigenous peoples for social, educational, recreational, spiritual and cultural practices; and
  - culturally important places (e.g. structures and/or sites that have historical, archaeological, paleontological, or architectural significance);
- **Community services and infrastructure**, such as community facilities, emergency/protective services, and health and education services;
- **Community well-being**, including social stability, community cohesion, and changes to intra-community interactions (e.g., sharing);
- **Household well-being**, including familial relationships and divisions of labour, gender norms, and the traditional cultural or spiritual roles of family members; and
- **Human rights**, including the rights of Indigenous peoples and rights of members of groups that may be differentially impacted by a project such as women, children and people of diverse gender identities.

Social effects may be defined in four realms: in the home, in the community, at work and on the land. For example, a holistic assessment of a particular social effect should examine the varying ways that the effect is experienced by people within the home, at work, in the community, and in their local environment. This approach to analysing social effects aligns with the upstream and downstream framing of health effects within a determinants of health approach.

The potential social effects of a designated project are context specific. Therefore, when assessing social impacts, the relevant communities (and diverse groups within these communities) should be engaged in the assessment in order to ensure that predicted social impacts are identified, prioritized and characterized correctly.

5.2.2. Methods: Social Impact Assessment

A Social Impact Assessment (SIA) is the primary approach to a comprehensive assessment of the social effects of a designated project. A SIA is a systematic process of analysing, monitoring and proposing mitigation measures for social effects of projects, including intended and unintended social changes caused by projects.[32] A SIA will include similar steps and methods to those used for assessments of health or economic effects, including the following key aspects:

- The development of a comprehensive and historically accurate picture of the potentially impacted communities, including details related to local cultures, practices, values and roles.
- A description of key social practices or activities that may be impacted by the designated project, including traditional cultural, spiritual or land-based activities.
- The identification of valued components that will be assessed in the impact assessment and consultation with key communities on these valued components and how they should be measured and assessed.
- An analysis of potential effects on these valued components.
- Proposed mitigation or enhancements, including project alternatives.

The broad approach to SIA includes many of the best practices for impact assessment as a whole. As with the assessment of environmental, health or economic effects, the methods, models or tools will vary depending on the indicator studied. For example, to measure predicted effects on community safety, practitioners may conduct a community mapping study, focus groups, interviews, or a quantitative survey. The specific method or tool for data collection or analysis should be selected in consultation with community members. Ideally, data collection and analysis will be participatory and provide capacity and skills building opportunities for community members.[33,34] For Indigenous communities, SIA methods should be co-developed to the extent possible.

[32] Vanclay F. 2003. International Principles for Social Impact Assessment. *Impact Assessment & Project Appraisal* 21(1): 5-11. Also available from: http://www.iaia.org/publicdocuments/special-publications/SP2.pdf

[33] Esteves A.M., Franks D. and Vanclay F. (2012). "Social Impact Assessment: The State of the Art", *Impact Assessment and Project Appraisal; 30(1).* https://www.tandfonline.com/doi/full/10.1080/14615517.2012.660356

[34] Branch K., Hooper D., Thompson J. and Creighton J. (1984). *Guide To Social Impact Assessment: A Framework For Assessing Social Change*. Routledge, New York.

5.2.3. Significance of timing and duration when evaluating social effects

Social effects may take time to emerge—particularly effects that impact community values, attitudes, and resilience. Some designated projects have a relatively short construction phase and a long operation phase. The time scale for the project is important to consider when evaluating social effects, particularly as projects become part of the social fabric of a community over time. For example, as people enter or leave a community to work on a designated project site, the social makeup of that community may be positively or adversely impacted. The social fabric of a community may improve over time as incomes rise and project revenues are invested in community services (e.g., childcare) and infrastructure (e.g., roads), and as the project becomes part of the community identity. Identifying the timing and duration of the social effect is necessary to help inform on-going monitoring and follow-up activities.

The specific social effects that will be required in the impact assessment will be determined based on the project context and will be articulated in the Tailored Impact Statement Guidelines. The Agency, in consultation with expert federal departments and potentially impacted communities, will determine what approach to the assessment of social effects is required given the scope of the project, the location and context, as well as input received in early planning. If the context demands a full SIA (versus consideration of individual, specified social valued components), this will be included in the Tailored Impact Statement Guidelines. A full SIA may be required if the impacted community requests this type of assessment or if the primary valued components of interest are social in nature. A SIA may also be nested within the larger impact assessment, or select methods and approaches from a SIA may be used for the assessment of social effects.

5.2.4. Guidance documents on social effects

Technical guidance from a broad range of international associations is available and should be consulted for guiding principles, definitions and evidence-based tools, such as:

- International Association for Impact Assessment, International Principles for Social Impact Assessment (2003)
- International Council on Mines and Metals, Good Practice Guide: Indigenous Peoples and Mining (2011)
- Mackenzie Valley Review Board, Socio-Economic Impact Assessment Guidelines (undated)

5.3. Economic effects

For the purposes of impact assessments under the Act, economic effects can be defined as:

> ***"The positive and adverse consequences of a designated project on components of the economy at the local, regional, and national levels."***

The components of the economy include:

- **Labour:** the people who engage in work associated with the project, as well as the number of jobs associated with the project, the types of jobs, and the type of skills required.
- **Land and resources:** any natural resource used in economic activity, including oil, minerals, trees and water.
- **Capital:** human-made assets that are used to produce goods and services, such as mining equipment, machinery used for construction, or commercial buildings.
- **Businesses and investment:** the operations of existing firms, industries, and other economic actors, including both those that are directly impacted by a designated project (such as building contractors or trucking companies) and in other sectors that may be indirectly impacted (such as tourism or commercial fishing).
- **Consumer spending:** spending on consumption goods and services, including private housing, rental accommodations, energy, food and fuel.
- **Government spending:** spending by local government (including Indigenous governments), provincial governments and the Government of Canada, including spending on:
  - services (such as healthcare, public safety, and primary education);
  - goods; and
  - the building or maintenance of public infrastructure (such as roads, bridges, and government buildings).

5.3.1. Direct, indirect or induced economic effects

The specific economic effects that will be required in the impact assessment will be based on the project context and will be articulated in the Tailored Impact Statement Guidelines. Depending on the nature of the project, the assessment of the economic impacts of a project may take into account the community, regional and national-level effects of the project, both positive and adverse. Economic effects may be either direct, indirect, or induced.

- **Direct economic effects:** changes in components of the economy as a direct consequence of a designated project (e.g., the number of jobs created at the project site, the value of supplies purchased, and taxes and royalties paid by the proponent).
- **Indirect economic effects:** changes in components of the economy as an indirect consequence of the project (e.g., the number of jobs created in other firms associated with the project and the value of spending by these firms).
- **Induced economic effects / income effects:** changes in the economy due to increased personal income caused by direct and indirect economic effects (e.g., spending by employees hired by the proponent and by employees hired at associated industries, restaurants and other local businesses).

Any of the components of the economy discussed above may experience direct and indirect effects. By definition, induced effects are restricted to consumer spending. The components of the economy (and the valued components that fall under those components) may be affected in both positive and adverse ways. The Tailored Impact Statement Guidelines may articulate specific economic components and/or methods that must be included in the analysis.

The assessment of economic effects may also include a consideration of the community, regional and national-level capacity to take advantage of the economic opportunities created by a project. For example, the economic benefits of job creation may not be directly realized in a small community with a limited pool of skilled labour. It is also important to consider cultural and social effects from changes to the economy in a given area. For example, a shift from a traditional fishing economy towards industrial work, particularly where individuals are leaving a community for long periods of time, can affect the connection that people have with their community and to their culture. This can also impact families and children, and the ability to pass on language and culture associated with traditional activities. Understanding the community context supports a clear description of the scale of potential local, regional and national economic effects.

5.3.2. Methods: Tools for economic impact assessment

There are several different methods of conducting economic analysis. Some approaches, such as those advanced by international finance institutions like the World Bank[35], Inter-American Development Bank[36], and the Asian Development Bank,[37] centre considerations on the economic feasibility and financial sustainability of projects. Other examples drafted by governments (e.g., Australian State of Queensland[38]) and private sector entities (e.g., Anglo American[39]) highlight the interconnected nature of social and economic effects (i.e., socioeconomic effects). Within these approaches, there are specific tools and methods that can be used depending on the focus of the analysis:

- **Fiscal valuation / fiscal impact analysis:** The purpose of fiscal valuation is to compile and review major revenues that will be generated by the project, particularly those generated by taxes and royalties for each level of government. Analyzing impacts in this way is a means of identifying where revenues and costs will be allocated, and whether these allocations are balanced between the different partners involved in the project. The primary indicators used in fiscal valuations include the number of jobs, revenue, expenditures, new capital improvements and new services that are generated by the project.
- **Input-output analysis:** Input-output models are applied in two ways.
  - First, they have a **descriptive** use, which allows for an analysis of the structure of the economy. Included in the structure of the economy are the relative importance (contributions) of each industry in the study area, wages and salaries stemming from these industries, household consumption, total value added, gross regional product, and interactions such as imports and exports.
  - Second, input-output models have a **predictive** They provide an outlook on the potential flow of inputs from the project to the local economy and, conversely, the flow of inputs from the local economy to the project. In input-output models, the standard measure of input flows are the direct, indirect and induced impacts of a project.
- **Cost-benefit analysis (CBA):** Under cost-benefit analysis, external benefits are defined as increases in human well-being (e.g., clean water) and costs are defined as reductions in human well-being (e.g., polluted water). Conducting a CBA begins with compiling all the costs and benefits associated with a project, then aggregating and comparing the costs to the benefits.

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[35] World Bank (2020). *Environmental and Social Framework Resources*. https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-framework-resources#guidancenotes

[36] Inter-American Development Bank (2020). *Economic Analysis Overview*. https://www.iadb.org/en/topics-effectiveness-improving-lives/economic-analysis-overview

[37] Asian Development Bank (2017). *Guidelines for the Economic Analysis of Projects*. https://www.adb.org/documents/guidelines-economic-analysis-projects

[38] State of Queensland (2017). *Economic Impact Assessment Guideline*, Department of State Development. https://www.statedevelopment.qld.gov.au/resources/guideline/cg/economic-impact-assessment-guideline.pdf

[39] Anglo American (2014). *SEAT Toolbox: Socio-Economic Assessment Toolbox, Version 3*. https://www.angloamerican.com/~/media/Files/A/Anglo-American-Group/PLC/sustainability/seat-overview/seat-overview-english.pdf

Each of these methods for economic analysis starts with a description of the baseline, or the local and regional economic environment in the absence of the project. This should include a description of the various components of the economy (as defined above). The method of analysis chosen will dictate a set of predicted economic effects to examine for the analysis. The practitioner should then describe these predicted economic effects. When conducting the economic impact assessment, rather than only reporting the economic effect in aggregate, practitioners should describe the direct, indirect and induced effects. Presenting all three types of effects will help to determine the potential positive and adverse economic impacts on different groups at local, regional and national levels.

5.3.3. Key considerations for analyzing economic effects

Practitioners should keep in mind the following key considerations when carrying out an analysis of effects:

- **Geographic scale and boundaries of effects –** the geographic scale of the economic effects of a project will depend on the nature of the project and its anticipated effects, and this scale may differ between economic effects. The practitioner's analysis should explain how the boundaries of economic effects were determined, and take into consideration the potential for local, regional and national level effects. Some effects may primarily occur at the local level, while others may occur at the regional or national level. For some projects, most positive economic effects may occur far from the project site (e.g., lower electricity prices in a major city) while more adverse economic effects (e.g., higher housing prices) may be concentrated locally. The scale and boundaries of the economic effects may or may not correlate to the scale of the project. For example, smaller projects that have negligible capital and labour market impacts at the national level may nevertheless still contribute to federal government revenues.
- **Analysing both near- and long-term effects –** economic effects may also change over the lifespan of the project, and practitioners should clearly distinguish the short-run and long-run effects. Particularly with economic factors, there will be many cases where the short-run effect may be adverse and the long-run effect positive, and vice versa. (For example, a project may cause higher costs of living and more traffic during construction before creating more permanent jobs and tax revenue when it becomes operational). These changes are important to consider in the analysis of well-being (economic and otherwise) and of potential mitigation measures.
- **Use of qualitative and quantitative measures –** the way in which qualitative and quantitative data are integrated and compared should also be clearly explained. For example, a pathways approach will likely require analyzing qualitative data (such as community input or surveys) in order to describe potential economic effects. When qualitative data is used, efforts should be made to link to quantitative data and similarly, quantitative data should be supported with qualitative data. Similar issues will arise when projecting into the future: practitioners should describe assumptions made in quantitative projections or forecasting (e.g., future commodity prices). Ideally, the analysis will include a range of projections or future scenarios.

5.3.4. Additional considerations: Economic feasibility

Whether a project's predicted economic effects come to pass will depend on the project's economic feasibility. Proponents may be required to provide details on the business case for the project. This could include a description of the assumptions about the project's feasibility under a range of scenarios. It might also describe how the positive and adverse economic effects could potentially change under these different scenarios. For example, an analysis of a natural resource project should include a range of estimates for the project's viability in light of possible changes to commodity prices, as these changes could impact the size of the royalties that would result from the project. . This is due to the fact that changes to commodity prices could impact the size of the royalties that would result. A thorough analysis of a project's business case will aid decision-makers in understanding the certainty of predicted positive and adverse economic effects.

6. Health, social, economic effects in Decision-Making and Post Decision phases

The Act requires the Minister or Governor in Council make a decision as to whether the project's effects are in the public interest. This public interest determination must be based on the Impact Assessment Report and the five public interest factors that are set out in the Act. The Impact Assessment Report will take into account the changes to health, social or economic conditions and the positive and adverse consequences of these changes that are likely to be caused by the carrying out of the designated project. The portions of the report addressing the health, social or economic impacts of the project will also inform the decision-maker's consideration of the public interest factors, and in particular may be relevant to four of these factors:

- **Consideration of the extent to which the designated project contributes to sustainability—**Under the Act, sustainability is defined as "the ability to protect the environment, contribute to the social and economic well-being of the people of Canada and preserve their health *in a manner that benefits present and future generations*" (emphasis added). For more information on the approach to the consideration of sustainability under the Act, please see the Guidance: Considering the Extent to which a Project Contributes to Sustainability.
- **Consideration of the extent to which some effects are significant—**This public interest determination must consider, among other things, the extent to which the adverse environmental, health, social and economic effects in federal jurisdiction and the adverse direct or incidental effects indicated in the impact assessment report are significant. To support this public interest determination, the Impact Assessment Report must characterize the extent of significance of the effects of the project. This is not a "yes or no" determination on whether an effect is significant or not. Rather, the Impact Assessment Report will describe the extent of significance of an adverse effect, using criteria such as magnitude, geographic extent, timing, frequency and duration. (Further Agency guidance on determining extent of significance is forthcoming).
- **Consideration of the implementation of the mitigation measures that the Minister or the Governor in Council considers appropriate—**Mitigation measures are expected to eliminate, reduce, control or offset the adverse effects of a designated project, and could include restitution for damage caused by those effects through replacement, restoration, compensation or any other means. The Impact Assessment Report will provide a description of technically and economically feasible mitigation measures to be applied to all identified adverse effects within federal jurisdiction, and the adverse direct or incidental effects. Mitigation measures proposed by other jurisdictions or Indigenous groups may also be considered.
- **Consideration of the impact that the designated project may have on any Indigenous group and any adverse impact that the designated project may have on the rights of the Indigenous peoples of Canada—**In considering the potential impact that a designated project may have on any Indigenous group, decision-makers will consider a range of factors that may include the positive and adverse effects the designated project may have on the

social, economic, and health conditions of Indigenous peoples. To inform this consideration, please see *Guidance: Assessment of Potential Impacts on the Rights of Indigenous Peoples*.

If the decision-maker determines that the adverse effects within federal jurisdiction and the adverse direct or incidental effects indicated in the Impact Assessment Report are in the public interest, the Minister issues a Decision Statement that includes conditions the proponent must comply with. This may include conditions that mitigate adverse health, social or economic effects within federal jurisdiction or that are direct or incidental effects, such as mitigation or monitoring requirements focused on the health, social or economic effects identified in the report. Conditions might also accommodate an adverse impact to the rights of Indigenous peoples, including those arising from effects on Indigenous peoples' health, social or economic conditions.

For impacts beyond federal jurisdiction, depending on the context, an adverse health, social or economic effect may be addressed by provincial, territorial or Indigenous partners, or voluntarily by proponents.

The Government of Canada may also put in place **complementary measures**, which are initiatives undertaken under federal programs or under the authority of a federal minister or department, beyond those stated in the Act. Complementary measures may be used to address issues outside of the care and control of a proponent, such as cross-cutting issues requiring an integrated response or to accommodate adverse impacts to section 35 rights held by Indigenous peoples. They may also be used to leverage and enhance the positive effects of a project. Examples of complementary measures may include skill development and training programs, or social programs.

Annex 1 – Key resources

Health Impact Assessment:

- Bhatia R., Farhang L., Heller J., Lee M., Orenstein M., Richardson M. and Wernham A. (2014). Minimum Elements and Practice Standards for Health Impact Assessment, Version 3. https://pdfs.semanticscholar.org/040d/8ff2749f8ef2ec8b8233b7bffae9f7a38a12.pdf
- The Firelight Group, Lake Babine Nation, and Nak'azdli Whut'en (2017). Indigenous Communities and Industrial Camps: Promoting Healthy Communities in Settings of Industrial Change. http://www.thefirelightgroup.com/firelightmaterials/wp-content/uploads/2016/03/Firelight-work-camps-Feb-8-2017_FINAL.pdf
- Westwood E., and Orenstein M. (2016). Resource Kit for HIA Practitioners: HIA for Industrial Projects. Habitat Health Impact Consulting Corp: https://hiasociety.org/resources/Pictures/Resource%20Kit%20HIA%20Industrial%20Projects.pdf

Social Impact Assessment

- International Association for Impact Assessment (IAIA) (2003). International Principles for Social Impact Assessment. Fargo ND: International Association for Impact Assessment. https://www.iaia.org/pdf/Sections/SIA/IAIA%20SIA%20International%20Principles.pdf
- Vanclay F., Esteves A.M., Aucamp I. and Franks D. (2015). Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects. Fargo ND: International Association for Impact Assessment. https://www.iaia.org/uploads/pdf/SIA_Guidance_Document_IAIA.pdf
- First Nations Major Projects Coalition (2019). Major project assessment standard. https://www.fnmpc.ca/s/FNMPC-MPAS-FINAL.pdf

Economic Impact Assessment

- World Bank (2017). The World Bank Environmental and Social Framework; in particular, ESS2: Labor and Working Conditions. https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-framework-resources#guidancenotes.
- Asian Development Bank (2017). Guidelines for the Economic Analysis of Projects. https://www.adb.org/documents/guidelines-economic-analysis-projects
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Annex 2 – Examples of potential valued components that are relevant to health, social and economic effects

Table 4 - Examples of potential valued components that are relevant to health, social and economic effects

Criteria	Example Indicators	
Health & well-being		
Clean air	• Air quality indicators (e.g., pollutants, dust, smog)	• Rates of respiratory illnesses
Clean water	• Water quality indicators • Availability of water resources	• Groundwater quality
Mental health & well-being	• Prevalence of mental health conditions	• Self-rated mental health
Health behaviours	• Risk-taking behaviours • Rates of alcohol, drug misuse • Exercise and physical activity	• Diet • Consumption of traditional foods
Health conditions	• Birth and death rates • Life expectancy • Disease-specific mortality rates	• Unintentional injuries • Sexually transmitted infections
Access to community health care	• Number and type of health services	• Accessibility of health services
Housing	• Housing availability • Quality of housing	• Access to safe housing

Criteria	Example Indicators	
Social well-being		
Social services	• Childcare services • Education • Community recreation • Women's shelters	• Homeless shelters and services • Emergency and police services • Transportation
Community cohesion	• Social networks • Levels of volunteerism • Community gatherings	• Cultural and spiritual practices • Traditional language use
Community safety	• Rates of crime • Rates of gender-based violence	• Traffic accidents • Perceived safety
Land	• Recreational spaces • Spiritual and culturally important sites	• Visual landscape
Economic well-being		
Employment	• Number of jobs • Type of jobs	• Employment rates • Rates of full-time, part-time, seasonal employment
Income	• Average income • Gender wage gaps	• Income disparities • Percent living below poverty line
Cost of living	• Housing prices • Availability of affordable housing	• Consumer prices
Local economies	• Contracting opportunities • Number of local businesses	• Change in property values
Traditional economies	• Market value of traditional economy • Value of goods from traditional economy	• Percent of people participating in traditional economy

Annex 3 – Data sources

The following table highlights some key data sources for health, social and economic effects. This should be considered a starting point, as more data collection will be necessary to accurately inform project-specific and context-specific information.

Table 5 - Key data sources for health, social and economic effects

Topic	Source
Health	
Determinants of Health for Aboriginal Peoples	National Collaborating Centre for Aboriginal Health: https://www.nccih.ca/en/publicationsview.aspx?sortcode=2.8.10.16&id=46
First Nations Regional Health	First Nations Information Governance Centre: https://fnigc.ca/rhs3report
Health Inequalities	Public Health Agency of Canada: /content/dam/phac-aspc/documents/services/publications/science-research/key-health-inequalities-canada-national-portrait-executive-summary/hir-executive-summary-eng.pdf
Health Inequalities	Public Health Agency of Canada: https://health-infobase.canada.ca/health-inequalities/data-tool/index
Determinants of Health	Indicators of the Determinants of Health, Northern Health (BC): https://www.northernhealth.ca/sites/northern_health/files/services/office-health-resource-development/documents/nh-unbc-indicators-report.pdf
Mental Health	Public Health Agency of Canada: https://health-infobase.canada.ca/positive-mental-health/
Food Security	Statistics Canada: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310038501
Health Services	Open Database of Healthcare Facilities, Statistics Canada: https://www150.statcan.gc.ca/n1/en/catalogue/13260001

Topic	Source
Social	
Education (by Region)	Statistics Canada: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3710013001#data
Post-Secondary Education	Statistics Canada: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3710001201
Disability	Statistics Canada: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310037401
Skills (Trades)	Statistics Canada: https://www150.statcan.gc.ca/n1/en/subjects/education_training_and_learning/apprenticeship_and_trades?p=1-All#all
Crime & Offences	Statistics Canada: https://www150.statcan.gc.ca/n1/en/subjects/crime_and_justice/crimes_and_offences
Social Networks and Public Engagement	Statistics Canada: https://www150.statcan.gc.ca/n1/en/catalogue/89M0032X
Volunteering and Community Involvement	Statistics Canada: https://www150.statcan.gc.ca/n1/en/catalogue/89M0017X
Recreation	Statistics Canada: https://www150.statcan.gc.ca/n1/en/subjects/society_and_community/time_use#data
Economic	
General Demographic Information (age, gender, ethnicity, language, education, employment, etc.)	Statistics Canada: Census Profile, 2016: https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E
GDP (by province/territory and by industry)	Statistics Canada: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610040202
Labour Force Survey	Statistics Canada Interactive Map: https://www150.statcan.gc.ca/n1/pub/14-20-0001/142000012018001-eng.htm

Topic	Source
Economic (continued)	
Employment Insurance Economic Regions	Government of Canada: https://srv129.services.gc.ca/eiregions/eng/geocont.aspx
Housing Markets	Canada Mortgage and Housing Corporation: https://www.cmhc-schl.gc.ca/en/data-and-research
Oil and Gas sector	Natural Resources Canada (Oil Pricing): https://www.nrcan.gc.ca/our-natural-resources/energy-sources-distribution/clean-fossil-fuels/crude-oil/oil-pricing/18087 Canada Energy Regulator (Natural gas, crude oil, and electricity) https://apps.cer-rec.gc.ca/CommodityStatistics/Statistics.aspx?language=english
Local gas prices	Canadian Automobile Association: https://www.caa.ca/gas-prices/local-provincial-gas-prices/
Global Commodity Prices	World Bank Commodity Markets Outlook: https://www.worldbank.org/en/research/commodity-markets