# Guide to Socio-economic Effects Assessments

YESAB
Yukon Environmental and Socio-economic Assessment Board

V. 2006.06

## DISCLAIMER

This Guide is not a legal authority and is not intended to provide legal advice or direction. The Guide provides information only, and should not be used as a substitute for the *Yukon Environmental & Socio-economic Assessment Act* or *regulations*. In the event of a discrepancy, the *Act* and *regulations* prevail. Portions of the *Act* have been paraphrased in the Guide, and should not be relied upon for legal purposes. The procedures described in this Guide may be deviated from, based on specific project circumstances. The Yukon Environmental & Socio-economic Assessment Board and Designated Offices disclaim liability in respect of anything done in reliance, in whole or in part, on the contents of this Guide.

# TABLE OF CONTENTS

## LIST OF FIGURES



## LIST OF TABLES



## LIST OF APPENDICES

# LIST OF ACRONYMS

| | |
|---|---|
| CEAA | Canadian Environmental Assessment Agency |
| DAP | Development Assessment Process |
| DB | Decision Body |
| DO | Designated Office |
| EA | Environmental Assessment |
| Ex. Comm or EC | Executive Committee of the Board |
| MVEIRB | Mackenzie Valley Environmental Impact Review Board |
| SEEA | Socio-economic Effects Assessment |
| SIA | Social Impact Assessment. |
| The Act | Yukon Environmental & Socio-economic Assessment Act |
| UFA | Umbrella Final Agreement |
| YESAA | Yukon Environmental & Socio-economic Assessment Act |
| YESAB | Yukon Environmental & Socio-economic Assessment Board |
| VESEC(s) | Valued Environmental & Socio-economic Component(s) |

# PREFACE

## PURPOSE OF THIS DOCUMENT

These *Socio-economic Effects Assessment* (SEEA) *Guidelines* describe approaches for conducting socio-economic effects assessments pursuant to the *Yukon Environmental and Socio-economic Assessment Act* (the *Act*). This guidebook is intended to provide practical guidance on the conduct of SEEA for development proposals in Yukon. This guide also directly complements other YESAB guides, namely the *Guide to Designated Office Evaluations and Form 1* and the *Proponent's Guide to Information Requirements for Executive Committee Project Proposal Submissions*.

## WHO SHOULD READ THIS GUIDE

This guidebook is one of several guidebooks prepared by the Yukon Environmental & Socio-economic Assessment Board (YESAB) to provide information and guidance to the following parties to explain the process requirements and expectations of YESAB for all parties to the assessment process:

- Proponents for the planning of their projects and preparation of project proposals. This guide is particularly relevant to proponents of projects that are subject to assessment at the Executive Committee or Panel level, as they are responsible for completing an initial environmental and socio-economic effects assessment prior to submitting their project proposals;
- The Public to understand how the assessments will be conducted and to aid them in preparing to participate in the assessment;
- Governments so that they may also be prepared to participate in assessments; and,
- Finally to the Board Members and Assessment Staff in order to provide consistent guidance on the subject of socio-economic effects assessments.

This guidebook is intended to provide guidance and specific tools for use in assessments at all three levels of assessment (Designated Office Evaluations, Executive Committee Screenings, and Panel Reviews) and for projects of varying complexity and in a multitude of socio-economic settings.

### *A NOTE REGARDING THE INTENDED AUDIENCE OF THIS GUIDEBOOK*

As a reflection of the two principal audiences for this document, that being the proponent and the YESAB assessor, efforts have been made to identify considerations and actions that are the responsibility of either or both parties by using the terms “proponent” or “assessor”. In cases where the responsible party may appear to be ambiguous it is likely that the guidance is intended for both parties to be considered during their respective work to conduct socio-economic effects assessments of proposed projects, where the proponent conducts an assessment in advance of a submission and where the assessor conducts the assessment once a proposal has been submitted.

## DOCUMENT LAYOUT

This guidebook is organized into four parts as follows:

### *PART I: INTRODUCTION TO SOCIO-ECONOMIC ASSESSMENT*

This part is intended to inform the user about what SEEA is, what the goals of SEEA are, who participates and how, as well as the challenges that are present for conducting socio-economic effects assessments.

### *PART II: PRINCIPLES FOR SOCIO-ECONOMIC EFFECTS ASSESSMENT UNDER YESAA*

This part presents the overarching principles and expectations that the YESAB has developed for the conduct of socio-economic effects assessment in Yukon. The principles represent the broad guidance that will serve as the goalposts for conducting assessments. While the specific methods that the assessor or proponent will employ for a particular assessment may vary, the assessments will adhere to these guiding principles.

### *PART III: CONDUCTING ASSESSMENTS*

This part represents the tools and methods for SEEA, or the detailed 'what' and 'how' of the assessment process. It outlines the steps in the assessment process, some of which involve feedback loops and reflection back on previous steps to refine understanding of the socio-economic context, issues, effects predictions, and mitigation measures. In short, the assessment of environmental and socio-economic effects is an iterative process.

The steps in the assessment closely follow those of environmental effects assessment. For each step, an overview in the context of SEEA is provided as well as the various tasks and procedures required to complete each step. Tables, figures, and lists are provided to prompt the user for action as well as to record, sort, and evaluate a variety of information regarding the project and the identified potential effects, to develop mitigation strategies and evaluate the significance of potential effects. For more complex projects, i.e. those with a greater potential to have significant effects, more detailed methodologies for SEEA are briefly introduced and compared.

### *APPENDICES*

These appendices contain references to academic and applied literature on a variety of socio-economic effects assessment thought, assessment methods, and tools. These will serve as a guide to additional information for the user where more details on the various techniques are required to carry out an effects assessment. The appendices also contain a glossary to the various technical terms used in the guide, which are common to assessment practices. An appendix containing a table to outline the range of socio-economic issues and interests that may be required for consideration in the assessment of major projects is also included. Finally there is an appendix which contains a listing of various organizations that have socio-economic mandates that may be useful resources in conducting assessments.

## CONSIDERATIONS FOR USE

This guide has been tailored to Yukon's specific environmental and socio-economic assessment circumstances as delineated by the *Act* and by making the best use of the most applicable literary and applied resources that were accessed during the preparation of this guidebook.

SEEA should be understood to be but one part of the greater effects assessment process. The consideration of socio-economic effects complements, and is intrinsically linked to, the assessment of environmental effects. This is particularly true for Yukon First Nation persons whose economic, social, and cultural realities are so closely tied to the land.

The guidance provided here is intended to be comprehensive and to provide project proponents with as much information as possible regarding SEEA prior to their submission of a project proposal. Adherence to the guide does not preclude the Board or Designated Offices from developing project specific requests for information from proponents in the context of their particular project. In addition to consulting this guide, proponents should consider consulting with the YESAB early on in their project planning to ensure that their project proposals are as strong as possible before submission for assessment.

While the potential for socio-economic effects will always be a consideration of YESAB assessors at any level of assessment, proponents of Designated Office level projects will only very rarely be required to conduct an initial and basic SEEA themselves. Proponents of projects at the DO level can consult the *Guide to Designated Office Evaluations and Form 1* as well as sector specific guidance that is being developed by YESAB, and/or speak with an assessor to find out what information pertaining to potential socio-economic effects should be included in their proposal.

It is expected that this document and the practice of SEEA in the Yukon will evolve as assessment experience under *YESAA* is gained and in response to changes to the social, economic, and environmental realities of the Yukon. As such, this document may be reviewed and updated periodically by the Yukon Environmental & Socio-economic Assessment Board. To ensure that you have the most up-to-date version, please consult the Board's website at www.yesab.ca.

YESAB is committed to a continuous improvement approach for maintenance and further development of its socio-economic effects assessment framework.

Any suggestions for updates or revisions to this guide are welcomed and should be directed to:

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# PART I - INTRODUCTION TO SOCIO-ECONOMIC EFFECTS ASSESSMENT

## 1.0 WHAT IS SOCIO-ECONOMIC EFFECTS ASSESSMENT?

*Socio-economic effects*, as described in the *Act*, include effects on economies, health, culture, traditions, lifestyles, and heritage resources. [1]

In the context of the *Act* these effects can be adverse and/or favourable (positive and/or negative).

*Socio-economic effects assessment* is the systematic analysis of the likely effects a proposed project will have on the day-to-day life of individuals, families, communities[2], businesses, and/or governments whose reality may be affected by a proposed project (adapted from Burdge, 2004a, p.3).

Some examples of the broad and general questions asked in a SEEA by proponents and assessors include:

- What social, economic, and/or cultural effects might a proposed development have?
- What is the mechanism or trigger by which the development contributes to these social and economic effects? Will it cause new effects or accelerate/exacerbate existing ones?
- What proportion of an expected effect can this development be held responsible for? How, if possible, can this be measured/estimated?
- Which populations and communities are most likely to be affected?
- What is the geographic scope at which these potential effects may be felt?
- Is the direction of the effects positive or negative?
- Is the direction of the effect different for different individual, families, communities, businesses, and/or governments (i.e. do some experience the positives while other experience the negatives)?
- Do the potential effects support or contradict community held aspirations, goals, vision? Is the community ready and willing for the development?
- Are the potential effects likely, significant, and adverse enough to merit the imposition of mitigation measures (measures to manage, reduce, or eliminate identified effects)?
- Do such mitigation measures exist and how can they be reasonably implemented?

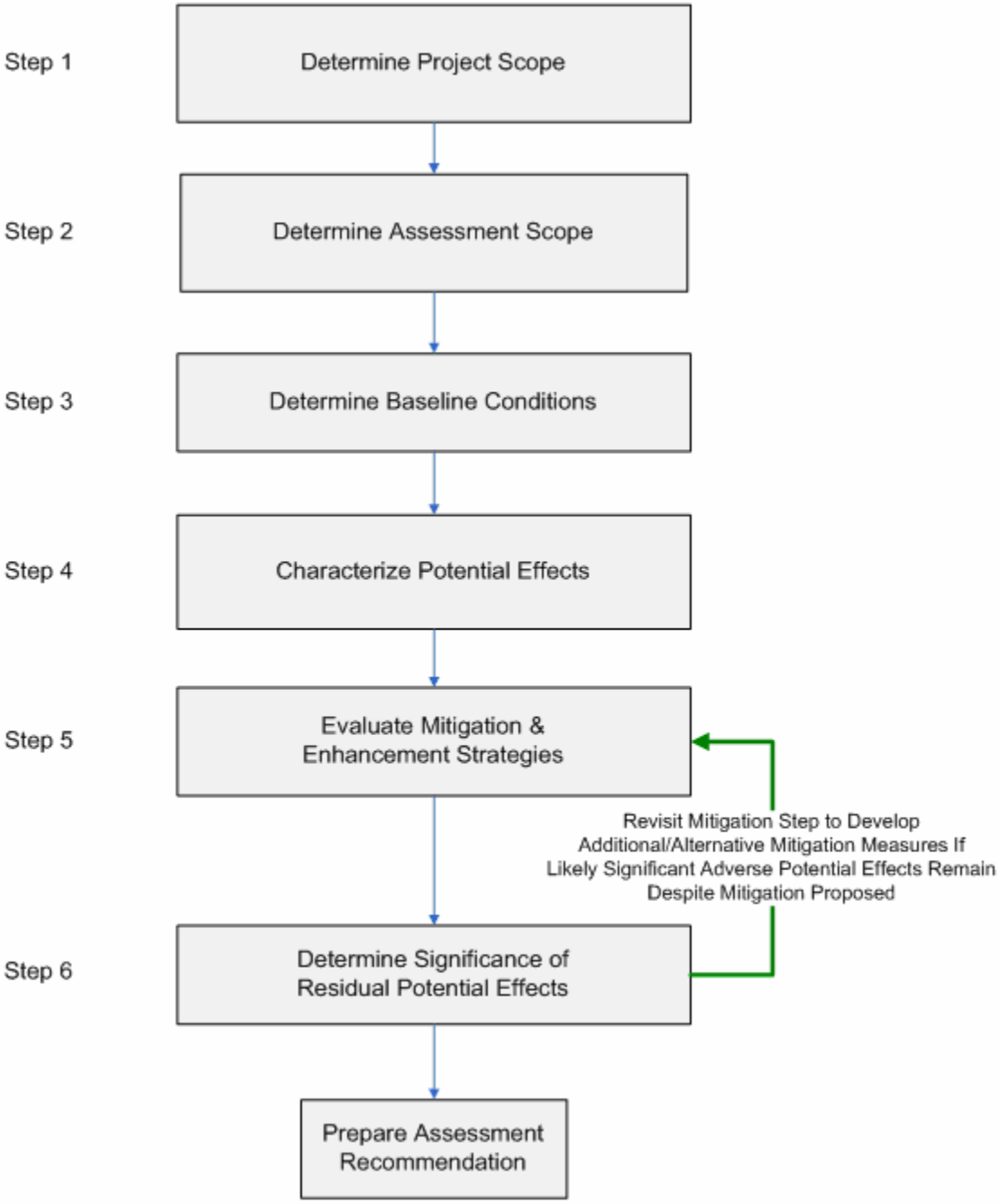
The basic steps in the assessment of socio-economic effects are the same as in the assessment of environmental effects. Although some of the tasks, approaches, and considerations associated

[1] Subsection 2.(1), *Yukon Environmental and Socio-economic Assessment Act*, S.C. 2003, c. 7.
[2] The term 'community' in this guide refers to both place-based communities, which can be defined geographically, and interest-based communities defined by a common interest or activity, also sometimes referred to as a 'stakeholder' group.

with each step vary. Under the *Act,* the assessment of both environmental and socio-economic effects is inextricably linked and will be conducted in an integrated fashion.

Figure 1 below presents the general assessment steps. A more detailed version of this figure is contained in Part III to outline the various tasks, considerations, and approaches for use within each step.

**Figure 1 Basic Steps in the Assessment Process**



## 2.0 WHY CONDUCT SEEA? – REGULATORY FRAMEWORK

Establishing a process to assess the environmental and socio-economic effects of developments in Yukon is a requirement of Chapter 12 of the Yukon First Nation Final Agreements (the Umbrella Final Agreement-UFA). This development assessment process, or DAP, is provided for in the *Yukon Environmental and Socio-economic Assessment Act* (*YESAA* or the *Act*). That is to say that the *Act* is the enabling legislation for the DAP.

Socio-economic effects assessment is specifically mandated under the *Act* and it requires that the Yukon Environmental and Socio-economic Assessment Board (YESAB) take into consideration "the significance of any environmental or socio-economic effects of the project or existing project that have occurred or might occur in or outside Yukon, including the effects of malfunctions or accidents."[3]

Section 5 (2) of *YESAA* describes the purposes of the *Act* thereby giving effect to the provisions of the Umbrella Final Agreement for the assessment of socio-economic effects, namely:

- To provide a comprehensive, neutrally conducted assessment process applicable in Yukon;
- To require that, before projects are undertaken, their environmental and socio-economic effects be considered;
- To protect and maintain environmental quality and heritage resources;
- To protect and promote the well-being of Yukon Indian persons and their societies and Yukon residents generally, as well as the interests of other Canadians;
- To ensure that projects are undertaken in accordance with principles that foster beneficial socio-economic change without undermining the ecological and social systems on which communities and their residents, and societies in general, depend;
- To recognize and, to the extent practicable, enhance the traditional economy of Yukon Indian persons and their special relationship with the wilderness environment;
- To guarantee opportunities for the participation of Yukon Indian persons -- and to make use of their knowledge and experience -- in the assessment process;
- To provide opportunities for public participation in the assessment process;
- To ensure that the assessment process is conducted in a timely, efficient and effective manner that avoids duplication; and,
- To provide certainty to the extent practicable with respect to assessment procedures, including information requirements, time limits and costs to participants.

Pursuant to Sections 42 and 50 of the *Act*, proponents and assessors must consider a number of matters when preparing project proposals and when conducting assessments. The matters to be considered include, among other matters, potential socio-economic effects that may result from the project.

At the conclusion of the assessment, the Federal, Territorial, and/or First Nation Governments, as *Decision Bodies* for the proposed project, will receive the recommendation from the assessor with all relevant project information. The Decision Body (or Bodies) will then decide whether to accept, reject, or vary the recommendation of the assessor (Designated Office, Executive Committee, or YESAB Panel). The decision is then issued in a decision document by the Decision Bodies.

[3] Paragraph 42.(1)(c), *Yukon Environmental and Socio-economic Assessment Act*, S.C. 2003, c. 7.

### *2.1 BENEFITS OF SEEA*

Socio-economic effects assessments provide several benefits including:

- Improving the design of proposed projects and allow for more environmentally and socio-economically sound and sustainable development in Yukon;
- Providing opportunities for those individuals, families, communities, businesses and governments that may experience socio-economic effects as a result of a project to participate in the assessment process;
- Ensuring that before projects are undertaken their potential socio-economic effects are understood and that people are prepared for any changes that may result from the proposed project if it is recommended to proceed;
- To ensure that projects are undertaken in accordance with principles that foster beneficial socio-economic change without undermining the ecological and social systems on which communities, their inhabitants and societies in general, depend (i.e. principles of sustainable development); and,
- Where effects may be significant and adverse the process will attempt to mitigate the effects (i.e. reduce or avoid the effects).

## 3.0 WHO PARTICIPATES IN THE ASSESSMENTS & HOW

The *Act* describes specific opportunities for participation in assessments as well as guidance for assessors facilitating opportunities for participation by interested and affected individuals. Detailed information on how to provide opportunities for public participation in the assessment process are available in a Yukon Environmental and Socio-economic Assessment Board guidebook entitled "*Opportunities for Public Participation under YESAA*".

Participation in assessments is not only restricted to that which occurs when a project proposal is submitted to the YESAB for assessment. SEEA is also a key component of project planning for proponents of projects. Particularly for those larger more complex projects assessed at the DO level and most certainly at the Executive Committee and Panel levels. Proponents of medium to large scale projects that have the potential to have significant socio-economic effects will be required to conduct socio-economic effects assessments of their projects prior to submission of their project proposal for assessment.

For those larger projects early engagement of the public and other potentially affected/interested organizations is strongly recommended. Avoiding appropriate SEEA early in project planning and proposal development invites delays during the YESAA assessment, where the proponent may be required to catch-up on SEEA requirements before the assessment can move forward. SEEA, like the environmental (biophysical) effects assessment, requires early assessment efforts by the proponent as part of their planning, conducted well in advance of the YESAB assessment.

As mentioned previously, the SEEA is a requirement of the *Act* and it is completed, during the assessment, by the Board Members and Staff of the YESAB. Others that play a role in the assessment include:

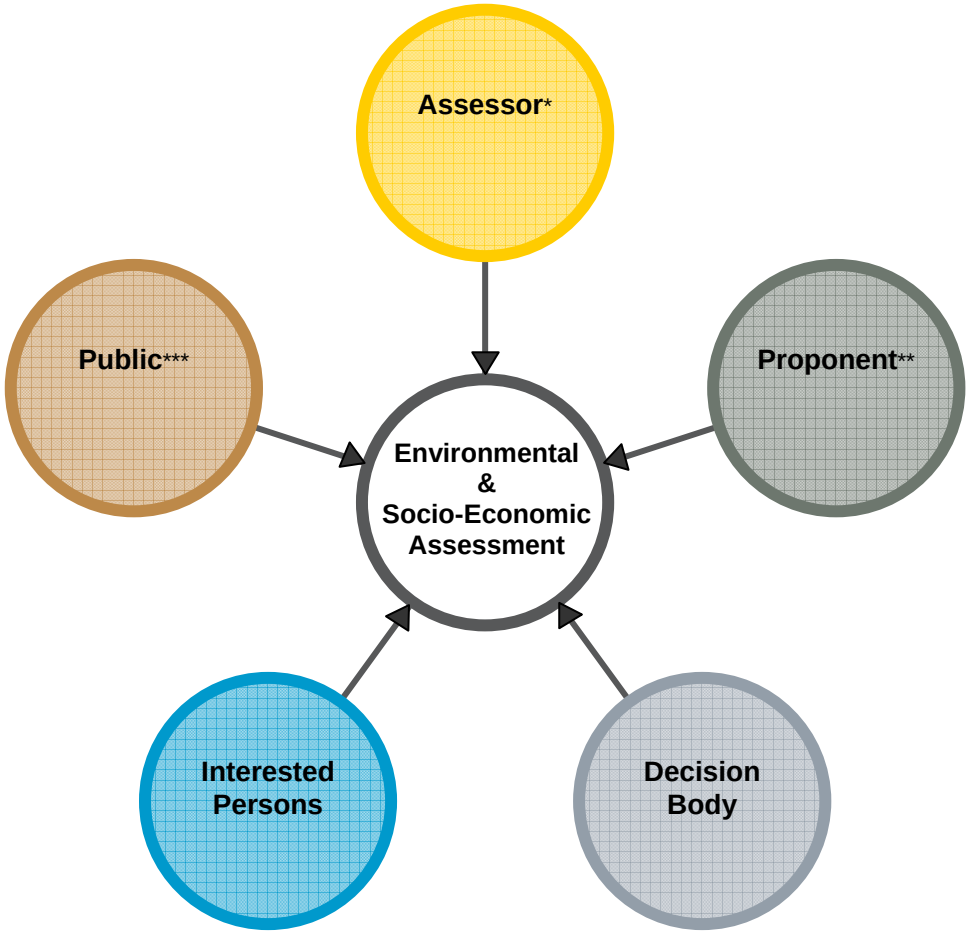
- Federal, Territorial, and First Nation governments:
  - as Decision Bodies when required; and/or
  - as interested and/or affected organizations

- to provide technical, expert, or otherwise specialist resources to the assessment

- Project Proponents – as described in the second paragraph above
- Potentially affected individuals, families, communities, businesses, governments
- Interested Persons as defined under the *Act* (Yukon Fish and Wildlife Management Board and its Salmon Sub-committee, and Renewable Resource Councils)

The following sections describe the roles, responsibilities, and some of the opportunities for these groups to participate and contribute to the assessment process. The various participants described may be involved during project planning and initial assessment led by the proponent, as well as the assessment conducted by YESAB.

**Figure 2 Parties Involved in Socio-economic Effects Assessments**




Notes:
* Assessors facilitate/provide opportunities for others to participate in the assessment.
** Proponents with project proposals being assessed at the Executive Committee level must have first consulted with potentially affected First Nations and/or communities.
*** 'Public' may also include governments (including First Nation Governments) that are not Decision Bodies for a particular project but wish to participate in the assessment by providing technical/expert advice into an assessment (e.g. Yukon Government for a project in a National Park).

### *3.1 PROPONENTS*

A proponent can be a private individual, organization, or corporation. Federal, territorial, First Nation, and/or municipal governments can also be proponents.

While the YESAB will conduct the formal assessment, proponents with projects that have the potential for significant effects, such as those typically subject to Executive Committee Screenings or Panel Reviews, are expected to conduct an initial socio-economic assessment to support their project design and proposal submission to the YESAB.

At the Designated Office level (> 95% of all assessments), proponents will be expected to provide information that will be used by assessors to complete a very basic SEEA (e.g. information about current land and resource use near the project), but will only occasionally be expected to conduct an initial assessment prior to project proposal submission if the proposed project warrants such effort on the part of the proponent.

Further considerations for both proponents and assessors regarding the level of SEEA required for a project is presented in Section 8.0 – Scope of the Assessment.

Experience shows that proposals for more complex or potentially contentious projects that undergo a SEEA in both the planning (proponent development process) and public assessment phases (*YESAA* process) often result in better, more publicly acceptable projects. As mentioned previously, proponents can save time and improve the quality of a SEEA by providing appropriately detailed information in their submission to the assessor.

YESAB has prepared guides for proponents to advise them of the information requirements for assessments at all levels. Further guidance on information requirements for project proposals can be found in the YESAB Guidebooks entitled, "*Proponent's Guide to Form 1*, *Schedule A of the Executive Committee Rules"*, and the companion guidebook entitled, "*Proponent's Guide to Information Requirements for Proposals Requiring Executive Committee Screening*".

Proponents are also encouraged to contact the YESAB to discuss the information requirements for project proposals once they have familiarized themselves with the available guidebooks.

Executive Committee or Panel project proposals will require the proponent to consult with the First Nation in whose traditional territory the project will occur or may have significant effects upon as well as any community which may experience significant effects as a result of the project.

Early community engagement in these cases is essential. This consultation plays a critical role in the scoping of the assessment that the proponent will initially undertake. It also familiarizes the community with the aspects of the proposed project. This subsequently allows those to be consulted to aid in identifying potential effects associated with the project and to allow the proponent an opportunity to address those potential effects in their project design and planning prior to submitting their proposal to the YESAB. The exercise thus allows for a two-way flow of information that is beneficial to all parties.

Proponents should be prepared before they initiate their consultation and should understand:

- The historic background of the community;
- The relationship community members have with the natural environment;
- Demographic character of the community;
- Political structure within the community and relationship to other levels of government;

- Existing community values, and goals and aspirations for economic development and social and culture well-being; and
- Existing vulnerabilities and strengths of the community;

Generally, information considered in the socio-economic effects assessment by proponents can include:

- The existing economic and social context of communities that could be expected to experience effects, to include such items as changes in employment opportunities, education and training, infrastructure needs, and social and cultural resources, as examples;
- Any views and/or information provided by potentially affected persons, including First Nations and communities after they have had an opportunity to review the project proposal;
- Predicted project effects, proposed mitigation, and significance of residual effects as applicable; and
- The details and potential effects of proposed enhancements that will result from the project.

## *3.2 INTERESTED PERSONS AND THE PUBLIC*

### *3.2.1 Interested Persons*

"Interested Persons", as defined in the *Act,* means any person or body having an interest in the outcome of an assessment, for a purpose that is not frivolous or vexatious, and includes:

- The Fish and Wildlife Management Board established under the Umbrella Final Agreement, in relation to a project that is likely to affect the management and conservation of fish or wildlife or their habitat;
- The salmon subcommittee of the Fish and Wildlife Management Board, in relation to a project that is likely to affect the management and conservation of salmon or their habitat; and
- A renewable resource council established under a First Nation's final agreement, in relation to a project that is likely to affect the management and conservation of fish or wildlife or their habitat within the traditional territory of that First Nation.

### *3.2.2 Land Use Planning Commissions*

Land Use Planning Commissions can also provide important insights in local vision for desirable future socio-economic conditions based on land and resource use. These insights are valuable tools to assessors in understanding whether potential project-based socio-economic effects are significant. In the case of the Land Use Planning Commissions, assessors must confer with these groups to determine whether the project proposal and the assessment outcomes comply with their operating plans.

### *3.2.3 The Public*

The public includes all citizens and formal and informal community[4] groups. It may include both individual citizens and non-governmental organizations (NGOs). Examples of such groups may include environmental advocates, health and social advocates, chambers of commerce, volunteer and civic clubs, among others.

Public involvement is a way for the interested public to be involved in the planning and assessment process, and to bring alternatives to the attention of the proponent and the assessor.

Where there is the potential for significant socio-economic effects to result from a project those potentially affected individuals, organizations, and communities should be involved in the SEEA process at a very early stage. This typically means being involved in, or aware of, the planning for a project. As warranted by the scale of the project and the interest of the potentially affected communities, this is the responsibility of the proponent during the planning period and of the assessor (YESAB) during the assessment. As mentioned previously, proponents that have project proposals that are required to undergo an EC screening will be required to consult with potentially affected First Nations and/or communities prior to submission of their project proposal. In addition, the project proposal will be required to provide sufficient information to the assessor on how the duty to consult has been met.

Proponents of projects that are required to undergo assessment at the DO level are not required to consult with the public. While not a requirement, it is advisable for proponents with projects that will be assessed at the DO to consult with the public and others when there is the strong potential for significant adverse effects to result from the project.

Potentially affected individuals, groups, and/or communities can participate in the process by gaining an understanding of the scope of the project (i.e. what is the proposed activity) and identifying issues of concern and potential effects associated with the project. Opportunities for public participation in the process are addressed in Part III, and further information is available in the two YESAB Guidebooks on public participation (Assessor's Guide and Participant's Guide).

To the greatest degree possible interested persons and the public should communicate in good faith with proponents who are seeking to consult with them prior to submitting their proposals under YESAA. They should also provide expert information and local context to the process of determining valued components, potential effects, and indicating the level of public concern both when working with proponents during the pre-application phase and when participating in the YESAB assessment.

The YESAB recognizes that communication and consultations with proponents prior to the submission of a project proposal for an assessment under YESAA does not constitute acceptance of the project proposal by those consulted. This is simply an initial opportunity for the public to identify interests pertaining to the project, to identify held values, to share with the proponent thoughts on what the potential effects of the project might be, and how and why those effects might be significant. This is also an initial opportunity to identify and discuss and mitigation measures that might be suitable for the potentially significant effects previously identified.

All of the information that the proponent yields from this initial engagement will be considered in the development of their final project proposal which they will submit to the YESAB for review.

[4] The term 'community' in this guide refers to both place-based communities, which can be defined geographically, and interest-based communities defined by a common interest or activity, also sometimes referred to as a 'stakeholder' group.

### *3.3 DECISION BODIES AND GOVERNMENT AGENCIES*

Governments can play multiple roles in an assessment.

- Governments can be decision bodies if they provide some form of regulatory authorization which will enable the project to proceed. In addition, federal government departments, which are individual Decision Bodies, can also be Decision Bodies if they are requested to provide funding for a project to proceed;
- Governments can be the proponent of a project; and/or
- Governments may provide views and information to the assessment, much the same as an interested person or the public might participate.

Regardless of whether a government is a decision body, those government departments with socio-economic mandates share a similar responsibility with communities and proponents in identifying, evaluating, and mitigating predicted effects. Assessments under YESAA provide a new and unique opportunity for those government departments to engage in planning before new socio-economic pressures and effects arise.

Governments can assist SEEA in several ways, including:

- Providing expert information throughout the assessment, including a critique of the project proposal and the issuance of reports identifying probable effects on communities and feasible mitigation;
- Asking questions and/or responding by being prepared to answer questions and respond to information requests where information may be lacking;
- Making realistic (mitigation) commitments in whole or in part to reduce public concern and the significance of potential adverse effects; or
- Where effects are identified, taking responsibility for those mitigation measures issued by the assessor that identify government as required participants, to the extent of their authority.

Decision Bodies, as defined under the *Act,* may include federal government agencies, Government of Yukon, and/or First Nation governments. The Decision Bodies make the final decision regarding whether to issue the authorizations required for the project to proceed. In order to aid the assessment, these agencies will provide comment or make other technical contributions during the assessment that speaks to the adequacy of the SEEA and its findings. Various government agencies and other levels of government (i.e. municipalities) may contribute to the assessment by providing information and advice.

As Decision Bodies, these organizations will review the assessment and subsequent recommendations in rendering their decision. They will also directly, or by the action of an agency within their organization, authorize the project to proceed. For example, the Decision Body may be the Government of Yukon and the agency authorizing the project, once a positive decision document is prepared, may be the Lands Branch of the Energy, Mines, and Resources Department.

The implementation and enforcement of adopted or accepted mitigation and monitoring elements will be part of the considerations made by the Decision Bodies, as the *Act* is an assessment instrument only and contains limited or no enforcement provisions in this regard. To the extent that the assessor needs to be confident that the proposed mitigation measures will be successful in order to deem an effect not significant, the assessor will work with the Decision Bodies to determine whether and how they can adequately include the mitigation measures developed during the assessment into the authorizations for the project.

### *3.3.1 Yukon First Nations Governments*

With the implementation of land claims and self-government agreements, First Nations in the Yukon, on a government-by-government basis, are assuming many of the governing responsibilities previously mandated to the federal and territorial governments.

Those Yukon First Nations without settled land claims are not considered Decision Bodies under the *Act* but maintain the same rights as the Yukon public, and guaranteed rights to consultation with the proponent and other governments regarding proposed projects.

Some First Nation organizations have also developed visioning statements, which help the assessors understand desirable future socio-economic conditions for these peoples.

### *3.3.2 Government of Yukon*

The Government of Yukon plays a key role in the SEEA process because of its legal responsibility for delivering programs and services for most aspects of health, social services, education, training, cultural well-being and economic development in Yukon. Territorial departments and agencies have a variety of roles and responsibilities that *indirectly but substantially* affect SEEA, including:

- The establishment of public policy that reflects local visions of socio-economic sustainability; and,
- Provision of programs and services in areas such as:
  - healthcare,
  - social services,
  - education,
  - public transportation and infrastructure,
  - municipal infrastructure services in unincorporated communities,
  - community policing, and
  - economic development in both the traditional and wage economies.

The Government of Yukon mandate can also directly contribute to SEEA by:

- Providing relevant social and economic baseline data for the SEEA.
- Supporting adaptive socio-economic effects assessment and management:
  - By monitoring and measuring the real socio-economic effects of projects indirectly or as a result of other regulatory monitoring, the Government of Yukon can help the Board understand whether their socio-economic effects predictions are reasonably accurate. Future assessments can then benefit from this knowledge and experience.
- The conduct of regional visioning exercises, where Yukoners express the kind of Yukon in which they would like to live. Included in these reports is a variety of information that speaks to desirable future socio-economic conditions.

### *3.4.3 Government of Canada*

The federal government continues to play a role in social, cultural, and economic development and fiscal stability in Yukon. It carries on many of these functions in partnership with the Government of Yukon and First Nation organizations. Some examples of other federal departments and agencies with social and economic mandates include Health Canada, Human

Resources Development Canada, Industry Canada, the Department of Fisheries and Oceans, and Statistics Canada.

The federal government may also contribute to SEEA by:

- Providing social and economic baseline data for the SEEA and supporting adaptive socio-economic effects assessment and management; and/or
- Sponsoring relevant national research on socio-economic conditions and meaningful indicators of socio-economic conditions and change.

Initiatives like the Northern Ecosystem Initiative Cumulative Effects Thresholds Project will directly add to both SEEA knowledge and techniques in Yukon.

### *3.4 YESAA ASSESSOR*

The assessor conducts the socio-economic effects assessment based on guidance provided in the *Yukon Environmental and Socio-Economic Assessment Act*, *Regulations*, Rules, and other documents produced by the Board, including this guide. The assessor is responsible for providing an opportunity for others to provide input and information on potential socio-economic effects of the project. The assessor will ensure that such input receives full and fair consideration. The assessor can also dialogue with proponents regarding SEEA prior to the submission of a project proposal to improve the quality of the proposal.

## 4.0 UNDERSTANDING & MANAGING CHALLENGES

### *4.1 UNIQUE CHARACTERISTICS OF YUKON*

The territory is large in area and is home to a relatively small population. Yukon has a land area of 474,707 $km^2$ with a population estimated at 29,000 (2001). Relative to the rest of North America south of the $60^{th}$ parallel, this represents a very small population per hectare, especially when considering that two thirds of the Yukon population resides in Whitehorse and the remaining population (approximately 10,000) is dispersed within 24 communities and scattered rural residential areas.

Communities in Yukon vary widely in cultures, traditions, populations, histories, economies, and the availability and use of natural resources.

There are 14 First Nations in the territory and each has an identified traditional territory, parts of which typically overlap with the traditional territories of other First Nations. Of these 14 First Nations, 10 have settled their Land Claims as of August 2005 and are the recognized Decision Bodies under the *Act* for assessable projects occurring on their settlement lands. All First Nations (settled and non-settled) are guaranteed consultation by the proponent during Executive Committee assessed projects proposed in their traditional territory. Those First Nations that are unsettled are also required to be consulted by a Decision Body considering a recommendation in respect of a project (at any assessment level) if the project or its potential significant adverse effects may be located within the traditional territory of that First Nation.

In conducting assessments, there must be recognition of the variability of historical experience and attitudes towards different types of development by communities. Community attitudes towards development can be attributed, at least partially, to their history, exposure, and

experiences with similar development activities. Among the communities in Yukon there is a wide variation in historical exposure to development projects and a wide variety of development outcomes. For example, the communities of Dawson City and Watson Lake have been exposed to relatively high levels of placer mining (and more recently tourism) and forestry activity, respectively.

From a socio-economic perspective, communities that are experienced with development activities may be more resilient to those types of developments in the future than communities with limited or no experience. Communities may also be more receptive to proposed developments if local economies are historically tied to related forms of development, be it natural resource extraction/use, commercial or industrial developments, and/or other development initiatives. In some cases communities that are experienced with development can work toward increasing the benefits of a project based on that previous experience. For example, when the US Park Service and Parks Canada wanted to establish the Klondike International Historic Park, the community of Skagway was able to extract several concessions, or what could otherwise be considered benefits or enhancements, for their approval of the park project.

### *4.2 Availability of Data & The Interests Oriented Approach*

A review of contemporary literature and previous experience suggests that a suitable means for the assessment of effects is to follow an interests-oriented approach. To the extent possible, the assessment framework will focus on addressing interests and values that are associated with potentially significant effects.

A variety of statistical data has been compiled for Yukon, both at the Territorial, and to a lesser extent, community levels. These data have been collected for various purposes and may be of some use in conducting a socio-economic effects assessment. While statistical and other forms of 'hard data' will be used where possible, many of the indicators will require carefully collected qualitative data based on the specific interests that are raised in the assessments. It is an inevitable fact that these types of assessments require primary data. Notwithstanding this reality it should be stressed that the YESAB promotes the use of secondary data first in SEEAs and the collection of primary data second.

Efforts are ongoing to gather and compile information that will be of use to future assessments in this regard. For example, the Government of Yukon DAP Branch has initiated a Socio-economic Indicators Working Group to identify and facilitate collection of information on meaningful socio-economic indicators for use in project assessments in Yukon. The group is made up of partners within the Government of Yukon and the Yukon Environmental and Socio-economic Assessment Board. This is a new group and it is anticipated and hoped that the federal government and First Nations governments will be interested in participating in the group in the future.

Where the 'hard data' may be limited in an assessment, additional effort will be made to use methods based on available and reliable data and on the interests that have been identified during scoping. The term 'interests-oriented' implies that the analysis is guided by interests raised and validated as relevant to the assessment by the assessor, proponents, governments, and particularly by the stakeholders that may be affected by potential changes/effects from a proposed project.

### *4.3 More on Public Participation*

Public participation has an important role in social and economic effects assessment. The nature of participation, however, should be tailored to the project and designed to meet the purposes of the *Yukon Environmental and Socio-economic Assessment Act* and the instructions in the Rules.

While opportunities for public participation range from large public hearings to personal interviews with key leaders, the techniques should be adjusted to fit the size and importance of the project. In some instances, for smaller scale and less intrusive projects, interviews or focus groups with leaders or technical specialists may be a suitable alternative to a community hearing. At a very minimum, the assessment process will provide opportunities for anyone to comment on a project proposal.

The use of participatory methods in SEEA assumes that the impacted population will have a voice in the assessment, with the further assumption that if they participate in the assessment and have their interests addressed they may be more willing to accept the assessment recommendation.

The incorporation of participatory techniques into a SEEA process can have an effect on, or be affected by, the social, cultural, and political environment. Depending on the skill with which participation is managed, there could be more or less understanding of the proposed project and its potential effects; or the process may inadvertently trigger conflict among interested parties. These changes affect the reliability and effectiveness of mitigation measures to alleviate adverse social effects. Where this occurs, the assessment recommendation must be responsive to the altered social, cultural, or political environment.

These techniques and challenges of participatory effects assessment are discussed further in the YESAB “Assessor's Guide to Public Participation Opportunities” and the “Guide to Interested Persons and the Public to Participate in Assessments”.

### *4.3.1 Guidance for Proponents on Community Engagement*

Early community engagement will be critical for those projects that will require a SEEA on the part of the proponent prior to submission. While not necessarily relevant for all assessments, some key considerations, elements and values of early community engagement include:

- Approaches to community engagement will vary among projects and among communities;
- Details of the project should be presented initially in plain language; avoid the issuance of large technical documents;
- Provide appropriate overview of project but focus on identifying and addressing community interests;
- Presentation of information regarding who the proponent is and how and where they can be contacted;
- Identify capacity issues of those to be engaged up front and tailor consultation efforts accordingly;
- Early communications should be made with key contacts such as:
  - Community political and spiritual leadership, including first nation and non-first nation;
  - Local and regional government social service providers;
  - Local and regional government lands and environment staff;
  - Regional first nation organizations;
  - Economic organizations;
  - Educators;
  - Justice workers and officials;
  - Local, regional, territorial and/or national NGOs knowledgeable of issues, history, and prior experiences relevant to those potentially affected;

  - Other land users – recreational and other community groups, tourism, trapping, and outfitting business people and organizations;
- Communications with the general public is also important and can aid in refining or augmenting information gathered from initial communications with key contacts.
- Methods to inform the public about the project and proponent and to identify interests in the project include:
  - Interview, focus groups, community meetings, open houses, surveys and polls.
  - Notifications may include pubic notices published in the paper or newsletters or via radio or internet describing the development and how to get more information or to provide input.
- While they may not have all the answers nor be charged with all the pertinent responsibilities, proponents should be prepared to discuss common interests and questions related to developments and potential socio-economic effects:
  - Displacement from the land, disruption of traditional economies or pursuits;
  - Maximizing local and regional employment;
  - Skills training and prospects for promotion;
  - Maximizing business development;
  - Avoidance of boom and bust cycles – how will the project contribute to the sustainable development goals of the community;
  - Uncertainty about project and effects associated with new or controversial technologies;
  - Uncertainty about effects to land and associated effects on socio-economic realm;
  - Pressures on physical and social infrastructure;
  - Protection of heritage resources;
  - Protection of culture, language and traditional way of life;
  - Cumulative effects – pace of change and resiliency to change;
  - Effect equity issues – pressures on youth, women, elders;
  - Increased disposable income, addictions and crime;
  - Improving educational opportunities and outlook;
  - Overall contributions to community wellness and cohesion.
- Avoid overstating or understating potential benefits or effects of the project. Those that could be potentially affected by the proposed project may be making decisions or arriving at conclusions from the information provided at this early stage;
- Where difficulties are encountered, or there is outright refusal to communicate/participate, despite the best and reasonable efforts of the proponent:
  - Focus on trying to identify potential effects on the community though other avenues;
  - Record and report all communication efforts.
- In all cases track and report all efforts that have been made, including at a minimum:
  - Details regarding the format and methods for each communication event/session;
  - Dates and places of all meetings;
  - Individuals and organizations involved;

- Topics discussed;
- Any suggestions by either party regarding potential effects, significance, and/or mitigation;
- Information tabled and/or requested from any party;
- All commitments and agreements made in response to interest/issues raised by the public; and,
- All issues that remain unresolved and any further efforts envisioned to resolve them.

### *4.4 PROJECT DESIGN CONSIDERATIONS*

While not all project effects can be avoided in every case, proponents should consider the notion of minimal impact project design as a preferable option to trying to provide mitigation strategies when planning their projects. Minimal impact project design and the creation of enhancements (or favourable effects) from a project can often be more economical for the proponent than implementing specific mitigation measures to minimize the adverse socio-economic effects that may result from an alternate (higher impact) project design. See the principles for SEEA presented in Part II.

### *4.5 EXPECTATIONS OF LEVEL AND DEPTH OF THE SEEA*

The amount of time and resources expended on the assessment must be suited to the scale, complexity, nature, and location of development proposed. It must also consider any important issues raised and the potential effects associated with those issues. Again it is important to focus on interests and values and where those have the potential to be significantly affected by the project.

The assessment must be scaleable, i.e. it must adapt to the complexity of the particular project and its potential effects. This issue is discussed in greater detail in the section regarding the scope of the assessment in Part III. Included in that section is *Figure 3 - Considerations for the Potential Scale of the Assessment*, which will be useful for both proponent and assessor in initially predicting the potential scale and intensity of the assessment.

Ultimately this is the exercise of developing the scope of the assessment – predicting what might be affected based on a preliminary understanding of the project and the biophysical and socio-economic environments – then focusing the remainder of the assessment on those components of the biophysical and/or socio-economic environment that have the greatest potential to be significantly affected by the project.

In this regard the principles, guidelines, and application tools contained in this guidebook are intended to be sufficiently descriptive to provide procedural certainty while flexible enough to adapt to the unique aspects of each project.

Determining the scale of the assessment is discussed further in the second section of Part III – *Establishing the Scope of the Assessment*.

Recall that proponents of DO level projects will only very rarely be required to conduct an initial SEEA. Proponents of projects at the DO level can consult the *Guide to Designated Office Evaluations and Form 1* as well as sector specific guidance that is being developed by YESAB, and/or speak with an assessor to find out what information should be included in their proposal.

As such, the remainder of this guide is directed primarily toward parties to the assessment of projects requiring assessment at the EC or Panel level.

### *4.6 CUMULATIVE SOCIO-ECONOMIC EFFECTS*

Cumulative effects are changes to the biophysical and/or socio-economic systems that are caused by an action in combination with other past, present and future human actions (Actions include projects and activities). A Cumulative Effects Assessment (CEA) is an assessment of those effects. Concerns are often raised about the long-term changes that may occur not only as a result of a single action but the combined effects of each successive action on the biophysical and/or socio-economic environments. CEAs are done to ensure the incremental effects resulting from the combined influences of various actions are assessed. These incremental effects may be significant even though the effects of each action, when independently assessed, are considered insignificant (Hegmann, 1999).

Cumulative effects may occur if:

- Local effects on valued components occur as a result of the project under assessment; and
- Those valued components are affected by other projects.

In many ways, socio-economic effects assessment, as described in this guide, will include cumulative effects issues because of the typically broad regional view of effects, and the inclusion of valued components and indicators representative of regional changes. Moreover, the examination of the socio-economic baseline, which sets the stage for the effects prediction and characterization, requires an understanding of historic and present trends not just a current snapshot. In this way the proposed development is certainly assessed with an understanding of the socio-economic effects of past and present actions. Where SEEAs may not integrate cumulative effects assessment so well is in the examination of the proposed project effects in combination with reasonably foreseeable future developments. Efforts to address this shortcoming can be made relatively seamlessly in the assessment by simply looking for other reasonable foreseeable projects which may also have effects on the valued components of concern in the assessment of the project proposal before the assessor.

While the integration of cumulative effects assessment into a SEEA may be relatively easy the exercise itself is not. Cumulative effects often occur over long periods of time and have a multitude of variables in play. These factors can pose a challenge to determining the degree to which the particular project undergoing assessment may contribute to cumulative effects.

The key steps in the socio-economic CEA process closely mirror that of local project effects assessment and as such CEA is not addressed specifically any further in this guidebook. A listing of reference materials and guidance regarding cumulative effects assessment is provided in Appendix B.

# PART II – PRINCIPLES & INTENDED OUTCOMES FOR SEEA

The project proposals that will enter the *Yukon Environmental and Socio-economic Assessment Act* process will be diverse in nature and will have a variety of potential effects, both in the environmental and socio-economic realms. Accordingly, the specific focal points and methods for assessing these proposals will vary. The following principles established for the conduct of socio-economic effects assessments will stand as the guideposts. As principles, they form the basis for why, when, where, how, and by whom the assessment is to be conducted.

The principles presented in this section flow into the application tools described in Part III. That section will provide greater detail on what is to be done and how to do it by describing the specific steps and actions in the assessment process.

The principles take into consideration the purpose and intent of *YESAA*, but also reflect ideas and research contained in several other documents on the subject (cited later in this document). The SEEA Principles also reflect the experience of staff, Board Members, and consultants to the Board. These principles are intended to reflect some of the ideals that have developed from the Yukon experience and focus on the procedural aspects of SEEA to facilitate better decision-making.

> A principle can be defined as a rule, or as a basic generalization that is accepted (as true) and that can be used as a basis for reasoning or conduct.

In this context, the following principles can be considered the broad and general rules for what to consider in a SEEA and how to conduct the assessment.

## PRINCIPLE 1: ACHIEVE A BROAD UNDERSTANDING OF THE LOCAL AND REGIONAL SETTINGS POTENTIALLY AFFECTED BY THE PROPOSED ACTION

- Identify and describe interested and directly affected persons and/or organizations.
  - Recognize the diversity between cultures and within cultures, and the diversity of stakeholder interests.
  - Conduct assessment activities with acknowledgment and consideration of the various organizational levels of stakeholders or interested parties. From the social perspective, those are the individual, family, and community organizational levels. From the economic perspective, they are the individual, business, and government economic activity levels.
  - Identify, characterize, and consider valued socio-economic components (VESECs) of stakeholders, with the stakeholders whenever possible.
- Develop relevant baseline information (profiles) of local and regional communities.
- Early engagement of potentially affected communities and other parties is essential for larger, more complex projects.

- Utilize methods and media acceptable to community capacity and custom when engaging a community to share information about a project and when attempting to develop an understanding of the community.
- Use participatory as opposed to simply consultative methods.

## PRINCIPLE 2: FOCUS ASSESSMENT ON KEY ASPECTS OF THE HUMAN ENVIRONMENT

- Adopt an "interests based" approach and identify those key social and economic interests relevant to the project from the community and stakeholder profiles.
  - While there may be many potential effects of a development identified in the assessment, it is those potential effects on identified valued components that might be *significant* that are substantially studied for the purposes of measurement, understanding, and mitigation development in advance of the event.
  - The amount of time and resources expended on the assessment must be suited to the scale, complexity, nature, location, likely effects, and public concern regarding the proposed project.
  - Potentially affected parties can aid the proponent/assessor in determining the required assessment effort.
- Select economic and social (effects assessment) variables that can be measured and aid in assessing the issues identified.
  - Economic and social indicators describe the greater socio-economic components of value that are relevant to the proposed project and that may be subject to change and therefore are of potential interest in the assessment.

## PRINCIPLE 3: PROVIDE VALID AND RELEVANT INFORMATION FOR USE IN DECISION-MAKING

- Collect social, economic, and cultural data of both a qualitative and quantitative nature sufficient to usefully describe and analyze all reasonable alternatives to the proposed project.
- Use secondary data first to determine need, if any, for primary data.
- Ensure that the data collection methods and forms of analysis are relevant, valid, and defensible in an assessment context under the *Act*.
  - In addition to science, incorporate local and traditional knowledge into the assessment as appropriate and as available. See YESAB *Guide to Incorporating Traditional Knowledge Into Assessments*.
  - Data must be accompanied by rationale for use, especially identified VESECs and indicators.
- Ensure the integrity of the data used in the assessment.
  - The assessor should provide for a critical analysis and validation of all forms and sources of data used in the assessment. External verification will include data collected by the assessor or provided by the proponent, or any other source during the assessment. Transparency of data sources will help any efforts to resolve disputes between conflicting information on a particular issue.

- Lack of available information does not imply lack of potential for significant effects.
- Information not available to the assessors cannot be used in an assessment; confidential agreements or other information or plans that are proposed to be developed later, cannot be used as evidence in decisions by a Designated Office, the Executive Committee, or a Panel of the Board. *Information must be seen to be heard.*

## PRINCIPLE 4: IDENTIFY METHODS AND ASSUMPTIONS AND DEFINE SIGNIFICANCE

- Assessment methods should be holistic in scope, i.e. they should describe all aspects of the socio-economic effects related to the proposed project.
  - Include an examination of the full lifecycle of the proposed project through closure and post-closure.
- For Executive Committee Screenings, assessment methods must also attempt to describe the potentially adverse cumulative socio-economic effects related to the project.
- Ensure that research and analytical methods and assumptions are sound, transparent, and replicable.
- Select methods of data collection and analysis that are appropriate to the foreseeable importance of the potential effects of the project.
- Consider but not be limited by the opinions and views of experts.
- Wherever possible, utilize what has been learned from previous assessments and similar developments, specifically northern examples.

## PRINCIPLE 5: ENSURE THAT EFFECT EQUITY[5] ISSUES ARE DESCRIBED AND ANALYZED

- Ensure that research methods, data, and analysis consider underrepresented and vulnerable stakeholders and populations (e.g. youth, women, elders).
  - Facilitate full consideration of equity concerns by ensuring focus on those members of the community that are most affected by the proposal.
  - Attempt to identify and avoid adverse residual effects that could be passed on to future generations.
  - Armed with quality information, the results of public evaluation and participation should demonstrate a broad acceptability of a project from the members of those communities likely to benefit from, or be affected by them. Great care must be taken in quantifying and qualifying the acceptability of a project in this regard.
- Consider the distribution of effects (whether social, economic, air quality, noise, or potential health effects) to different social groups (including ethnic/racial and income groups) and to the different levels of social structure (effects to the individual vs. the community as whole).

[5] *Effect (or impact) equity* is similar to the concept of *environmental justice* and refers to determining whether a project adversely affects a disadvantaged community or population when measured against the positive effects or value it brings to that community or population. It implies that all social and economic classes should equally bear the adverse effects of a project.

## PRINCIPLE 6: CONSIDER AND RECOMMEND SUITABLE MITIGATION AND INCLUDE IN THE ASSESSMENT MECHANISMS TO IMPROVE THE LIKELIHOOD OF MITIGATION SUCCESS

- Seek to include mechanisms for evaluation and monitoring of the effects of the proposed project.
- Where mitigation of effects may be required, provide a mechanism and plan for assuring that effective mitigation takes place.
  - Mitigation strategies developed during the assessment should be evaluated for viability (i.e. that they are economically and technically feasible and that they will be successful) to be sure that they can be implemented by the proponent and regulatory authorities that may authorize a project to proceed.
  - This can be done during the assessment when developing and evaluating proposed mitigation strategies. To determine the potential for successful mitigation, the proponent/assessor should work with the Decision Bodies to determine whether and how they can adequately include mitigation measures (including monitoring) in the authorizations for the project.
- Identify data gaps and plan for filling these data needs in the monitoring stage.
- Ongoing monitoring and public reporting need to be part of mitigation and needs to involve community, regulators, proponents, and government.
- Identify limits of acceptable change and link to requirement for additional mitigation – i.e. a response – when limits are reached and/or exceeded – the concept of adaptive management.
- Lack of a "regulatory home" does not exempt parties from the responsibility to mitigate likely significant adverse effects.
- Whenever possible the goal should be to implement mitigation measures that produce durable net benefits, rather than simply reducing significant adverse effects.

## PRINCIPLE 7: DETERMINE THE BEST DEVELOPMENT ALTERNATIVE(S) RATHER THAN MERELY SERVING AS AN ARBITER BETWEEN SOCIO-ECONOMIC BENEFIT AND SOCIAL COST

- Encourage positive outcomes through proactive project planning on the part of the proponent (where appropriate) and by the assessor, which builds capacity, empowers local participation, and realizes human and social potential.
- Use SEEA as a planning tool to look for economical and effective ways to direct a project's potential effects in a positive way.
- Seek to fit projects into community vision, plans, and desires.
- In recognition of the fact that many development projects have finite lifetimes, focus on making projects positive contributors to sustainable development of communities that are potentially affected.

# PART III - CONDUCTING ASSESSMENTS

## 5.0 GENERAL

As previously mentioned, this document has been written for assessors within the YESAB as well as proponents of developments that require them to conduct an initial assessment of their own project prior to submitting a project proposal for review. This document also contains useful information for individuals and organizations that may be a party to, or have an interest in participating in a development assessment. This context should be considered for the purposes of Part III of this document, in addition to the previous material presented.

## 6.0 PROCESS OVERVIEW

The socio-economic effects assessment process follows six basic steps and within each step numerous tasks will be completed. The following sections outline and describe each step and the various tasks to be completed therein. Each step is introduced with some of the basic concepts and rationale. Following this are specific details regarding how the assessor can complete each of the outlined tasks. In some cases more detailed information and direction to other sources of relevant information are provided. To conclude each step a summary list of required tasks is provided.

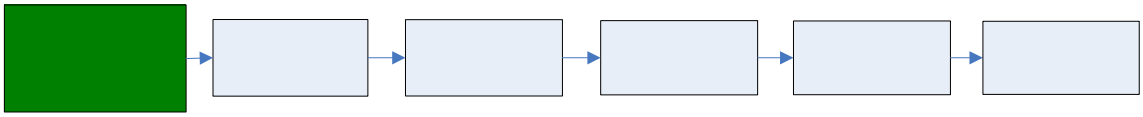
Effects assessment in general is an iterative process in which assessment steps may repeat until the assessor has satisfactorily assessed the potential effects of the project. Under YESAA the end result is the determination of whether the project is likely to have significant adverse effects and whether it can be recommended to proceed or not to proceed. The iterative nature of the process is particularly prevalent in the application of mitigation and testing of significance of these potential adverse effects. This aspect of the process is discussed further in subsequent sections.

Compared to EA, SEEA is a relatively new field of study, recognizing data limitations, and evolving methodologies, the goal is to broadly examine potential effects and then focus the assessment on those that are most likely to be significant and adverse.

**Table 1 Overview of SEEA Process Steps and Tasks**

| Step No. | Element of the Process | Tasks in the Process | Methods |
|---|---|---|---|
| 1 | **Determine Scope of Project** | Identification of principal and accessory developments. | Analysis of project and associated infrastructure use based on criteria of linkages, interdependence and proximity. |
| 2 | **Determine Scope of Assessment** | Identification of interests with the project and valued environmental and socio-economic components, links between biophysical and socioeconomic variables, likely socio-economic effects and possible ways to characterize those effects, and areas and period of effect and assessment boundaries. | Assessor best judgment and consultation with interested and potential affected parties to ID issues and values; preliminary or initial prediction of expected changes and effects that defines the parameters for the preparation of socioeconomic baseline or profile of potentially affected populations (individuals, groups, organizations, businesses or communities). |
| 3 | **Compile the Socio-economic Baseline** | Overview and analysis of current socioeconomic context and historical trends relevant to interests and valued components identified. | Collection and compilation of data about actual change, and socioeconomic responses up to the current point in time. |
| 4 | **Characterizing Potential Effects** | Detailed prediction and characterization of the potential effects in the context of various effect attributes (e.g. magnitude, extent, duration). | Projection of change. Various approaches can be used: multiple accounts, multipliers, contingent valuation, futures foregone, trends, scenarios, effect matrices. |
| 5 | **Mitigation/Enhancement** | Initial analysis of (proponent) proposed mitigation in the context of the identified potential effects. Subsequent to an initial significance assessment, assessor conducts additional refinement of project design where specific measures are identified to address the outstanding concerns of the assessment team and interested parties regarding potential adverse socioeconomic effects. Consideration of alternatives. | Identification of effective actions to avoid, eliminate or reduce adverse effects. Identification of actions to enhance socioeconomic benefit. |
| 6 | **Significance Determination** | Examination of the importance of residual socioeconomic effects of the project against decision criteria defined by values and at scales suitable for the implementation of the development. | Selection and application of decision criteria to serve as rational basis for decision-making. |

# 7.0 STEP 1: DETERMINE SCOPE OF PROJECT



## *7.1 TASKS*

- Identify and describe principal project
- Identify and describe any accessory projects
- Prepare a preliminary summary listing of the project components and activities that are to be included in the assessment
- Describe and document the information and rationale used to determine proposed scope of the project



## *7.2 OVERVIEW*

There are two focal points of scoping: determining and defining the scope of the project (addressed in this section) and determining and defining the scope of the assessment (addressed in the following section). For the assessor to be able to do an effective job of either, the proponent must submit a technically comprehensive description of the project. The YESAB has prepared several documents to provide guidance to proponents on submission requirements.[6]

The reader is referred to the YESAB document entitled, "Guidance for Establishing Scope of the Project and Scope of the Assessment for Project Proposals under *Yukon Environmental and Socio-economic Assessment Act*" for a detailed discussion and description of determining the scope of the project. A summary, however, is provided here.

## *7.3 DETERMINING THE PRINCIPAL AND ACCESSORY PROJECTS*

Project scoping is the exercise of determining what the principal and accessory projects are as proposed by the proponent. Effective project scoping provides the assessor with an outline of the proposed activities and a common understanding of what constitutes the project for the purposes of the assessment. The completion of this step ensures that the proponent and the assessor have a clear and common understanding of the project components and the project activities.

In determining the scope of the project, the assessor must consider all phases of the project. Both the spatial (the geographic extent) and temporal (time) scales or phases of the project and its activities should be identified.

[6] YESAB Guide "Proponent's Guide to Form 1", YESAB Guide "Proponent's Guide to Project Proposal Submission to a Designated Office," and YESAB Guide "Proponent's Guide to Information Requirements for Executive Committee Project Proposal Submissions".

The generalized project phases are:

- Construction or modification – all activity associated with readying or changing the land for building or changing the facility, plant or structure
- Operation or maintenance – all activity that occurs after construction is complete and the project is fully operational
- Temporary closure – activities that occur during any period where the project operations are temporarily ceased or where no determination has been made with respect to ceased operations
- Decommissioning or abandonment – activity linked to a decision that the project will cease at some definite point in the future

As part of this exercise, the assessor must identify:

- The principal project and its activities; and,
- The accessory project(s)/activity(ies), meaning any other activity which the assessor considers likely to be undertaken in relation to the principal project and its identified activities, which it considers sufficiently related to it to be included in the project.

An assessor can make use of a number of sources of information and expertise when determining the project scope:

- Form 1 and/or a project proposal (e.g. proponent's project description or environmental assessment report);
- The proponent - to ensure clear understanding of the principal project activities and any accessory projects or activities. Often, discussions with the proponent prior to the submission of a project proposal help to define the project (and assessment) scope; and/or
- The Decision Bodies and any associated regulatory authorities that may be associated with authorizing any of the proposed activities.

At the end of this process, an assessor should be able to develop a "Statement of (Project) Scope" as set out in the Designated Office and Executive Committee Rules.

The following table provides a template that the assessor may use to organize and summarize information regarding the scope of the project. A very simple example is provided.

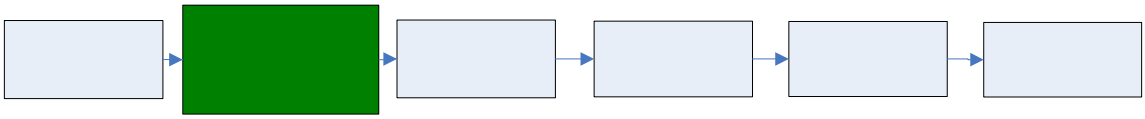
**Table 2 Example Scope of Project Summary**

| | | Description | Determination Criteria (Interdependence, Linkage, and/or Proximity) |
|---|---|---|---|
| | **Principal Project** | **XYZ Mountain Gold Project** | |
| **Components and/or Activities** | Mill | 2,500 tonnes/day throughput; Concentrate haul to deep water port in Alaska. | |
| | Camp | Construction of 125 persons camp, includes cookhouse, laundry, and septic system. | |
| | Tailings Management Facility | Construction of two impoundments with emergency spillways, a reclaim pond, an events pond. Requires redirection of Super Creek. | |
| | Underground Workings and Waste Rock Dumps | Four (4) openings at various levels on XYZ Mountain. Non-acid-generating waste rock to provide adit landings, ore load outs, with mechanical shops at each adit. | |
| | **Accessory Project/Activity** | **25 Km Access Road** | Interdependence (Project could not proceed without access road) |
| **Components and/or Activities** | RoW Clearing | Removal of vegetation and overburden from RoW | |
| | Quarry/Borrow Pits | Located at Km 1 (LHS), Km 5 (LHS), and Km 11 (RHS) - Total Volume Est. 1,220,000 $m^3$. | |
| | Water Crossings | 32 water crossings with the use of 500mm CMPs. | |

### *7.4 SUMMARY*

- As appropriate, meet with the proponent and/or decision bodies and/or regulatory authorities, prior to the submission of a project proposal
- Ensure a comprehensive understanding of and agreement on the scope of the proposed activities (recommended for larger projects, in particular)
- Identify and describe the principal project
- Identify and describe any accessory projects
- Prepare a preliminary summary listing of the project components that are to be included in the assessment
- Identify any regulatory authorizations required for the project to proceed
- Describe and document the information and rationale used to determine the proposed scope of the project.

# 8.0 STEP 2: DETERMINE THE SCOPE OF ASSESSMENT




## *8.1 TASKS*

- Develop a basic understanding of the socio-economic setting
- Identify important interests relating to the proposed project
- From those interests, identify Valued Socio-economic Components (VESECs)
  - The identification of relevant VESECs provides a conceptual orientation to begin to think about possible effects
- Preliminarily identify potentially significant effects of the project
  - Identify any spatial and temporal overlaps (i.e. interactions) of the VESECs and the project activities
  - Sort through the interactions to reveal those effects that are likely to be significant
- Establish the spatial and temporal boundaries for the assessment:
  - Based on the preliminary understanding of the extent and timing of the potentially significant effects to VESECs identified
- Confirm that the established scope for the assessment is consistent with Section 42 of the Act (Matters to be considered) and the principles for Socio-economic Effects Assessment (SEEA) provided in this guide
- Document the rationale used to determine the proposed scope of the assessment

## *8.2 OVERVIEW*

Once the scope of the project has been set (i.e. what makes up the project), it is then possible to determine the scope of the assessment. Scoping assessments is also dealt with in the document entitled, "YESAB Guide: *Guidance for Establishing Scope of the Project and Scope of the Assessment for Project Proposals under Yukon Environmental and Socio-economic Assessment Act*". A discussion in the context of socio-economic effects assessment is provided here.

Good scoping reduces the risk of including inappropriate components in an assessment or excluding components that should be assessed.

The key function of assessment scoping activity is to focus the assessment on potential effects to the VESECs that are most relevant and important. By understanding the potentially affected community or communities and identifying interests, the assessment scoping then leads to the identification of important VESECs and potential project effects. The decision whether or not to continue investigating potential effects on a particular VESEC (i.e. scope them into the assessment) will depend on whether a proposed project is likely to cause significant socio-economic effects on it. The goal is to identify what the social, economic, and/or cultural interests are, and to focus on effects that may be significant and likely to occur. The professional judgment

of the assessor and any concerns that may be raised by Decision Bodies, Regulators, and the public help determine which VESECs should be focused on during the assessment.

> For those larger projects where the proponent is required to conduct a SEEA in advance of submitting their project proposal, it is they who define the scope of the assessment. During the YESAB assessment, however, it is the assessor who defines the scope of the assessment. As such it is important for proponents to ensure adherence to this guide when scoping their project assessments and also consulting early with the assessors at the Board to ensure that the scope of their assessments are properly focused.

### *8.2.1 Considerations for the Level of Assessment*

The appropriate level of SEEA for the project will be determined ultimately from the inputs to and results of some of the early tasks in this step. The scope of the assessment is influenced by a variety of factors associated with the proposed project. To provide proponents and assessors with general guidance as to what levels of detail and effort are appropriate, the Yukon Environmental and Socio-economic Assessment Board has developed a list of considerations for the level and depth of SEEA which is presented in Table 3. Every project will be different, so the assessor can use this tool along with their experience and other assessments conducted under *YESAA* as benchmarks. This method adopts an assessment approach that considers a number of project-specific and setting-specific criteria that aid the assessor in predicting the project's potential for significant environmental and/or socio-economic effects. From this prediction, the assessor can infer the level or scale of the assessment that may be necessary for each particular project.

Socio-economic profiles may be useful for proponents and assessors as a quick reference to support the determination of the level of assessment for various types of projects in various locations within Yukon. In other cases where early community engagement was conducted the proponent should have much of the information at hand to input into this predictive tool.

The challenge facing the proponent and the assessor in establishing an appropriate scope for the assessment is dependant on several equally important factors, including:

- Finding the balance between practical constraints of time, budget and available data;
- Following the guiding principles for socio-economic assessment (presented in Part II); and
- The need to adequately address complex environmental and socio-economic interactions and effects that, theoretically, could extend for considerable distances away and well into the future.

Table 3 below presents an example of the continuum of variables used to determine a project's potential for significant effects from which an assessor may initially infer the potential scale of the assessment. This is a predictive tool for use by proponents and assessors to gain an initial understanding of the level and complexity of the pending assessment.

## Table 3 Considerations for the Potential Scale of the Assessment & Level of SEEA Effort

| Assessment Variable | Questions, Descriptions and/or Example Indicator | Range of Values | |
|---|---|---|---|
| Level and Nature of Concern | Were community concerns addressed by proponent commitments? | Low Level of Concern | High Level of Concern |
| | Were there concerns from previous development? | | |
| | Is the community ready/comfortable with this type of development? | | |
| Level of Interest | Does the community want to work with the proponent on SEEA? | Yes | No |
| | Level of interest in development? | No Interest | Very High Interest |
| | What are community expectations? | Low | High |
| | How well does the proposal fit into existing community or regional plans? | Excellent Fit | Poor Fit |
| Development Physical Size | Physical Footprint | Small | Large |
| | Associated Linear Developments (e.g. powerlines, transportation/access routes) | None | Very Extensive |
| | Required Physical Infrastructure | None | Very Extensive |
| Relative Economic Value | Vibrant Wage Economy, Mixed, or More Traditional Economy | Predominantly Wage Economy | Predominantly Traditional Economy |
| | Current Socio-economic Status | Low Unemployment | High Unemployment |
| Development Timeline | Duration of Development | Very Short (<1 year) | Very Long (>50 years) |
| | Duration of Potential Pos. and Neg. Effects | Very Short (<1 year) | Very Long (>50 years) |
| | Duration of Major Labour and Service Requirements | Very Short (<1 year) | Very Long (>50 years) |
| Complexity of Development | Intrusiveness of the activity | Subtle | Very Intrusive |
| | Reliance on Outside Expertise | Low Percentage | High Percentage |
| | Level of Technology | Low Tech | High Tech |
| | Potential for Pollution and Externalities | Low | High |
| | Worst Case Scenario Severity | Low | High |
| Economic Scale | Capital Cost | <$500,000 | >$200 million |
| | Predicted Gross and Government Revenues | Low | High |
| | Expected Direct Income and Income and Employment Multipliers | Low | High |
| Labour Force, Services, & Supplies Required | Number of Person Days Work | Low (<2500 days) | High (>1million days) |
| | Type of Workers/Services Required | Low Skill | Highly Specialized |

**Table 3 (Cont'd) Considerations for the Potential Scale of the Assessment & Level of SEEA Effort**

| Assessment Variable | Questions, Descriptions and/or Example Indicator | Example Range of Values | |
|---|---|---|---|
| Capacity of Nearby/Affected Communities to Take Advantage of Development | Skill Levels Required vs. Available Labour Pool | Poised to Take Advantage | Little Capacity to Take Advantage |
| | Local Education and Training Demographics | | |
| Prior Experience with Similar Developments or Similar Communities Experience with Similar Developments | Is there local experience with development? | Abundance of Experience | Little Experience |
| | Nature of Experience with Development | Predominantly Positive | Predominantly Negative |
| | Are there other examples of studies, assessments with similar circumstances that can be consulted? | Several other examples to work from | Few Examples to work from |
| Previous, Current, or Proposed Developments in Region | What is the potential for significant cumulative effects | Unlikely | Highly Likely |
| Proximity to Sites of Historical or Current Socio-economic Significance | Presence of such site in area of project | Low Incidence | High Incidence |
| Proximity to Important Wildlife Harvesting Locations | Types and relative abundance of harvestable wildlife | Low Harvesting Values | High Harvesting Values |
| | Sensitivity of wildlife populations and their habitat in the area | Low Sensitivity | High Sensitivity |
| | Importance of Traditional economy and use of traditional/country foods | Low Importance | High Importance |
| Alternative Uses of Land and Current Level of Usage | Will the project affect the ability of traditional and other consumptive users to go out on the land? | Low Percentage Use Area | High Percentage Use Area |
| | Are there alternative economic and non-economic uses of the land? | | |
| Proximity to Communities and Level of Interaction | How close is the development to the community? | Distant | Close |
| | How will labour force interact with community? | Little Interaction | Substantial Interaction |
| Size and Demographic Make-up of Nearby Communities | Communities with different demographics and size will have differing responses to development. | Non-Traditional Lifestyle | Traditional Lifestyle |
| | | Large Population | Small Population |
| | | Multicultural | Unicultural |
| Estimated Migration Patterns (In and Out) of Potentially Affected Communities | Is there increased access to the region/community associated with the development? Associated Pressures? | Little New Access | Highly Increased Access |
| | | Typical In-Migration or Out-Migration | Increased In-Migration or Out-Migration |
| Identifiable Change in Community Physical and Social Infrastructure Needs | Compare Current vs. Increased Demands and Identify Gaps in Infrastructure | No Expected Demand Changes | High Expected Demand Changes |
| Identification of Any Community that is Particularly Vulnerable | Generally women, youth, and the elderly are more vulnerable. | No Especially Vulnerable Groups | Many Vulnerable Groups |

Despite the very preliminary nature of the prediction at this point in the assessment, the proponent and assessor can use their understanding of where each variable sits within the ranges available to aid them in predicting the scale of the assessment required.

As stated previously in Part I, while the potential for socio-economic effects will always be a consideration of assessors at any level of assessment, proponents of Designated Office level projects will only very rarely be required to conduct an initial and basic SEEA themselves.

Proponents of projects at the DO level can consult the *Guide to Designated Office Evaluations and Form 1* as well as sector specific guidance that is being developed by YESAB, and/or speak with an assessor to find out what information should be included in their proposal.

### *8.3 UNDERSTANDING THE SOCIO-ECONOMIC SETTING*

Before proponents and assessors can make the preliminary determination of whether the proposed project will affect elements of the environmental and/or socio-economic systems, he/she must have some knowledge of the local project setting. In the case of SEEA, the proponent and assessor must have a basic knowledge of the relevant human environment/zones of influence and background conditions in the area potentially affected by the project. For many assessments, some simple research and investigation relevant to the project area may be necessary to develop this understanding.

This task should not be confused with the detailed baseline work that is presented in Step 3. That step includes the more detailed research and characterization of specific valued components that are most relevant to the assessment.

Proponents and assessors should make themselves aware of some basic information to ensure that the identification of interests with the project, the related valued components, and initial effects identification are as competent as possible from the start.

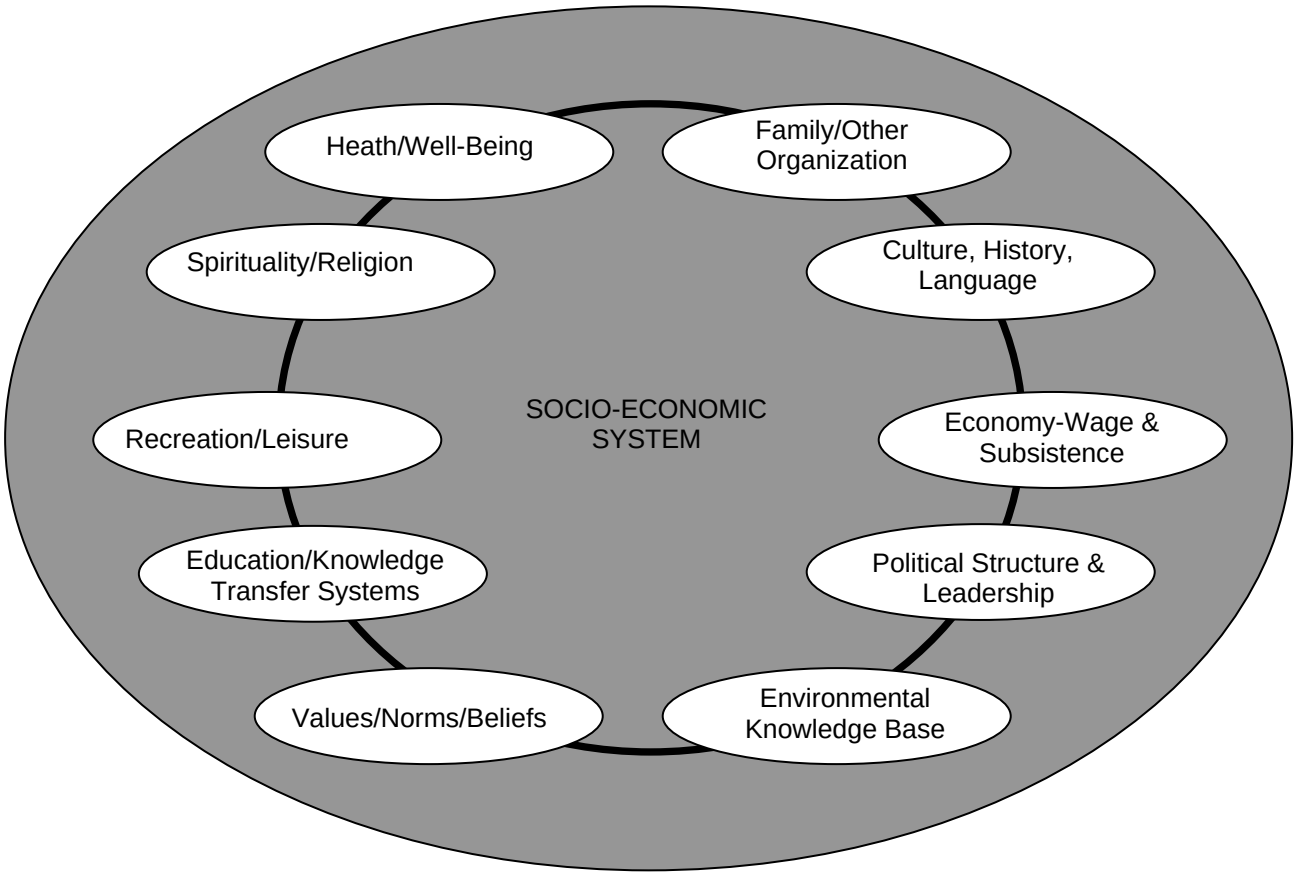
This may include developing a *general understanding* of the historical and current status and any discernable trends respecting the following:

- Societal relationships with the biophysical environment;
- Political and social resources;
- Culture, attitudes, social-psychological conditions;
- Economic and financial background; and/or,
- Relevant population (or demographic) characteristics (e.g. age, gender, education, and employment distributions).

An understanding of the socio-economic system and the specific characteristics of the potentially affected community or communities leads the way for proponents and assessors to identify possible interests in the proposed project. When interests in the project are identified in the next step, they are going to be related to potential effects on the components of the socio-economic system.

Figure 4 below presents a diagram of the socio-economic system and the variety of components that are generally thought to contribute to its make-up.

**Figure 3 Components of the Socio-economic System**




### *8.4 IDENTIFYING INTERESTS*

When a project is proposed and an individual or organization has an interest in that project, it is because they believe that it may have favourable and/or adverse effects on one or more of the components of the socio-economic system that they, or those they represent, value. Identifying interests will allow the proponent and the assessor to determine what specifically from the components of the environmental and socio-economic system is most important, particularly with regard to the proposed project.

Interests will be identified by inviting regulators, NGOs, industry representatives, First Nations, directly affected parties, and the greater public to make comment on the proposed project. Specialists with scientific, local, or traditional knowledge of the potential socio-economic effects may also be consulted. The assessor, with prior knowledge and experience, may also identify specific interests with respect to the project.

In identifying interests, and scoping the assessment in general, it is critical that the assessor draw on the opinions of interested parties to verify the scope of the project and assessment. While the resultant compilation of interests in the project won't confine the assessor to scope everything into the assessment, it serves as a critical tool to assist the proponent and the assessor in ensuring that important interests and issues are not overlooked.

Input into the identification of interests can vary substantially among interested parties that may hold different values and have different goals and objectives relative to a proposed project. The

assessor should, in the end, make a decision that balances all views and perspectives of interested parties - especially vulnerable segments of the population, such as single parent families or small businesses - to determine which issues are most important and thus must be included in the assessment.

The assessor will examine all interests, and any accompanying supporting information submitted to the assessment, for relevance and validity. The views and information of all contributing parties will be given full and fair consideration. Any stated interests known to the assessor that are not scoped into the assessment must be supported by a suitable rationale/explanation for being excluded from the assessment. This added effort contributes to the transparency and reasonableness of the process. A listing, or concordance table, can be a useful tool to show how the submitted views and information (interests) were considered in the assessment.

Interests can be raised by any of the participants in the process, including the assessor. They are typically identified based on the following:

- Institutional recognition
  - The importance of an environmental or socio-economic attribute or resource can be acknowledged in the laws, plans or policy statements of government agencies or private groups.
- Public recognition
  - Segments of the public recognize the importance of an environmental or socio-economic resource or attribute. Public recognition may take the form of support, conflict or opposition and may be expressed formally (e.g. letters) or informally (e.g. protest action).
- Technical recognition
  - The importance of an environmental or socio-economic resource or attribute can be based on scientific and/or traditional knowledge.

## *8.5 IDENTIFYING VALUED COMPONENTS - VESECS*

Now that interests relevant to the project have been identified, we must further examine them and establish context by determining the valued socio-economic components (VESECs) to which they relate. By doing this the assessor can begin to determine what, specifically, may be affected because of a particular project.

In the previous task, we associated socio-economic components or components of the socio-economic system to the interests that were identified. In this task, we will refine the identified socio-economic components to identify the specific socio-economic components that are of particular value to the community or communities, which may be affected by the proposed development. The relative importance may be determined based on cultural values or scientific concern. Valued Socio-economic Components may vary between communities or within communities, and can change over time.

### *8.5.1 What are VESECs?*

Value may be attributed to a component of the environment and/or the socio-economic system for economic, social, environmental, aesthetic or ethical reasons.

- Valued environmental and socio-economic components (or VESECs) are parts of the local environment and socio-economic fabric that are valued because of their ecological and/or socio-economic importance.
- VESECs can represent a class of species, a type of ecosystem, or an important component of a social and/or economic system; and,
- VESECs are used in the assessment of potential effects arising from a project and associated activities.

### *8.5.2 Why Are They Valuable?*

VESECs are considered valuable because they are:

- Recognized by the scientific and/or other communities as important due to their abundance, scarcity, endangered status, or role in the environmental or socio-economic system;
- Recognized by the public as being important and attributed value for various economic, social, environmental, aesthetic or ethical reasons.; or,
- Legally recognized and afforded specific protection by law, policy, or regulation.

### *8.5.3 The Socio-economic Context:*

Valued socio-economic components are a subset of VESECs and generally refer to those items recognized by the public as being important because of their:

- Integral connection to, or reflection of, the social-economic system;
- Commercial or economic value; and/or,
- Their role in maintaining quality of life in a community.

VESECs can be selected by distilling stakeholder interests, assessing and prioritizing various components through a weighting scheme, and soliciting input from meetings or workshops attended by proponents and/or assessors, interested parties, and other stakeholders (adapted from Hegmann and Yarranton, 1995). Experience gained through assessments across Yukon and in specific regions will aid assessors in identifying and understanding valued environmental and socio-economic components (VESECs). Engaging the potentially affected community and expert technical resources (scientific and traditional) that are familiar with the project area and the particular type of undertaking will aid in strengthening the proponent's proposal and the assessor's skills in identifying and understanding VESECs.

Valued socio-economic components can be one of the components of the socio-economic system itself or a subcomponent of that system (as previously presented in Figure 3).

The following Table 4 provides some examples of VESECs.

The assessor should develop lists of all the identified VESECs relevant to the project and the issues identified. This then provides the background for the next task, which will filter through the identified VESECs and narrow the focus on those VESECs that have the potential to be significantly affected by the project.

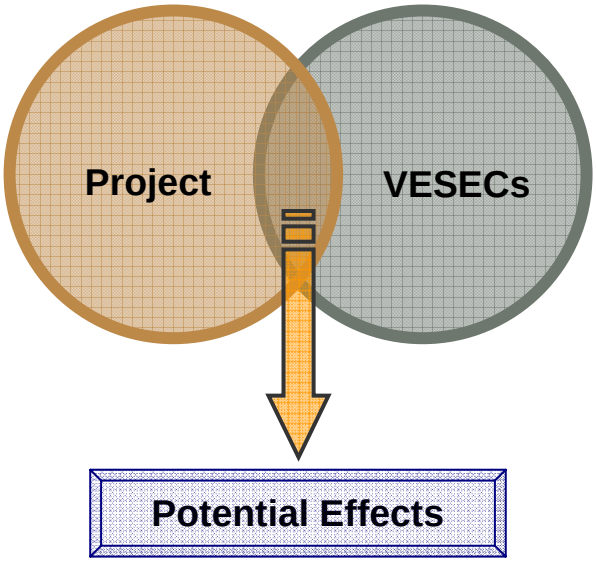
Additional literary and technical resources regarding VESECs and their identification and use in assessments are provided in Part IV.

### *8.6 Preliminary Determination of Potential Effects*

With the interests and related VESECs identified, the next step is a preliminary identification of the range of possible social and economic effects that may result from the proposed action. Completion of this task uses information from the proponent, potentially affected persons, experts, and previous assessments of similar activities, and supplemented by the professional judgment and experience of the assessor.

The preliminary identification of potential project effects is completed by examining the interactions (i.e. spatial and temporal overlaps) between the project and its activities with the valued components of the socio-economic system – VESECs. The assessment should then sort through the identified interactions to reveal those effects that are likely to be significant (i.e. determine what is affecting what, and which of those interactions are most important).

**Figure 4 Examining Project-VESEC Interactions to Predict Potential Effects**




**Not every potential effect needs to be assessed in every assessment.** The focus should be on those potential effects that may be significant, and most likely to occur. It should be noted that, while it is typical to 'scope in' effects that are likely to be adverse, the *Yukon Environmental and Socio-economic Assessment Act* requires that the assessor consider the significance of any environmental or socio-economic effect that is likely to occur. Potentially adverse and beneficial effects both contribute to the assessment, although the recommendation at the conclusion of the assessment is based on whether there are significant adverse effects that cannot be mitigated. With that in mind, beneficial effects may be used to mitigate adverse effects and/or inform the criteria and decision making when assessing the significance of adverse effects. Again, the focus should be on the likely potentially significant effects to those VESECs that are most important.

Both the proponent and the assessor should understand that the effects that are most important to address in a particular assessment may well vary project to project. There are a variety of reasons why this occurs including location of the project and the interests of those potentially affected. A diligent process of investigating potential effects on identified VESECs will ensure that the most important effects are examined and addressed.

### *8.6.1 Deciding What Potential Effects Merit Detailed Assessment*

As described previously, the level of effort for the assessment and the extent of resources allocated should mirror the importance of the potential effects relative to the *Act* and the importance of the VESECs.

Using the mining project example previously introduced an analysis of the potential changes to gender roles and relationships resulting from the hiring and training of many local women may be critical to the assessment, whereas a gender assessment for the construction of a rural residential subdivision would not likely be warranted.

As a result of this task, the comprehensive list of VESECs outlined previously will be refined into those most relevant to the proposed project. It may be determined in the scoping stage that, while of value, not all of the VESECs that are identified are likely to experience significant socio-economic effects. As such, they could be scoped out of the assessment.

Economic and social effects of development may be adverse or favourable depending on the perspective: short term, or long lasting, localized or extensive and changeable throughout the course of the project. A systematic approach that examines economic and social participants [7] and associated responses to a proposed project can help to identify these aspects of potential effects.

A possible method used to identify potential socio-economic effects is to look at the socio-economic effects of similar past projects. The identification of likely future effects is based on reconstructing the socio-economic effects of past events. The more dissimilar the social, cultural, economic, and political environment, the less certainty is expected in reconstructing past events to make predictions about the project proposal currently undergoing assessment. Ideally, there would be a comparable environment where a previous project has taken place that could serve as a basis of comparison.

For the purposes of assessments under the *Act,* it is likely that assessors will research the effects of similar projects in other jurisdictions for use in their assessments. The assessor will also be able to use the results of assessments of similar projects in Yukon as they are completed. The information gained from such research will be of benefit to the body of knowledge held by the Yukon Environmental and Socio-economic Assessment Board. The use of a comparative assessment methodology is discussed further in Step 4.

As part of the scoping exercise, the assessor will take input received during the assessment and analyze the proposal and comments received to create a list of potential socio-economic effects of the project. This requires expertise in predicting how the social and economic environment may be altered by the project proposed. One of the greatest challenges to socio-economic effects assessment will be to identify potential socio-economic effects that would be directly related to the proposed project versus other underlying or ongoing socio-economic changes.

### *8.6.2 Economic Effects*

Economic effects refer to how people make a living, the material well-being of people and communities, and effects to economic activities. Projects that result in the creation or realignment of economic linkages between individuals, businesses, and governments may spawn a variety of large-scale economic effects. Projects that utilize existing economic linkages will likely feature more favourable economic effects and fewer, if any, adverse economic effects. For example, the

[7] Economic participants (sometimes referred to as 'agents') can be individuals, businesses, or governments. Social participants are individuals, families, and communities.

mining project that proposes to rely on the nearest local centre for the bulk of their equipment, supplies, and labour force needs will likely see fewer and less significant adverse economic effects brought up during the assessment.

The purpose of this step in the assessment process is to identify the economic effects that are reasonably likely to be experienced by individuals, businesses, and governments. Remember that the economic effects are not limited to those measured in dollars, as subsistence and trading are common in Yukon. For example, if you are not working, it is presumed you are consuming leisure and recreation. In northern regions, time is often spent in three non-mutually exclusive ways: work, leisure, non-wage work such as subsistence activities, and perhaps a fourth, household and personal maintenance.

The following list presents the broad categories of potential economic effects that may occur in a study area:

- Direct Economic Effects - are the initial, immediate effects caused by a specific activity? The direct effect will subsequently initiate a series of iterative rounds of income creation, spending, and re-spending that will result in Indirect Effects and Induced Effects.
  - Example: The direct effects of an investment in a new mine could be new jobs for the community or increased sales for a local grocery store.
- Indirect Economic Effects - are the effects that result from the actions of the sectors which provide inputs to sectors experiencing Direct Effects. Therefore, the indirect effects are those changes to production, employment, incomes, etc., which take place as a result of the direct effects and include the effects on sectors that may be directly or indirectly related to the initially affected sector.
  - Example: A commercial food distributor may have to make additional trips to the community or modify their product offerings based on new demand at the local grocery store.

The assessor should identify the economic effects that are likely to be borne by: a) individuals, b) businesses, and c) governments, because of a project. Possible direct and indirect economic effects to each player are shown in the table below.

**Table 4 Potential Economic Effects Experienced by Various Economic Participants**

| | Economic Participants | | |
|---|---|---|---|
| | **Individuals** | **Businesses** | **Government** |
| **Potential Economic Effects** | Employment | Local purchases (additional business revenues) | Changes in demand for publicly provided goods (roads, schools, health care, environmental protection, etc.) |
| | Wages/salaries | Spin-off businesses | Changes in fiscal flows (revenues and expenditures) |
| | Human capital (training opportunities) | Crowding out (extent to which new businesses established to serve the project are expected to displace existing businesses) | Positive externalities (e.g., expanded markets, improved business environment, enhanced community services) |
| | Crowding out (extent to which "new" jobs are expected to displace existing jobs in the community) | Business leakage (extent to which project inputs can be supplied from the project area) | Negative externalities (e.g., environmental degradation, increased land prices, greater use of local public infrastructure, additional greenhouse gas emissions) |
| | Labour leakage (extent to which labour for the project can be supplied from the project area) | Impact on aggregate economic output (gross domestic product) | Other effects reasonably expected to be experienced by governments |
| | Other effects reasonably expected to be experienced by individuals | Other effects reasonably expected to be experienced by businesses | Other effects reasonably expected to be experienced by governments |

### *8.6.3 Social Effects*

Social effects refer to effects on people and communities. The identification of potential social effects again involves examining the proposed project and its interactions with valued socio-economic components. The interaction between all aspects and phases of the project with the social environment (directly or indirectly) will help identify likely project-induced changes that represent social effects.

Proposed projects can have (direct and/or indirect) effects on individuals, families, and communities (and the social groups within them) as well as the region where individuals live, and can include effects such as:

- Changes in aesthetic quality (e.g. of the home, the community, recreational locations and traditional use area);

- Changes to lifestyle and cultural well-being (e.g. options for wage versus subsistence at the family level, maintenance of cultural practices or value systems linked to community hunts and traditional social support systems);
- Changes to the quality of heritage resources (e.g. graves that may be important to families, protection of sacred places, meaning of heritage resource in teaching about culture);
- Changes to mental and physical health (e.g. individual stress, family violence, drug or alcohol abuse and crime); and/or,
- Changes to gender roles and relations (e.g. head of household, community leadership).

Interested parties and expert advisors can help to verify the preliminary identification of social effects. Although the identification of effects may have begun with the proponent's project planning (particularly for assessment at the Executive Committee Level) and the preparation of a project description, it is expected that the assessor will refine the list of potential project effects.

As introduced above, we include aesthetic quality, health, culture, traditions, lifestyles, heritage resources, and gender roles in our definition of social components that can experience effects. The following topical questions may help to identify potential social effects by examining the interactions between the project and the variety of social components identified.

**Table 5 Social Effects Identification Questions**

| Socio-economic Component | Social Effects Identification Questions |
|---|---|
| Aesthetic/Landscape Quality | Will locally, regionally, or nationally important visual resources be changed or obscured by the project? |
| Health | Will the project result in any changes that alter psychological well-being? (e.g. stress due to change in work, spousal assault, child abuse or neglect, etc.) |
| | Will the project result in changes to physical well-being? (e.g. repetitive motion injury, alcoholism or drug abuse, etc.) |
| Gender (Male/Female Differences) | Will the project alter gender roles or relationships between the genders? (e.g. head of household, primary caregiver, money management, etc.) |
| Culture | Will the project affect community values (e.g. wage versus subsistence economy and traditional values)? |
| Heritage Resources | Will the project enhance access to or overlap with historically or traditionally used areas (e.g. traditional trails, camps, graveyards, cabins) where heritage resources are present? |
| Infrastructure | Will the project create stresses on existing infrastructure or require investment in new and/or improved infrastructure? |
| Recreation/Leisure/Residence | How have people used the area? How do people currently use the area? How might the project affect land use? |
| Other Social | Will the project change community resources? (e.g.community social capital*) |

Notes:
Sample Indicators in Brackets – Other indicators in Appendix D.
* The term 'social capital' refers to the social capital of a society and includes the institutions, relationships, attitudes and values that govern interactions among people and contribute to economic and social development. It includes the shared values and rules for social conduct expressed in personal relationships, trust and a common sense of "civic" responsibility that makes a society more than a collection of individuals.

Another approach to the identification of social effects is to consider the project phases, associated activities, and mechanism by which social interaction is altered. This approach is process-oriented and may reveal different types of effects (those driven by speculation or perception and perhaps indirect or induced effects).

**Table 6 Potential Social Effects Identified by Project Phase**

| Project Phase | Examples of Potential Effects |
|---|---|
| Construction/implementation | Depending on the scale of activity and whether a migrant construction force is required, may create greater strains on schools, health facilities, housing and social services. Mental stress may increase due to changing patterns of social interaction, conflict between newcomers and long-time residents, sudden increases in the cost of housing and local services and increased uncertainty about the future. Local organizations and economies change as old behaviors are replaced by new behaviors. |
| Operation/maintenance | Stable high wage employment, increased tax base, quality infrastructure, enhanced leisure opportunities |
| Planned Temproary Closure | Response is variable depending on nature of project, could mean loss of economic opportunities, employment loss, etc. |
| Decommissioning/Abandonment | Response is variable depending on nature of project, could mean loss of economic opportunities, employment loss, etc. |

If there is any uncertainty with the preliminary understanding of whether the identified effect has the potential to be significant, it is best to include it for further assessment.

### *8.7 Establishing the Spatial and Temporal Boundaries for the Assessment*

In determining the scope of assessment, the assessor must identify the temporal (time) and spatial (geographic) distribution or boundaries of the assessment.

Assessment boundaries are based on the extent to which the identified potential effects of the proposed project are expected to be observed in space and time.

Sometimes these boundaries are the same as the spatial and temporal extent of the VESECs and/or the project and its activities. More often, however, the assessment boundaries are preferentially scaled to that balance point at which the identified potential effects to a particular VESEC will likely become insignificant (i.e., very low probability of occurrence or acceptably small magnitude).

Different effects can have different geographic extents (spatial boundary) and periods during which the effect will occur (temporal boundary). The spatial boundary is often referred to as the "Study Area" or the zone of influence, which could be either primary or secondary. The temporal boundary is often referred to as the "time frame" or "period" of the effects.

The spatial and temporal extents of potential socio-economic effects may be ascertained by asking the following questions:

- When will the socio-economic effects begin to occur?
- How long will they last and will they differ depending upon different project stages?
- What are the geographic boundaries of the socio-economic effects?

While the extent of the effects may vary both in time and space for different VESECs, the assessor needs to establish an overall primary and secondary zone of influence for purposes of communicating the assessment findings and most importantly in establishing the boundary for data collection purposes in Step 3.

The assessor should also note that the effects characterization may occasionally indicate that the boundaries of the assessment should be expanded or reduced based on new information not available at this stage of the assessment.

The temporal boundaries of the assessment should account for the various development phases as introduced in Section 7.3, including[8]:

- **Construction Phase -** When large infusions of capital and labour can have both beneficial and adverse effects.
- **Operational Phase –** When effects on the socio-economic environment become better understood, including for example, effects associated with the redistribution of labour and new employment structures.
- **Closure/Decommissioning Phase –** When communities must adapt to the removal of a component of the socio-economic system and plan and prepare for the future.
- **Post Closure Phase –** Where communities implement plans for the future, live with the legacy of the project effects and experience inter-generational effects that may occur.

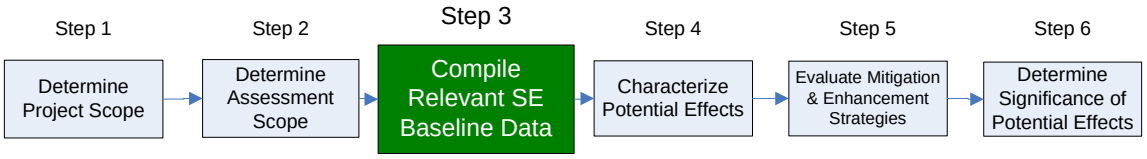
### *8.8 SUMMARY*

- Develop basic understanding of the socio-economic setting
- Identify interests relating to the proposed project
- Identify Valued Environmental and Socio-economic Components (VESECs)
  - The identification of relevant VESECs provides a conceptual orientation to begin to think about possible effects
- Preliminarily identify potentially significant and likely effects of the project
  - Identify any spatial and temporal overlaps (i.e. interactions) of the VESECs and the project activities
  - Sort through the interactions to reveal those effects that are likely to be significant (i.e. what is affecting what; and which of those interactions are important)

[8] Adapted from *Socio-economic Impact Assessment Guidelines for the Mackenzie Valley – Public Draft May 8, 2006*, Mackenzie Valley Environmental Impact Review Board.

- Establish the spatial and temporal boundaries for the assessment:
  - Based on the preliminary understanding of the extent and timing of the potentially significant effects
- Confirm that the established scope for the assessment encompasses the considerations of Section 42 of the Yukon Environmental and Socio-economic Assessment Act ("Matters to be Considered") and the principles for Socio-Economic Effects Assessment (SEEA) provided in this guide
- Document the rationale used to determine the proposed scope of the assessment

# 9.0 STEP 3: COMPILE RELEVANT SOCIO-ECONOMIC BASELINE DATA




## *9.1 TASKS*

- Identify suitable descriptors or indicators to characterize the baseline condition for the relevant VESECs identified;
- Collect and compile relevant information regarding the selected descriptors or indicators to characterize the current and historical socio-economic conditions in the study area.

## *9.2 OVERVIEW*

Project development generally brings changes (effects) to the socio-economic conditions in a community or region. To assess properly the potential socio-economic effects of a project, the proponent and the assessor need to understand the baseline or background socio-economic conditions. In scoping the assessment, the proponent and the assessor establish a basic understanding of the socio-economic setting for the purposes of identifying interests, VESECs, and potential effects. At this point it is time to expand on this basic knowledge and build a more comprehensive understanding of the socio-economic setting so that the potential effects can be adequately characterized. Completion of this step will set the stage for the detailed projection and estimation (or characterization) of effects in the next step.

This step involves characterizing the current and historical socio-economic conditions of the potentially affected community or communities with particular regard to the valued socio-economic components that have been identified as relevant to the assessment.

Now that a preliminary determination of the potentially significant effects and VESECs has been conducted, it is important for the assessor to access, review, compile, and evaluate more detailed and/or specific socio-economic information in the context of the proposed project. This can be completed by collecting and compiling more detailed background information regarding the VESECs identified.

The level of effort devoted to the description of the human environment should be commensurate with the size, cost, and degree of expected effects of the proposed project. As with the environmental baseline, it should be noted that for the larger, more intensive, or potentially contentious projects, proponents should initiate the collection of socio-economic baseline information as soon as possible in planning their project. In these more complex projects (mostly at the Executive Screening level of assessment), it should be part of the proponent's project planning and setting of the scope of their initial project assessment prior to entering the *YESAA* process. The *Proponent's Guide for Designated Office Evaluations* and the *Proponent's Guide to Information Requirements for Executive Committee Screenings* provide direction to the proponent on the information required for the purposes of the assessment.

As with the remainder of the proponent's submission, the assessor should endeavour to validate any socio-economic baseline information provided in the proponent's project submission under the *Act*. If the scale of the project does not warrant collection and/or extensive consideration of

such information by the proponent, the assessor may have to seek out other sources for this information if it is deemed necessary (as in the case of the lower level Designated Office evaluations). The assessor must bear in mind that, as discussed in Step 2 – *Determine Assessment Scope*, only those elements of the socio-economic environment within the established study area that are potentially affected by the project need be further identified and characterized.

Just as in the assessment of potential environmental effects, the socioeconomic baseline information will be useful for later comparison to the results of any effects monitoring that is conducted when, and if, the project proceeds. This aspect of collecting and evaluating socio-economic data will be further discussed in Step 5.

### *9.2.1 Types and Sources of Information*

Proponents and assessors can make use of a variety of information during a socio-economic assessment. On a project-by-project basis, each should seek out various types of data, both general and specific, with respect to a particular socio-economic variable.

At this point, the focus should be on particular elements that are most relevant to the assessment and gathering information in more detail.

The following listing of information sources has been adapted from Taylor et al. (2004) and may include:

- Statistics:
  - Census reports and other such statistical data collected by governments and other organizations.
- Written social data:
  - Articles in newspapers, letters to the editors of newspapers or other printed current events media, annual reports, academic literature, and written testimonies, as long as it does not relate to the project and tells us about social behaviour before the announcement of the proposed project.
- Observation and respondent contact data:
  - Interacting with people in the area, during work, leisure, and other social settings, and systematically observing selected behaviours based on the preliminary investigation (scoping) and other important variables that may emerge.
- Survey data:
  - Where structured interviews are carried out or questionnaires are administered, assessment scoping must be completed to ensure the validity of the selection of questions and the variables to be investigated.
- Public participation data:
  - Information gathered during the period of the assessment where there are opportunities for public participation.
- Information from agency or project personnel:
  - Government and non-government agencies/organizations and/or project personnel can be a valuable source of information about the communities in which they reside, work, or recreate. Examples of information may include: employment, any available health information, crime and delinquency information.

In completing the social baseline, it is important to be aware of potential data sources and their respective strengths (e.g., comprehensiveness, reliability, reproducibility) and limitations (e.g., non-representative data, bias, sampling errors). For instance, if an assessor is using data from a community profile and the profile was generated using survey methodologies where the success rate was skewed toward non-First Nations members of the community, the social baseline for the given community would not be representative.

### *9.2.2 Role of Analytic & Participatory Methods in Preparing the Social Baseline*

Comprehensive data will not always be available to establish a baseline for the assessment for the project. In such cases, either document the lack of information or use an alternative measure. This is especially important where a project may have a differential effect on communities, in the areas of demographics (e.g., predominantly First Nation or non-First Nations), primary economic bases (e.g., government, tourism, or mining), or community structure (e.g., communal or individual ownership).

Participatory approaches can be used and scaled to the scope of the project and the assessment to enhance the quality of the social baseline.[9] Participatory techniques may be used to get interested stakeholders to identify issues or otherwise contribute to the assessment, for example. As appropriate, employing participatory techniques can improve the comprehensiveness and quality of socio-economic effects predictions and associated mitigation measures.

Participatory approaches to gathering qualitative data should be used when practical to address deficiencies in quantitative data and resulting predictions with lower degrees of certainty (see Table 7 in the next section); the decision regarding whether it is appropriate to allocate the time and resources to engage in participatory techniques should be made in consideration of the VESECs, the associated values, and the effectiveness of other data gathering approaches. More extensive and often expensive participatory techniques may be warranted only for larger projects.

In cases where the project is expected to have a relatively small footprint, be non-intrusive, straightforward and in a location where multiple land uses are accepted, verification of the compiled socio-economic baseline could consist of brief discussions with community leaders or perhaps neighbouring land users. Conversely, extensive community participation may be necessary in cases where the proposed project is large in size, complex, or involving highly technical measures of unknown risk, is contentious, and/or occurs in a sensitive location.

An example of this is the now completed Brewery Creek Gold Project south of Dawson City. In this instance, the proponent proposed the use of a technology for capturing the gold from the ore that was at the time untested in Yukon and unfamiliar to regulators and the public. In this case, extensive community consultation was undertaken to inform people about the project and the proposed technology, to discuss the socio-economic benefit sharing, to learn about the local peoples' use of the area, and to gather suitable environmental socio-economic data with which to complete the assessment.

Special care must be taken to adequately understand and describe the community and its diversity, to compare, assign, and apportion differential adverse effects (in the next step) to some sectors of the community (e.g., single mothers, First Nations peoples). This requires the use of indicators that address demographic cross-sections of the community, e.g. First Nation and non-First Nation, male and female, child to elderly, poor and wealthy, and disabled or not.

[9] YESAB has prepared an assessor's guide to engage the public in information sharing and input to assessments.

It is important to realize that the absence of a definable community in the immediate vicinity of the proposed project does not mean that there will be no interested and/or affected parties, since most of Yukon has traditional uses.

### *9.2.3 Scale of the Information Collection*

Descriptions and measures of socio-economic variables need to be made relevant for different categories of the parties involved, i.e., individuals, families, businesses, communities, and governments. The effects can also span a variety of geographic units. The variables and the way that they are measured for one geographic unit are not necessarily relevant for another. Typically in Yukon, socio-economic information that is available has been collected at the territorial level, and therefore may not help project-level assessments. Assessors should seek out detailed community-level baseline socio-economic information as available.

## *9.3 SELECTING RELEVANT SOCIO-ECONOMIC ASSESSMENT MEASURES OR INDICATORS*

Project development invariably includes some changes (effects) to the socio-economic conditions in a community or region. To assess properly the potential socio-economic effects of a project, it is important for the proponent and the assessor to identify those socio-economic assessment indicators that are likely to indicate meaningful change to a VESEC or otherwise reflect the predicted effects of the project. The goal of the assessor here is to identify and describe as many meaningful indicators for which they have (or can acquire) data on and for which they can reasonably expect to do some analysis.

The social and economic assessment indicators are derived from the VESECs and point to measurable change in human population, communities, and social and economic relationships resulting from a proposed project. The delineation of socio-economic assessment indicators defines categories of possible social and economic change and selects the most suitable measures from which to describe current conditions and predict change. It achieves the goals of scoping by focusing on the most important categories of change and on useful and meaningful indicators.

Table D1 in Appendix D identifies some of the potential socio-economic indicators and associated measures that may be used in an assessment. This is a preliminary collection of potential indicators, of which some may not be applicable to every assessment. As assessments are conducted and greater understanding of communities in Yukon is gained, it is likely that several different/additional variables that may be measurable and useful (i.e. meaningful) to assessments under the *Yukon Environmental and Socio-economic Assessment Act* will be employed.

The assessor should consider the listed (and any additional) indicators and select the most appropriate ones to explore given the VESECs and potential effects previously identified.

Indicators should be meaningful and can be selected based on the following criteria:

**Relevance**
Is it tied to the context of the project and the potential effects? Is it relevant to needs of assessment? Does it indicate the cause, not just symptom? Will it focus and motivate action? Is there a clear relationship between the assessment goal and data?

**Completeness**
Does it provide good coverage of the issues? Does it cover major elements of priority?

**Understandable**

Can the information be presented in an easily understandable way to the target audience? Is it meaningful to most people involved or affected? Is it comparable among jurisdictions? Is it useful at large & small geographic scales? What is the comparability to targets, thresholds or standards? Use standardised measurement wherever possible to permit comparison.

**Validity**
Is the indicator a true reflection of the facts? Is it easily measurable? Was the data collected using scientifically defensible measurement techniques? Consider scientific validity/theoretical soundness, evident links of cause and effect, representative of interests/valued components, responsiveness to change.

**Practical**
Can the data be easily collected by the proponent and/or assessor as a part of assessment? Is the indicator verifiable and reproducible? What happens if the data isn't available? Is the data within the proponent's and/or assessor's control? Is accurate time-series data available or collectable? What is the relative cost-effectiveness of collecting and analyzing the data?

**Reliability**
Will you arrive at the same result if you make two or more measurements of the same indicator? Would two different researchers arrive at the same conclusions? Is it free from bias?

### *9.4 PREPARING THE ECONOMIC BASELINE*

In every economy, different economic agents interact to make use of scarce resources to produce goods and services. In the simplest of economic models, there are three participants: labour, businesses, and governments. Thus, the "effects on economies" of a project can be described in terms of its effect on the present economic state of individuals, businesses, and government. Therefore, the economic baseline is a description of the economic circumstances of the individuals and businesses in the study area as defined in the project scope and the scope of the assessment. The economic baseline also includes the programs and services delivered by the various government institutions that exercise jurisdiction in the study area.

To characterize the relevant economic baseline, the assessor should describe the current economic setting in the project area from the perspectives of a) individuals, b) businesses, and c) governments, and in the context of the selected VESECs and socio-economic variables.

Table D1 in Appendix D includes an example list of variables and indicators that could be used to set the stage for the evaluation of potential economic (and socio-economic) effects of the proposed project. As deemed appropriate, information could be gathered/compiled for these indicators or surrogates thereof in advance of, or as part of, conducting an assessment. The table lists the various economic agents and some starting points for the selection of suitable indicators to aid in characterizing the economic baseline.

### *9.5 PREPARING THE SOCIAL BASELINE*

The social baseline is a description of the social fabric at a geographical level that is suitable for the proposed project. The organization of society occurs at the levels of individuals, groups, and communities as defined by geography, shared interests or ethnicity. Correspondingly, project effects may be felt at these levels.

The baseline is a profile that should contain enough information to depict the social system (e.g., formal and informal organization related to land or water management or use where the project is proposed, cultural and demographic diversity of potentially affected communities, power relations

by culture or gender, and normal rate of change) at a level of meets the purposes of the assessment. The social baseline is defined spatially based on the primary (substantial and direct), secondary (moderate and indirect) and tertiary (minor and indirect) communities that are expected to be affected.

Social systems are not static and change in response to new ideas and technology. For this reason, the social baseline should attempt to reflect normal rates of change to identify intra-generational and inter-generational dimensions of social effects based on trends within and across a generation. In other words, the assessor should endeavour to consider both current and historical information.

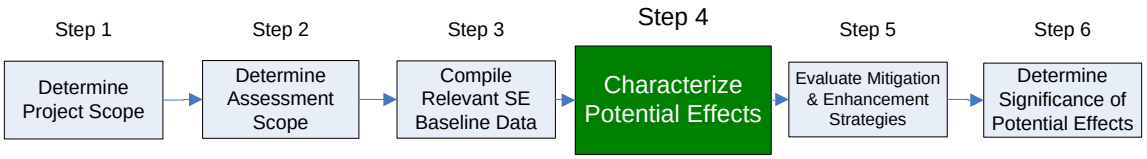
In completing this social baseline, it is important to describe the social system relevant to the proposed project. Various elements that may be included in a social baseline are presented in Appendix D. The assessor should understand that data might not be available on all relevant aspects of the social system. In these cases, the assessor will use the best information available and employ the precautionary principle where necessary.

Again, Table D1 in Appendix D provides an example listing of indicators that can be used for the purposes of establishing baseline from which to conduct the assessment.

### *9.6 SUMMARY*

- Identify suitable descriptors or indicators to characterize the baseline condition for the relevant VESECs identified;
- Collect and compile relevant information regarding the selected descriptors or indicators to characterize the current and historical socio-economic conditions in the study area.

# 10.0 STEP 4: CHARACTERIZE POTENTIAL EFFECTS




## *10.1 TASKS*

- Characterize potential effects
- Document the rationale and methods used to complete this task

## *10.2 OVERVIEW*

This step attempts to characterize any potential changes from baseline socio-economic conditions that can be predicted if the project were to proceed. In addition to the direction provided here, the assessor is referred to Burdge 2004b, chapters 7-10 for some examples of approaches to conducting analyses of effects on specific VESECs.

In Step 2, the assessor made a preliminary prediction of the potential effects of the project based on an understanding of the project activities, the environmental and socio-economic setting, and the values people associate with the various components of the socio-economic system. In step 3, the assessor researched those components of the socio-economic system that have the potential to be affected and those socio-economic variables that may be subject to change. In this step, the assessor brings all of these notions and data together to characterize the potential effects of the proposed project.

There are several attributes that are commonly used to describe potential effects, including the following:

- Direction
  - Direction refers to whether the effect will be viewed as beneficial or adverse. Note that the same effect, viewed as beneficial by one individual, business or government, could be viewed by others as adverse. Differing perspectives should be considered in the assessment. An effect may also be both positive and negative (beneficial or adverse) depending on who is potentially affected.
- Magnitude
  - How the effect compares to previous change, typical ongoing change, or if it exceeds a standard, the threshold of some other level of acceptable change.
- Geographic Extent
  - The geographic extent of a project effect considers how far from the project location the economic and social effects are observable.
- Duration
  - How long the effect lasts/endures; short-term or long-term effects.
- Frequency of Occurrence

  - When the effect occurs and how often it occurs.
- Reversibility
  - If the effect were to cease, how much time would be required to return the affected VESEC to pre-disturbance conditions (factoring pre-disturbance rates of change).
- Socio-economic Context
  - Experience with previous projects, resiliency, or ability to cope/adapt;

The assessor should characterize the effects of the project on identified VESECs in the context of these general effects attributes. The data compiled for these effect attributes will be assembled in the section on determining significance in a later step of the assessment.

Various analytical methods can be employed to evaluate the effects and characterize them in the context of the effect attributes presented in the previous paragraph. The assessment of social and economic effects may rely on several different analytic methods in combination.

Selection of the most appropriate tools can be based on consideration of the following:

- Ability to organize, analyze and present information
- Stage of the assessment (e.g., scoping, baseline data collection, analysis)
- Types of issues
- Types of disturbances and effects
- Types of VESECs
- Quality and extent of baseline data
- Level of expertise available
- Resources available to complete an acceptable assessment

In undertaking the analyses, the assessor should try to use methods that provide the opportunity for people to participate, and minimize any bias when collecting and evaluating socio-economic information.

It is necessary to examine the potential effects on VESECs for each project stage. The type of effect and the associated effect attributes might be quite different. For example, if a large energy project requires a 300-person camp during construction but only four people during operations, the socio-economic effects of the changes in population size and composition during each stage would be quite different. Furthermore, the potential effects might impact on different VESECs. Proposals for larger projects may have also explored and considered socio-economic interactions through discussions with those most directly affected, as well as plans to involve local people and organizations. This information will be critical in characterizing the potential effects of the project.

As outlined in Step 4, a common way to determine whether socio-economic effects are likely to occur is to compare the quality of existing socio-economic conditions with predicted socio-economic conditions after development. If the affected community does not have previous experience with the socio-economic effects of development, the assessor should look at changes that occurred in similar communities where similar projects are operational.

A variety of effects assessment methodologies are presented in the following sections.

## *10.3 Predicted Changes to Socio-economic Assessment Variables*

### *10.3.1 Economic Effects*

For each economic effect estimated describe the attributes under each of the headings presented previously (e.g. magnitude, direction, extent). For each economic effect estimated, outline the methodologies and data used in the calculations and outline/document the information gathered via public participation processes. Table 9 outlines possible methodologies and data sources to be used in the estimation of economic effects.

The purposes of the *Yukon Environmental and Socio-Economic Assessment Act* instruct assessors to consider those who would experience both the positive and negative effects of a proposed project. Fostering "beneficial socio-economic change" should be encouraged "without undermining the ecological and social systems". Northern regions feature smaller, resource-based economies and smaller populations, and are particularly susceptible to situations where much of the positive benefits go elsewhere, but the adverse effects remain locally. Incidence analysis described later in this section can be used to describe the distribution of project benefits and costs. In recent years, benefit agreements have become a common tool used to stem economic leakages like this from a project area.[10]

Economic effects follow from transactions between individuals, businesses, and governments. For major projects, the aggregate value of certain transactions, such as project capital costs and labour requirements, will be available from project plans. Where available, the aggregate value of such transactions can be used as a starting point for estimating potential economic effects.

It should be noted that not all the following methodologies are relevant or appropriate for all types of project assessments. Further, there may be data limitations that require the use of one method in place of another in order to provide meaningful conclusions.

[10] Indeed, the *Yukon Oil and Gas Act* (section 68) explicitly requires that a benefit agreement be completed as part of the oil and gas disposition process.

## Table 7 Potential Methodologies for the Economic Effects Estimation

| Economic Effect | Possible Methodology |
|---|---|
| ***Individual Effects*** | |
| Employment | Proponent employment estimates, by skill type; multiplier analysis (with multipliers from Statistics Canada's Input/Output model) |
| Wages/salaries | Proponent wages/salaries estimates, by skill type; multiplier analysis (with multipliers from Statistics Canada's Input/Output model) |
| Human capital (training and skill development opportunities arising from the project) | Analysis of training plan(s) prepared by proponents which outline required skills and capabilities |
| Crowding out (displacement of existing employment) | Unemployment estimates; training plan analysis; follow-up studies |
| ***Business Effects*** | |
| Local purchases (additional business revenues) | Economic leakage/non-leakage estimates for project inputs |
| Spin-off businesses (number and type of new business created) | Economic leakage/non-leakage estimates for project inputs |
| Crowding out (extent to which new businesses established to serve the project are expected to displace existing businesses) | Qualitative analysis; follow-up studies |
| ***Government Effects*** | |
| Demand for publicly provided goods and services | Assessments of historic and future demand for publicly provided goods and services |
| Fiscal flows | Estimates of taxes, fees and royalties and associated offsets; estimates of additional expenditure demands |
| Aggregate economic output (gross domestic product) | Multiplier analysis (with multipliers from Statistics Canada's Input/Output model) |
| Positive externalities* | Qualitative analysis; follow-up studies; public participation |
| Negative externalities* | Qualitative analysis; follow-up studies; public participation |
| ***Net Social Benefit*** | |
| Tangible costs/benefits | Cost-benefit analysis; multiple accounts analysis; incidence analysis; feasibility study; cost-effectiveness analysis |
| Intangible costs/benefits | Cost-benefit analysis; multiple accounts analysis; public participation; incidence analysis |
| ***Sustainability*** | |
| Environmental valuations | Cost benefit analysis (contingent valuation; travel cost method; hedonic pricing); multiple accounts analysis; panel surveys |
| Intergenerational transfers | Public participation; panel surveys |
| Cumulative economic effects | Aggregation over time of [selected] economic effects; panel surveys |

Note: * Externalities are benefits or costs that are not included in the market price of goods or services. For example, the cost of natural resource depletion, pollution and other environmental and social factors are externalities that often are not factored into the market price of a product.

### *10.3.2 Cost-Benefit Analysis*

Cost-benefit analysis, which seeks to determine the overall social costs and benefits of a project, is generally used to facilitate choices between project scenarios by allowing identification of the project scenario with the highest net benefit to society. A well-designed cost-benefit analysis will seek to capture both positive externalities and negative externalities[11] expected to be generated by a project.

Cost-benefit analysis has its theoretical roots in welfare economics and is based on several obvious assumptions which work well in theory, but which do not always work smoothly in practice. [12] Because of limitations in the application of cost benefit analysis theory (e.g., requirement for monetization) the results of these analyses have not been as satisfactory as practitioners might like. The problem with cost-benefit analysis is how to assign a monetary figure to all the potential social and environmental costs and benefits, a difficult task. The other and more serious challenges for the use of cost-benefit analysis involve the resources that are needed for such an analysis. Data collection and calculations are difficult tasks and in an area with as few people as Yukon, the assessor will have trouble getting data at the community level for such an analysis.

### *10.3.3 Multiplier Analysis*

Multiplier analysis is a method of assessing the indirect effects of projects and not just the effects associated with transactions between economic agents directly involved with the proposed project. Thus, multiplier analysis is a way of characterizing certain aggregate effects that go beyond 'proponent – labour' or 'proponent – service supplier' relationships. Published by Statistics Canada, multipliers are derived from complex mathematical models called Input-Output tables and trace the changes in an economy that result from a "spending injection" such as the construction of a major project.

Multiplier analysis can be used to demonstrate the increase in gross domestic product (GDP) and the employment effort associated with the increase in GDP which results from the spending injection. In turn, the value of wages and salaries paid in exchange for the total employment effort can also be calculated. Economic impact estimates calculated with Statistics Canada multipliers can be separated into direct and indirect[13] components and can limited to a provincial/territorial economy or can include effects traced throughout the entire Canadian economy. Statistics Canada does not calculate multipliers at the community level.

Understanding the multiplier effects associated with a mining development, for example, would aid in understanding the potential economic effects associated with its construction, operation and closure. For example what will be the effect on the economy when the mine ceases operations? Employment and income would decline by the size of the employed labor force and payroll of the closed mine. Other businesses in the territory would, however, also experience the effects as lesser amounts of their goods and services would be demanded. A measure is needed that estimates the effects created by an increase or decrease in economic activity; one such potential measure is multiplier analysis.

[11] Externalities are created when an activity undertaken by an individual has an impact on the well-being of a bystander. If the effect of the activity is beneficial, the activity is said to create a positive externality. In contrast, if the activity has a negative effect, it is said to create a negative externality. Externalities are generally considered as not measurable and consequently not included in the cost of the good or service. Examples include air pollution, family stability and cultural invasion.
[12] For example, the implicit requirement for the monetization of all cost and benefits factors.
[13] Statistics Canada has not published multipliers which allow for the calculation of induced effects since 1990.

Some caveats regarding the use of multiplier analysis bear noting. First, multipliers are based on a "snapshot" of an economy at a given point time. Structural changes in an economy since the model was built are not accounted for and can lead to inaccurate results. Second, the model considers only transactions where monies (i.e., dollars) are exchanged. By design, non-monetary social and environmental effects of a spending injection are not considered. Third, I-O models are "one-way" in the sense that they report only the positive effects of a spending injection. Multipliers do not consider that the same spending injection could have been spent on an alternative project with similar or improved benefit levels.

#### *10.3.4 Incidence Analysis*

Where concern has been raised about whether the distribution of project effects is "fair", incidence analysis is one option for exploring the distribution of expected economic effects of the project (who pays and who benefits).

#### *10.3.5 Multiple Accounts Analysis*

Multiple accounts analysis is a technique that allows for the inclusion of qualitative as well as quantitative measures. Ranges of social and economic effects are documented for a series of evaluation accounts, which allow for a structured discussion at the community level about the tradeoffs between development choices. Note that structured discussion does not necessarily imply formal talks but can instead dialogue that can take place over time and in different locations. Like cost-benefit analysis, multiple accounts analysis is balanced in that it considers both positive and adverse effects.

#### *10.3.6 Panel Surveys*

Panel surveys are effective if the participants are not together geographically. This method could also be used as a monitoring technique depending on the resources available to the assessor. This method requires the same set of individuals (or individuals with the same job title/community role) to be asked the same questions at regularly scheduled intervals (e.g., the first week of February in each year for ten years). It can be used to subjectively assess the socio-economic health of a community. Panel surveys can also provide an effective means of gathering "traditional economic knowledge" for use in assessments.

### *10.4 Social Effects*

The analysis and prediction of social effects considers detailed data from the project proponent, records of previous experience with similar projects (corporate knowledge that will build with Board experience), census and vital statistics, documents and secondary sources, and field research (informant interviews, hearings, technical workshops, etc.). The input of individuals, communities, and groups most likely to be affected by the proposed project is particularly important.

The analysis of social effects determines the importance of project-related changes to change that is ongoing. Again, the analysis attempts to establish the directionality, magnitude, extent, duration, and reversibility of effects relative to the affected populations, as well as their resilience to effects. There is a particular emphasis on determining who is most adversely affected. One goal of assessment is to try to avoid having the same people or group always be the recipient of negative social effects (refer to SEEA Principle 5). The assessment itself does not do this, but the results of the assessment will help decision makers and proponents avoid excessively burdening the disadvantaged.

In selecting analytical methods, the assessor should consider both quantitative and qualitative options. Regardless of methods chosen, the confidence in the data and certainty in the predictions arising from the data should be explicitly stated.

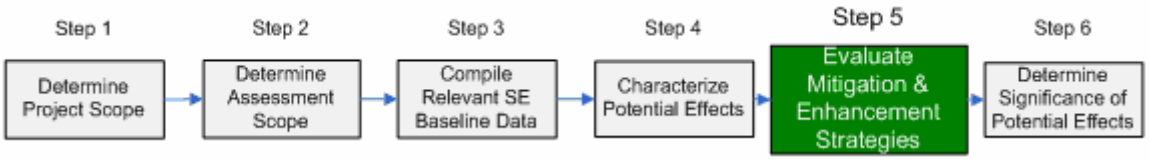
**Table 8 Tools for Conducting Social Effects Analysis**

| Method | Description |
|---|---|
| Comparative method | Present is compared to future based on reconstructing the past for similar environments |
| Straight line trend projections | Predict trends using estimated rates of change |
| Population multiplier methods | Increased population is associated with corresponding designated increases in jobs, housing units, infrastructure needs |
| Statistical Significance | Calculations determine probabilistic differences with and without proposed project |
| Scenarios | Logical imaginations based on hypothetical futures using mental modeling |
| Expert Judgment | People familiar with area present scenarios and significant implications |
| Calculation of Futures Foregone | Determine options foregone (what is irrevocably lost) should the project proceed |

### *10.5 SUMMARY*

- Characterize the important project - socio-economic interactions and the effects to valued socio-economic components
- Document the rationale and methods used to complete each task

# 11.0 STEP 5: EVALUATE MITIGATION STRATEGIES




## *11.1 TASKS*

- Identify and evaluate any mitigation measures for those effects that are adverse and potentially significant in the context of the previously identified socio-economic effects
- For those effects that would remain after the application of mitigation (i.e. residual effects) move onto the next step for assessment of significance
- Once the iterative looping between the mitigation and significance steps are complete and the mitigation measures are finalized, carry them forward to the recommendation stage
- Document the rationale and methods used to complete these tasks

## *11.2 OVERVIEW*

The mitigation of socio-economic effects involves the elimination, reduction, control of, or compensation for the predicted adverse social and economic effects.

When it is not possible to eliminate, reduce or rectify adverse socio-economic effects, the final option is to "replace through compensation" or whatever monetary means are appropriate. It is important to recognize, however, that compensation is not mitigation and should be seen as the "court of last resort" in mitigation.

To be effective, mitigation measures must be technically and economically feasible both for the proponent, or others responsible, and suitable within the cultural and institutional setting of the affected communities.

Mitigation of potentially adverse socio-economic effects requires dialogue between all stakeholders. Proponents should initiate discussions with affected communities, governments, and regulators to identify and refine appropriate mitigation measures. It is not unlikely that other assessments of similar projects will have identified similar potential effects and mitigation measures. Existing assessment reports, regulatory instruments and/or negotiated agreements may provide useful information for conducting this aspect of the project assessment.

The mitigation and significance steps (steps 5 & 6) are conducted in an iterative fashion. That is, there exists a feedback loop between the two steps where they are repeated until the potential effects of the project are no longer significant.

There are several descriptions and examples of how the steps of mitigation and significance determination are to be conceptualized and conducted, particularly with regard to the order of the

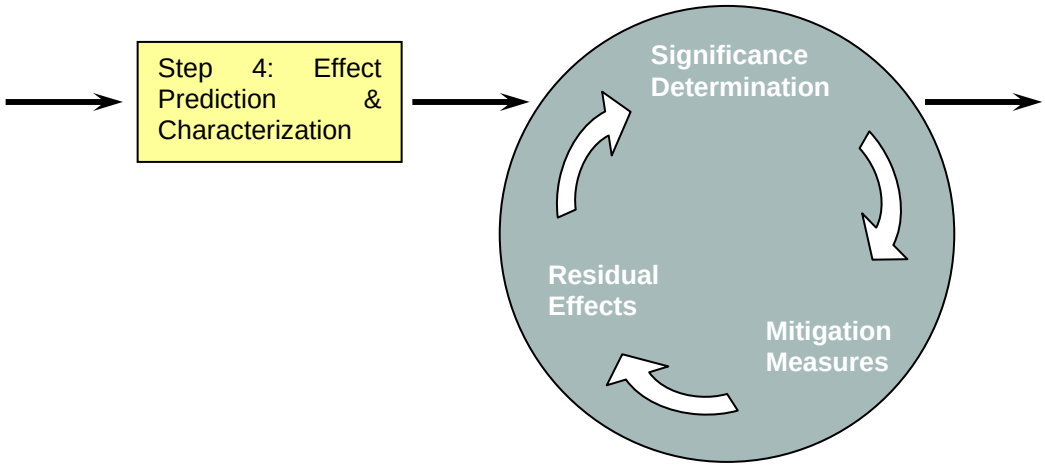
steps and the tasks within each. The two common assessment approaches were aptly described in Hegmann et. al. (1999)[14].

Hegmann states that,

> *"This approach (mitigation before significance) implies that mitigation must be identified regardless of whether there is a significant effect. This is not, however, always an unusual or onerous task as many mitigation measures are "standard and or best" practice and often expected to be recommended by assessors and/or regulators. In the reverse order (significance before mitigation), the significance reflects the "worst-case" situation before mitigation is applied, and therefore provides an understanding of what may happen if mitigation fails or is not as effective as predicted. In recent practice, the former approach is more common (mitigation before significance), largely to better reflect the eventual outcome to decision makers under the assumption that mitigation is effective as described."*

Pursuant to the Act, however, mitigation is only required for those potential effects that are likely, significant, and adverse. As such it is appropriate to first determine whether the potential effect is one that is likely, significant and adverse, then suggest mitigation if it is. Hence, the latter of Hegmann's approaches (significance then mitigation) is how the YESAB approaches the process. A final point to observe is that following the mitigation step the iterative loop must be closed in order to conclude the assessment and this is done by conducting a subsequent significance test. So in essence the approach is more appropriately phrased as *significance-mitigation-significance*. The following figure depicts this process.

**Figure 5 Looping Nature of Mitigation and Significance Steps**




Note: The proponent enters the loop at the significance determination task. The assessor enters at the mitigation task, where they consider the mitigation proposed by the proponent and ID residual effects, then proceed to test for significance.

[14] CEAA Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd., February 1999. *Cumulative Effects Assessment Practitioners Guide.* Prepared for the Canadian Environmental Assessment Agency (CEAA).

For the assessor, the first time through this iterative loop doesn't require the development of mitigation, simply consideration the project proposal (including any mitigation proposed by the proponent) and then a determination whether there are any residual effects. If there are any residual effects (and there often are), then the assessor determines their significance. If any residual effects are determined to be likely significant and adverse, then the assessor should return to the mitigation step and develop, evaluate, and recommend mitigation measures of their own, sometimes including the "standard and/or best practices" mentioned in the previous paragraphs. A subsequent significant assessment is then conducted if there are any remaining or residual effects after the consideration of the new mitigation. The loop is always exited when there are no adverse residual effects that remain or those that remain are not significant.

For projects with few potential significant effects, the proponent and/or assessor conducts this process rather quickly. For more complex projects, with a greater potential for significant effects, the process of significance determination and mitigation development is most effectively conducted in a collaborative manner, both during the proponent's initial SEEA and that conducted by the YESAB. The proponent (and the affected community, particularly during Executive Committee Screenings) will be a part of these discussions as project approval is contingent on successful mitigation. This approach will result in mitigation more likely to be successfully implemented. The cooperative approach to mitigation also allows affected communities, governments, and regulatory authorities to comment on and contribute to the refinement of the mitigation measures so they are effective, enforceable, and acceptable to the interested parties. As a part of this step, the assessor (pursuant to the *Act* and the results of the assessment) will develop terms and conditions for inclusion in an assessment recommendation over and above the mitigation proposed by the proponent.

In cases where no suitable mitigation can be developed to avoid likely significant adverse effects, the assessor must consider recommending to the decision body that the project not proceed.

While according to the process outlined above these assessment steps could be presented with the significance step followed by the mitigation step, because the assessor must be familiar with mitigation proposed and any residual effects identified in order to determine significance, the mitigation step is presented first.

### *11.3 Sources of Mitigation Measures*

Mitigation measures can be fit into one of several categories, each with unique influence in the assessment and decision making processes, including:

- Commitments made by the proponent or other parties;
  - Represents the majority of the mitigation developed for a project;
  - Typically commitments made by proponent, but may also be by governments;
  - Commitments may also be cooperative between any or all of proponents, communities, First Nations, or other governments and organizations.
- Terms and conditions included in the recommendation of the assessor;
  - The assessor will include any additional mitigation that has not been previously identified and committed to in the project record for potential effects that it deems likely, significant, and adverse;
- Signed contractual agreements between parties or other agreements/plans that are required by law.

- Depending on the size and complexity as well as the potential effects of a particular project a variety of agreements exist to aid in mitigating potentially significant adverse effects;
- Usually include provision for recruitment, training, and employment, health and wellness maintenance and promotion, economic development, and compensation if absolutely required
- Include Socio-economic Agreements – Voluntary contract between proponent and responsible government(s) addressing community well-being and economic opportunities
- Include Impact Benefit Agreements – Voluntary contract between proponent and First Nations (typically) for compensation, employment, training and business opportunities.
- Include Access Agreements – Required contract between proponent and land owners (typically First Nations) for access to or across lands.

It should be recognized that the assessor cannot legally require that voluntary agreements such as socio-economic agreements or impact benefit agreements (in most cases) be in place. If, however, the assessor determines that in the absence of such agreements it is likely that significant adverse effects will occur the assessor can include mitigation measures to address specific issues. At the Executive Committee level the assessment could conclude that in the absence of such agreements there will be significant public concern and can thus refer the project to a Panel of the Board for review.

It is important to recognize that the assessor cannot accept, as mitigation, promises that all potentially significant adverse effects will be mitigated in unfinished or undisclosed agreements. The assessor can only make determinations regarding the significance of potential effects if information on the proposed mitigation measures is provided during the assessment.

### *11.4 Developing Suitable Mitigation*

Several questions can be posed to determine whether the mitigation proposed is suitable, including the following:

- Will the mitigation measure eliminate or prevent an impact, reduce the risk of occurrence and/or severity of the outcome, or merely compensate for the loss? Recall that compensation is the least favourable approach.
- What alternative mitigation is available and what is the rationale behind the chosen option? Do the parties involved believe the mitigation would be successful?
- Is the mitigation technically and economically feasible to implement?
- Does the mitigation address effect equity concerns?
- Does the mitigation require, and if so, have mechanisms for: monitoring, reporting, feedback and response?
- Does the mitigation include other adaptive management mechanisms to deal with accidents, malfunction, or unforeseen effects or levels of effects?
- What is the probability of success – how certain is the effectiveness of the mitigation?
- Are there any identifiable effects associated with the mitigation (i.e. does the mitigation have unforeseen adverse effects on another VESEC.)?

The results yielded from questioning the proposed mitigation measures will identify mitigation measures that meet the principles identified in Part II.

### *11.5 Monitoring & Adaptive Management as a Framework for Mitigation Success*

Monitoring and adaptive management of socio-economic effects can be useful to ensure mitigation measures are appropriate and successful, and they are critical but often overlooked activities in project assessment and development. These ideas are also referred to as a 'follow-up and monitoring' and/or 'adaptive management' in much of the assessment literature addressing this subject. The requirement for effects monitoring is explicitly identified in the Act as a consideration in Executive Committee level assessments, but can be considered by proponents regardless of the assessment level if it is appropriate for the mitigation identified to address the potential effects of their proposed project.

As part of a mitigation strategy these efforts may be part of a comprehensive effects management plan and can include the development and implementation of monitoring and response plans for unanticipated and/or unmitigated project effects (i.e. adaptive management[15]).

The socio-economic information collected for determination of baseline conditions plays a critical role in the ability to monitor the effects of projects, as it was the foundation on which the effects prediction and characterization were made and on which the mitigation is predicated. Ongoing monitoring of key socio-economic indicators from baseline conditions, through project implementation, operation, and closure allows proponents, communities, regulators, and other resource managers to more effectively and adaptively manage any adverse effects of the project on affected populations and communities.

For proponents and assessors, socio-economic effects monitoring information provides feedback regarding the accuracy of predicted project effects during the assessment. The opportunity to "check" predictions, based on differences between predicted and actual change, will be of help in future assessments and is vital in correcting erroneous assumptions in the future. Traditionally, a lack of monitoring related to project-based social effects assessment has made it difficult to measure the accuracy of effects predictions made during previous assessments. Lack of confidence in the information used and the resulting prediction does not alleviate the assessor from the responsibility of making a decision in the face of uncertainty. Under these circumstances, the assessor can only strive to make the best decision possible with the information available.

The monitoring of socio-economic effects aims to identify any discrepancies between predicted and actual social effects of development, and to check that the distribution of effects has not shifted significantly over time. These discrepancies may arise from changes in the socio-economic context resulting from the consultation process or other factors external to the assessment; or incorrect assumptions about the socio-economic context (northern communities and peoples) where the mitigation measures are to be applied. The management of effects aims to correct errors in actions taken in response to flawed predictions so that the socio-economic effects of development are effectively mitigated.

[15] Adaptive management is based upon the premise that managed natural systems are complex and unpredictable. While there are numerous definitions of adaptive management, most include adaptive management as the process of adjusting management actions and/or directions as new and better information emerges about the biophysical or socio-economic systems. Adaptive management rigorously combines management, research, monitoring, and means of changing practices so that credible information is gained and management activities are modified by experience.

Monitoring also aims to verify the effectiveness and enforcement of mitigation or enhancement measures. In the event that monitoring reveals that mitigation measures are ineffective, adaptive management protocols may be used.

Monitoring can be helpful where uncertainty is a concern in mitigation. In these cases, it is vital that the strategies include opportunities for follow-up evaluation and adaptive management. The assessor should ensure that project follow-up monitoring and management is undertaken to help all assessors and interested parties for future project assessments. Terms and conditions associated with follow-up monitoring must be developed in concert with those regulatory and enforcement agencies whose mandate it is to conduct the monitoring or who enforce monitoring provisions as a condition for proceeding with a project.

Working with the proponent, communities, regulators and enforcement agencies will help to ensure that when developing monitoring and adaptive management programs, they are technically and economically feasible. Several assessment regimes in other jurisdictions have, for example, recommended the establishment of community or technical advisory committees to aid in the monitoring and adaptive management of larger, long-term (15 years or more) projects for resource extraction. This approach has proven somewhat successful in alleviating adverse socio-economic effects. For those larger projects or any project that has the potential for significant effects, providing feedback on monitoring results to those most adversely affected helps increase understanding of the entire SEEA process and the current condition of their environment.

Considerations of the scale of the project as discussed in previous sections also apply here. The consideration of and/or recommendation for monitoring should be suitable for the scale of the project and the identified potential effects.

The agreements that can be developed to address significant adverse effects presented earlier in this section can also be augmented by monitoring agreements (often called socio-economic monitoring agreements). This monitoring is an essential element to ensure the mitigation measures that have been developed are being effective.

Essential components, and thus the expectations of YESAB, of a monitoring program or plan include:

- Listing and description of what is to be monitored
- The use of suitably qualified persons to monitor
- Adequate resources (people, equipment and money) to properly monitor and evaluate effects
- Involvement of the affected community in monitoring activities
- Maintenance of transparency about what types of data were actually monitored
- Analysis and evaluation of the monitored data
- Preparation of a monitoring report for performance compliance to be available to all for review, particularly the affected community

Table 11 provides an example that may help detail monitoring and management plans as part of the overall mitigation strategy. In addition to a simple summary, as depicted in the table, the details of the plans should be well described and presented for assessment.

The MVEIRB Socio-economic Impact Assessment Guidelines for the Mackenzie Valley identify several points of good guidance for adaptive management plans, including:

- Public participation in mitigation monitoring and adaptive management systems;

- Inspection and surveillance to ensure policies, commitments, and terms and conditions are implemented;
- Linking the monitoring and response to specific thresholds or levels of acceptable change, so that an identified compliance level is defined and that the response when approaching or exceeding the threshold is clearly defined;
- Mechanisms to address unacceptable levels of change and unanticipated changes, and adjust mitigation measures accordingly;
- Independent auditing and routine reporting of the adaptive management system to ensure accountability to the public.

**Table 9 Example Summary of Monitoring and Adaptive Management Strategies**

| Potentially Significant Effect | Monitoring Program Objectives | Methods | Reporting Details | Response To Unanticipated or Otherwise Unmitigated Effects | Responsible Organization |
|---|---|---|---|---|---|
| Unacceptable Level of Employment Leakage to Outside Labourforce | Confirm enhancement and mitigation effectiveness | Record person-days of project employment completed by local residents, with breakdown by position type and gender | Annual Report (Public) | Execute Relevant Protocol of the Adaptive Management Plan | Proponent |
| | Confirm implementation of IBA | Evaluate compliance with IBA with parties | According to Agreements | Execute Relevant Protocol of the Adaptive Management Plan | Proponent |

Note: Adapted from Devon Canada Corporation, August 2004. Comprehensive Study Report Devon Beaufort Sea Exploration Drilling Program. Submitted to the National Energy Board of Canada.

### *11.6 RESPONSIBILITY FOR MITIGATION*

The responsibility and reach of the assessor with regard to mitigating effects ends at the conclusion of the assessment. From that point forward, ongoing effects assessment via monitoring and response via management plans is the responsibility of others and must continue through all phases of the project. As such it is the responsibility of others to ensure that the mitigation measures that were committed to during the assessment as well as those that were added by the assessor are implemented and functioning properly. As alluded to in the previous sections, this responsibility may be spread across a variety of parties depending on the particular effect and proposed mitigation measure. Proponents, governments, and affected communities all have a role to play in mitigation of effects.

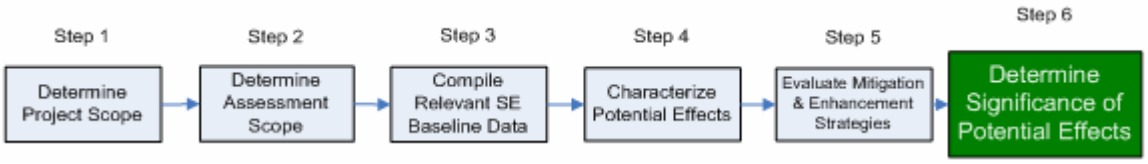
Typically the responsibility for mitigation falls to the proponent and the responsible governments (i.e. the Decision Bodies). Proponents will comply with terms and conditions of the authorizations that they receive from government and the regulators will ensure that the mitigation is enforced.

Efforts by all parties should be made to ensure that those mitigation measures that don't appear to have a regulatory home find some way to be implemented and enforced. Governments can provide leadership in this regard by developing policy and/or programs that focus on mitigation socio-economic effects. Ultimately the Decisions Bodies (Federal, Territorial and First Nation Governments) need to be willing to exercise their respective socio-economic protection mandates and give life to the recommendations of the assessor where no regulatory home currently exists.

### *11.7 SUMMARY*

- Identify and evaluate any mitigation measures for those effects that are adverse and potentially significant in the context of the previously identified socio-economic effects
- For those effects that would remain after the application of mitigation (i.e. residual effects) move onto the next step for assessment of significance
- Once the iterative looping between the mitigation and significance steps are complete and the mitigation measures are finalized, carry them forward to the recommendation stage
- Document the rationale and methods used to complete these tasks

# 12.0 STEP 6: DETERMINE SIGNIFICANCE OF POTENTIAL EFFECTS




## *12.1 TASKS*

- Consider significance in the context of the Act and the SEEA Guiding Principles presented in Part II of this guidebook
- Define the significance determination criteria
- Based on the characteristics of the adverse socio-economic effects and the significance criteria, determine whether the adverse socio-economic effects are significant
- Draw significance conclusions regarding the potential effects and determine the assessment recommendation
- Document the rationale and methods used for analyzing and assessing the significance of adverse effects and likelihood of occurrence

## *12.2 OVERVIEW*

Socio-economic significance determinations are subjective, normative (what should be), and value laden. They are undertaken to decide whether to proceed with a project based on the social and economic acceptability of potential change. Significance determination involves forming conclusions about the importance to the potentially affected parties of the potential social and economic effects identified and estimated during the assessment. The process of significance determination provides an opportunity for the *residual socio-economic effects* to be weighed according to a variety of qualitative and quantitative criteria. Residual effects are those effects that are *predicted* to remain after the committed to mitigation has been applied.

Systematic, explicit, open, and thoughtfully supported significance judgements are central and critical to effective assessment practice. The significance determination exercise itself should be conducted with several objectives in mind, requiring that it be:

- Focused
- Explicit
- Logical
- Substantiated
- Systematic
- Traceable
- Appropriate
- Consistent
- Inclusive
- Collaborative
- Effective, and
- Adaptable.

It has been observed, however, that no method or result has ever fully achieved all of these objectives together and the objectives that receive the most and least attention in an assessment is itself a significance judgment (Lawrence, November 2005).

In light of the challenges to 'getting it right', the basis for making a finding of significance should be transparent. This approach enhances the credibility of the assessment and is central to the perception of neutrality in the process for the YESAB. Moreover, it is critical that the information and methodology used to complete the assessment is obvious so that another person could come to a similar conclusion based on the same evidence.

The significance determination outcomes should reflect options considered and any unavoidable trade-offs that may be made (among recognized objectives) with specific reference to: the proponent's burden to prove that the project will have no significant adverse effects, the avoidance of significant adverse effects in the areas of concern, the focus on mutually reinforcing net gains, the protection of the social and physical environment for future generations (i.e. denying trade-offs that displace significant adverse effects from the present to the future), explicit justification, and open process.

Given the above direction on the objectives for the significance determination exercise and some examples of objectives for what the end results should be it is interesting to review what the Act directs the assessor to specifically examine when determining significance.

Pursuant to the *Yukon Environmental and Socio-economic Assessment Act* (s.5, s.42), the determination of significance should consider the following:

- The project must be undertaken in accordance with the principles that foster beneficial socio-economic change without undermining the ecological and social systems on which Yukon communities, their residents and the larger society depend;
- Direct changes to the socio-economic system caused by the project; and
- The effects of these socio-economic changes on:
  - Quality of life and other socio-economic conditions
  - The special relationship between Yukon First Nations persons and the wilderness environment of Yukon
  - The cultures, traditions, health and lifestyles of Yukon First Nations persons
  - The cultures, traditions, health and lifestyles of other residents of Yukon
  - The interests of residents of Yukon and of Canadian residents outside Yukon

This step, as directed by the *Act*, must also consider the significance of any potential effects of accidents and malfunctions associated with the project.

### *12.3 Considering Differences Between the Biophysical and Socio-economic Realms*

Lawrence (November 2005) identified several challenges for SEEA and differences between biophysical and socio-economic effects assessment with regard to significance determination implications, including for example:

- Socio-economic effects can commence with the project announcement and planning;
- People can and do alter their behaviour in anticipation of potential effects;
- People adapt, to varying degrees, to change;
- The assessment process and the public role in the process can alter the nature, magnitude, and importance of potential socio-economic effects;
- Sometimes perception and resulting behavioural changes are based on misconceptions;

- Interpretation of the significance of social and economic effects vary greatly over values, beliefs, perceptions, interests, and attitudes;
- Many types of socio-economic effects have no parallel among biophysical effects;
- Many social phenomena are complex, contentious, changeable, uncertain and subject to multiple interpretations;
- Socio-economic effects can be difficult to manage;
- Meaning and value are socially determined and adjusted through social interactions;
- Significance determinations are especially subjective for potential socio-economic effects because they are filtered through multiple values, beliefs and perspectives, and are highly dependant on context;
- Dialogue is central to social interactions. Distortions in dialogue can exacerbate adverse social effects;
- Effective public participation can be critical in reducing some socio-economic effects to acceptable levels;
- The interpretation of socio-economic effects significance is inhibited by limitations of the SEEA discipline (e.g., conflicts among technical, scientific, collaborative and political SEEA approaches, highly variable practice, common secondary status to biophysical (environmental) effects assessment, lack of uniform set of criteria for evaluating SEEAs); and
- The interpretation of socio-economic significance is inhibited by social science constraints (e.g., multiple, overlapping and competing models, approaches that tend to be critical and discursive rather than predictive and explanatory, many concepts are not amendable to empirical measurement).

### *12.4 Criteria for Significance Determinations – The Benchmarks*

Others have noted that determining the significance of effects is relatively easy when there are pre-existing thresholds of acceptable change, such as those defined in various federal and territorial legislation (MVEIRB, 2002). Thresholds may be expressed in terms of goals or targets, standards and guidelines, carrying capacity, or limits of acceptable change, each term reflecting different combinations of scientific data and societal values (CEAA, February 1999).

In these circumstances, it is relatively easy to determine whether an identified effect will fall below or breach a threshold. It also allows proponents to design their projects to comply with these thresholds. This is typical of environmental assessments for known environmental effects where a great deal of scientific and traditional knowledge has been collected and evaluated over the years to set definable and measurable standards.

In the case of socio-economic effects, the standards, guidelines, objectives, and thresholds are not as well defined, understood, or necessarily agreed-to. While there are some initiatives to develop thresholds of acceptable change, many are still in the development stage. The assessor must therefore rely on other means to discern and develop project/assessment specific thresholds and make significance determinations. This may include consideration and interpretation of guidelines, policy and vision statements, results of research studies, and of course, input from affected people (MVEIRB, 2002). In the absence explicit targets, standards, thresholds, to define the significance criteria, the exercise of significance assessment becomes an increasingly more subjective, value dependent judgment of importance.

There are several factors the assessor should consider that can influence the determination of significance, including:

- Breach of a threshold
- Effectiveness of mitigation
- Size of study area
- Relative rarity or sensitivity of the valued socio-economic component
- Magnitude of change relative to natural background variability
- Creation of induced actions
- Degree of existing disturbance

The basic tasks involved in the significance determination step include developing criteria for what is significant with regard to the effect attributes that were characterized in Step 4, those attributes being:

- Direction of change (positive, neutral, negative, or both positive and negative)
- Magnitude
- Geographic extent
- Duration
- Frequency
- Reversibility
- Socio-economic context
- Likelihood of occurrence:
  - Probability of occurrence; and,
  - Uncertainty (in the context of scientific or traditional knowledge).

In this step the results of the characterization of the potential effects are entered into a framework that compares the result to specific criteria of what is or is not significant. For example when characterizing the duration of the potential effect on public safety as a result of increased accidents associated with use of a local access road it was determined that the duration of that effect would be for the life of the project, approximately 28 years. For the purposes of determining whether the effect was significant the 28 year duration would be compared to the significance criteria developed for this type of effect to see whether it was significant.

In determining significance the assessor must clearly identify the assumptions they have made in the determinations. Specific criteria should be developed to decide whether the identified socio-economic effects are significant. The discussion for each effect attribute presented in the following paragraphs provides some consideration for the development of criteria to determine the significance of the adverse effects.

The criteria for what is considered significant or not significant will likely change between projects and VESECs. That is to say different criteria will be important in different assessments and the extent to which an individual criterion will influence the overall determination of significance will vary between assessments.

Significance criteria development should also be conducted in consideration of the Act and the guiding principles presented in Part II.

### *12.4.1 Direction of Change*

While it if often obvious that an identified effect is adverse or favourable it is important to be explicit in identifying the direction of change. For example, effects can often be favourable for one individual, family or community, while the opposite is true for another individual, family or community. (i.e. effects can be adverse and favourable – positive and negative at the same time), Understanding this relationship in the context of significance is sometimes critical.

Depending on the scale (size) of the project and the potential effects, the determination of adverse effects will be made:

- By using a combination of qualitative and quantitative measures; and,
- By the assessor using best professional judgment in concert with those most likely to experience the effects.

One way to determine whether an identified socio-economic effect will be adverse or favourable is to determine the level of concern with and/or the direction of change for a potentially affected VESEC. This can be completed by examining the direction of change in the context of the VESEC and the potential effect, which is shown in Table 15.

Adverse or favourable effects may include the following (depending on the direction of the predicted change – i.e. adverse or favourable):

- Changes to human health, well-being, or quality of life
- Changes in employment or size of the economy
- Changes to the quality or quality of recreational opportunities or amenities
- Change in the current use of lands and resources for traditional purposes by First Nation and non-First Nation persons
- Changes to historical, archaeological, paleontological or architectural resources
- Changes to aesthetic appeal or changes in visual amenities (e.g. viewscapes)
- Changes to commercial/subsistence biological species or resources
- Changes to future resource use or production

The following table presents and defines the various directions of change:

**Table 10 Potential Effect Directions of Change**

| Effect Direction | Definition |
|---|---|
| Positive | VESEC change would be an improvement or otherwise acceptable |
| Neutral | VESEC not expected to change |
| Negative | VESEC change would be for the worse or otherwise unacceptable |
| Positive and Negative | VESEC change in both directions |

**Those effects that are assigned a positive or neutral change direction can be discounted from further testing for significance.**

### *12.4.2 Magnitude*

Magnitude refers to the scale of the effects. The following are examples of general questions to prompt the assessor when determining the magnitude of the effects' interactions:

- How serious is the effect?
- Does it cause a large change over baseline conditions (e.g. will rates of disease double?)
- Does it cause a rapid rate of change – an influx of outsiders over a short time period?
- Will these changes exceed local capacity to address, incorporate or adapt to the change? e.g., enough housing and basic necessities to feed and clothe an outside work force?
- Does it create a change that is unacceptable and to whom?
- Does it exceed a recognized threshold value and what is that threshold?

In the case of socio-economic effects, magnitude may refer to the degree to which a change may be detectable by an established measurement within a specific range. In this context, it would be the change or effect as measured on a selected variable or indicator and its location, within a normal range of variation that would be used to determine magnitude.

Table 13 provides examples of the various levels to assign to magnitude. Based on the criteria above, residual effects with higher magnitudes are more likely to be significant.

### *12.4.3 Geographic Extent and Location*

Socio-economic effects may be restricted to the project site or within the project footprint area only, for example drilling leading to noise and air pollution, leading in turn to possible health problems. Other effects may be regional in extent, being felt in nearby communities, or span territorial, national, or international borders. Other effects may be significant based on their geographic location (e.g. far north or an isolated location).

Adverse effects are usually borne by those closest to the source of the effects. Correspondingly, adverse effects that are restricted primarily to the local level can be significant, but this determination of significance will likely be based on another attribute such as magnitude, duration and frequency, and/or socio-economic context. In the context of geographic distribution, adverse effects are generally more likely to be significant if the effects span a greater geographic area.

### *12.4.4 Duration and Frequency*

Adverse effects should also be considered with regard to their potential duration and frequency of occurrence. As a general rule, socio-economic effects which are long-term and/or frequent are more often significant.

### *12.4.5 Reversibility*

Reversibility refers to the extent and the amount of effort it would take to "undo" the effects of a particular project. Reversible adverse socio-economic effects may be less significant than those that are irreversible. As with adverse environmental effects, it can be very difficult to determine whether adverse socio-economic effects will be reversible.

### *12.4.6 Socio-economic Context*

The context within which a particular socio-economic effect may occur can affect the determination of significance. The adverse effects of a project may be more significant if they occur in communities that:

- Have historically been adversely affected by other development activities; and/or
- Have fragile social structures and social organization and therefore have little resilience to imposed stresses.

Conversely, effects may not be significant on communities with robust and healthy social organizations that have experienced some socio-economic changes associated with development. Previous experience means that they have the knowledge and ability to adjust to potentially negative socio-economic effects.

Socio-economic context is critical to the determination of significance since communities that have already been adversely affected by development activities, or are for other reasons socio-economically vulnerable, will have less resilience to imposed stresses (DIAND, September 2001).

### *12.4.7 Likelihood*

When determining the likelihood of significant adverse socio-economic effects, there are two criteria to consider.

*Probability of Occurrence*

If there is a high probability that an identified socio-economic effect will occur, then the potential effect may be significant. Similarly, a potential effect that has almost no chance of occurring should be considered insignificant. Hegmann *et. al.* suggests that, "in practice, likelihood as an attribute of significance…is often rated on a scale: None (no effect will occur), Low (<25% or minimal chance of occurring), Moderate (a 25% to 75% or some chance of occurring), and High (>75% or most likely a chance of occurring)."

*Uncertainty*

There will always be uncertainty associated with the information and methods used in an assessment. Uncertainty in predicting effects and determining significance can arise due to variations in socio-economic and natural systems, a lack of information, knowledge, or scientific agreement regarding cause-effect relationships, or the inability of predictive models to represent accurately complex systems (CEAA, Feb. 1999). Monitoring and adaptive management plans are often used to address uncertainty and thus render a potentially significant adverse effect not significant.

The Canadian Environmental Assessment Agency describes a number of ways, among others, to measure, communicate, and manage uncertainty:

- Make conservative conclusions (i.e., assume that an effect is more rather than less adverse). This is referred to as the Precautionary Principle (where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation).
- Provide a record or audit trail of all assumptions, data gaps, and confidence in data quality and analysis to justify conclusions.
- Recommend mitigation measures to reduce adverse effects and monitoring, followed by evaluation and management of effects, to ensure effectiveness of these measures.
- Implement mechanisms to evaluate the results of the monitoring and provide for subsequent mitigation or project modification, as necessary.

### *12.4.8 Risk Assessment for Significance*

Where no standards, guidelines, objectives, or thresholds for acceptable socio-economic change exist, a risk-based analysis may be employed to determine significance. This methodology measures the combination of the probability of an effect occurring and the magnitude of the consequences of that effect. Like many other methods in effects assessment, professional judgment and experience are central to the analysis. This method is typically used in situations of very low effect probability and where the effects are potentially catastrophic or traumatic.

Recall that the criteria for what is significant will vary depending on the project and the environment in which it is proposed. Table 13 presents generic significance criteria for the various effects attributes which can stand as the starting point for the development of project specific significance criteria for each one of the effect attributes.

**Table 11 Effect Attributes & Generic Significance Criteria**

| Effect Attribute and Significance Level | Signifincace Criteria |
|---|---|
| **Magnitude** | *The level of detectability of an effect from the activity (or results thereof)* |
| Low | Effect on VESEC is unlikely to be detectable or is below established thresholds of acceptable change |
| Moderate | Effect on VESEC is likely to be detectable within the normal range of variation or is below established thresholds of acceptable change |
| High | Effect on VESEC is likely to be detectable and outside the normal range of variation or exceeds established thresholds of acceptable change |
| **Geographic Extent** | *The area that may be affected by the activity* |
| Low | Direct Project Area - Within the Immediate Project Footprint |
| Moderate | Regional Study Area |
| High | Yukon |
| High | Canada Beyond Yukon |
| High | Beyond Canada |
| **Duration** | *The period of time during which an activity (or results thereof) will have an effect on a VSEC* |
| Low | Short-Term (< 1 year) |
| Moderate | Medium-Term (1 to 10 years) |
| High | Long-term (> 10 years) |
| **Frequency** | *How often will the effect occur?* |
| Low | Never |
| Low | Seldom |
| Moderate | Occasionally |
| High | Continuously |
| **Reversability** | *How soon could restoration occur to acceptable conditions?* |
| Low | < 1 year |
| Moderate | 1 to 10 years |
| High | > 10 years |
| **Socio-economic Context** | *Similar Development Experience and Capacity to Adapt to Change* |
| Low | Communities have considerable experience with development, are sturdy, and are resilient to imposed changes |
| Moderate | Communities have some experience with development, are moderately sturdy and have some capacity to adapt to imposed changes |
| High | Communities have little or no experience with development, are fragile, and have low resilience to imposed changes |

### *12.5 SIGNIFICANCE CONCLUSIONS*

Based upon the results of this final test in the assessment, the Designated Office or Executive Committee (as determined by the *Regulations*) will determine and accordingly recommend to Decision Bodies, whether:

- The project be allowed to proceed, if it determines that the project will not have significant adverse environmental or socio-economic effects in or outside Yukon
- The project be allowed to proceed, subject to specified terms and conditions, if it determines that the project will have significant adverse environmental or socio-economic effects in or outside Yukon that can be mitigated by agreeing to and implementing those terms and conditions
- The project not be allowed to proceed if it determines that the project will have significant adverse environmental or socio-economic effects in or outside Yukon that cannot be mitigated
- The project be referred to the Executive Committee (for an assessment conducted by a Designated Office) or a Panel (for an assessment conducted by the Executive Committee) if, after taking into account any mitigation measures included in the project proposal, it cannot determine whether the project will have significant adverse environmental or socio-economic effects

The assessor should note that the Executive Committee of the Board must require a Panel Review if it determines the following:

- That the project might contribute significantly to cumulative adverse effects; or,
- That the project is causing or is likely to cause significant public concern; or,
- That the project involves technology that is controversial in Yukon or the effects of which are unknown (e.g. underground storage of radioactive waste).

If the assessment conclusion is that the project is likely to have significant adverse socio-economic effects, but that certain terms and conditions will satisfactorily mitigate those effects, then the assessor must develop and present those terms and conditions in the assessment report and include them in the final recommendation.

### *12.6 SUMMARY*

- Consider significance in the context of the Act and the SEEA Guiding Principles presented in Part II of this guidebook
- Define the significance determination criteria
- Based on the characteristics of the adverse socio-economic effects and the significance criteria, determine whether the adverse socio-economic effects are significant
- Draw significance conclusions regarding the potential effects and determine the assessment recommendation
- Document the rationale and methods used for analyzing and assessing the significance of adverse effects and likelihood of occurrence

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The content and views expressed in this report do not necessarily reflect those of the experts consulted. They are solely those of the YESAB, including any outstanding errors or omissions.

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*APPENDIX A*

# *GLOSSARY OF TERMS*

YESAB
Yukon Environmental and Socio-economic Assessment Board

## *GLOSSARY*

**Accessory development** - Any associated activity or infrastructure essential to the principal development.

**Adaptive Management -** The implementation of a management system that respects the fact that all environments are unpredictable. Management is continually monitored, and if thresholds of change beyond that predicted with initial mitigation measures are reached, additional mitigation is applied to keep the effect below unacceptable levels.

**Alternative** – a plan to meet one or more objectives. Alternatives are usually made up of two or more components or options that can work together to solve a complex problem.

**Assessment** – an evaluation of a proposed project by a Designated Office, a screening by the Executive Committee or a review by a Panel of the Board.

**Baseline Conditions -** Baseline conditions describe the condition that would prevail if no actions were taken and represent the past and present conditions associated with the socio-economic environment in which a development is proposed to take place. Baseline conditions provide a benchmark against which to measure change; good baseline data should also identify strengths and weaknesses in the socio-economic environment.

**Benefit-cost analysis** – a project evaluation technique that weighs the tangible and intangible benefits of a government project against its tangible and intangible costs.

**Commitment -** In an assessment, a commitment is a statement of intent by any party (or parties) to alter their planned activities in such a way that the proposed development changes to so that a particular effect is no longer significant. These commitments are collected by the assessor and included in the assessment report and treated as mitigation measures that need to be implemented and encapsulated as terms and conditions of the development authorizations (permits and licenses).

**Community Wellness -** Community wellness is the status of the physical, emotional, social, cultural and economic well being of a community, including individuals, families and the community as a whole. The state of community wellness depends on the well-being of all aspects of a community – individuals, families and the community as a whole.

**Community** – The term 'community' in this guide refers to both place-based communities, which can be defined geographically, and interest-based communities defined by a common interest or activity, also sometimes referred to as a 'stakeholder' group.

**Community infrastructure** – public and private services and facilities that contribute to the general quality of life (e.g., health, transportation, power, education, water and water quality, and sanitation services).

**Community profile** – a demographic profile of one or more communities before, during or after the proposed action is implemented (see baseline profile).

**Consensus** – unanimous agreement and support. You can often build consensus through tradeoffs and compromises.

**Consensus building** – getting everyone to support a solution and unanimously work to translate it into a long-term, real solution.

**Constraint** – a limitation or restriction. Resources and constraints are vital to determining what can and cannot be done.

**Consultation -** The *Yukon Environmental & Socio-economic Assessment Act* (Section 3) states that, Where, in relation to any matter, a reference is made in this Act to consultation, the duty to consult shall be exercised

(*a*) by providing, to the party to be consulted,

(i) notice of the matter in sufficient form and detail to allow the party to prepare its views on the matter,

(ii) a reasonable period for the party to prepare its views, and

(iii) an opportunity to present its views to the party having the duty to consult; and

(*b*) by considering, fully and fairly, any views so presented.

**Crowding out (business)** – the displacement of existing businesses by "new" businesses associated with a project.

**Crowding out (labour)** – the displacement of existing employment by "new" employment created by a project.

**Cultural Effect -** Any effect on the set of values, norms and beliefs that guide the behaviour of individuals who associate with each other in a communal way. In the Mackenzie Valley, concerns among First nation groups about cultural effects tend to revolve around their relationship with the land and time on the land, the ability to harvest wildlife and other resources, and the maintenance of traditional language, inter-generational relationships, laws and way of life. Cultural effects are included under the umbrella of SEIA.

**Cultural resource** – any building, site, district, structure, or object significant in history, architecture, archaeology, culture, or science. This can extend to include a community's heritage and way of life. Effects to cultural resources may be examined separately from social effects, but are always related.

**Culture** – material and non-material aspects of a way of life shaped and transmitted among members of a community or a larger society. Sometimes referred to as shared beliefs. Examples include "folk" cultures, a European or Western culture or First Nation cultures, depending on the context of the proposed action.

**Cumulative Effects -** Those effects (biophysical, socio-cultural or economic) that result from the effects of a proposed development in combination with other past, present or reasonably foreseeable future developments.

**Directly-affected community -** A community that it is predicted will be substantially affected by a development, either beneficially, adversely, or both. Persons who live nearby who will hear, see, or smell the proposed project; are forced to relocate either voluntarily or involuntarily; have an interest in the project or policy changes (may not live in primary or secondary zones of influence); are interested in the potentially affected resources; might normally use the land affected; or be affected by the influx of seasonal, temporary, or permanent residents.

**Diversity** – ensuring that a diverse population, e.g., racially, ethnically, gender and age, are included in the decision process.

**Economic effects -** Economic effects concern the ways in which people make a living, material well-being, economic activities in society, societal production, distribution and allocation functions. They include both market (labour market, capital market, market for goods, production links) and non-market values and systems. Economic effects also include the distribution of wealth and financial burdens created by the development (see Appendices F and G for more discussion).

**Economic Impact Assessment -** Examines how a proposed development might impact how people make a living, their material well being and the economic structures of a society. This can include examination of conflicts and transitions between non-market and market economic values and systems.

**Effect** – a result or consequence - synonymous with impact.

**Effect Equity -** A principle that argues that adverse socio-economic effects should not fall disproportionably on certain groups of the population without preferential distribution of benefits to same.

**Environmental & Socio-economic Effects Assessment -** The process of systematically considering the potential effects of a development during decision-making.

**Existing conditions** – characteristics of the planning area (zones of influence) that exist at the time of the analysis. (See baseline conditions and demographic and social profiles).

**Externality** – A secondary or unexpected consequence. In economics, used to describe costs and benefits not reflected in the price of the good or service giving rise to the externality (such as unregulated pollution).

**Factor or variable** – relevant indicator of potential change used to analyze the differences among alternatives.

**Follow-up study** – An evaluation of the accuracy of the economic and social effect predictions made as part of a socio-economic effects assessment.

**Gender assessment** - includes systematic procedures to measure and understand the effect of the proposed action on the role and status of women in the cultural context of the communities located in the zones of influence.

**Heritage Resources**

- a moveable work or assembly of works of people or of nature, other than a record only, that is of scientific or cultural value for its archaeological, palaeontological, ethnological, prehistoric, historic or aesthetic features;
- a record, regardless of its physical form or characteristics, that is of scientific or cultural value for its archaeological, palaeontological, ethnological, prehistoric, historic or aesthetic features; or
- an area of land that contains a work or assembly of works referred to in bullet one above, or an area that is of aesthetic or cultural value, including a human burial site outside a recognized cemetery.

**Human capital** – the education, skills, and knowledge embodied in an individual or a community.

**Human environment** – natural and physical environment and the relationship of people with that environment including physical, biological, cultural, social, and economic factors within the project area.

**Impact** – an economic, social, environmental, and other consequence that can be reasonably foreseen and measured in advance if a proposed action is implemented.

**Impact Benefit Agreement (IBA) -** IBAs are typically private contractual arrangements between a proponent and a specific group of First Nation people, intended to serve as a means of providing benefits to communities in the course of development via a range of commitments.

**Incidence analysis** – a combination of qualitative and quantitative assessment techniques used to identify who “wins” and who “loses” in project developments.

**Indicator -** A measurable activity, experience or state of being that will help illustrate quantitative socio-economic baseline conditions (prior to the development) or effects (after the development begins). E.g. The unemployment rate of a community is one indicator of economic well-being.

**Interdependence** – if the principal project could not proceed without the undertaking of another project, the two may be considered to form a single project.

**Interested and affected publics** – those individuals, groups, or community organizations and institutions who believe that an action might affect them or who otherwise may have a stake in the outcome of a project decision (also sometimes called stakeholders). (See Affected parties).

**Inter-generational equity** - the needs of the present generation are met without compromising the ability of future generations to meet their own needs.

**Intra-generational equity** - the benefits from projects should address the needs of all, and the adverse socio-economic effects should not fall disproportionately on certain groups of the population.

**Leakage** – the flow of dollars paid to factors of production (e.g., labour, capital) located in economies geographically distant from the project area.

**Linkage** – if the decision to undertake the principal project makes the decision to undertake another project inevitable, the two may be considered to form a single project.

**Measure** – defined unit or method you can use to analyze the relative desirability of an action and ensure that alternatives are compared in the same manner. (See indicators).

**Mitigation measures** – measures for the elimination, reduction or control of adverse environmental or socio-economic effects.

**Monitoring -** A consistent method of measuring or watching something to detect changes, using scientific or traditional knowledge; a continuing assessment of indicators in a repetitive and systematic way. It may occur at a number of different levels (e.g., development-specific, local/community, regional, territorial, national, international).

**Multiple accounts analysis** – a participatory assessment technique where ranges of social and economic effects are documented so that structured discussion at the community level may be facilitated to secure agreement about the tradeoffs between development choices.

**Multiplier analysis** – a mathematical technique used to trace the effects of a spending injection on an economy, based on input-output models published by Statistics Canada.

**Net social benefit** – the sum of tangible and intangible economic costs and economic benefits of a project.

**Panel survey** – a sampling technique where the same set of individuals (or individuals with the same job title/community role) are asked the same questions at regularly scheduled intervals.

**Plan** – any plan, program, policy or proposal that is not yet a project or existing project. Developments often follow a sequence; policy then program, then a plan to carry out a program, which in many cases ends up being a project.

**Precautionary principle** – belief that where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

**Prevention Principle** – belief that avoiding negative socio-economic effects is preferable because it is more cost effective than restoring or rectifying damage afterwards.

**Primary zone of influence** – refers to the social effects that occur in the primary zone of influence by the proposed action and occur in the same time and place.

**Principal development** – any activity or undertaking that requires an authorization as defined under *YESAA*.

**Principle of Subsidiarity** – belief that decision making power should be decentralized and accountable decisions made as close to an individual citizen as possible, so that local people have an input into the approval and management processes to ensure there is constant public scrutiny.

**Professional judgment** – a decision made by a person knowledgeable in the relevant field of expertise, and generally based on that person's experience and all information reasonably available at the time. Available data and rationale for the decision should be documented.

**Project** – an activity that is subject to assessment under section 47 or 48 and is not exempt from assessment under section 49 of *YESAA*.

**Proponent** – a person or commercial entity that proposes to undertake a project or activity, or a government agency, independent regulatory agency, municipal government or First Nation that proposes to require -- under a federal or territorial law, a municipal by-law or a First Nation law -- that a project or activity be undertaken.

**Proximity** – any activity proposed so close to the principal and accessory of a project that it would be considered part of the project.

**Public involvement** – the systematic provision for affected publics to be informed about and participate in.

**Quality of Life** – beliefs, perceptions, and values about what constitutes a good life. Could include such factors as adequate income, availability of basic needs, education and the ability to purse a chosen life style.

**Relevance** – bearing upon, connected with, and pertinent to the decision and solution.

**Risk** – the probability that an event will occur.

**Scope of assessment** – the initial identification of prioritization of relevant interests, valued environmental and socio-economic components, potential effects, and the spatial and temporal extent of social and economic effects associated with the scope of the project. Typically involves input from potentially affected and interested publics to define the extent of the assessment. The process of identifying issues, participants, areas to cover, available resources, and constraints. Identifying the area, issues, and groups affected or involved by a given activity or subject.

**Scope of project** – the identification of the principle and accessory developments (what physical works will be included or excluded as a part of the development proposal), including existing infrastructure where upgrades or use relative to the proposed project represents a substantial change in the use of that infrastructure.

**Scoping** – the act of developing/delineating both the scope of project and scope of assessment.

**Secondary effects** – communities that are indirectly and moderately affected by a project either positively or negatively (but ones that can be reasonably foreseen).

**Secondary zone of influence** – refers to the social effects which will be caused by the proposed action, but may occur later in time or are further removed in distance, but are reasonably foreseeable.

**Significance** – a value-based, subjective judgment or interpretation about what is important with criteria based on thresholds set (often) on a case-by-case basis that encompasses the variety of attributes of effects in a particular environment. Having meaning or importance to the decision and solution.

**Social assessment variables** – point to measurable change in human populations, communities, and social relationships resulting from a development project or policy change.

**Social infrastructure**

Those community agencies, services, and facilities and other social support measures necessary for adequate functioning of that community, and contribute to the well-being of its residents.

**Social Justice** – issues related to equity, human rights and the opportunity to participate in decisions affecting one's life. Includes the legal and planning issues related to agency decision making.

**Socio-economic Effects** – effects on economies, health, culture, traditions, lifestyles, and/or heritage resources.

**Socio-economic Effects Assessment (SEEA) -** The systematic analysis of the likely effects a proposed project will have on the day-to-day life of individuals, families, communities[16], businesses, and/or governments whose reality may be affected by a proposed project. Where those effects are significant and adverse, SEEA also attempts to reduce, remove or prevent them from occurring.

**Socio-economic Environment** (as opposed to the biophysical environment) - Those aspects of the human environment including economies, health, culture, traditions, lifestyles, and heritage resources.

**Stakeholders** – groups and individuals who have specific interests in the resources and issues or will be affected directly by the decision and solution. Stakeholders may not be direct participants (e.g., children, people who choose not to participate, people who don't know about the action). (See interested and affected parties - terms used synonymously).

**Strategic Environmental Assessment** – the attempt to assess environmental, financial, and social effects at the policy, plan, or program level rather than at the project or community level.

**Sustainable development -** Also known as sustainability or intergenerational equity, this term refers to the goal of satisfying present needs without compromising the ability of future generations to meet their own needs.

**Thresholds -** Thresholds provide limits of acceptable change against which effects of developments can be monitored and proposals for new developments can be assessed. In SEEA, thresholds have been rare, but are required in order for adaptive management systems for threshold defined mitigation to take place. An example would be the requirement for new social infrastructure to be put in place if population growth exceeds 5 percent in a community in the course of a year.

**Traditional knowledge** – the accumulated body of knowledge, observations and understandings about the environment, and about the relationship of living beings with one another and the environment, that is rooted in the traditional way of life of First Nations people. With respect to SEEA, traditional knowledge may include knowledge about the historical and present social, cultural and economic environs that people have worked and lived in, and provide understanding of the critical requirements of – and potential threats to – Valued Components.

**Triggers** (also called pathways or causal mechanisms) - A trigger is any activity that initiates another activity. In SEEA, the concept of trigger is used to express the relationship between a cause and an effect, an important consideration when looking at whether a development contributes solely or in part to an identifiable effect.

**Uncertainty principle** – belief that the knowledge of the social world and processes is incomplete and can never be fully complete because the social environment and the processes affecting it are changing constantly, and vary from place to place and over time.

**Values** – abstract and often-unconscious beliefs, attitudes, and assumptions by an individual of what is right and important.

**Valued Components -** Valued Components are aspects of the economic, social, biophysical or cultural fabric of a community or region that are considered important by the party who defines them. They can be considered important because they provide economic value, reflect connections that are vital to a way of life, or are vital to maintaining quality of life in the community. Valued Components provide a focus for the assessment and for the collection and reporting of monitoring information.

**Weight** – how important a decision factor is when compared with other factors. This determines priorities when evaluating alternatives.

*APPENDIX B*

# *ADDITIONAL SEEA LITERATURE*

YESAB
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***APPENDIX C***

# *TABLE C1*

## *INFORMATION REQUIREMENTS FOR SEEAS OF PROJECTS ASSESSED AT THE EC OR PANEL LEVEL*

***From YESAB *Proponent's Guide to Information Requirements for Executive Committee Project Proposal Submissions* and from the MVEIRB *Socio-Economic Impact Assessment Guidelines for the Mackenzie Valley PUBLIC DRAFT May 2006* (with permission)

YESAB
Yukon Environmental and Socio-economic Assessment Board

Table C1 –Information Requirements for SEEAs of Projects Assessed at the EC or Panel Level

| **PROPOSAL SECTION** | **GENERAL CRITERIA** | **INFORMATION REQUIREMENTS FOR *PROJECT PROPOSALS ASSESSED AT THE EC OR PANEL LEVEL*** |
|---|---|---|
| Consultation | Requirements Consultation | Proponents required to include specific information in their project proposals, pursuant to the instructions in Section 2 of the Information Requirements for Project Proposals Requiring Executive Committee Screening<br><br>Generally:<br>• Provide a contact/distribution list of the parties who have been provided notice of the project by the proponent;<br>• Provide a detailed description of the methods of consultation used to identify and, inform, and solicit input from potentially affected First Nations and community residents, including the form and detail of the information provided to the consulted parties,<br>• Describe the format (e.g. community meetings, open houses, copies of the project proposal provided to individuals) provided to those consulted, to allow the presentation of their views to the proponent,<br>• State the time allotted those consulted, to allow them to prepare their views on the proposal, including a rationale for the allotted time,<br>• Describe the format (e.g. community meetings, open houses, copies of the project proposal provided to individuals, etc) provided to those consulted, to allow the presentation of their views to the proponent,<br>• Identify any concerns interests/issues that were raised, and the individual or group that raised them. Outline similarities or differences in presented views, ;and,<br>• Provide a detailed description of how the views and information presented, including traditional knowledge if provided, were considered in preparation of the project proposal. |

Note: Applicability and level of effort and detail for the provision of the information requirements outlined in the table are variable depending on the particular project and socio-economic context of the project study area.

Table C1 –Information Requirements for SEEAs of Projects Assessed at the EC or Panel Level

| PROPOSAL SECTION | GENERAL CRITERIA | INFORMATION REQUIREMENTS FOR *PROJECT PROPOSALS ASSESSED AT THE EC OR PANEL LEVEL* |
|---|---|---|
| Description of Existing Socio-economic Environment | Socio-economic baseline conditions | Include current, historic, and trend information, with identification of vulnerable groups. Indicate all of the communities and other affected groups that are included in the scope of assessment – provide a rationale for not including any "borderline" communities. For each identified community, provide the following, broken down by ethnicity and gender where appropriate:<br>• Population demographics, economic structures, employment stats, labour force characteristics and level of training/education (status and opportunity levels), major industrial activities, level of business activity, practice of the traditional economy, cost of living and income levels<br>• Measures of community stability/vulnerability: housing status, status and adequacy of social & physical infrastructure, recreational facilities, levels of crime & addiction, community quality of life and other measures of community wellness<br>• Any stated community priorities, economic or social development plans, or Valued Components<br>• Health status of communities, including physical and mental health<br>• An additional regional (and possibly territorial) baseline condition assessment with all of the above criteria as appropriate |
| | Historic/Current Land Usage | Traditional land users groups with periods of occupancy |
| | | Recreational use of the land with users identified |
| | | Describe areas that are particularly important for hunting, trapping and berry picking, identifying species harvested, harvest levels, and the level of importance of the traditional economy to communities being studied |
| | | Current other economic uses of the land |
| | | Any land use planning (final and proposed) |
| | Cultural/heritage resources | Identification of any areas of known or suspected heritage resources, and of which social group? |
| | | Locations of special significance (e.g., harvesting grounds, spiritual places, trails, special landscape features, storied sites), and of which social group? |
| Project Description | Human resource requirements | List number of employees required for each stage of development |
| | | All employment requirements by skill level for each stage of development |
| | | Proposed work scheduling (e.g., 2 weeks in-2 weeks out) |

Note: Applicability and level of effort and detail for the provision of the information requirements outlined in the table are variable depending on the particular project and socio-economic context of the project study area.

Table C1 –Information Requirements for SEEAs of Projects Assessed at the EC or Panel Level

| PROPOSAL SECTION | GENERAL CRITERIA | INFORMATION REQUIREMENTS FOR *PROJECT PROPOSALS ASSESSED AT THE EC OR PANEL LEVEL* |
|---|---|---|
| | Housing of workforce | List all information about use of camps vs. housing in the community, and any policies for control over the workforce (e.g., is workforce isolated from communities and how?) |
| | Business inputs required | Required contractors and goods and services for life of development |
| | Economic inputs and outputs | Predicted gross expenditures for all development phases, and relation to local, regional & territorial Gross Domestic Product |
| | | Predicted gross revenues from development, broken down annually (including sales price assumptions) |
| | | Describe any proposed investments in human or physical capital other than direct development-related investments (training, community education, buildings, programs, etc.) |
| Alternatives Alternatives | Work scheduling | Alternatives to proposed work scheduling |
| | Development Location | Where applicable, identify any alternatives to locations of physical works, transportation corridors and ancillary developments, their socio-economic context and valuation, and rationale for chosen locations |
| | Development Timing/Phases | Alternative development timelines |
| | Need for camps | Identify whether camps will be used for housing workers, and the decision-process for choosing this alternative |
| | Land Usage | Comparisons of development utility vs. economic and social utility of alternative land uses for the area (e.g., tourism). Include any information on parks, Protected Area status or proposals, and recreational features. |
| | "No-go" option | Consideration of the relative merits of development versus no-development (the so-called "no-go" option). |
| Time and Space Boundaries of the Assessment | Spatial boundaries | Each Valued Component needs to have a set spatial boundary in the project proposal |
| | | Each spatial boundary needs to have a rationale included for it in the project proposal |
| | | Identify any concerns about first nation title or other land status issues that are in contention |
| | Temporal boundaries | Same requirements as for spatial: Proponent sets and offers rationale for temporal boundaries |

Note: Applicability and level of effort and detail for the provision of the information requirements outlined in the table are variable depending on the particular project and socio-economic context of the project study area.

Table C1 –Information Requirements for SEEAs of Projects Assessed at the EC or Panel Level

| **PROPOSAL SECTION** | **GENERAL CRITERIA** | **INFORMATION REQUIREMENTS FOR *PROJECT PROPOSALS ASSESSED AT THE EC OR PANEL LEVEL*** |
|---|---|---|
| Effects Assessment | Economic: Direct Employment | Assess development requirements for labour vs. available local labour pool for each potentially-affected community, broken down by skill level requirements and local capacity |
| | | Any barriers to employment, advancement and retention of northern and/or first nation workers |
| | | Proponent and other parties' plans, strategies or commitments to maximizing northern/first nation hires, promotion and retention with focus on most affected communities |
| | | Increased training requirements necessary to get adequate local workforce |
| | | Estimation of any increases or decreases in local and regional population as a result of the development |
| | Business Activity & Government Costs & Benefits | Capacity of local, regional and territorial businesses to capture contracts & provide goods and services - percent of totals |
| | | Proponent and other party strategies for maximizing local business opportunities |
| | | Economic multipliers of development, including income, employment and local goods and services multipliers |
| | | Increased training requirements for business development |
| | | Estimates of external competition for business from development; list any proponent policies for local preference |
| | | Indicate how development may contribute to economic diversification at different spatial levels |
| | | For projects with the potential to influence/create strong demands on a wide array of infrastructure and social services provided by government, estimate additional government costs associated with the development; compare to expected government revenues |
| | | Indicate any plans to promote local post-development economic stability, emphasizing transition programs for workers, and overall protection from boom and bust cycles |
| | Distribution of Beneficial & Adverse Impacts | Predicted distribution of royalties and taxes from immediate development and indirect benefits of same (e.g., income tax), show percent contribution to territorial tax base |
| | | Predicted employment, income and business activity multipliers of the proposed development (by community) |

Note: Applicability and level of effort and detail for the provision of the information requirements outlined in the table are variable depending on the particular project and socio-economic context of the project study area.

Table C1 –Information Requirements for SEEAs of Projects Assessed at the EC or Panel Level

| PROPOSAL SECTION | GENERAL CRITERIA | INFORMATION REQUIREMENTS FOR *PROJECT PROPOSALS ASSESSED AT THE EC OR PANEL LEVEL* |
|---|---|---|
| | | Prediction of local economic impacts on inflation, costs of living, housing availability, access to goods and services, physical and social infrastructure |
| | | Identify any groups within the community that are likely to be especially adversely impacted |
| | | Identify effects on traditional economy and role of conservation of natural resources in development planning |
| | | Estimate which communities will be more beneficially and adversely affected by the development |
| | | Estimate level of, and effects associated with, population changes from development associated in- and out-migration |
| | | Identify economic "lessons learned" from other similar developments inside or outside the Yukon and the North |
| | | Identify any plans, strategies or commitments to deal with any effects predicted from above, and any agreements for distribution of benefits |
| | Social Impacts | Identify and assess effects on all Valued Components identified (preferably in consultation with community) |
| | | Undertake (or take advantage of existing) needs assessment, including both existing population and probable in-migrants |
| | | Identify community structures and way of life that may be affected by the development |
| | | Estimate potential effects of increased disposable income on social issues in communities, including alcohol and drug usage, gambling, family violence, housing pressures, and educational access, quality and completion levels |
| | | Estimate effects on mine workers' and families' mental, physical and cultural health |
| | | Identify how population changes may put pressures on social services and practitioners as a result of development |
| | | Identify and potential impacts and channels related to individual and population health (e.g., Sexually transmitted disease, teen pregnancy, dietary changes) |
| | | Identify social "lessons learned" from other similar developments |

Note: Applicability and level of effort and detail for the provision of the information requirements outlined in the table are variable depending on the particular project and socio-economic context of the project study area.

Table C1 –Information Requirements for SEEAs of Projects Assessed at the EC or Panel Level

| PROPOSAL SECTION | GENERAL CRITERIA | INFORMATION REQUIREMENTS FOR *PROJECT PROPOSALS ASSESSED AT THE EC OR PANEL LEVEL* |
|---|---|---|
| | | Identify any programs, policies, commitments to protect and promote individual, family and community wellness |
| | Heritage Resources | List any effects possible from the development and associated activities (including increased access) on heritage resources in identified or high potential areas |
| | Traditional Land Use and Resource Harvesting | Describe any potential direct or indirect effects on hunting, fishing, trapping or berry-picking the development might have, including access to land changes, reduced or improved hunting success, quality of country foods, longer distances required to practice traditional economic activities |
| | | Describe effects on access to traditional lands for traditional users, and for outsiders/non-first nations |
| | | Describe any efforts toward establishing a compensation plan or process for any effects to traditional harvesting activities caused by the development |
| | Protected Areas | Identify any areas proposed for withdrawal, as applicable. |
| | | Identify any other areas that have not yet been proposed for withdrawal that have been identified as areas of special significance, and who and why they are determined so |
| | Visual Resources | Identify any particular landforms, locations of special interest, or other unique environments that merit special attention |
| | | Discuss potential visual effects of the proposed development, in combination with other cumulative developments |
| | | Identify all area users who may be adversely affected by losses of aesthetic qualities of place |
| | Socio-economic Environment Monitoring | Describe any commitments, plans or strategies to monitor and adaptively manage local and regional business opportunities, employment, continued education and training, social effects, effects on traditional harvesting, and worker and community health and wellness |
| Closure and Reclamation | | Identify strategies for communities to adapt to post-closure economic environment; Compare closure alternatives: 1) removal or 2) maintenance of development infrastructure post-closure; include assessment of costs of care and maintenance for temporary closure |
| Cumulative Impacts | | Estimate potential cumulative effects on culture –values, tradition, language, spirituality<br>Estimate potential cumulative effects on social cohesion, quality of life and ability to adapt positively to pace of economic change<br>Estimate potential cumulative effects on land usability for traditional economy and/or other alternative economic activities |

Note: Applicability and level of effort and detail for the provision of the information requirements outlined in the table are variable depending on the particular project and socio-economic context of the project study area.

***APPENDIX D***

# *TABLE D1*

## *EXAMPLE THEMES, CRITERIA, & INDICATORS FOR SOCIO-ECONOMIC EFFECTS ASSESSMENT*

***Adapted (with permission) from the MVEIRB *Socio-Economic Impact Assessment Guidelines for the Mackenzie Valley PUBLIC DRAFT May 2006*

YESAB
Yukon Environmental and Socio-economic Assessment Board

Table D1 – Example Themes, Criteria, and Indicators for Socio-economic Effects Assessment

| **Theme Revealed by the Indicator** | **Criteria** | **Indicators** | **Meaning and Potential Value** | **Source** |
|---|---|---|---|---|
| Livelihood and economic vitality | Cost of living | • Consumer price index | Based on the price of goods and services—useful in baseline assessment when considering what level of income is required to get goods and services | Statistics Canada |
| | Value of goods and services | • GDP and Gross regional and local income | Regional and territorial gross figures of income. Doesn't help to understand local or project level effects—may mask effects on small communities. | Statistics Canada |
| | Income | • Average employment income | Averaged out income for Territories, also available at a community level and first nation and non-first nation. | Statistics Canada and Bureau of Statistics |
| | | • Income by source—especially social assistance rates | Can give a sense of the dependence on government subsidies, vs. wage economy. | Statistics Canada |
| | Unemployment | • Employment rate | Percentage of working age people with jobs | Bureau of Statistics |
| | | • Participation rate | Percentage of population of work age people who enter the workforce | Bureau of Statistics |
| | | • Unemployment rate | Percentage not working out of available labour pool | Bureau of Statistics |
| | | • Seasonal vs. full time employment | Stability of employment in region, as well as potential indication of freedom to engage in traditional economy | Bureau of Statistics |
| | | • Population below poverty level (lesser used measures include family poverty, number of children in families receiving social assistance) | Number of marginalized and vulnerable populations | Statistics Canada |

Table D1 – Example Themes, Criteria, and Indicators for Socio-economic Effects Assessment

| Theme Revealed by the Indicator | Criteria | Indicators | Meaning and Potential Value | Source |
|---|---|---|---|---|
| | Economy | Changing occupational opportunities (Comparison of census data with occupational profiles of regional residents to job categories for proposed project.) | Degree to which the project might alter the occupational profile of impacted community. | Statistics Canada |
| | | • Percentage of workforce-aged group engaged in traditional activities | Strength of traditional economy, as far as it is registered | Bureau of Statistics |
| | | • Number of locally based businesses, bankruptcies and start ups | Changes in economic health in the region—a measure of capacity to take advantage of changing business opportunities and susceptibility to downturns | Local Chamber of Commerce, Development Corporations |
| | | • Changing property values | Project specific demands on real estate can create boom and bust situations | Local Chamber of Commerce, realty managers |
| | Traditional Economy<br><br>Traditional Economy (continued) | • Changes in harvester travel patterns or loss of harvest areas | Potential for disruption of harvester work key to economy and well being | First Nations, Bureau of Statistics |
| | | • Percent of population engaged in traditional economy | Indication of strength of traditional economy | Bureau of Statistics |
| | | • Harvest levels in region | Indication of strength of hunting and trapping | Bureau of Statistics |
| | | • Percent of income derived from traditional economic activities | Ratio of traditional economic activities to wage labour market—the importance of the traditional market may not be fully exposed through this, as much is unreported. | Bureau of Statistics |
| | | • Market value of traditional economy | Indication of strength of market economy for furs and game meat | Bureau of Statistics |
| | Equity | • Female: male wages | Potential for existing gender differences to be increased by new development | Bureau of Statistics |

Table D1 – Example Themes, Criteria, and Indicators for Socio-economic Effects Assessment

| Theme Revealed by the Indicator | Criteria | Indicators | Meaning and Potential Value | Source |
|---|---|---|---|---|
| | | • Income disparity (% families with income less than $30,000 and % families with incomes greater than $75,000) | Separates the gaps of high income and low income and reveals how much disparity there is. Available at local levels and for non-first nation and first nation populations. | Bureau of Statistics |
| | | • Percent of children living in low income households | Potential for existing poverty to be increased by new development—these children are more vulnerable to poor health outcomes and lower social status through lifetimes | Statistics Canada |
| | | • Population dependency ratios | Higher dependency ratios usually indicate more stable families. | Statistics Canada |
| | | • Numbers and capabilities of existing social organizations | Number of charity and non-profit agencies, as well as public agencies | Phone book, interviews |
| | | • Changes in obligations and relationships to elders | With wage economy or increased absences, ability and importance of elder relationships may be disrupted | Interviews |
| | | • Alteration in family structure | Measures change in family status categories, e.g., married, never married, female head of household | Bureau of Statistics, or anecdotal data |
| | | • Disruption in social networks | Usually refers to transportation cutting off neighbourhoods or relocation, but in towns where people are physically gone for six months of the year social ties may decrease | Anecdotal data |
| | | • Levels of volunteerism and participation in community events | May be an indication of the level of engagement of population in community activities | Surveys and interviews |
| | Attitudes toward development | • Attitudes toward development | Positive or negative feelings, beliefs or positions expressed by residents in the community about the proposed project. | Public meetings, surveys or opinion polls |

Table D1 – Example Themes, Criteria, and Indicators for Socio-economic Effects Assessment

| Theme Revealed by the Indicator | Criteria | Indicators | Meaning and Potential Value | Source |
|---|---|---|---|---|
| | Attitudes toward development (continued) | • Disruption in daily living and movement patterns | Disruptions in daily living and work activities due to change in visual environment, noise & odour levels, transportation or vehicle traffic. | Perceptual surveys |
| | | • Reduction in perceived quality of life or environmental value | Changes in perceived quality of life for people dependent on the land or with sacred areas within the project site might be considered. | Interviews, community meetings, focus groups |
| | | • Change in aesthetic quality, outlook and visual impact | Related to quality of life—may be key for area used for harvesting or for tourism | Chamber of Commerce, First Nations |
| | Community infrastructure | • Community infrastructure and services—including education, childcare, medical care and social and community support services, recreation, water, sewerage and waste disposal and transportation | Increase or decrease in requirements for supply of basic infrastructure services and facilities in communities as a result of the proposed project. Most services expressed in terms of amount needed per 1,000 persons. Need to assess services such as sewerage, housing, municipal or rural water and social and health services. | Interviews and YTG Social Envelope Departments and Bureau of Statistics |
| | Political structures | • Public involvement in decisions affecting community, land and resource base | Degree of involvement of citizens | Government departments |
| | | • Voting rates in municipal and regional elections of issue based plebiscites | Degree of involvement of citizens | Census and local voting management |
| | | • Relevance to policy objectives on local and regional development | Key to understanding the place of the project in the regional plans | Regional business and government plans |

Table D1 – Example Themes, Criteria, and Indicators for Socio-economic Effects Assessment

| Theme Revealed by the Indicator | Criteria | Indicators | Meaning and Potential Value | Source |
|---|---|---|---|---|
| | | • Trust in political and social institutions<br>• Integrity of government agencies | Measures of citizen faith in institutions may indicate citizen belief in ability of government to manage and monitor project | Interviews and surveys |
| | | • Ability to exercise Treaty rights or rights of self government | Faith in the protection of first nation rights through Treaties or modern agreements may indicate potential for conflict or disagreement | Interviews with Chiefs, lands negotiators, First Nations, government |
| | | • Ability to maintain intellectual property | Control and ownership of data that emerges from First Nations | First Nations |
| | Justice and Safety | • Violent crime rate by RCMP detachment<br>• Rate of juvenile crime<br>• Number of property crimes<br>• Strength of police force<br>• Changes perceptions of health, safety, risk and fear of crime<br>• Shelter admissions<br>• Number of complaints of family violence<br>• Shelter admissions % of lone parent families<br>• Child protection investigations and number of children in care | Refers to crimes and potential sources of crimes, as well as the forces ability to deal with issues. Final indicators deal with vulnerable populations, such as women, children and first nation populations. | RCMP; Women's Associations; social service agencies; Bureau of Statistics |
| | Housing | • % of households in core need<br>• % of households with 6 or more<br>• Housing affordability<br>• Housing ownership | Indicates crowding, housing functionality and up-keep, as well as the pricing of housing in the region | Bureau of Statistics; Yukon Housing Corporation |

Table D1 – Example Themes, Criteria, and Indicators for Socio-economic Effects Assessment

| **Theme Revealed by the Indicator** | **Criteria** | **Indicators** | **Meaning and Potential Value** | **Source** |
|---|---|---|---|---|
| Population structure and health | Population growth | • Yearly population estimates<br>• Population mobility (intra territorial and inter-provincial)<br>• YUKON population growth by age<br>• Number of teen births<br>• Number of transient workers<br>• Birth and death rates | Population characteristics | Statistics Canada Bureau of Statistics |
| | Health behaviours | • Incidence of heavy alcohol use<br>• Alcohol consumption per capita<br>• Gambling rates<br>• Income savings rates | All indicators of how stress and change are dealt with, or how pre-existing conditions are amplified or mitigated by development | Social workers, counsellors, Bureau of Statistics |
| | Health conditions | • Sexually transmitted infection rate<br>• Numbers of injuries<br>• Diabetes levels<br>• Mental health status | Indicators of health and well-being, both physical and mental | Health agencies, Bureau of Statistics |
| | Community and health system characteristics | • Doctors and nurses per capita<br>• Community health workers and counsellors per capita<br>• Healing services and programs<br>• Self-reported workloads | Uptake and use of services in the region—may illustrate projected need | Health agencies, Bureau of Statistics, First Nations |
| Education and Training | Post-Secondary | • % of population with some post-secondary training or education | Indicative of potential employable population for skilled positions | Education coordinators; schools; Bureau of Statistics |
| | Training | • Availability and change in training programs | Potential for programs to meet needs of project | Chamber of Commerce; Chamber of Mines; Education departments |

Table D1 – Example Themes, Criteria, and Indicators for Socio-economic Effects Assessment

| Theme Revealed by the Indicator | Criteria | Indicators | Meaning and Potential Value | Source |
|---|---|---|---|---|
| | High school | • % of pop >15 years and older with high school diploma<br>• High school graduation rate<br>• % of population >15 years with grade 9<br>• % of graduates requiring upgrades prior to post-secondary | Indicative of potential employable population for semi-skilled and unskilled positions | Bureau of Statistics |
| | Literacy levels | • Functional literacy rates | Whether a person is able to understand and employ printed information in daily life, at home, at work and in the community. Can provide a sense of skills of the employable. | Surveys and government education departments |
| | Cultural education | • Number of people who know about traditional harvesting methods and teach<br>• Number of people who know how to survive, practice cultural arts<br>• Opportunities for knowledge sharing | The level of traditional knowledge that exists and is being shared in the communities | Interviews with First Nations |
| Cultural Well-Being | Language | • % of first nation people who speak a first nation language at home<br>• % of first nation people 15 years and over able to speak an first nation language<br>• First nation language instruction | Use and development of language skills in the community | First Nations, Bureau of Statistics |
| | Diet | • Use of harvested meat<br>• Percent of diet provided by country food | Use of traditional foods in the community, potential indicator of increased costs to families if use decreases/ increases in diabetes often associated with traditional diet change | First Nations, Bureau of Statistics |

Table D1 – Example Themes, Criteria, and Indicators for Socio-economic Effects Assessment

| **Theme Revealed by the Indicator** | **Criteria** | **Indicators** | **Meaning and Potential Value** | **Source** |
|---|---|---|---|---|
| | Hunting, Fishing and Trapping | • Percent of population that hunts, fishes, traps for sustenance<br>• Percent of population hunts, fishes traps for leisure/sport | Related to diet, but also to culture and physical well-being. Hunting successes are often shared widely in communities, strengthening bonds. | First Nations, Bureau of Statistics |
| | Cultural values and religion | • Changes in cultural practices<br>• Religious practice by denomination<br>• Changes in cultural values, such as beliefs, norms, and rules<br>• Experience of marginalization—the structured exclusion of groups because of cultural characteristics | All can point to changes due to either increased involvement in wage economy or in dominant society—however it is difficult to point in any one direction for influences, but certainly cumulative effects must be considered here. | Interviews with key people, such as priests, social workers, cultural program coordinators |
| | Cultural spaces | • Effects on known cultural, historical and archaeological resources<br>• Decline in use of place names relating to specific territories | Project specific effects that can damage sacred or historic areas and loss of use of place names | Interviews and surveys |

*APPENDIX E*

# *TABLE E1*

## *LISTING OF ORGANIZATIONS WITH SOCIO-ECONOMIC MANDATES*

YESAB
Yukon Environmental and Socio-economic Assessment Board

**Yukon First Nation Governments/Organizations and Tribal Councils**

| Name | Socio-economic Mandate | Contact Info | Data Sources |
|---|---|---|---|
| The Council for Yukon First Nations | To ensure the entrenchment of the inherent right of self-government;<br>to advocate and facilitate the advancement of the educational values and needs of the Yukon First Nations.<br>to preserve, promote and protect the use of our Aboriginal languages;<br>to continue a role of political advocacy for the advancement and betterment of all Yukon First Nations; to ensure the protection of the human, civil and legal rights of the citizens of Yukon First Nations | Phone: (867) 393-9200<br>Fax: (867) 668-6577<br>Wed site:www.cyfn.ca<br><br>All First Nations and Tribal Councils may be contacted through this office or website | Umbrella Final Agreement<br>First Nations' Final Agreements<br>Self Government Agreements |

**Yukon Government Departments**

| Name | Socio-economic Mandate | Contact Info | Data Sources |
|---|---|---|---|
| *Tourism and Culture* | Is responsible for tourism development with the Yukon's tourism industry to help build a vibrant Yukon economy and,<br>to foster creativity and quality of life.<br>to provide support and information<br>to preserve and interpret our history and heritage resources | Phone: (867) 667-5036<br>Toll free (In Yukon): 1-800-661-0408, local 5036<br>Fax: (867) 667-3546<br>Web site: tc.gov.yk.ca | |
| Cultural Services - Heritage Resources Unit | To provide services and support to the Territory in archives, arts, museums, and heritage resources | Phone: (867) 667-5386<br>Toll free (In Yukon): 1-800-661-0408, local 5386<br>Fax: (867) 667-8023<br>Kerri.Scholz@gov.yk.ca | Handbook for the Identification of Heritage Sites and Features, Economic Impacts of Yukon Museums and Heritage Institutions |
| Yukon Arts Centre | To promote and develop Yukon visual and performing artists | Phone:(867) 667-8575<br>Fax: (867) 393-6300<br>info@yac.ca | Arts and Heritage Village Development Plan, Municipal Development of Cultural Spaces |

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|---|---|---|---|
| Yukon Heritage Resources Board | To provide advice to government on issues that affect the territory's historic resources | Phone: (867) 668-7150<br>Fax: (867) 668-7155 | |
| *Community Services* | To serve Yukoners and their communities.<br>To provide better access to enhanced services<br>To strengthen communities<br>To protect communities when forest fires and other kinds of disasters threaten<br>To make interactions with government a pleasant and rewarding experience for both the customer and the employee | Phone: (867) 667-5811 or (867) 667-5812<br>Toll free (In Yukon): 1-800-661-0408<br>TTY/TDD: (867) 393-7460<br>Fax: (867) 393-6295<br>E-mail: inquiry@gov.yk.ca<br>Wed site: www.community.gov.yk.ca | Final Environmental Screening Report (Whitehorse Copper Development Project) |
| Community Development | To assist unincorporated and rural Yukon communities with development of community plans, comprehensive zoning regulations and administration of the Subdivision Act and to ensure safe and orderly development within the community | As for *Community Services* | Land Development Protocol Agreement |
| Yukon Housing Corporation Board | To link families, communities and the housing industry with programs and services that work to support the housing needs of Yukoners | Phone: (867) 667-5759<br>Toll free 1 800-661-0408 extension 5759<br>Fax: (867) 667-3664<br>e-mail: ykhouse@gov.yk.ca<br><br>Community housing offices may be contacted through this office | 2004/2005 Annual Report (PDF 3.5MB)<br>Community Housing Studies |

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|---|---|---|---|
| *Economic Development* | To support business development, trade and investment opportunities, and partnerships for the development of the Yukon economy | Phone: (867) 667-8416<br>Toll free: 1-800-661-0408 Ext. 8416<br>Fax: (867) 393-6944<br>E-mail: ecdev@gov.yk.ca | The New Direction Document, Longest Days Street Fair Impact Assessment, Yukon Economic Outlook, Economic Impact Estimator (on-line tool) |
| Community Development Fund | | | |
| Yukon Enterprise Trade Fund | To stimulate and support the growth of Yukon business activity through market penetration and expansion and business development | Phone:867-667-3014 or 867-393-7014<br>Business and Trade Branch<br>Whitehorse, Yukon<br>etf@gov.yk.ca | |
| Investment, Trade and Business Development Branch | To provide counselling information and technical advice on developing a business (start up or expansion). Or contact the Canada/Yukon Business Service Centre http://www.cbsc.org/yukon/index.html | Phone: (867) 393-7014 or 1-800-661-0408 local 7014 (toll free within the Yukon)<br>Fax: (867) 393-6944<br>www.economicdevelopment.gov.yk.ca | |
| *Education* | | Phone: (867) 667-5141<br>Toll free (In Yukon): 1-800-661-0408, local 5141<br>Fax: (867) 393-6254<br>contact.education@gov.yk.ca | Yukon Training Strategy |

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|---|---|---|---|
| *Energy, Mines and Resources* | To responsibly manage and support the sustainable development of Yukon's energy and natural resources | Phone: (867) 667-3130<br>Toll free (In Yukon): 1-800-661-0408 ext. 3130<br>Fax: (867) 667-8601<br>TTY/TDD: (867) 393-7460 | Mining Land Use Statistics |
| Yukon Land Use Planning Council | To help Government and Yukon First Nations coordinate their efforts to conduct community based regional land use planning | Phone: (867) 667-7397<br>Fax: (867) 667-4624<br>www.planyukon.ca<br><br>Regional Land Use Commissions can be contacted through this office | Council Recommendations, Cumulative Effects Thresholds Workshops, Regional Land Use Planning and Cumulative Effects Workshop |
| Yukon Minerals Advisory Board | To make recommendations on specific matters referred to it<br>To undertake other initiatives, such as conferences and public workshops on mineral development matters<br>To make recommendations to the Minister to fulfill the objectives of the Board | Phone: (867) 667-3130<br>Toll free (In Yukon): 1-800-661-0408 ext. 3130<br>Fax: (867) 667-8601<br>TTY/TDD: (867) 393-7460<br><br>www.emr.gov.yk.ca | Annual Reports |
| *Environment* | | | State of the Environment Report |
| Porcupine Caribou Management Board | To manage the Porcupine Caribou Herd<br>To protect and maintain its habitat in Canada | Phone: (867) 633-4780<br>Fax: (867) 393-3904<br>E-mail: pcmb@taiga.net | Annual Reports |

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|---|---|---|---|
| Yukon Fish & Wildlife Management Board | To help guide management of fish and wildlife, conserve habitat and enhance the renewable resources economy | Phone: (867) 667-3754<br>Fax: (867) 393-6947<br>yfwmb@yknet.yk.ca<br>Renewable Resource Councils may be contacted through this office | Management plans |
| Yukon Council on the Economy & Environment | To help ensure that the economy and the environment are managed in a harmonious way To raise public awareness of sustainable development issues | | |
| *Executive Council Office* | To facilitate the Cabinet decision-making process by providing advice, analysis etc.<br>To coordinate policy development and other projects<br>To coordinate corporate management issues, strategies and priority setting<br>To build strong "government-to-government" relationships between the Yukon and Yukon First Nation governments<br>To foster effective relations with the governments of Canada, the provinces and territories, and with other circumpolar jurisdictions such as the State of Alaska | Phone: (867) 667-5866<br>Toll free (In Yukon): 1-800-661-0408, local 5866<br>Fax: (867) 393-6214<br>**eco@gov.yk.ca** | Yukon chapter of the Northern Strategy |
| *Health and Social Services* | To help individuals acquire the skills to live responsible, healthy and independent lives<br>To provide a range of accessible, affordable services that assist individuals, families and communities to reach their full potential | Te Phone: (867) 667-3673<br>Toll free (in Yukon): 1-800-661-0408 local 3673<br>Fax: (867) 667-3096<br>Email: hss@gov.yk.ca<br>Web site: www.hss.gov.yk.ca | Yukon Addiction Survey: Preliminary Results 2005<br>Report to Yukoners on Comparable Health and Health System Indicators: 2004 |

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|---|---|---|---|
| Yukon Water Board | Is responsible for the issuance of water use licences for the use of water and/or the deposit of waste into water. Water licences are issued for a variety of undertakings, such as:<br>placer and quartz mining,<br>municipal use,<br>power,<br>agricultural,<br>industrial,<br>recreational,<br>conservation | Phone: (867) 456-3980 (can call collect)<br>Fax: (867) 456-3890<br>Web site: www.yukonwaterboard.ca | |
| Yukon Human Rights Commission | To promote principles of human rights<br>To promote education and research designed to eliminate discrimination<br>To promote settlement of complaints or cause complaints that are not settled by agreement to be adjudicated<br>To conduct education and research on the principle of equal pay for work of equal value in the private sector | Phone: 867-667-6226 or 1-800-661-0535<br>Fax: 867-667-2662<br>E-mail: humanrights@yhrc.yk.ca<br>www.yhrc.yk.ca | Promoting and Protecting Human Rights |
| *Women's Directorate* | To ensure that gender considerations are integrated into all aspects of government policy-making, legislation and program development | Phone: (867) 667-3030<br>Toll free (In Yukon): 1-800-661-0408, local 3030<br>Fax: (867) 393-6270<br>General inquiries: lorie.larose@gov.yk.ca<br>www.womensdirectorate.gov.yk.ca<br>Other women's groups can be contacted through this office and website | |

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|---|---|---|---|
| Yukon Advisory Council on Women's Issues | To develop public awareness of the issues affecting the status of women<br>To promote a change of attitudes within the Yukon so that women may enjoy equality of opportunity<br>To encourage discussions and expressions of opinion by Yukon residents on issues affecting the status of women<br>To review policies, programs, and legislation affecting women,<br>To advise the Minister with respect to such issues as the Minister may refer to the council<br>To advise the Minister with respect to such issues as the council considers advisable<br>To encourage organizations and groups that promote the equality of women | Phone: (867) 667-3030<br>Toll free (In Yukon): 1-800-661-0408, local 3030<br>Fax: (867) 393-6270<br>lorie.larose@gov.yk.ca<br>www.womensdirectorate@gov.yk.ca | |
| *Workers' Compensation Health and Safety Board* | To provide care and compensation for injured workers, while ensuring safe and healthy work practices | Phone: (867) 667-5645<br>Toll-Free across Canada: (800) 661-0443<br>Fax: (867) 393-6279<br>Email: worksafe@gov.yk.ca<br>http://wcb.yk.ca | |
| *Yukon Development Corporation* | | | |

**Federal Government Departments**

| Name | Socio-economic Mandate | Contact Info | Data Source |
|---|---|---|---|
| *Department of Indian and Northern Affairs (Yukon Region)* | To develop Northern resources and protect aboriginal interests<br>To promote sustainable development<br>To foster good governance practices | Phone: (867) 667-3888<br>Fax: (867) 667-3801<br>Toll free 1-800-661-0451<br>Web site: www.ainc-inac.gc.ca | Sustainable Development Strategy<br>Self-Government Agreements<br>Comprehensive Claims Agreements Land Governance Agreements<br>Implementation Plans |
| *Health Canada* | To help Canadians maintain and improve their health, while respecting individual choices and circumstances | Web site: www.hc-sc.gc.ca | Toxic Substance Research Initiative, First Nations Health, Environmental Assessment and Human Health: Perspectives, approaches, and Future Directions - A Background Report for the International Study of the Effectiveness of Environmental Assessment |
| *Human Resources and Social Development* | To improve the standard of living and the quality of life of all Canadians by promoting a highly skilled and mobile workforce as well as an efficient and inclusive labour market | Web site: www.sdc.gc.ca | |
| *RCMP* | To conduct a yearly environmental scan on crime | Web site: www.rcmp-grc.ca | Environmental Scan 2004, Sustainable Development Strategy |

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| *Industry Canada* | To develop industry and technology capability<br>To foster scientific research<br>To set Phone communications policy<br>To promote investment and trade<br>To promote tourism and small business development<br>To set rules and services that supports the effective operation of the marketplace. | Web site: www.ic.gc.ca | A Practical Guide to Business Opportunities Generated by Multilateral Environmental Agreements (MEAs) Sustainable Development Strategy Kick-Off Meeting Corporate Social Responsibility: An Implementation Guide for Canadian Business<br>Gaining Momentum: Corporate Sustainability Reporting in Canada |
| *Statistics Canada* | | www.statcan.ca<br>e-mail:<br>infostats@statcan.ca | CANSIM (socio-economic database)<br>Economic Importance of Transportation<br>Students in the Labour Market<br>Income and the outcomes of children |
| *Environment Canada* | To preserve and enhance the quality of the natural environment, including water, air and soil quality To conserve Canada's renewable resources, including migratory birds and other non-domestic flora and fauna;<br>To conserve and protect Canada's water resources<br>To carry out meteorology; enforce the rules made by the Canada - United States International Joint Commission relating to boundary waters<br>To coordinate environmental policies and programs for the federal government | Phone: (819) 997-2800 or 1 800 668-6767<br>Fax: (819) 994-1412<br>TTY: (819) 994-0736<br>E-mail:<br>enviroinfo@ec.gc.ca<br>www.pyr.ec.gc.ca | Canadian Environmental Quality Guidelines |
| *Department of Fisheries & Oceans* | To develop and implement policies and programs in support of Canada's economic, ecological and scientific interests in oceans and inland waters. | Phone: (613) 993-0999<br>Fax: (613) 990-1866<br>TTY: 1-800-465-7735<br>www.dfo-mpo.gc.ca | State of the Fisheries 2005<br>2205-2010 Strategic Plan |

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| National Round Table on the Economy and the Environment | To explore new opportunities to integrate environmental conservation and economic development, in order to sustain Canada's prosperity and secure its future. | Phone:: 613-992-7189<br>Fax: 613-992-7385<br>E-mail: admin@nrtee-trnee.ca<br>Web: www.nrtee-trnee.ca | Securing Our Wealth: Investing in the Environmental Quality of Canadian Cities |

**Non-governmental and other key organizations**

| Name | Socio-economic Mandate | Contact Info | Data Source |
|---|---|---|---|
| Yukon Literacy Coalition | To ensure Yukon literacy interests are represented nationally<br>To ensure active Yukon regional literacy representation<br>To develop and maintain systems<br>Supporting all Yukon literacy programs, projects, stakeholders and workers;<br>Assisting communities to establish and reach literacy goals;<br>Developing and encouraging partnerships among community groups, individuals, and all levels of government;<br>Gathering information about literacy programs and resources while building and maintaining networks for sharing this valuable information across Yukon;<br>Developing and distributing material and resources for the promotion and teaching of literacy;<br>Developing and implementing promotion and awareness campaigns Monitoring literacy activity in the Yukon and contributing to policy making processes Advocating for the support of literacy in the Yukon<br>Developing and facilitating a communications plan<br>Building a learners network across the Territory.<br>Supporting, initiating, and developing family/intergenerational literacy initiatives in the Yukon | Phone: (867)668-6535<br>Fax: (867)668-6518<br>info@yukonliteracy.ca<br>www.yukonliteracy.ca | |
| Yukon Learn | Support literacy, learners and literacy practitioners in the Yukon | Phone: (867) 668-6280<br>Toll free: 1-800-668-6280<br>www.yukonlearn.com | |

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| Yukon Trappers Association | To help trappers in all aspects of the trapping and marketing of fur<br>To sell trapping<br>supplies, purchase furs and crafts and be involved in trapper education | Phone: (867) 667-7091<br>Fax: (867) 667-7330<br>E-mail: yukonfur@yknet.yk.ca<br>Web site: www.yukonfur.ca | |
| Yukon Council on Disability | To be a resource for Yukoners with disabilities on issues of equity, community awareness, government policy and employment | Phone: (867) 668-6703 or Fax: (867) 393-4992<br>Email: yukoncod@northwesPhone.net<br>Web site:www.ycod.ca | Services for People with Disabilities: A Yukon Guidebook |
| Canadian Arctic Resources Committee | C.A.R.C. is a citizens' organization dedicated to the long-term environmental and social well being of northern Canada and its peoples.<br><br>We believe in sustainable development and the application of the precautionary principle. Our policy and advocacy work is grounded in solid scientific and socio-economic research and experience. | Phone: (613) 759-4284<br>Fax: (613) 759-4581<br>Toll Free number: (866) 949-9006 | Carrying Capacity and Thresholds: Theory and Practice in Environmental Management,<br>Fort Liard Cumulative Effects Study,<br>A Plan for the Land,<br>Working With Biophysical and Socio-economic Data: A Preliminary Step toward an integrative approach to cumulative effects assessment in the Slave geological province |
| Northern Research Institute | To promote research in the north, by the north and for the north | Phone:: 867-668-8772<br>Fax: 867-668-8805<br>Email: | Yukon Research Centre Needs Assessment Report 2004 |

**Social Organizations**

| Name | Socio-economic Mandate | Contact Info | Data Source |
|---|---|---|---|
| Big Brothers & Big Sisters of Yukon | To help children make important decisions through mentoring programs | Phone: (867) 668-7911<br>bbbsyukon@aol.com<br>www.bbbsofyukon.ca | Public/Private Ventures Impact, USA<br>The Difference an Hour Can Make, South Africa |
| Bringing Youth to Equality | To mobilize youth to action<br>To provide youth the means to educate themselves on community and national initiatives, youth programs and activities | Phone: (867) 667-7975<br>Fax: (867) 393-6341<br>E-Mail: bytenow@yukonyouth.com<br>Web site: www.yukonyouth.com | |
| CAIRS Society Whitehorse | To provide healing opportunities for former students and intergenerational community members<br>To provide counselling services for survivors and their families<br>To assist those at risk with knowledge and skills in accessing services | (867) 667-2247<br>Phone: 867-667-2247<br>Fax: 867-633-5319<br>Email: jackiem@yt.sympatico.ca | |
| Learning Disabilities Association of Yukon | To enable persons with learning disabilities to reach their maximum potential. | Phone:(867) 668-5167<br>Fax: (867) 668-6504 | |
| Yukon Volunteer Bureau | To inspire Yukoners to continue to volunteer their knowledge and skills to the community<br>To connect volunteers to opportunities<br>To provide resources and training for organizations to help them engage and manage their volunteers<br>To develop partnerships to advance volunteerism in the community | Phone: 867.456.4304<br>Fax: 867.456.4302<br>Email: info@volunteerbureau.yk.ca | |

**Economic Organizations**

| Name | Socio-economic Mandate | Contact Info | Data Source |
|---|---|---|---|
| Dana Naye Ventures | To assist Yukon people and communities to become more self-reliant<br>To provide developmental finance and advisory services to entrepreneurs and Yukon business | Phone: (867) 668-6925<br><br>Fax: (867) 668-3127<br>Toll Free: 1-800-661-0448<br>E-Mail: dnv@dananaye.com | First Ventures: Bridging the Investment Gap for Aboriginal Business |
| Yukon Chamber of Commerce | To provide the community chambers of commerce and the broader Yukon business community with a unified voice on issues affecting the welfare of the Yukon. | Web site: www.yukonchamber.com | |
| Whitehorse Chamber of Commerce | To advance the commercial, financial, industrial and civic interests of a community | Phone: 867-667-7545<br>Fax: 867-667-4507<br>Email: business@whitehorsechamber.com | |
| Canadian Association of Petroleum Producers | To analyze key oil and gas issues and represent member interests nationally<br>To strive to achieve consensus on industry codes of practice and operating guidelines that meet or exceed government standards. | Phone: (403) 267-1100<br>mailto:communication@capp.ca | Stewardship Benchmarking Guide |
| Yukon Chamber of Mines | To strive to represent the full spectrum of exploration and mining activities in the Yukon<br>To promote responsible and prosperous exploration and mining industries in the Yukon<br>To represent the interests of the mining industry at all levels of government discussion<br>To increase public awareness of the benefits of responsible, sustainable development of mineral resources | Phone: (867) 667-2090<br>Fax: (867) 668-7127<br>E-mail: info@ycmines.ca<br>Web site: www.ycmines.ca | |

**Cultural and/or Social Aboriginal Organizations**

| Name | Socio-economic Mandate | Contact Info | Data Source |
|---|---|---|---|
| Skookum Jim Friendship Centre | To provide programming in Recreation, Traditional Parenting, Pre-Natal Nutrition Outreach Program, Youth Leadership-Urban Multipurpose Aboriginal Youth Council, Tan Sakawathan Diversion, Northwest Territories Post-Secondary services, and training and student financial services | www.skookumjim.com | |
| Aishihik Lake Wilderness Treatment Centre | To service delivery for individuals, families, groups and communities affected by residential school abuse and intergenerational impacts | Mr. James Allen Director Phone: 867-634-2288 Fax: 867-634-2108 | |
| Yukon First Nations Tourism Association | To promote and maintain the cultural integrity of native tourism. | Phone (867) 667-7698 Fax (867) 667-7527 E-mail: admin@yfnta.org Web site: www.yfnta.org | |
| Yukon Aboriginal Women's Council | advance the interests of women of Indian or Inuit ancestry in the Yukon including Status, Non-Status, Indians and Métis | Phone: (867) 667-6162 Fax: (867) 668-7539 Mailing Address: 103-307 Jarvis Street, Whitehorse, Yukon Y1A 2H3 Contact: Norma Claggett | |

**Independent Yukon Boards**

| Name | Socio-economic Mandate | Contact Info | Data Source |
|---|---|---|---|
| Yukon College Board of Governors | To provide continuous exploration and implementation of excellent, relevant, and accessible learning opportunities for people in a northern context. | Phone: (867) 668-8800 www1.yukoncollege.yk.ca | Yukon College Economic Impact Assessment and Cost-Benefit Analysis |