

***TRADITIONAL KNOWLEDGE GUIDE FOR THE INUVIALUIT  
SETTLEMENT REGION, NORTHWEST TERRITORIES***

***VOLUME II: USING TRADITIONAL KNOWLEDGE IN IMPACT  
ASSESSMENTS***

**Prepared for:  
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Calgary, Alberta**

**Prepared by:  
KAVIK-AXYS Inc.  
Inuvik, Northwest Territories**

**In Association with:  
FMA Heritage Resources Consultants Inc.  
Calgary, Alberta**

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## **Executive Summary**

The traditional knowledge guide developed as Phase II of ESRF-04-048 is essentially a management document for proponents, consultants and responsible authorities concerned with the role of traditional knowledge in the impact assessment process. The guide stresses consideration and understanding of cultural differences in this process. As working concepts, a distinction is made between traditional knowledge, traditional environmental knowledge and traditional land use in order to help 'compartmentalize' not only the scope, but also different kinds of traditional knowledge information.

The guide discusses and provides approaches to developing collection and use protocols, engaging Inuvialuit people, and collection strategies. Discussion pertaining to needs related to project and assessment scoping, information sharing and assessment process. The benefits of using traditional knowledge are provided. As a means of illustrating how and when traditional knowledge can be used in the assessment process, each stage is discussed and real-life examples provided as to how such information was used or could have been used in past projects. Information is also provided as to the nature and content of reports on traditional knowledge to meet both impact assessment and community needs.

## Résumé

Le guide des connaissances traditionnelles élaboré durant la Phase II du FÉE-04-048 est essentiellement un document de gestion destiné aux promoteurs, aux consultants et aux autorités responsables qui s'intéressent au rôle des connaissances traditionnelles dans le processus d'évaluation des répercussions environnementales. Le guide insiste sur la prise en compte et la compréhension des différences culturelles dans le cadre de ce processus. En ce qui concerne les concepts de travail, on établit une distinction entre les connaissances traditionnelles, les connaissances traditionnelles en environnement et l'usage des terres à des fins traditionnelles, afin d'aider à « compartimenter » non seulement la portée, mais également différents types d'information sur les connaissances traditionnelles.

Le guide examine et propose des méthodes pour mettre au point des protocoles de collecte et d'utilisation, auxquels participeraient les Inuvialuit, et des stratégies de collecte. Il met l'accent sur les besoins liés à la détermination de la portée du projet et de l'évaluation, au partage de renseignements et au processus d'évaluation. Le guide relève également les avantages de l'utilisation des connaissances traditionnelles. Pour illustrer de quelle manière et à quel moment les connaissances traditionnelles peuvent être utilisées lors des évaluations, chaque étape y est expliquée et des exemples concrets y sont fournis pour montrer dans quelle mesure l'information a été ou aurait pu être utilisée dans les projets antérieurs. Le guide fournit également des renseignements sur la nature et le contenu des rapports sur les connaissances traditionnelles pour répondre aux besoins en matière d'évaluation des répercussions et aux besoins des communautés.

## **Project Personnel**

### **Project Manager**

Gloria J. Fedirchuk, Ph.D., FMA Heritage Resources Consultants Inc.

### **Report Authors**

Sherri Labour, M.A., FMA Heritage Resources Consultants Inc.

Gloria J. Fedirchuk, Ph.D., FMA Heritage Resources Consultants Inc.

Nicole Nicholls, B.A., FMA Heritage Resources Consultants Inc.

### **Researchers**

Nicole Nicholls, B.A., FMA Heritage Resources Consultants Inc.

Sherri Labour, M.A., FMA Heritage Resources Consultants Inc.

Camellia Gray, KAVIK-AXYS Inc.

### **Internal Reviewers**

Gloria J. Fedirchuk, Ph.D., FMA Heritage Resources Consultants Inc.

Michael Fabijan, KAVIK-AXYS Inc.

Camellia Gray, KAVIK-AXYS Inc.

Doug Chipertzak, B.Sc., KAVIK-AXYS Inc.

### **ESRF Reviewers**

Bonnie Gray, ESRF Chairperson

Bruce Vincent, Imperial Oil Limited

Margaret McQuiston, National Energy Board

Kym Hopper-Smith, ESRF Program Coordinator

### **Senior Editor**

Gloria J. Fedirchuk, Ph.D., FMA Heritage Resources Consultants Inc.

### **Revisions Editor**

Doug Chipertzak

## Table of Contents

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
	<i>What do I need to know about this guide? .....</i>	<i>1</i>
1.1	Benefits .....	1
	<i>What are the benefits of collecting and using traditional knowledge in impact assessments? .....</i>	<i>1</i>
1.2	Working Concepts .....	2
	<i>What concepts are helpful in using traditional knowledge for impact assessments? .....</i>	<i>2</i>
1.3	Organization and Use of the Guide .....	3
	<i>How is the guide organized and how do I use it? .....</i>	<i>3</i>
<b>2</b>	<b>Research Philosophy .....</b>	<b>5</b>
	<i>What are some of the things that I need to consider before collecting traditional knowledge? .....</i>	<i>5</i>
2.1	Fundamental Research Principles .....	5
	<i>What are some of the guiding principles of traditional knowledge research? .....</i>	<i>5</i>
2.2	Collection Protocols .....	6
	<i>What are traditional knowledge protocols and why are they important? .....</i>	<i>6</i>
2.3	Determining Stakeholders .....	6
	<i>How do I determine which Inuvialuit communities should be involved in the traditional knowledge study for my impact assessment? .....</i>	<i>6</i>
2.4	Study Format .....	7
	<i>What determines the size and type of traditional knowledge study I need to undertake? .....</i>	<i>7</i>
	<i>What role will the community play in how the traditional knowledge study is carried out? .....</i>	<i>7</i>
	<i>Who are traditional knowledge facilitators and what role can they play? .....</i>	<i>8</i>
2.5	Traditional Knowledge and Western Science .....	9
	<i>What are some of the differences between traditional knowledge and western science? .....</i>	<i>9</i>
<b>3</b>	<b>Collecting Traditional Knowledge .....</b>	<b>11</b>
	<i>How do I collect traditional knowledge? .....</i>	<i>11</i>
3.1	Community Engagement .....	11
	<i>How do I approach the community? .....</i>	<i>11</i>
	<i>How do I employ community members for a traditional knowledge study? .....</i>	<i>11</i>
3.1.1	Community Workers .....	11
	<i>How do I hire community workers? .....</i>	<i>12</i>
	<i>Will community workers require training? .....</i>	<i>12</i>
3.1.2	Traditional Knowledge Participants .....	13
	<i>What do I need to know to work with traditional knowledge participants? .....</i>	<i>13</i>
3.2	Information Needs .....	13
	<i>What types of traditional knowledge do I need to collect? .....</i>	<i>13</i>
3.2.1	Traditional Land Use Information .....	14
	<i>What types of traditional land use information do I need to collect? .....</i>	<i>14</i>
3.2.2	Traditional Environmental Knowledge Information .....	15
	<i>What kinds of traditional environmental knowledge do I need to collect? .....</i>	<i>15</i>
3.2.3	Information Needs Communication .....	17
	<i>How do I address information needs for traditional knowledge? .....</i>	<i>17</i>
	<i>What role will the community play in defining information needs? .....</i>	<i>18</i>



3.3	Information Sharing.....	19
	What things do I need to consider with respect to information sharing? .....	19
3.3.1	Informed Consent.....	19
	<i>How do I ensure that I have informed consent? .....</i>	19
3.3.2	Intellectual Property .....	20
	<i>How do I ensure that intellectual property rights are protected? .....</i>	20
3.4	Schedules and Timing.....	21
	<i>How do I manage schedules and timing to ensure that traditional knowledge is included in the impact assessment? .....</i>	21
3.5	Baseline Work .....	22
	<i>What does baseline work for traditional knowledge consist of? .....</i>	22
3.5.1	Baseline Research .....	22
	<i>What types of baseline research do I need to do? .....</i>	22
3.5.2	Participant Interviews.....	23
	<i>How do I interview traditional knowledge participants? .....</i>	23
	<i>What is most effective interview format for collecting traditional knowledge? .....</i>	23
	<i>What type of questions do I ask during participant interviews? .....</i>	25
	<i>What kind of maps do I need for participant interviews, and how do I use them? .....</i>	25
3.5.3	Site Visits.....	26
	<i>Why are site visits important? .....</i>	26
<b>4</b>	<b>Applying Traditional Knowledge.....</b>	<b>27</b>
	<i>How can I use and apply traditional knowledge? .....</i>	27
4.1	Project Planning Stage .....	27
	<i>What happens at the project planning stage? .....</i>	27
4.1.1	Project Design and Definition.....	28
	<i>How can traditional knowledge contribute to project design and definition? .....</i>	28
4.1.2	Terms of Reference .....	29
	<i>How can traditional knowledge be used in developing a terms of reference for a proposed project? .....</i>	29
4.1.3	Public Consultation .....	29
	<i>What role can traditional knowledge play during public consultation? .....</i>	29
4.2	Effects Assessment Stage.....	30
	<i>What happens at the effects assessment stage? .....</i>	30
4.2.1	Scoping .....	30
	<i>How can traditional knowledge be used for the selection of indicators? .....</i>	30
	<i>How can traditional knowledge be used to select study areas? .....</i>	31
	<i>How can traditional knowledge be used to select temporal boundaries? .....</i>	32
4.2.2	Analysis .....	33
	<i>How do I use traditional land use information for to analyze effects? .....</i>	33
	<i>How do I use traditional environmental knowledge to analyze effects? .....</i>	34
4.2.3	Mitigation .....	35
	<i>How can traditional knowledge help design mitigation strategies? .....</i>	35
4.2.4	Significance .....	36
	<i>How can traditional knowledge be used to determine significance? .....</i>	36
4.2.5	Follow Up and Monitoring .....	37
	<i>How can traditional knowledge be used at the follow up stage? .....</i>	37

4.3	Regulatory Stage.....	38
	<i>What happens at the regulatory stage? .....</i>	38
4.3.1	Screening .....	38
	<i>How can traditional knowledge be used during a screening process? .....</i>	38
4.3.2	Panel Review .....	38
	<i>What role can traditional knowledge play in a panel review? .....</i>	38
4.3.3	Hearings.....	39
	<i>How can traditional knowledge contribute to the hearing process? .....</i>	39
4.3.4	Regulatory Decision.....	39
	<i>What role can traditional knowledge play at the regulatory decision stage? .....</i>	39
<b>5</b>	<b>Traditional Knowledge Reporting .....</b>	<b>44</b>
	<i>How do I prepare traditional knowledge reports for an impact assessment? .....</i>	44
	<i>How do I meet my commitment to the community on the reporting of traditional knowledge? .....</i>	44
5.1	Contents .....	45
	<i>What are the basic contents of a traditional knowledge study report? .....</i>	45
5.2	Baseline Report .....	46
	<i>What does a traditional knowledge baseline report look like? .....</i>	46
5.3	Assessment Report.....	46
	<i>What does a traditional knowledge assessment report look like? .....</i>	46
5.4	Community Report .....	47
	<i>What is a community report? .....</i>	47
5.5	Verifying Results .....	47
	<i>How do I ensure that the results of the traditional knowledge study are accurate? .....</i>	47
5.6	Mapping .....	47
	<i>Can I present traditional knowledge results on maps? .....</i>	47
<b>6</b>	<b>Concluding Statements .....</b>	<b>49</b>
	<i>What are some of the major challenges facing the collection and use of traditional knowledge? .....</i>	49
<b>7</b>	<b>References .....</b>	<b>50</b>
7.1	Literature Cited.....	50
7.2	Internet Sites.....	51
7.3	Personal Communications.....	51
<b>Appendix A</b>	<b>Sample Consent Form .....</b>	<b>A-1</b>
<b>Appendix B</b>	<b>Sample Interview Checklist.....</b>	<b>B-1</b>
<b>Appendix C</b>	<b>Workshop Report .....</b>	<b>C-7</b>

## List of Tables

Table 1	Traditional Knowledge and Western Science.....	9
Table 2	Information Needs Communication Matrix.....	18
Table 3	Summary of Potential Application of Traditional Knowledge in Impact Assessments .....	40

## List of Box Keys

Box Key A	Research Principles .....	5
Box Key B	Traditional Knowledge Collection Protocols .....	6
Box Key C	Before You Start .....	7
Box Key D	Traditional Knowledge Facilitators.....	8
Box Key E	Community Worker Questions .....	12
Box Key F	Traditional Land Use Information Needs .....	14
Box Key G	Traditional Environmental Knowledge Information Needs .....	15
Box Key H	Obtaining Informed Consent .....	20
Box Key I	Being Respectful .....	23
Box Key J	Baseline Information Collection .....	24
Box Key K	Project Planning and Traditional Knowledge .....	28
Box Key L	Scoping .....	31
Box Key M	Assessing Community Wellness.....	33
Box Key N	Traditional Environmental Knowledge Analysis.....	34

## Abbreviations

ESRF.....	Environmental Studies Research Fund
FMA.....	FMA Heritage Resources Consultants Inc.
GIS.....	geographic information systems
GPS.....	global positioning system
ISR.....	Inuvialuit Settlement Region
Kavik .....	Kavik-AXYS Inc.
MVEIRB .....	Mackenzie Valley Environmental Impact Review Board
NTS.....	national topographic system
RA .....	responsible authority
RFP .....	Request for Proposal
SAGD .....	steam-activated gravity drainage
VEC .....	valued ecosystem component
VSC .....	valued social component

# 1 Introduction

## ***What do I need to know about this guide?***

In the fall of 2004, Environmental Studies Research Fund (ESRF) managers accepted a proposal from Kavik-AXYS Inc. (Kavik) and FMA Heritage Resources Consultants Inc. (FMA) to develop a guide “for the collection, integration, use and assessment of traditional knowledge” in project-specific impact assessments (Solicitation No. ESRF-04-048). The guide was developed in two phases/volumes:

1. Phase 1 – Volume 1 of the guide, which includes research and evaluation of related literature, and
2. Phase 2 – Volume 2 of the guide (this volume), which presents information on ‘how-to’ collect and use traditional knowledge for impact assessments.

The ESRF program “sponsors environmental and social research to assist oil and natural gas exploration companies in making wise decisions about development on frontier lands. Frontier land includes those areas where the resources are located in offshore areas off the East and West coasts and all lands north of the 60<sup>th</sup> parallel” (ESRF website 2005). The main focus of research for this guide was therefore on Canada’s north, namely the Northwest Territories and the Yukon. During early scoping meetings with ESRF managers, it was determined that particular attention should be paid to examples and context relevant to the Inuvialuit Settlement Region.

The guide is meant to provide a management document for consultants, proponents, and responsible authorities (RAs) focused on understanding and considering cultural differences in the conduct and analysis of impact assessment. It may also provide guidance to people conducting traditional knowledge studies, be they community members or outside consultants (traditional knowledge facilitators). It is written from perspective and experience of traditional knowledge facilitators, but may also be useful to Inuvialuit communities conducting or managing their own traditional knowledge studies for impact assessments.

## 1.1 Benefits

### ***What are the benefits of collecting and using traditional knowledge in impact assessments?***

Some of the potential benefits that traditional knowledge has for enhancing the impact assessment process include:

- more accurate descriptions of the environmental and socio-economic settings
- contribution to project design and final project definition
- improved confidence in environmental and socio-economic effects analyses
- better mitigation strategies and follow up programs
- improved decision-making at all phases of a proposed project
- improved ability to meet regulatory requirements and avoid costly delays in project planning

For these benefits to be realized, “all parties need to know in practical terms what traditional knowledge is, what information it provides, how this information can be documented and brought into the environmental assessment process, and how it should be expected to affect both the process and the outcome....there is an overriding requirement for common rules and protocols, transparency of procedure, and clarity of outcome for all parties” (Usher 2000: 184-185). This document suggests some concrete ways that progress can be made in improving the collection and use of traditional knowledge in the assessment process.

## 1.2 Working Concepts

### ***What concepts are helpful in using traditional knowledge for impact assessments?***

A full discussion of the terms and concepts used in the guide is provided in Section 2.3: Working Concepts of Volume 1. A summary of the three most commonly used terms is provided here for convenience.

The term ‘traditional knowledge’ is used here to refer to two of the most important types of information that can be provided by Aboriginal peoples and used in impact assessments. The first type of information, traditional land use<sup>1</sup> information, is collected to build a picture of Aboriginal patterns of use (from current time to approximately 50 years ago; archaeological and heritage resource studies normally deal with traditional use patterns prior to this time), and to discover how a proposed project may affect that use. This information is needed to assess the potential effects of a proposed project on traditional use (traditional land use impact assessment).

The second type of information, traditional environmental knowledge, refers to knowledge about the environment that is held by local Aboriginal peoples.<sup>2</sup> This knowledge could be generally considered as knowledge about resource management. It can include knowledge of animal movements and population trends, location of permafrost, changes in water and air quality, berry patches, and the reaction of animal species to different disturbances, to name just a few examples. In the context of impact assessments, it may also include information about changes to community wellness, climate and health; the location and importance of heritage resource sites; and resource use. This knowledge, in addition to contributing to the assessment of effects to traditional land use, can be used in conjunction with Western science to improve the scientific and socio-economic assessments. (Please see Section 3.2: Information Needs for a more detailed discussion of the types of traditional environmental knowledge that may be collected and used by different impact assessment components.)

<sup>1</sup> Traditional *land* use also refers to activities that may not be land-based, as in the case of the Inuvialuit beluga harvest.

<sup>2</sup> The terms traditional environmental knowledge and traditional knowledge are often used interchangeably in the literature. They have different meanings in this guide. Traditional knowledge is a very broad concept comparable to ‘Western knowledge’. Traditional environmental knowledge and traditional land use information are just two of many possible types of knowledge that come under its umbrella.

## 1.3 Organization and Use of the Guide

### *How is the guide organized and how do I use it?*

The traditional knowledge guide is presented in two volumes. Volume 1 (Phase I work) is comprised of a literature review and evaluation. It is 'academic' and represents the research portion of the guide. This volume, Volume 2 (Phase II), is the 'how to' part of the guide.

Volume 1 contains the following information:

- Objectives, scope of work, and how the guide is organized (Section 1)
- Methodology used in the literature review, and working concepts, terms and definitions to be used in the guide (Section 2)
- Review and evaluation of current legislation and policy, traditional knowledge guidelines and impact assessments using traditional knowledge (Section 3)
- Recommendations and comments on the general direction of traditional knowledge studies (Section 4)
- An annotated bibliography of the following (Appendix A):
  - relevant legislation, policy, policy guidelines and legal decisions
  - current impact assessment studies where traditional knowledge has been used, focusing on the Canadian north
  - existing traditional knowledge guides, guidelines and general literature pertinent to the study

The current volume is organized into the following sections:

- Summary information on project background and scope, benefits of using traditional knowledge, guide structure and working concepts (Section 1).
- Information on how to approach a traditional knowledge study, including protocols, working with communities and participants and different research approaches (Section 2).
- Discussion regarding the collection of traditional knowledge, such community engagement, and information scoping, sharing and needs for impact assessment work (Section 3).
- Approaches to using and applying traditional knowledge information at each stage of the impact assessment process (Section 4).
- Suggestions for presentation and creation of traditional knowledge reports (Section 5).
- Concluding statements regarding some of the major issues facing the collection and use of traditional knowledge (Section 6).
- References used in Volume 2 (Section 7).
- Appendices containing sample consent forms, and interview topic checklists.

To make this volume more interactive and easier to use, some ‘user-friendly’ features have been added. In addition to section titles, key questions are included at the beginning of each section to help the reader understand the main questions that are addressed in each section. In addition, text boxes are used throughout the guide to summarize key points. These are referred to as ‘box keys’, and are listed in the table of contents. Real-life examples, where available, have been provided throughout Section 4: Applying Traditional Knowledge to provide additional direction on how traditional knowledge may be used.



## 2 Research Philosophy

### ***What are some of the things that I need to consider before collecting traditional knowledge?***

This section provides information on things that need to be considered and set up prior to doing a traditional knowledge study with Inuvialuit communities.

### 2.1 Fundamental Research Principles

#### ***What are some of the guiding principles of traditional knowledge research?***

Application of the following principles – to both research and consultation – is regarded as fundamental to the successful collection and use of traditional knowledge:

- Consultation and traditional knowledge protocols are required
- Inuvialuit people own and control their traditional knowledge
- Respect for the body of knowledge contained within traditional knowledge
- Inuvialuit groups and participants required informed consent to participate in traditional knowledge research
- The Inuvialuit should be actively and meaningfully consulted at all stages of the impact assessment for a proposed project whenever possible
- The Inuvialuit must be active participants in the design and conduct of a traditional knowledge study
- Respect for traditional channels of authority, and level(s) of approval that may be required by Inuvialuit group(s)
- Community selection of traditional knowledge participants
- Researchers shall work with Inuvialuit groups and/or traditional knowledge participants to establish a traditional knowledge program that reflects their perspectives, needs, capacity and schedule
- The conduct of researchers and others working with the Inuvialuit must be professionally responsible and culturally respectful at all times
- Traditional knowledge researchers act as facilitators only, and cannot in any way speak for an Inuvialuit group or traditional knowledge holders

#### **Box Key A: Research Principles**

1. Establish protocols
2. Traditional knowledge ownership
3. Respect for traditional knowledge
4. Informed consent
5. Active and meaningful consultation
6. Flexible study design
7. Several levels of consent
8. Community selection of participants
9. Respectful and professional conduct
10. Facilitators only

## 2.2 Collection Protocols

### ***What are traditional knowledge protocols and why are they important?***

Traditional knowledge protocols outline the agreed practices, standards, schedule and means of carrying out a traditional knowledge study. It is strongly recommended that proponents establish an understanding with community representatives and participants before trying to collect traditional knowledge.

For small projects, this may take the form of an initial meeting with the community to discuss the proposed traditional knowledge study. For larger projects, or where the proponent is conducting extensive consultations with an Inuvialuit group, traditional knowledge collection protocols may have to be discussed and drafted into a formal document. Either way, protocols for the collection, use and protection of traditional knowledge need to be discussed and agreed upon before proceeding with a traditional knowledge study in an Inuvialuit community.

Protocols for the collection of traditional knowledge help both the community and the proponent understand each other's goals and expectations with regard to traditional knowledge research. Some of the things that may be included in traditional knowledge protocols are listed in Box Key B.

The protocols required for traditional knowledge collection are different from consultation protocols that may be provided by an Inuvialuit community, although they may have elements in common. Consultation protocols describe how a proponent should proceed in its discussions with a community; traditional knowledge protocols will likely be more detailed and specific to the proposed project and work.

#### **Box Key B: Traditional Knowledge Collection Protocols**

1. Study goals, schedule, and timelines
2. Sharing and use of information collected
3. Confidentiality issues (if applicable)
4. Required data verification, follow up procedures and anticipated issues
5. Acceptable amount and method of payment to Elders and community workers (e.g. payment for time, honoraria, gifts) (Payment schedules should be consistent with those used by local institutes and cultural resource centers.)
6. Recognition of contributions to the study made by interviewees and community workers
7. Role and function of Community Advisory Committee (if applicable)
8. Interview protocols
9. Engagement of community workers
10. Contribution to documentation of cultural history and traditions
11. Investment in the storage and collection of information gathered
12. Gifting protocols
13. Assist in the promotion of traditional knowledge and traditional knowledge research priorities at the community or regional level
14. Sharing of study findings (e.g., local media, open houses, meetings)

## 2.3 Determining Stakeholders

### ***How do I determine which Inuvialuit communities should be involved in the traditional knowledge study for my impact assessment?***

During project planning and before the collection of traditional knowledge can begin the potential Inuvialuit groups that may have historical and traditional interest in the area must be determined. Who should be consulted and how is usually determined by the proponent and their public consultation team, although they may receive some guidance from responsible authorities (RAs), and Inuvialuit organizations. Traditional knowledge discipline lead(s) may also provide insight because of their knowledge of historic and traditional use patterns. Geographic areas currently used by a particular Inuvialuit group

may not reflect historical patterns of use. Traditional territories often overlap, so some work must be done to determine the Inuvialuit communities that have an interest in the proposed project area, or who may be affected by the project.

## 2.4 Study Format

### ***What determines the size and type of traditional knowledge study I need to undertake?***

The type of traditional knowledge study to be undertaken depends on the type and scale of project being proposed. The type of project influences the aerial extent of potential project effects, the proponent's commitment to undertaking a traditional knowledge study, and agreement by the Inuvialuit community to participate in the work. For example, the development of a well site in which effects may be limited to a small geographic area, consultation with community members and Elders may suffice to identify potential effects. On the other hand, an oil sands project, because of the potential to affect a large number of environmental, social and health factors over a large area (e.g., air emissions), would require a larger field-based program in which impacts are studied in depth. In many instances, a generic effects assessment in which either focus group interviews or one-on-one interviews are conducted, along with site visits, will be sufficient to identify community concerns and enable effects assessment. It is important when presenting the project to the community that the project description be as complete as possible and presented in a format (e.g., plain language) that is readily understood by all community members in order that they can advise on the size and type of traditional knowledge study needed to be undertaken.

### ***What role will the community play in how the traditional knowledge study is carried out?***

In addition to the things mentioned above, community goals and capacity will also factor into the format of the traditional knowledge study. The way a traditional knowledge study is conducted can range from community-based research to a more consultant-based model. Some Inuvialuit groups may choose to conduct their own traditional knowledge study. Others may recommend that the traditional knowledge study be carried out by qualified consultants, with some degree of guidance from them. For most projects conducted north of 60, it is best to assume that a more community-based model of research will be required. In the Inuvialuit Settlement Region (ISR), for example, proponents will be asked to hire community members to be involved in the traditional knowledge study. This may take the form of hiring community members to conduct traditional knowledge

#### **Box Key C: Before You Start**

1. Determine proponent commitments
2. Determine stakeholders
3. Establish protocols
4. Determine study type:
  - Community-based or consultant-based?
  - Traditional environmental information required?
  - Generic effects assessment (i.e., traditional land use type interviews only)
5. Determine community requirements/needs
6. Determine community timing considerations
7. Determine who will be involved in the collection of traditional knowledge information:
  - Consultants:
    - Public consultation
    - Disciplines
    - Traditional knowledge facilitator(s)
  - Community members:
    - Traditional knowledge facilitator(s)
    - Interpreters, translators, transcribers
    - Elders, traditional scientists
  - Combined effort of community workers and consultants
  - Proponent representatives
8. Determine how and with who follow up and data verification will be conducted

interviews, but a more participatory approach is recommended. For the Devon Canada Corporation's Beaufort Sea Exploration Drilling Program Application, for example, local Inuvialuit were hired, provided with training on conducting interviews and the use of traditional knowledge in impact assessments, and were involved in all aspects of the traditional knowledge assessment (Kavik 2004).

The development of traditional knowledge collection protocols will involve some discussion of the proposed project, and of the size and format of the traditional knowledge study. These discussions are usually held between the project proponent and the appropriate community bodies from the Inuvialuit community. Beyond these discussions, an initial meeting between traditional knowledge facilitators and community workers (i.e., people from the Inuvialuit community who are hired to work on the study, in whatever capacity), representatives and/or participants (i.e., traditional knowledge holders) is required to further scope and define the nature of the work to be carried out before proceeding with the traditional knowledge study.

### ***Who are traditional knowledge facilitators and what role can they play?***

In cases where the Inuvialuit community cannot or does not wish to carry out the traditional knowledge study required for the impact assessment independently, outside consultants may be hired to manage and/or complete the work. These people are termed 'traditional knowledge facilitators'. Unlike some of the community workers who may be hired to work on the traditional knowledge study, they do not hold traditional knowledge. They must work with participants and/or community workers to collect and present traditional knowledge in an appropriate and accurate fashion, thus facilitating its use in the impact assessment.

The skills for collecting traditional land use information and traditional environmental information are complementary, but somewhat different. They both require a facility for interpersonal relationships and cross-cultural understanding. Traditional knowledge facilitators must not only be able to conduct effective interviews and build trust with co-workers and participants, but must also be able to understand impact assessment science, methodologies and process. Traditional knowledge facilitators must therefore have an appreciation of the cultural *and* ecological context of the proposed project.

Traditional knowledge facilitators must also be prepared to help other team members understand the cultural and political sensitivities of their work. Less experienced team members must be able to approach discipline leads with issues, and inform managers and the proponent of any potential problems that are encountered. Discipline leads should also consider other managers or specialists who have worked in similar arenas as sources of support and guidance when addressing difficult or sensitive issues.

#### **Box Key D: Traditional Knowledge Facilitators**

External researchers who undertake traditional knowledge studies with an Aboriginal community are facilitators. They do not 'own' the information they are collecting. Facilitators:

1. Lead interviews and the collection of traditional knowledge
2. Ensure traditional knowledge is treated in accordance with agreed upon protocols.
3. Present traditional knowledge in a way that is accurate and appropriate to its context, meaning and value.
4. Work with traditional knowledge participants to ensure accuracy.

## 2.5 Traditional Knowledge and Western Science

### ***What are some of the differences between traditional knowledge and western science?***

Comparing traditional knowledge to western science is like comparing ‘apples and oranges’ (Berkes et al. 2000). A more appropriate comparison would perhaps be western *knowledge* and traditional knowledge. However, the collection and use of traditional knowledge in an impact assessment context means that emphasis is placed on the scientific aspects of western knowledge and, as explained elsewhere, the traditional environmental knowledge and traditional land use aspects of traditional knowledge. It is helpful to try and understand how the differences between western and traditional knowledge, and the cultures that they flow from, lead to different social structures and resource management tactics as impact assessments and Inuvialuit concerns with respect to the environment are both ultimately about resource management (Table 1).

**Table 1 Traditional Knowledge and Western Science**

<b>Traditional Knowledge</b>	<b>Western Science</b>
<i>Knowledge and Learning</i>	
“Supremely concrete” <sup>1</sup>	“Supremely abstract”
Subjective; does not exclude cultural values and perspectives	‘Objective’; tries to exclude culture and values
Apprentice-based learning	‘Book’ learning
Oral	Written
Long-term, local	Short-term, regional
<i>Social Organization</i>	
Communal	Individualistic, independent
Sharing, reciprocity, respect, humility	Trade, dominance, power, control
Cultural survival and identity	Technological improvements
Barter, non-market economies	Market economies
<i>Resource Management</i>	
Stewardship	Ownership
Precautionary, preventative	Risk management (mitigate and compensate)
Conservationist	Monitoring
Ecosystem-based	Population-based
Integrative	Hierarchical
Ability to absorb future events	Precision of future predictions
SOURCES: Berkes et al. 2000, Emery 1997, Oakes and Riewe 1996	
NOTE: 1) Levi-Strauss quoted in Berkes et al. 2000.	

Traditional knowledge is different from western science, not only in its content, but also in the way that it is gained. The main difference is the inseparability of culture and the environment in traditional knowledge. In modern resource management, these differences are starting to be mediated by approaches that stress the precautionary principle, or that adopt adaptive, integrative or co-management strategies. In the context of impact assessments, this implies a shift from the consideration or prediction of impacts to an examination of the “*kind* of assessment and management research that can be undertaken” (Author’s emphasis, Berkes 1998: 201).

In the context of impact assessments, traditional knowledge and western science frequently overlaps and complements each other through things like improved scoping, the identification of valued assessment components and indicators, and the assessment of potential impacts. The involvement of the Inuvialuit is also called for as the results of the assessment are communicated back to the community.

Because traditional knowledge represents accumulated knowledge about the environment and its relationship to human occupancy, collection and use of this knowledge in impact assessment processes can provide information reflecting different cultural origins and the historical time depth of observation and interaction of these cultures with the environment, which can add great value to an impact assessment. These observations can sometimes differ from ‘western science’ because they are rooted in the past and reflect cultural and social adaptation to environment through time.

### 3 Collecting Traditional Knowledge

#### *How do I collect traditional knowledge?*

“Scientists think they are always right just because they have their information in writing. Well, they are not always right.... The Inuvialuit have all kinds of valuable information about the environment...it is not all written down. This has to come together somewhere. Maybe you should talk to us more.” (Billy Day quoted in Kavik-AXYS 2002.)

Unlike the collection of environmental data by western science, the collection of traditional knowledge relies on people. For the most part, the cultural values and mores of traditional knowledge participants differ from those of western society. Respect for elders and their knowledge, respect for the land and all its occupants, and established protocols for contacting, acquiring, and acknowledging traditional knowledge are of utmost importance to Inuvialuit groups.

This section discusses the major elements involved in collecting traditional knowledge including how to:

- Engage community workers and traditional knowledge participants
- Define the types of traditional knowledge information required for the application
- Ensure that confidentiality and intellectual property issues are addressed
- Factor traditional knowledge collection into application schedules and timelines
- Complete baseline research for the traditional knowledge study

#### 3.1 Community Engagement

##### *How do I approach the community?*

The first step in approaching an Inuvialuit community is usually when the proponent forms its public consultation team. Public consultation personnel will normally have established relationships in the community, and experience with the impact assessment process. This type of background is valuable in establishing initial contact with the community to share information about the proposed project. The public consultation team can normally guide the proponent on how to proceed with discussions with the community, which normally involves a series of meetings between the proponent and a community's political representatives.

##### *How do I employ community members for a traditional knowledge study?*

Community members can become involved in a traditional knowledge study in a number of ways. They may be hired as community liaisons, coordinators, interviewers, report writers, interpreters (spoken word), translators (written word) and/or transcribers.

##### 3.1.1 Community Workers

It is important that all workers – including outside facilitators – be technically competent. It is equally, if not more, important that they be enthusiastic and motivated. Some basic



skills recommended for community workers are: “a high level of curiosity and analytical capacity; an understanding of their own culture and how research among their own people should be conducted; a good traditional education; and confidence and respect” of community members (Grenier 1998: 32-33). Community workers should also have a keen interest in, and deep respect, for their own culture and traditions, as well as some understanding of the potential benefits that traditional knowledge research can provide.

### ***How do I hire community workers?***

The first step in engaging community workers is the identification of interested and/or qualified parties. Local cultural and social institutes and Elders’ Committees are knowledgeable about who in the community has relevant experience, and who may be available to assist in the traditional knowledge study. Community employment offices may also assist in the hiring of community workers. These organizations can also be consulted about how to make best use of local media to advertise for these positions. Further, local individuals will also have information about acceptable employment terms and fees for local workers.

Once community workers have been hired, it is very important to spend time educating them about the proposed project, and explaining work objectives. The context and need for the study should also be clearly outlined. Some of the key questions that need to be addressed with community workers are listed in Key Box E.

As with traditional knowledge participants, it is important to ensure that local workers feel they are contributing in a meaningful way, and that their work is appreciated and acknowledged.

#### **Box Key E: Community Worker Questions**

1. What are the regulatory requirements for the proposed study?
2. What kind of information is needed?
3. How is the information going to be used and shared?
4. How will their work be acknowledged?
5. What is the study methodology?
6. How will their work be acknowledged?
7. What protocols or research standards have been agreed to?
8. What tools or equipment will be used (e.g., tape recorders, cameras, maps, GPS units, all-terrain vehicles)?

### ***Will community workers require training?***

Community workers may require some training to effectively participate in a traditional knowledge study. They will need to know how to effectively conduct traditional knowledge interviews, and how to use interview equipment. Basic training in working with maps, tape recorders, cameras and hand-held global positioning system (GPS) units can be provided in on-the-job training sessions with traditional knowledge facilitators. Training in basic interviewing techniques and/or in conducting oral history research may be obtained from local cultural institutes. Such organizations should be consulted as to their ability or willingness to provide such training. The Prince of Wales Northern Heritage Centre Oral Traditions Manual (Hart 1995) is a valuable reference tool and can be obtained online (<http://www.pwnhc.ca/research/otm/otm.htm>). This guide can be used as a primer in conjunction with on-the-job training sessions and/or training workshops for community workers.

The Prince of Wales Manual suggests the following minimum standard for interpreters and translators working in the Northwest Territories: Grade 10 reading and writing (English), some experience in interpreting and translating, graduation from the interpreter/translator program at Arctic College, the ability to write the Inuvialuit languages correctly with standardized orthographies or syllabics (Government of



Northwest Territories standards), and to speak and write both languages. In the ISR, the skills required for interpreters and translators are even more specialized because they must be able to read and/or write in the appropriate local dialect of Inuvialuktun.

### 3.1.2 Traditional Knowledge Participants

#### ***What do I need to know to work with traditional knowledge participants?***

Proper honour and respect must be paid to traditional knowledge participants, many of whom will be elders. Elders are leaders and venerated guidance counselors in their communities. Experienced hunters and trappers and other community members may also be interviewed. Some of these people may not have extensive ‘book’ learning, but may be just as smart as, or more, than university graduates or corporate leaders. Traditional knowledge collection protocols may provide some information on how to work with elders and other participants, but in the absence of any specific guidelines, a good approach is to always treat the person being interviewed as though they are very learned person from whom you are about to gain much valuable information. Additional information on conducting participant interviews is presented in the Section 3.5: Baseline Work.

The community itself is best suited to select the most appropriate people for providing the required traditional knowledge information, and the number of individuals that are either suitable and/or available for interviews. The main focus of traditional knowledge collection will be community elders, who have a long history of living off the land and who represent the main repositories of traditional knowledge. It should be remembered that when asking elders or other community members questions, that different languages may have different meanings or interpretations for the same words. For increased understanding when asking questions, especially of elders, use Inuvialuit words and a translator when practical. Experienced and active hunters and trappers or outfitters will also have much valuable information about current and more recent trends. In the ISR, community youth may also be involved in the traditional knowledge study. Both male and female participants should be included to ensure that gender-specific is captured.

While it is assumed that traditional knowledge participants will be selected by the community, a request should be made to specifically include elders who have a good knowledge of community oral traditions and history, a history of living on the land, and who represent both sexes. For small-scale projects, with few or no regional effects, participants who are familiar with the project area are preferred.

Traditional knowledge participants should be paid for their services. The rates of pay need to be consistent and equal for interviewees. The one exception to this is youth, who may receive a lower rate of pay. Rates of pay should be established with the community when developing your study protocols.

## 3.2 Information Needs

#### ***What types of traditional knowledge do I need to collect?***

This section describes how to decide exactly what kinds of traditional knowledge information are needed for impact assessment. As mentioned previously, there is a call for two basic different types of traditional knowledge information: 1) traditional land use information and, 2) traditional environmental knowledge. The nature and scope of

traditional land use information required will be fairly standard from project to project. Traditional environmental knowledge requirements will be determined by the nature and scope of the project and environmental components being assessed.

### 3.2.1 Traditional Land Use Information

#### ***What types of traditional land use information do I need to collect?***

Traditional land use information is collected to provide an understanding of the potential impacts of a proposed project on traditional use. Although the specific scope and nature of the traditional knowledge study to be undertaken has to be determined in consultation with community members, the collection of traditional land use information usually contains basic components relevant to understanding the context of traditional use (history, geographical area), community use patterns, philosophy of landscape use and the resources used, and potential interactions with the proposed development and the impact assessment. The broad types of traditional land use information required generally include:

- Extent of territory occupied/used
- Context for current traditional land use practices
- Inuvialuit philosophy regarding their relationship with the environment
- Maps of traditional land use activities and site locations.
- Official or local names to identify locations on map. Care should be taken with place names as some local names may be used multiple times for different locations (e.g., Fish Lake).
- Inuvialuit perspectives on potential impacts (issues) from both previous developments and the proposed project
- Mitigation strategies and monitoring programs recommendations relative to proposed project

More detailed traditional land use information regarding traditionally used areas and species is also needed, including:

- Family and group foci for traditional activities
- Special use sites (e.g., fish camps, berry picking camps, medicinal plant collecting areas)
- Special women's areas (e.g., puberty retreats, spiritual renewal camps)
- Burial sites
- Sacred/spiritual sites/geography
- Significant traditional landmarks
- Trail systems

#### **Box Key F: Traditional Land Use Information Needs**

1. Historical context
2. Definition of traditional territory
3. Community sub-group territorial use
4. Summary of philosophy of resource use
5. Inventory of prime resources/area
6. Inventory of primary human habitation areas
7. Traditional Knowledge (see section on traditional environmental knowledge)
8. List of issues and concerns
9. Mitigation and monitoring recommendations

- Cabins, campsites
- Registered trap lines
- Occupation/meeting/gathering places
- Relationship (ties) to the land (spiritual, individual)
- Legends, stories, traditional lore
- Archaeological sites
- Resource species used and their uses
- Relative importance of species
- Harvest methods and numbers harvested
- Community use and distribution of species and harvest
- Water resources

### 3.2.2 Traditional Environmental Knowledge Information

#### ***What kinds of traditional environmental knowledge do I need to collect?***

The types of traditional environmental knowledge information to be collected for the impact assessment will depend on several factors: Inuvialuit agreement to participate in the traditional knowledge study, the availability of previously completed traditional knowledge studies, the scope of the current impact assessment, and the needs and objectives of the Inuvialuit communities, proponent and impact assessment components.

In the formal collection of traditional environmental knowledge, traditional knowledge facilitators will discuss information needs with other impact assessment scientists to create a list of topics to be covered during participant interviews. Once participant interviews are complete, there is a need for further discussions to explore how the information gathered can be applied in the effects assessments. (Traditional environmental knowledge may also be ‘informally’ collected from Inuvialuit assistants by assessment scientists during field studies. This aspect of traditional knowledge collection is discussed in greater detail in Section 3.3: Information Sharing).

Some suggested types of information that

#### **Box Key G: Traditional Environmental Knowledge Information Needs**

1. Environmental component needs:
  - Soils
  - Air
  - Water
  - Vegetation
  - Fisheries
  - Wildlife
  - Heritage resources
  - Noise
  - Resource use
  - Socio-economics
  - Human health
2. Long-term trends
3. Overall environmental health
4. Cumulative effects
5. Issues and concerns regarding potential project effects on environmental components and/or animal species
6. Mitigation and monitoring recommendations

may be useful for the analysis of the various impact assessment components are listed below. Note that this is not a comprehensive list, and is intended as to serve as a guide only. Types of traditional environmental knowledge information that may be applicable include things such as:

- Soil conditions and terrain – location of permafrost, changes in permafrost conditions, trends in moisture conditions, changes in drainage patterns, flood patterns, and terrain stability
- Air quality – climatic conditions (variability, change), such as, precipitation conditions, wind conditions, micro-climate temperatures, seasonality of climate, and changes in air quality
- Hydrology and hydrogeology - stream conditions, watershed effects, water temperatures, water quality (potable, colour, odour), seasonal flow levels, unusual flow levels, locations of or changes in underground aquifers, locations, changes and, seasonal ice conditions
- Vegetation - abundance, diversity, health, animal forage, food collection, seasonal and timing issues, and traditional use (medicinal, ceremonial, construction (e.g., bark))
- Fisheries - abundance, diversity, habitat, health, spawning grounds, seasonal or timing issues, or disturbance leading to avoidance behaviour
- Wildlife - abundance, diversity, habitat, health, nesting or denning areas, bird staging areas or flyways, seasonal or timing issues, disturbance leading to avoidance, important movements and migration corridors and changes to these, location of important sites (e.g., salt licks, grouse leks, calving grounds), and predator-prey relationships (i.e., movements, cycles)
- Heritage resources – traditional camp sites, cabins and cabin sites, burial sites, spiritually significant sites, other historical or spiritual locations
- Noise – trends in noise levels, seasonal variations, location of important wildlife habitat, disturbance leading to avoidance, location of cabins or other traditionally used sites
- Resource use – hunting, trapping, plant collection, fishing areas, trends, species, timing
- Socio-economic – community or family relationship concerns, cultural retention and transmission concerns
- Human health – perceived risks or recent changes in human health, preferred traditional foods, general idea of how much of diet is comprised of traditional foods (Note: Dietary studies are very different from traditional knowledge studies per se.), and quality or trends in traditional foods

More generic information relevant to the impact assessment process may be obtained by discussing the following issues with traditional knowledge participants:

- Overall environmental degradation, cumulative effects, long-term ecosystem effects and trends
- Concerns about the impact of the proposed development, and its potential impact on the environment and the community

- Mitigation recommendations to minimize impacts
- Suggestions for monitoring

### 3.2.3 Information Needs Communication

#### *How do I address information needs for traditional knowledge?*

Traditional knowledge facilitators need to be involved in impact assessment scoping meetings so that the information needs of other components can be discussed and explored. Discipline leads need to be informed of the level of detail and kind of traditional knowledge information that they can expect to gain through the traditional knowledge study for the impact assessment. To prepare for the collection of traditional knowledge, the following question needs to be asked of impact assessment discipline leads: what type(s) of traditional knowledge would be useful to you for your baseline and analysis? Traditional knowledge facilitators may also be able to offer insight and suggestions as to where traditional knowledge can provide additional information for the scientific analyses.

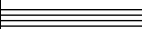


This step requires active and ongoing communication between the assessment discipline leads and the traditional knowledge facilitator(s). To use the fisheries assessment as an example, traditional knowledge facilitators would discuss fisheries information needs with the fisheries scientists prior to carrying out interviews with traditional knowledge participants. Information required would be added to the topic checklist for the traditional knowledge interviews. Traditional environmental knowledge would be recorded (along with traditional land use information) and provided back to the fisheries scientists. Conversations and comments from the interviews would be recorded verbatim, with notes added by the traditional knowledge facilitator for clarification as required. (The interpretation of interview transcripts can sometimes be difficult as the spoken language used in conversations is informal and missing the context of ‘being there’.)

It is expected that there would be further communication and discussion between the fisheries scientists and the traditional knowledge facilitators should further information or clarification be required. This sometimes requires follow up communication with one or several participants, especially if there is a need to gain a better understanding of what a particular piece of traditional knowledge might mean. Accepted communication protocols should be followed to gather any additional information from traditional knowledge participants. In some cases, direct dialogue between scientists and traditional knowledge participants may be warranted. The collection of traditional environmental knowledge in the context of an impact assessment cannot be considered a detailed or exhaustive traditional environmental knowledge study, any more than traditional land use information collected in the same context can be considered a traditional land use study. Both are limited by project and assessment scope. Traditional knowledge facilitators may be able to work in conjunction with impact assessment scientists and traditional knowledge participants to involve traditional scientists in field surveys, or in focused traditional environmental knowledge discussions.

Table 2 provides of overview of where and when in the impact assessment process the traditional knowledge facilitator needs to communicate with other discipline leads. The table also identifies other groups with whom the traditional knowledge facilitators should be speaking. The public consultation team may have information that would assist in the design of the traditional knowledge study, or that would help prepare the traditional knowledge team for work in the community. Discussion between the proponent and the

traditional knowledge team may happen at any stage of the process, but is especially important at the planning and scoping stages, and again at the mitigation, significance and follow up stages, where the proponent may make commitments to address stakeholder concerns. Traditional knowledge facilitators will likely also interact with the impact assessment methodology team, particularly at the beginning of the impact assessment work. The proponent may choose to communicate with the Inuvialuit group and/or participants at any or all stages of the process.

**Table 2 Information Needs Communication Matrix**

	Discipline Leads	Public Consultation Team	Impact Assessment Methodology Team	Proponent	Inuvialuit Group and/or Participants
Planning/Preparation					
Scoping					
Analysis					
Mitigation					
Significance					
Follow Up					
Regulatory					
<b>LEGEND:</b> <div>  White boxes indicate where communication is optional or unnecessary.         </div> <div>  Boxes with horizontal lines indicate where communication is recommended.         </div> <div>  Dark gray boxes indicate areas where communication is highly recommended.         </div>					

Traditional knowledge facilitators must also be prepared to help other team members understand the cultural and political sensitivities of their work. Less experienced team members must be able to approach discipline leads with issues, and inform managers and the proponent of any potential problems that are encountered. Discipline leads should also consider other managers or specialists who have worked in similar arenas as sources of support and guidance when addressing difficult or sensitive issues.

### ***What role will the community play in defining information needs?***

The information needs from the community perspective will be generally identified during the initial scoping meeting held with the community, and by any previously published work that has noted community concerns. The documentation and analysis of community concerns, provides direction for general interview topics and effects assessment. More specific information needs should be with the Inuvialuit community and participants as the traditional knowledge study progresses.

The traditional knowledge study may also be able to contribute to community objectives in the following ways:

- Documentation of Inuvialuit cultural or community history
- Contribute to the storage and collection of community traditional knowledge
- Contribute to training and capacity-building in community
- Improve the understanding of impact assessment and project details through the sharing study activities and findings

- Assisting in the promotion of traditional knowledge and traditional knowledge research priorities at the community or regional level (e.g., educational programs or curriculum development; contributions to archival collections, or the Prince of Wales Northern Heritage Centre's geographic place names database).

### 3.3 Information Sharing

#### What things do I need to consider with respect to information sharing?

Traditional knowledge collection protocols can greatly facilitate the gathering and sharing of traditional knowledge information for assessment purposes (see also Section 2.2: Collection Protocols). It is important and necessary that communities provide input on how information from a traditional knowledge study is shared. How a community wants information shared may be specific to a given project and may not apply to all studies. A community may choose to withhold access to traditional information, or may want to use the information collected to achieve other goals (e.g., land claims). Some Inuvialuit groups may choose to independently present their traditional knowledge at hearings (see also Section 4.3.3: Hearings).

Some traditional knowledge information may be obtained outside the formal process of traditional knowledge interviews (e.g., from Inuvialuit assistants during field surveys, from Inuvialuit stakeholders during project meetings and/or public consultation). Traditional knowledge gathered outside the formal traditional knowledge process is not subject to the same research principles and standards that are applied to the formal conduct of traditional knowledge research (e.g., informed consent, protection of intellectual property, cross-cultural facilitation skills, interview information verification) and should be shared with traditional knowledge facilitator(s). It may provide additional direction for the scoping and/or analysis of impacts to traditional land use. This step also helps ensure that *all* of the traditional knowledge gathered throughout the impact assessment work is captured and recorded, and passed on to the relevant assessment disciplines.

#### 3.3.1 Informed Consent

##### *How do I ensure that I have informed consent?*

One of the primary responsibilities of traditional knowledge facilitators is to ensure that they have the informed consent of participants. During the first meeting with participants, researchers need to spend time explaining the purpose and goals of the traditional knowledge study, as well as nature of the proposed project. The more educated participants are about the impact assessment and the use of their traditional knowledge, the better participants will be able respond to the needs of the study. The types of information that need to be discussed to obtain informed consent are listed in Box Key H.



Documentation for traditional knowledge interviews should therefore contain a record of informed consent. This may be in the form of verbal consent recorded either on tape, or on consent form. (A sample consent form is provided in Appendix A.) It should be noted that the distribution and publication of personal photographs are legally protected, so express permission must be obtained from participants if their photographs are to be used for any publications associated with the impact assessment. At a minimum, interview documentation should include the following:

- Name, affiliation, date of birth, gender and address of participant
- Family relationship to other interviewees (if applicable)
- Length of residence on the land
- History of residence in the area.
- What seasons are spent in the area?
- How is the area used (i.e., hunting, berry picking etc.)?
- Last time in the area.
- Signed consent form

The informed consent from traditional knowledge participants is just one of several levels of consent that may have to be obtained before traditional knowledge is actually collected (Menzies 2001). Other levels of consent (e.g., political, community organization level) may or may not involve the traditional knowledge team, as they may be obtained through proponent negotiations or public consultation discussions. The different levels of consent and that that are required before traditional knowledge can be shared will vary from community to community.

#### Box Key H: Obtaining Informed Consent

1. Provide enough information about the proposed project so that participants are able to form an opinion about potential impacts.
2. Explain why traditional knowledge is being collected.
3. Explain and commit to how and where their traditional knowledge will be used, and where and how original interview materials will be archived.
4. Discuss the purpose and process of the impact assessment that traditional knowledge is being collected for.
5. Note that you understand that they have the right to:
  - Not participate
  - Set conditions of use for their traditional knowledge
  - Protect their intellectual property rights
  - Assert confidentiality over certain aspects of traditional knowledge
6. Note the obligations of researchers and proponent (e.g., respect traditional knowledge collection protocols, instructions for confidentiality)
7. Explain how and when payment would be made for their participation.
8. Describe the consultation process.
9. Provide information on who can be contacted if they have additional questions or concerns.
10. Explain how they will be given credit for their contribution.
11. Describe the proposed follow up and data verification process.
12. Repeat what has been agreed too to ensure both parties understand correctly.
13. Use a consent form when possible.

### 3.3.2 Intellectual Property

#### *How do I ensure that intellectual property rights are protected?*

Establishing informed consent and traditional knowledge collection protocols will go a long way towards ensuring that intellectual property rights are protected (see also Section 2.2: Collection Protocols). Traditional knowledge facilitators need to share their research approach and declare their recognition and protection of intellectual property rights with participants. An example of what a commitment to protecting intellectual property rights (from FMA's corporate practices) looks like is provided below:



Inuvialuit traditional knowledge is privileged, confidential information to be controlled and disseminated under the guidance of community Elders and political representatives. FMA recognizes community control of the process, from setting the program agenda, through consultation and trainee selection and program development, and a commitment to community ownership and control of all research products and their use. FMA assumes a strong and continuing reliance on the capability of community adults as trainee researchers, teachers, writers and project advisors, while at the same time recognizing that the community may wish youth to be involved in the traditional knowledge study with Elders. We stress that our role is only to interpret and edit those aspects of information that the Inuvialuit choose to share with developers and the general public. In this context, all information, whether it is in tape and/or transcribed form, is the property of the Inuvialuit community of origin and is returned to the community at the completion of the traditional knowledge program. Copies of these documents are made only at the request of the community, or through agreement with individuals providing the information.

### 3.4 Schedules and Timing

#### ***How do I manage schedules and timing to ensure that traditional knowledge is included in the impact assessment?***

The importance of considering the collection of traditional knowledge when developing schedule and timelines for the assessment application cannot be stressed enough. Proponents are bound by factors such as regulatory timeframes, construction windows and economic considerations.

Traditional activities and gatherings often mean that the people who need to be involved in the traditional knowledge study will be unavailable for certain periods of time (e.g., in the ISR, the spring polar bear hunt, the summer beluga hunt, jamborees, arts festivals). Community consultation people and/or community workers can offer a great deal of guidance on these matters. They will be aware of busy periods in the communities and of what activities need to be taken into account when trying to schedule traditional knowledge interviews or meetings. Community workers may suggest scheduling interviews right after a hunt, when the species of interest or area are fresh in people's minds. It should be remembered that communities do not all share the same time for when seasons begin or end. For example, spring time or goose hunting will occur earlier in Inuvik than in Sachs Harbour.

The availability of community workers, and the time required for the transcription and/or translation of interview tapes is another factor that needs to be considered in the timeline for the traditional knowledge study. For example, there are very few translators who are qualified to work in the three Inuvialuktun dialects, and work schedules and deliverables must be organized to accommodate their availability. There are also short-term scheduling considerations such as the time of day an interview is conducted, length of the interview, the location of the interview and other considerations of an individuals needs.

Allowing adequate time for review and feedback from community organizations and participants is also recommended. Community members will ultimately determine what is an 'adequate' timeline, but this can be addressed at the early planning stages through discussions regarding traditional knowledge collection protocols and study methodology. To approach this issue in a respectful manner, present your schedule as a 'draft', with the recognition that community input may dictate that timelines be extended. One of the most

effective ways of alienating community members is by proceeding with your work as if they have to accommodate *your* schedule. If you make an effort to work with community representatives and participants to respect their needs and perspectives on scheduling, they will be far more willing and able to participate.

It is recommended that traditional knowledge baseline research be completed before the scientific field surveys are begun. One of the most common complaints made by Inuvialuit groups with regard to impact assessment work is that the work is already done, and conclusions already reached, before they are even consulted. The collection of traditional knowledge information prior to baseline field studies enables the inclusion of traditional knowledge in the scientific assessments. Traditional knowledge facilitators will be able to provide the other disciplines for information that can assist them in scoping and focusing their work. (See Section 3.5: Baseline Work below and Section 4: Applying Traditional Knowledge for more information.)

## 3.5 Baseline Work

### ***What does baseline work for traditional knowledge consist of?***

After the Inuvialuit stakeholders have been determined, met, and the nature of the study has been selected, traditional knowledge baseline work can begin. Baseline traditional knowledge work involves the review of relevant, existing traditional knowledge information (if available), and interviews and site visits with Inuvialuit participants.

### 3.5.1 Baseline Research

#### ***What types of baseline research do I need to do?***

Baseline research consists of a literature review of previous traditional knowledge studies. This familiarizes the traditional knowledge team with existing literature relevant to the specific Inuvialuit group(s) and the geographic area in which the proposed projects is situated, and with the Inuvialuit group itself. It can provide information on potential issues and concerns, cultural lifestyle, and other relevant background information. It also allows for identification of ‘data gaps’ in previous studies, and identifies ways in which interviews may most usefully be directed. The literature review forms the basis for participant interviews and the effects assessment.

Many groups have already completed some, if not extensive, traditional knowledge work in their communities. This previous work may be available to be used for the traditional knowledge study required for the impact assessment. This work may also include past study questionnaires which may assist in the development of a new questionnaire and avoid duplication or improve questions to be asked. There may be traditional land use studies available for reference, or geographic information systems (GIS) data that can be purchased from the community.

Baseline research may also include obtaining biological information. It is important that project personnel have a basic understanding of the species of interest in the study area. In some cases it may be valuable to contact a local biologist to get more up-to-date and detailed information on specific species for an area.

### 3.5.2 Participant Interviews

#### ***How do I interview traditional knowledge participants?***

Perhaps the most important element of conducting interviews with traditional knowledge participants is to be respectful. What does being respectful mean? Ask yourself the following questions to make sure that respect is first and foremost in your mind when working with traditional knowledge participants:

- Did I provide the potential participant with enough pre-interview information so that they could make an ‘educated’ decision about whether or not they wanted to participate in the traditional knowledge study for the proposed project?
- Did I provide sufficient lead time when setting up interviews?
- Did I allow the participant to select the time and location of the interview? Interviews should be scheduled to fit participant schedules and not the interviewer.
- Was I adequately prepared for the interview so that I could present information and answer questions in a clear and organized fashioned?
- Did I consider the language (plain language) used in the questions?
- Did I ‘rush’ or show impatience during any part of the interview?
- Did I interrupt the participant at any point?
- Did I make every effort to put the participant at ease, comfortable?
- Did I maintain a non-judgmental attitude throughout the interview?
- Was I respectful of the participant’s privacy and/or desire to share only certain types of information?
- Did I allow adequate opportunity for them to ask questions?
- Did I pay attention to the participant’s level of interest and fatigue so as to not overtire them (maximum interview time is normally two hours)?
- Was I polite at all times?
- Did I thank the participant before leaving?

#### **Box Key I: Being Respectful**

1. Pre-interview
2. Interview time and place
3. Organized presentation of information
4. Do not rush!
5. Never interrupt
6. Non-judgmental attitude
7. Respect participant’s privacy and boundaries
8. Allow lots of time for questions
9. Do not overtire participant
10. Be polite
11. Thank participant before leaving

#### ***What is most effective interview format for collecting traditional knowledge?***

Traditional knowledge interviews may be conducted in a variety of formats and settings. Consideration of participants’ needs and wishes should be paramount in determining final format and setting for interviews. Having two facilitators on hand is optimal as this allows one person to focus on directing the questions, and the other to focus on taking accurate notes. If acceptable to participants, tape recorders and/or video cameras may be

used, in addition to note taking. Additional direction on interview format is provided below.

- *Focus group versus individual interviews.* Either or both of these techniques may be used. It is sometimes helpful for people to have others present who share their memories and experiences. However, exclusive use of group interviews is not recommended, as it is often difficult for interviewers to obtain clear and focused information in such settings. Use of a combination of these techniques is best.
- *Interview setting.* Interviews should be conducted in settings that are comfortable and familiar to the participants (i.e., their home). You may wish to set up access to a more formal interview setting (e.g., office) if possible, as some participants may suggest a setting where there are fewer interruptions and/or that is quieter if their home is particularly busy. Field trips and/or site visits with participants are highly recommended (see Section: 3.5.3: Site Visits).
- *Interview structure.* A semi-structured interview with open-ended questions is best suited to traditional knowledge collection. In this type of interview, the interviewer acts as a facilitator, and helps provide focus and direction to the interview. Because it is a less structured interview format, it is important that interviewers have experience and/or training in conducting this type of interview. Some researchers favor questionnaires as they provide structure that appears to make the study simpler and more efficient. Unfortunately, when collecting traditional knowledge, this approach limits the information one is able to collect and defeats the purpose of personal interviews, which is to create intimacy and trust with participants. Additional information on interview questions is provided below.
- *Interview aids.* Maps, photographs and reference texts may all be used during interviews. (This is in addition to materials needed for recording interview information such as tape recorders, video recorders and/or note taking materials.) If site photographs are relevant and available, these may encourage participants to 'remember' location information. Photographs or graphics of project facilities are very helpful for providing context to the introduction of the proposed project. Reference text that have colour photographs and that are suitable to the region may help participants identify wildlife, fish and plant species during discussions regarding traditional environmental knowledge. Even if the species being discussed is not presented in the reference text, participants will likely be able to identify a similar species, and describe how it differs from the one that is presented. Both large and small-scale maps should be used to aid researchers and participants in discussing site-specific and regional traditional knowledge. Maps of the project footprint are required during interviews to provide participants with the proposed location of the project, and an impression of the context for potential impacts. Additional information regarding the use of maps in participant interviews is provided below.

**Box Key J: Baseline Information Collection**

1. Literature review
  - Historical cultural pattern
  - Existing reports, interviews
  - Previous effects assessments
2. Participant Interviews
  - Documentation - maps, audio or video recording
3. Site Visit
  - Site-specific resource use
  - Site-specific observations
  - Location documentation
4. Reduction of data into 'patterns'
  - Seasonal round
  - Resource harvest foci
  - Camp locations
5. Identification of 'irregularities'
6. Verification

- *Participant photographs.* A signed release for personal photographs is legally required in Canada. Traditional knowledge facilitators need to provide participants with information on what their photograph may potentially be used for to obtain informed consent. Obtaining this release can be part of the informed consent process. (See Section 3.3.1 Informed Consent and Appendix A: Sample Consent Form.)
- *Recording interviews.* It is recommended that all interviews be recorded. This enables fact checking and can constitute a contribution to local archives. It should be noted that high quality recordings are required; the transcription of audio recordings can be very tedious and time consuming. Prior to recording ensure the interviewee is comfortable and gives their permission for the use of audio recordings. If written or typed recording is required ensure the notes are taken down carefully.
- *Verification.* Follow up and verification is an essential part of the collection of traditional knowledge. It may include activities such as discussing findings with key representatives and organizations, fact checking with participants, or participating in community meetings and/or workshops. Follow up processes ensure that the communities and participants know how their input has contributed to the proposed project and allows them to review, correct, and potentially add to the information collected.

### ***What type of questions do I ask during participant interviews?***

A ‘checklist’ of interview topics relevant to the proposed project and the impact assessment information needs can be prepared from information gathered during initial meetings, background research and discussions with the impact assessment team. Appendix B contains an example of the kind of topic checklist that can be used in interviews with traditional knowledge participants. This checklist was used for the collection of traditional knowledge for the Devon Canada Corporation Beaufort Sea Exploration Drilling Program (Kavik 2004).

### ***What kind of maps do I need for participant interviews, and how do I use them?***

Maps are needed during participant interviews to introduce the project area, record site-specific information, and note areas of interest. Small-scale maps that cover large areas (e.g., 1:250,000) can be used to discuss regional patterns of harvesting and travel, or animal movements. Large-scale maps that cover smaller areas (e.g., 1:50,000), and that provide more detail, are normally best suited for discussing site-specific information in or near the proposed project area. National topographic system (NTS) maps can be purchased for these purposes. The regional-scale maps must cover an area that encompasses the full extent of the traditional territory used by the Inuvialuit group you are working with.

Maps illustrating the project footprint will be available from the proponent. In some cases, the proponent will be able to illustrate their footprint over aerial photography. These kinds of maps are very helpful as it makes it easier for participants to visualize the topography and landscape if they are unfamiliar with NTS maps, and/or map scales, or have never seen the land from the air.

While maps based on aerial photography are wonderful aids in illustrating the proposed project area, they are limited in their usefulness as ‘mark-up maps.’ Interviewers will have to ‘mark-up’ maps during discussions with participants to note areas that will either

be visited during field trips, and/or included on maps in the final report. Maps are normally ‘marked-up’ in pencil, and pencil marks are very difficult to see on an aerial photograph background.

The geographic information systems (GIS) team and/or the proponent may be able to provide good quality maps that include the project footprint and enough topographic detail to be used in interviews. For projects involving a large number of participants, and where it is expected that a great deal of information will be collected over a relatively large area, this might be the most economical and suitable way of obtaining mark-up maps.

Any number of ‘mark-up’ methods may be used on the maps. Some researchers use mylar overlays, and do not mark on the map itself. This works well in desk-top settings and where detailed information is required, but where maps are also being used in the field, this method can be cumbersome. A numbered reference system may also be used, wherein small dots with numbers are placed in innocuous locations on the maps and arrows drawn to specific sites in pencil. The interviewer then notes the location number and activity associated with that number. This avoids having multiple and/or confusing pencil marks in the same location on the mark-up map. If the area being covered is relatively small, the simplistic approach of using NTS maps and pencil marks may be adequate. However, interviewers should have several copies of the NTS maps on hand in case a ‘clean’ mark-up map is required.

### **3.5.3 Site Visits**

#### ***Why are site visits important?***

Site visits with participants to the proposed project area provide the added benefit of providing context to desk-top interviews. Since traditional knowledge is a ‘lived’ experience, much additional valuable information can be obtained from visiting areas or sites that elders or harvesters have used, and discussing their experiences there with them. Elders often feel more comfortable on the land, and because of the contextual nature of traditional knowledge, a visit to traditional use sites frequently yields information that would otherwise not be shared. Site visits are also an appreciated confirmation of traditional users’ ties to the land.

Photographs, sketches, site descriptions and GPS readings, in addition to note taking, are all part of the recording of site visits.



## 4 Applying Traditional Knowledge

### *How can I use and apply traditional knowledge?*

This section is intended to provide a picture of how, at each possible stage of the assessment process, traditional knowledge can be applied. It is assumed that readers are familiar with the different aspects of impact assessment processes, so more attention is paid to the potential uses and applications of traditional knowledge than to the actual processes themselves. However, some background on the type and scope of work expected at each stage is provided to help the reader understand underlying assumptions.

The collection and application of traditional knowledge will necessarily be different for each and every project and assessment. Discussions regarding the application of traditional knowledge therefore begin with a generic, best-case scenario, with real-world examples being provided where possible. Examples provided are not restricted to northern Canada, as lessons learned from impact assessments practice elsewhere in Canada may have some applicability to regions north of 60.

An effort has been made to provide as many real-life examples (from professional experience and/or from project-specific impact assessment literature) as possible. In some cases, suggestions on how to use traditional knowledge are based on recommendations or comments from Inuvialuit or academic sources. The use of traditional knowledge in impact assessments, while not new, lacks precedent in some areas.

In addition to any formal traditional knowledge collection that is planned, traditional knowledge may also be collected through various consultation processes with the Inuvialuit (e.g., public consultation or biophysical field studies). The discussion of traditional knowledge application is therefore not restricted simply to the effects assessment stage, but also covers meetings and discussions that are held between regulators, the proponent and/or Inuvialuit groups (e.g., development of project Terms of Reference, hearings; see also Table 3).

Assessment stages are organized into three major categories: project planning, effects assessment and regulatory. Not all of the stages described below will be applicable to all assessments. Processes such as screening (regulatory) and pre-development assessments (project planning), which may or may not involve a full impact assessment, are covered in categories considered most appropriate for the type of work required.

Table 3 at the end of this section summarizes the stages of traditional knowledge application as described in the text.

### 4.1 Project Planning Stage

#### *What happens at the project planning stage?*

The project planning stage includes three different types of activities: project design and definition, which may extend beyond the project planning stage itself; the formulation of terms of reference for the impact assessment; and public consultation. This stage basically involves all the planning required in preparation for an impact assessment, and largely involves the proponent, regulators and impact assessment managers (See Box Key K and the Project Planning section of Table 3). As this planning may involve the

Inuvialuit at some stages, reference to how they might become involved, and how traditional knowledge could be used, is discussed.

#### 4.1.1 Project Design and Definition

##### ***How can traditional knowledge contribute to project design and definition?***

The project design and definition stage includes preliminary planning, post-application and pre-license refinements, permitting, pre-development assessment work, and decommissioning. Many of these aspects of project planning do not normally involve traditional knowledge or consultation with the Inuvialuit. For instance, some Aboriginal groups in British Columbia have expressed their frustration that project planning for some mine developments involves post-application licensing and project definition that substantially changes the project, but for which no consultation of Aboriginal peoples or inclusion of traditional knowledge is currently required (British Columbia First Nation Environmental Assessment Working Group 2000; Ferris and Day 2000). The Mackenzie Valley Environmental Impact Review Board (MVEIRB) traditional knowledge guidelines (2005) suggest that early discussions with Aboriginal groups can serve to minimize design modifications and avoid potential information deficiencies.

It is important that detailed project plans are shared. Data transfer needs to include "...full access to information, data (baselines, modeling, risk) and maps (layout, options, GIS)" to enable adequate review and input (Ferris and Day 2000). Impact assessment training and cross-cultural awareness workshops during the project planning stage can also facilitate the impact assessment process. Cultural perspectives, values and expectations (e.g., perspectives on significance, sustainability and risk) may be brought forward, providing greater clarity on funding requirements, consultation and participation needs and protocols, and impact assessment direction and focus (Winds and Voices 2000).

Some real-world examples of how traditional knowledge can improve or contribute to project design and definition are provided below.

##### **Box Key K: Project Planning and Traditional Knowledge**

1. Project design and definition:
  - Early planning stages
  - Detailed information-sharing
  - Minimize design modifications
  - Avoid potential information deficiencies
2. Terms of reference:
  - Early issue identification and scoping
  - Consultation requirements
3. Public consultation:
  - Early issue identification
  - Consultation requirements
  - Traditional knowledge collection protocols

##### ***Pipeline Routing***

In northeastern Alberta, a culturally significant area was protected through avoidance and proactive project planning. Traditional knowledge facilitators, in working with community Elders, identified unusual drumlin-like formations that figured prominently in history of the local Aboriginal peoples. These formations were protected when the proponent made the decision to mitigate potential impacts through a realignment of the pipeline.



**Wellpad Placement**

In another case in northeastern Alberta, where pipeline routing and pad placement for a steam-activated gravity drainage (SAGD) project proceeded without input from local Aboriginal groups, it was observed that the project would significantly impact wildlife. Pads and pipelines were placed such that they surrounded a lake that was important for regional wildlife use and ungulate movements and access to the lake were impeded. Traditional knowledge participants commented that project design could have been improved, and impacts on wildlife mitigated, had they been involved in early project planning.

**Airstrip Orientation**

In the planning stages for a northern diamond mine, input from a community elder assisted engineers in early project planning. During initial community meetings, an elder quickly noted that the orientation for the airstrip was inappropriate because of prevailing wind directions, which could cause problems for arriving and departing aircraft.

**4.1.2 Terms of Reference*****How can traditional knowledge be used in developing a terms of reference for a proposed project?***

In addition to the development and finalization of engineering plans, the project planning stage of the impact assessment process includes the creation of the impact assessment terms of reference for a proposed project. The participation of the Inuvialuit in the creation of the terms of reference can serve to identify critical issues early on in the impact assessment process. Formal recognition of the potential role of aboriginal peoples and traditional knowledge in the development of an appropriate terms of reference has been recognized in some parts of Canada. The MVEIRB uses traditional knowledge to in the development of their terms of references for example (2005). And in British Columbia, the provincial assessment office is expected to work with Aboriginal peoples to identify their interests, and ask for their input and comments on effects to be assessed, consultation requirements and/or other requirements to be included in the terms of reference (British Columbia Environmental Assessment Office 2003).

**Hydroelectric Development**

A series of early public consultation meetings targeting Aboriginal groups potentially affected by a hydroelectric project in northern Manitoba were used to frame the terms of reference for the impact assessment. (North Central Transmission Line Environmental Assessment Review Panel 1992, Inkpen 1999).

**4.1.3 Public Consultation*****What role can traditional knowledge play during public consultation?***

Public consultation with Inuvialuit groups is best carried out at the earliest stages of the project planning and overall impact assessment process. The identification of potential Inuvialuit stakeholders and the determination of which Inuvialuit groups will be involved in the traditional knowledge study for the proposed project often occurs at this stage. (See also Section 2.3: Determining Stakeholders). Good public consultation can assist in

early issue identification, add to scoping and project definition, and the development of the terms of reference.

If not already defined, consultation requirements and protocols will likely be determined during the public consultation stage as well. Protocols for the collection and use of traditional knowledge for project purposes may also be developed through discussions with the potentially affected Inuvialuit groups at this stage. (See also Section 2.2: Collection Protocols.)

A traditional knowledge study is made much easier when preparation has been made prior to the beginning of the study. If a proponent has a poor relationship with a particular Inuvialuit group, much precious time may be lost when visiting the community, as participants may be angry, uncooperative or frustrated. If the proponent has conducted meaningful consultation with the Inuvialuit group and traditional knowledge collection protocols have been developed, there is a greater likelihood that these types of situations will be avoided. Obtaining informed consent and ensuring that intellectual property rights are protected also facilitates the traditional knowledge study.

Audio-visual presentations on the proposed project and impact assessment planning and findings that are shared through public consultation would preferably be in English and Inuvialuktum. Information materials should also be appropriate to the Aboriginal community (Winds and Voices 2000).

### ***Change in Ice Conditions***

During initial public consultation meetings and disclosure for an exploratory drilling program in the Beaufort Sea, the proponent received numerous comments from community members about climate change and ice formation. This eventually led to additional scientific studies to examine changes in the timing of break-up and freeze-up, which confirmed community comments and led a modification in project scheduling and planning.

## **4.2 Effects Assessment Stage**

### ***What happens at the effects assessment stage?***

The five basic steps in conducting an assessment of potential project effects are: scoping, analysis, mitigation, significance and follow up (Hegmann et al. 1999). The potential uses and application of traditional knowledge for each of the five stages are explored below.

### **4.2.1 Scoping**

#### ***How can traditional knowledge be used for the selection of indicators?***

Traditional knowledge can contribute critical information to the scoping stage of an impact assessment, and identify issues of concern unique to traditional users. Valued ecosystem and social components (VEC/VSC) identified by Inuvialuit communities often differ from those selected by western scientists. The very concept of VEC/VSC selection is contrary to a holistic view of nature. The development of the impact assessment approach and methods therefore needs to include traditional knowledge so that indicators and values appropriate to Inuvialuit communities are used. This implies that disciplines

(other than traditional land use) will have enough traditional knowledge available to them to make decisions about which VEC/VSCs should be included in their assessment, and that the traditional land use assessment has selected indicators appropriate to the Inuvialuit group that they are working with. In the case of the traditional land use assessment, a draft list of indicators (based on literature review and/or previous experience) may be selected prior to interviews with traditional knowledge participants, but this list must be verified with participants.

**Box Key L: Scoping Tasks**

1. Identification of regional issues or concerns
2. Selection of appropriate valued components (indicators)
3. Identification of spatial and temporal boundaries
4. Identification of potential impacts

### **VEC Selection**

Moria (*Lota lota*) is valued as a traditional food in many Aboriginal communities in northern Alberta, but is not viewed as an indicator species or valued as a sport fish, and therefore rarely (if ever) included as a VEC in fisheries assessments conducted in the region.

An impact assessment for a large oil sands development in northeastern Alberta did not include caribou as a VEC as scientific documentation did not record it as an ‘important’ species in the region. Traditional land use work conducted after the biophysical studies revealed that caribou was considered the ‘most important’ wildlife species from a traditional use perspective, and that Elders were very concerned about their disappearance from areas where they had once been common.

### ***How can traditional knowledge be used to select study areas?***

There is no ‘cookie cutter’ approach to the selection of local and regional study areas for traditional land use assessments. The selection of study areas depends on number of factors, not the least of which is the type of project being assessed, and the perspectives and concerns of the Inuvialuit community.

Local study area boundaries for traditional land use need to include areas that may be affected by the proposed project. As with other impact assessment disciplines, the area “in which the obvious, easily understood and often mitigable effects will occur” will drive the formulation of a local study area (Hegmann et al. 1999: 14). In this context, the project footprint might be an appropriate local study area for projects where the principal effects will be ‘on the ground’ (e.g., steam-assisted gravity drainage development).

To address cumulative effects to traditional land use, the selection of a regional study area (where the interaction of project effects with other effects is considered) should reflect regional traditional use (e.g., traditional territory). When air emissions are associated with a project, the overlap of the air quality study area with an Aboriginal group’s traditional territory may be an appropriate choice for a regional study area. This area encompasses potential impacts to vegetation (e.g., potential acid deposition), and therefore represents the largest spatial extent of potential impacts to plant gathering. As air quality study areas normally represent much larger areas than a single traditional territory, the traditional territory of Aboriginal groups other than the main stakeholder(s) may be implicated.

As with the selection of VEC/VSCs, traditional knowledge may also influence the selection of study areas for other assessment components. If a ‘new’ species is added to

the wildlife assessment's VEC list, for example, this may change the wildlife study area boundaries.

### ***How can traditional knowledge be used to select temporal boundaries?***

The concept of temporal boundaries in impact assessment practice is intended to address change from existing (baseline) conditions to some foreseeable and 'predictable' point in the future. Temporal boundaries have a start ('base') date and an end date. The base date is best identified by the Inuvialuit group, and depending on their perception, may be constituted by 'today's' date or the date at which they see major changes beginning to occur in traditional use and/or surrounding environmental conditions. In the case of an Inuvialuit community living in a relatively undisturbed or 'pristine' setting, the base date might best be constituted by the existing, present-day conditions. (See example below from Athabasca oil sands for an example of 'base' date defined as point in time in the past when the Aboriginal groups started observing major changes in their surroundings.)

The end date generally coincides with completion of project decommissioning, but may be seen to continue beyond cleanup if ongoing, 'residual' effects are contemplated or perceived. For example, many Aboriginal peoples have little confidence that current reclamation practices can return the land back to a state that permits acceptable levels of traditional use.

The longer the time period forecasted, the more difficult and uncertain the prediction of impacts becomes. Impact assessments therefore normally restrict their forecasts to 'reasonable' time periods. Temporal boundaries in the Aboriginal worldview would extend from 'time immemorial' to seven generations into the future. In this context, the evaluation of environmental sustainability, risk and significance take on new meaning. (See also Section 4.2.2: Analysis below and Section 2.5: Traditional Knowledge and Western Science.)

### ***Assessment Boundaries***

In traditional knowledge interviews regarding the proposed development of an offshore exploratory drilling program in the Beaufort Sea, mark-up maps covering a large area of traditional harvesting patterns and movements were used. The local study area was discussed with participants as being the drilling areas, barging routes and other areas where 'normal' project activities might potentially interact with traditional use. As upset events must be considered for assessments in the ISR, the regional study area encompassed the area that may potentially be affected by a blowout event.

In Alberta's Athabasca oil sands many Aboriginal groups view 1960 as a critical turning point. Prior to 1960, Aboriginal peoples in the area were still able to carry out a traditional lifestyle. After 1960, development in the region began to increase, affecting local environmental conditions and traditional sources of food (Tanner et al. 2001). Thus, 1960 represents a meaningful base date for the assessment of cumulative effects to traditional land use in that area.

## 4.2.2 Analysis

### How do I use traditional land use information for to analyze effects?

During the analysis of effects, the collection of regional baseline data is completed, and cumulative and project-specific effects (on selected VEC/VSCs) are assessed. Traditional land use information is used for the analysis of potential effects to traditional use. (The types of traditional land use information required are provided in Section 3.2.1: Traditional Land Use Information. A sample interview checklist can be found in Appendix B.) To understand how a proposed project may affect traditional land use, a picture of traditional use must be developed, and participants' impressions of potential impacts need to be presented. Conclusions derived from this perspective may or may not 'agree' with the conclusions reached by impact assessment scientists.

The assessment of potential effects to traditional use is based on community wellness. In Aboriginal culture, community wellness is a reflection of knowing one's place in the world, of being able to participate in and continue practices and activities conducted by past generations (albeit in modern forms), and the ability to pass on the collective knowledge and use of the environment according to past tradition. Cultural values reflect these facets of community wellness as well as a 'healthy' relationship with 'the land'.

Analysis of community wellness must address both the cultural values and cultural mores of a particular Inuvialuit community. Cultural mores reflect the social importance of species, harvesting techniques and community use (distribution) patterns. (If information on things such as 'culturally significant ecosystems' (McKillop 2002) is available, this can be added to the spatial analysis.) For example, disruption of caribou migration patterns affects family hunting as a resource use, and relates to the cultural transfer of traditional environmental knowledge regarding the geographic area used by caribou. Disruption of caribou migration may also affect harvest numbers and result in diminished food distribution in the community, leading to hardship among some community members, thus affecting community wellness.

Similar to other assessment components, the assessment of potential effects to traditional land use has to consider the implications of different project stages (scenarios). Effects on traditional use will vary throughout operations, construction and decommissioning. Traditional knowledge participants will likely not restrict their observations to the assessment stages of a project; their perspective of potential impacts will include things such as exploration, seismic work, and post-reclamation success. Analysis of effects to traditional land use will need to include these observations, even if they are not specific to the proposed project, as they relate to participants impressions of cumulative impacts.

Perspectives on cumulative effects to traditional use must also include consideration of the 'time lag' and interaction of other activities with various project scenarios. Effects arising out of the construction phase are probably the easiest to identify and analyze in the context of selected indicators, as construction activities and changes in the local environment are immediate and readily visible. On the other hand, effects resulting from

#### **Box Key M: Assessing Community Wellness**

Evaluation of potential disruption or loss of traditional patterns and cultural continuation associated with loss of harvest territories, including:

- cultural properties
- ties to the land
- self esteem
- independence
- community organization and interaction
- a sense of a structured place in the modern world

operations may be more subtle and enhanced/aggravated over time. What may initially appear to be a minor effect can, through the duration of the project, become a major effect. Effects associated with the operations stage are most likely to have residual effects and are most likely to be of concern to an Inuvialuit community as such, effects will potentially affect their lives long after decommissioning is complete.

### ***How do I use traditional environmental knowledge to analyze effects?***

The inclusion of traditional environmental knowledge in the analysis of biophysical and socio-economic effects begins at the scoping stage with the identification of indicators appropriate to the traditional knowledge provided. Using a hypothetical case of a proposed offshore development in the Beaufort Sea as an example, the fisheries impact assessment scientists may have already selected Arctic charr as one of their VECs, based on their knowledge of the area, the role char plays in the ecosystem and previous scientific research. Preliminary traditional knowledge information confirms that charr plays an important role in the ecosystem (traditional environmental knowledge), and is also a critical source of traditional food for the fall harvest period (traditional land use). As charr use both freshwater lakes and rivers and the ocean throughout their life cycle, their movements and presence at different times during the year is information important to both fisheries scientists and traditional knowledge participants. Traditional environmental knowledge can be used to improve the knowledge base of the fisheries assessment in providing (perhaps additional, perhaps new and previously unrecorded) information on the location of spawning and over-wintering areas; the location and timing of charr movements; observed changes and trends over time in charr abundance, presence/absence, size, health; and the relationship of these all these things to environmental factors (e.g., water quality, temperature). This traditional environmental knowledge could then be added and used in the analysis of potential effects to charr, alongside the data gathered from the scientific literature and field studies.

#### **Box Key N: Traditional Environmental Knowledge Analysis**

- Begins with selection of appropriate indicators
- Provision of 'traditional science' information to assessment components
- Information source equivalent to scientific literature and field studies
- Include summary statement of use and contribution of traditional environmental knowledge to analysis

While the requirement to include traditional knowledge in impact assessments is now quite common, there is still quite a lot of discussion surrounding its weighting and use, so it is appropriate that assessment scientists include some description of how traditional environmental knowledge is used in their analysis and write up. Did the information gained from the traditional environmental knowledge add to was already known or 'assumed' by western science in any way? If so, how? Does it support or contradict previous scientific studies, or the assessment scientist's own professional experience? The answers to these questions may reveal critical information gaps, and/or the limitations of existing science to address important assessment questions. Some scientists may be uncomfortable discussing the limitation or weaknesses of their science, and traditional environmental knowledge may highlight these weaknesses. (This is equally true for the strengths of western science. However, professional experience shows that assessment scientists are much more comfortable discussing the strong points of their work than they are its weaknesses.) From the perspective of many Aboriginal stakeholders, this is precisely why traditional knowledge holders have so much to offer impact assessments, and why a description of how it is used in the various assessment components is merited. If a serious disjunction between western and traditional science



does arise during the course of the traditional knowledge study and analysis, it is recommended that the proponent, impact assessment managers, Inuvialuit representatives, and (if applicable) RAs be consulted as to how to proceed.

### ***Port Development***

In the case of a recent port development near Vancouver, the impact assessment analysis and conclusions did not reflect the values and understanding of local Aboriginal peoples. For example, traditional knowledge, in contradiction to western science values and assumptions, asserted that eel grass is good, and that an increase in the presence of harvestable resources is of greater value than an increased diversity in non-harvestable species. Aboriginal stakeholders did not expect that the western science would agree with their conclusions, but did expect that the traditional knowledge point of view would be represented in the conclusions and write up of the impact assessment.

### ***Vegetation Assessments***

Vegetation assessments now frequently include valued traditional species and identify disturbance to them. For the a large mine in the Athabasca oil sands, areas of high, moderate and low traditional plant potential were evaluated as part of the vegetation assessment (Golder Associates 2002).

### ***Winter Spawning Fish***

In one case in Alberta's oil sands, Aboriginal participants commented that the fisheries studies did not capture the fact that a winter spawning fish species important to traditional users would be affected by the project. The fisheries studies did include spring spawning species, and because traditional environmental knowledge was not collected for the assessment, analysis of winter spawning was not done.

## **4.2.3 Mitigation**

### ***How can traditional knowledge help design mitigation strategies?***

The use of traditional knowledge in the impact assessment process provides opportunities for applying adaptive management principles to resource management. Both traditional knowledge and adaptive management must deal with situations where “much is unknown, some things are certain, and the unexpected must be acknowledged” (Berkes 1999: 125). How is this relevant to mitigation? In the impact assessment process, potential project effects are managed through mitigation (and to much lesser degree, through monitoring). In fact, the significance of effects is only evaluated in the context of mitigation measures (residual effects).

The collection of traditional knowledge for an impact assessment includes the solicitation of recommendations for mitigation from traditional knowledge participants. (See also Section 3.2: Information Needs, and Appendix B: Sample Interview Checklist.) Suggestions for mitigation from traditional knowledge participants are not limited to measures to ‘protect’ the environment (e.g., protection of habitat, additional scientific studies), but also include things normally associated with ‘compensation’ or capacity-building (e.g., day care or cultural centres, traditional land use studies, training, jobs and contracts).

Recommendations for mitigation from Aboriginal stakeholders may also be provided during the proponent's public consultation activities or meetings with Aboriginal political representatives. As with other types of traditional knowledge gathered outside the formal traditional knowledge collection process, these should be shared with traditional knowledge facilitator(s). Mitigation recommendations associated with traditional knowledge will be outlined in the traditional land use assessment. Recommendations that have implications for other assessment components need to be passed on to the relevant discipline lead(s).

### ***Pipeline Routing***

Project location can impact traditionally used locations. For example, the routing of a pipeline in the East Slopes of Alberta transected a well-known and actively used Aboriginal berry picking area. This blueberry picking area was not only important to the community as source of traditional food, but was also an important harvest area for ceremonial feasts. A minor rerouting (mitigation measure) of the pipeline would have avoided this culturally significant site. Impact to traditional use was mitigated through compensation, which would have been unnecessary had Aboriginal peoples been consulted in the project planning stage.

### ***Wildlife Crossings***

The design and location of wildlife crossings for above-ground pipelines in northern Alberta have been affected by traditional environmental knowledge collected for impact assessments. Recommendations to improve this mitigation measure include the study of wildlife trails around pipeline corridors, and modifications to make crossings more 'natural'.

## **4.2.4 Significance**

### ***How can traditional knowledge be used to determine significance?***

It is critical that the traditional land use assessment reflect the values and perspectives of the Inuvialuit community potentially affected by the project. Different Inuvialuit groups and communities will have different values and perspectives. The analysis of significance is best completed in consultation with traditional knowledge participants and/or the Inuvialuit community in question. Discussions of significance need to include: frequency of use, historical length of use, number of users, rarity, number of resources and number of uses, as well as associations with spiritual, medicinal and cultural transferal activities. This information may be collected during traditional knowledge interviews (see Appendix B for an interview topic checklist), and confirmed during follow up meetings in the community.

It is also critical to recognize that the traditional land use assessment reflect an 'anthropological' perspective of environmental significance. In contrast to western science, which focuses on the environmental relationships of particular species, a traditional knowledge study evaluates effects from a holistic perspective in that sense that it not only considers a particular species, but also its role and value to social and cultural aspects of the community. What may not be significant to the ecological community may have important implications to community use and organization. As such, there may be differences in VECs and in attached significance assessment between western and traditional science. These differences, with appropriate contextual background to enable



an understanding of the basis of these differences, can be described in the final baseline and assessment reports for the traditional land use assessment. Therefore, it is crucial that the traditional knowledge discipline leads have some background in cultural science so that they can facilitate an understanding of the role of ‘culture’ and cross-cultural differences in impact assessment.

In this context, a high impact (significant) would be indicated by a loss of a significant proportion of traditional activities, interactions and use as a result of project effects. It suggests that there will be a significant loss of individual well being (as part of a viable cultural entity) and community well being (cultural continuance). A high impact could result from the loss of a particularly important or sensitive environmental component, traditional use pattern or community social interaction (e.g., traditional food harvesting for elders).

A medium (moderate) impact could be defined as project effects hindering the capacity for cultural continuation by the loss of basic traditional elements, making it difficult to maintain holism in complete cultural and traditional continuity. Low impact could be defined as project effects being limited to the loss of minor harvest species, harvest areas or access to either.

Through the exercises described in the sections above (Sections 4.2.1: Scoping, 4.2.2: Analysis and 4.2.3: Mitigation), traditional knowledge may also contribute to the significance conclusions of other impact assessment disciplines. While the conclusions of western science may be different from those reached by traditional science, they should be considered as being equivalent to western science, and discussion regarding such conclusions should be presented alongside impact assessment findings derived from western science (see also Section 4.2.2: Analysis).

### ***Disturbance to Vegetation***

During one environmental assessment in the Athabasca oil sands, discipline leads for vegetation found that less than two percent of the study area would be affected. This disturbance was determined to be not significant in the impact assessment. Aboriginal participants in the traditional land use work disagreed with this conclusion, stating that this disturbance was indeed significant (D. Bush, pers. comm.).

### ***Heritage Resource Significance***

Scientists working on archaeological assessments frequently work with community elders to determine and rank the significance of heritage resources and sites. A similar type of approach could be applied to other impact assessment components, particularly where it is expected that there will be a discrepancy in the significance determinations of western and traditional science. This type of information collection could be managed through the involvement of traditional knowledge participants in the biophysical and archaeological field studies.

## **4.2.5 Follow Up and Monitoring**

### ***How can traditional knowledge be used at the follow up stage?***

Follow up in the context of impact assessment includes measures to verify assessment predications (e.g., monitoring) and manage effects. The five-year review of the CEA Act resulted in a greater emphasis on and requirement for follow up (Bill C-9, Section 38).

Some Aboriginal groups see “First Nation involvement in post-EA [environmental assessment] monitoring and follow-up” as an “effective mechanism to ensure accountability” (British Columbia First Nations Environmental Assessment Working Group 2000: 4).

Recommendations for follow up (e.g., need for additional studies, monitoring programs) are solicited during traditional knowledge interviews and presented in the traditional land use impact assessment report. (See also Section 3.2: Information Needs, and Appendix B: Sample Interview Checklist.) Recommendations relevant to other assessment components would be passed on to the relevant discipline lead(s).

### ***Monitoring Program for Mine***

A well-known example of the application of traditional knowledge to monitoring is the Environmental Monitoring Advisory Board for the Diavik diamond mine in the Northwest Territories. This community-based monitoring program contributes traditional knowledge and conducts follow up on issues such as the management of fish habitat, and fencing for the protection of wildlife.

## **4.3 Regulatory Stage**

### ***What happens at the regulatory stage?***

For the purposes of this guide, the regulatory stage is seen as those steps of the impact assessment process in which traditional knowledge may play a role, but in which a formal impact assessment may not be conducted (e.g., screening), or over which the proponent has little or no control (e.g., regulatory hearings). While this stage may constitute an important part of an impact assessment process, it is discussed in a summary fashion here, as the main intent of the guide is to provide guidance on how to collect and use traditional knowledge in the analysis of effects.

#### **4.3.1 Screening**

##### ***How can traditional knowledge be used during a screening process?***

The screening process seeks to identify the nature and intensity of potential impacts and provides information for RAs to determine the need for a full comprehensive study. In the ISR, screening requires consultation with community members and traditional knowledge holders. It may be completed without formal or intensive field programs, but normally involves discussions with community representatives and the presentation of project maps. It therefore relies on the experience and knowledge of local individuals corporations in the project area

#### **4.3.2 Panel Review**

##### ***What role can traditional knowledge play in a panel review?***

Aboriginal peoples may also participate in or provide information to an impact assessment panel review. Although rare, examples of Aboriginal representation on panel reviews do exist and can provide a very effective means of ensuring that Aboriginal issues are addressed and that traditional knowledge is used in the impact assessment

process (e.g., Manitoba Hydro North Central Transmission Line). Some Aboriginal groups criticize the panel review process for being “inflexible” and offering little or “no opportunity for shared decision-making” (British Columbia First Nations Environmental Assessment Working Group 2000: 3).

### 4.3.3 Hearings

#### ***How can traditional knowledge contribute to the hearing process?***

A participant of the traditional knowledge study should be present when information from the study is shared at a hearing. It is preferable to have the participant deliver this information directly or at a minimum be present with the person who is speaking. Having a participant present at the hearings allows for questions specific to traditional knowledge to be answered by a holder of this knowledge and not by a facilitator. If a hearing, presenting traditional knowledge is being held in a local community then the local Hunters and Trappers Committee should be notified.

Project proponents and traditional knowledge facilitators need to be prepared to accept that the Inuvialuit may choose to participate in ways that are ‘external’ to the assessment itself by intervening or participating in hearings. Proponents should also be aware that even if traditional knowledge *is* collected during an impact assessment, this does not prevent an Aboriginal group from acting as an intervener.

Hearings are sometimes seen as an alternative to taking part in an impact assessment process that is viewed as being fundamentally flawed (e.g., Innu Nation and hearings for Voisey’s Bay mine in Labrador). Hearings may also be used as a means of further airing and clarifying comments on or objections to an impact assessment that they did participate in (e.g., intervention of some Aboriginal groups in Athabasca oil sands region).

### 4.3.4 Regulatory Decision

#### ***What role can traditional knowledge play at the regulatory decision stage?***

At the decision stage and before impact assessment report review is complete, the Inuvialuit may submit comment on the findings of the impact assessment. At this point, responsible authorities have to make a decision and set the conditions of approval (if so granted).

#### ***Hydroelectric Dam***

A hydroelectric development in Yukon was deemed by scientific studies to have no significant impacts and some benefits. From the perspective of local Aboriginal communities and traditional knowledge, significant effects were predicted. The regulatory decision was that the project should not proceed.

**Table 3 Summary of Potential Application of Traditional Knowledge in Impact Assessments**

Environmental Assessment Process	Types of Traditional Knowledge <sup>1</sup>			
	Factual	Use & Management	Values	Cosmology
<b>Project Planning</b>				
<b>Project Design and Definition<sup>2</sup></b>  <i>Proponent</i> <i>Aboriginal Group(s)</i>	<ul style="list-style-type: none"> <li>• Identification of potential impacts</li> <li>• Identification of potential site selection problems</li> <li>• Identification of constraints (e.g., Diavik – Elders recommendations about directional placement of airport based on knowledge of prevailing winds)</li> </ul>	<ul style="list-style-type: none"> <li>• Preliminary identification of patterns of use</li> <li>• Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Delineation of impact assessment process and Aboriginal participation</li> <li>• Identification of Aboriginal stakeholders</li> <li>• Identification of preliminary issues</li> <li>• Identification of potential impacts</li> <li>• Impact assessment and cross-cultural awareness training</li> </ul>	<ul style="list-style-type: none"> <li>• May offer different perspectives on project design and alternatives</li> <li>• Opportunity for improving cross-cultural understanding</li> </ul>
<b>Terms of Reference</b>  <i>Proponent</i> <i>Responsible Authority</i> <i>Assessment Practitioners</i> <i>Aboriginal Group(s)</i>	<ul style="list-style-type: none"> <li>• Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Delineation of impact assessment process and Aboriginal participation</li> <li>• Definition and agreement on concepts of thresholds and significance relevant to traditional knowledge</li> <li>• Identification of preliminary issues</li> <li>• Identification of potential impacts</li> <li>• Impact assessment and cross-cultural awareness training</li> </ul>	<ul style="list-style-type: none"> <li>• May offer different perspectives on impact assessment process and methodologies</li> <li>• Opportunity for improving cross-cultural understanding</li> </ul>

**Table 3 Summary of Potential Application of Traditional Knowledge in Impact Assessments (cont'd)**

Environmental Assessment Process	Types of Traditional Knowledge <sup>1</sup>			
	Factual	Use & Management	Values	Cosmology
<b>Project Planning (cont'd)</b>				
<b>Public Consultation</b>  <i>Proponent</i> <i>Aboriginal Group(s)</i>	<ul style="list-style-type: none"> <li>Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>Identification of patterns of use</li> <li>Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>Development of consultation protocols</li> <li>Development of traditional knowledge protocols</li> <li>Identification of issues</li> <li>Identification of potential impacts</li> <li>EA and cross-cultural awareness training</li> </ul>	<ul style="list-style-type: none"> <li>Opportunity for improving cross-cultural understanding</li> <li>May offer different perspectives on project design and alternatives</li> </ul>
<b>Effects Assessment</b>				
<b>Scoping</b>  <i>Proponent</i> <i>Responsible Authority</i> <i>Assessment Practitioners</i> <i>Aboriginal Group(s)</i>	<ul style="list-style-type: none"> <li>Contribute to baseline information*</li> <li>Contribute to identification of spatial and temporal boundaries (e.g., knowledge of animal migration, fish spawning areas)</li> <li>Help answer question of whether boundaries adequately represent change or trends in effects</li> <li>Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>Identification of patterns of use*</li> <li>Contribute to identification of spatial and temporal boundaries (e.g., extent of berry picking areas)</li> <li>Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>Development of traditional knowledge protocols</li> <li>Definition and agreement on concepts of thresholds and significance relevant to traditional knowledge</li> <li>Identification and selection of VEC/VSCs*</li> <li>Identification of potential impacts</li> <li>Impact assessment and cross-cultural awareness training</li> </ul>	<ul style="list-style-type: none"> <li>May offer different perspectives on assessment process and methodologies</li> <li>May offer different perspective on what is a VEC/VSC*</li> <li>Opportunity for improving cross-cultural understanding, especially among assessment scientists and holders of traditional knowledge</li> </ul>
<b>Analysis</b>  <i>Assessment Practitioners</i> <i>Aboriginal Group(s)</i>	<ul style="list-style-type: none"> <li>Input to modeling (e.g., avoidance behaviour of certain species, selection of modeling techniques)</li> <li>Knowledge of cumulative effects (e.g., how will a particular VEC/VSC respond to given pressure, knowledge of trends)</li> </ul>	<ul style="list-style-type: none"> <li>Contribute to selection of indicators and/or measurable parameters (e.g., knowledge of response of ecosystems and/or species, traditional knowledge based prediction of cause-effect relationships)</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of which effects probable, or which would have most serious impacts to traditional use</li> </ul>	<ul style="list-style-type: none"> <li>May offer alternative analysis (e.g., risk, sustainability)</li> <li>Opportunity for improving cross-cultural understanding, especially among impact assessment scientists and holders of traditional knowledge</li> </ul>

**Table 3 Summary of Potential Application of Traditional Knowledge in Impact Assessments (cont'd)**

Environmental Assessment Process	Types of Traditional Knowledge <sup>1</sup>			
	Factual	Use & Management	Values	Cosmology
<b>Effects Assessment (cont'd)</b>				
<b>Mitigation</b>  <i>Proponent</i> <i>Assessment Practitioners</i> <i>Aboriginal Group(s)</i>	<ul style="list-style-type: none"> <li>Management of effects through identification of areas to be avoided to protect either traditional use or animal species</li> </ul>	<ul style="list-style-type: none"> <li>Identification and development of mitigation measures</li> </ul>	<ul style="list-style-type: none"> <li>Input as to how to prioritize mitigation</li> </ul>	<ul style="list-style-type: none"> <li>Legends and stories relating to environmental protection, resource management and conservation may offer alternative suggestions for mitigation measures</li> </ul>
<b>Significance</b>  <i>Proponent</i> <i>Assessment Practitioners</i> <i>Aboriginal Group(s)</i>	<ul style="list-style-type: none"> <li>Knowledge of trends can contribute to significance evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Interpretation of what results mean</li> </ul>	<ul style="list-style-type: none"> <li>Interpretation of what results mean<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Legends and stories relating to environmental protection, resource management and conservation may offer alternative interpretation of significance</li> </ul>
<b>Follow Up and Monitoring</b>  <i>Proponent</i> <i>Responsible Authority</i> <i>Aboriginal Group(s)</i>	<ul style="list-style-type: none"> <li>Monitoring impacts on VEC/VSCs*</li> <li>Verification of predictions</li> </ul>	<ul style="list-style-type: none"> <li>Contribution to development of monitoring programs and/or contingency plans</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of effectiveness of mitigation or accuracy of predictions</li> </ul>	<ul style="list-style-type: none"> <li>Legends and stories relating to environmental protection, resource management and conservation may offer alternative interpretation of follow up</li> </ul>
<b>Regulatory</b>				
<b>Screening</b>  <i>Proponent</i> <i>Responsible Authority</i> <i>Aboriginal Group(s)</i>	<ul style="list-style-type: none"> <li>Identification of potential impacts</li> <li>Identification of potential site selection problems</li> <li>Identification of constraints</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary identification of patterns of use</li> <li>Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>Identification of preliminary issues</li> <li>Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>May offer different perspectives on project design and alternatives</li> </ul>
<b>Mediation</b>  <i>Proponent</i> <i>Responsible Authority</i> <i>Aboriginal Group(s)</i>	<ul style="list-style-type: none"> <li>Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>Identification of preliminary issues</li> <li>Identification of potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>May offer different perspectives on project design and alternatives</li> </ul>

**Table 3 Summary of Potential Application of Traditional Knowledge in Impact Assessments (cont'd)**

Environmental Assessment Process	Types of Traditional Knowledge <sup>1</sup>			
	Factual	Use & Management	Values	Cosmology
<b>Regulatory (cont'd)</b>				
<b>Panel Review</b>  <i>Responsible Authority</i> <i>Assessment Practitioners</i> <i>Aboriginal Group(s)</i>			<ul style="list-style-type: none"> <li>Participation and representation on panel (e.g., Manitoba Hydro North Central Transmission Line assessment review panel)</li> </ul>	
<b>Hearings</b>  <i>Proponent</i> <i>Responsible Authority</i> <i>Assessment Practitioners</i> <i>Aboriginal Group(s)</i>			<ul style="list-style-type: none"> <li>Hearings - Direct statements from individuals* (e.g., Innu Nation presentation at Voisey's Bay hearings)</li> </ul>	
<b>Decision Stage</b>  <i>Proponent</i> <i>Responsible Authority</i> <i>Aboriginal Group(s)</i>			<ul style="list-style-type: none"> <li>Submission of comments on impact assessment adequacy</li> </ul>	
NOTES: 1 Adapted from Usher 2000 and 2001. Usher categorizes the impact assessment process into four stages: scoping, preparation of an environmental impact statement, public review and monitoring and follow up. He has identified specific areas where traditional knowledge can fit into the impact assessment process. These are noted with an asterisk. 2 Project design and definition includes preliminary planning, post-application and pre-license refinements; pre-development assessment work, and decommissioning. 3 There is a risk that the significance conclusions reached via traditional knowledge and western science will differ.				

## 5 Traditional Knowledge Reporting

### ***How do I prepare traditional knowledge reports for an impact assessment?***

The discussion on reporting assumes that external consultants will be responsible for gathering and presenting the traditional knowledge information, and applies to the assessment of impacts to traditional land use only. For discussion of how traditional environmental knowledge information may be presented by other assessment disciplines, please see Sections 4.2.2: Analysis and 4.2.4: Significance). The generic contents of a traditional knowledge study are presented, and well as the different types of reports that may be prepared for assessment work. Reports that contain baseline and assessment information are part of the standard, required reporting for an impact assessment. The community report is an optional report that is sometimes prepared for the community's use only.

As discussed in previous sections, there are several distinct stages in gathering and presenting traditional knowledge information. After protocols, study scope and a schedule have been agreed too, the traditional knowledge team can arrange a site visit. Once information has been gathered from the site visit(s) and traditional knowledge interviews, traditional knowledge facilitators will review the information and create a draft traditional land use impact assessment report. This may be comprised of separate baseline and impact assessment reports, or be combined into a single impact assessment report. These reports are public and will be filed as part of the regulatory application. Separate 'community' reports may also be created in cases where confidential or sensitive information is gathered, and which the Inuvialuit group wishes to see recorded, but not shared with the general public. These contents of the various reports are discussed in more detail in the following sections.

### ***How do I meet my commitment to the community on the reporting of traditional knowledge?***

Once the draft reports have been 'signed off on' by the proponent, copies of all draft reports need to be sent to the community coordinator or representative(s) for review and distribution. A follow-up meeting in the community may need to be scheduled to discuss preliminary results with traditional knowledge participants. Guidelines and requirement for this process will likely be provided in the traditional knowledge collection protocols. Other elements which may also be in the traditional knowledge collection protocols are the recognition of the study participants in all reports. Once all reports are finalized they should be distributed to the appropriate community organizations and to participants of the study. Results of the study should also be presented to the community at large. If videos are being shown of participants in public in their own or local community, ensure families who have members in the video are notified of the time and place when the video will be shown.



## 5.1 Contents

### ***What are the basic contents of a traditional knowledge study report?***

Some of the basic elements that would apply to most types of traditional knowledge reports include:

- Introduction, objectives and background – an overview of the proposed project and assessment context, as well as nature and extent of the traditional knowledge study completed, including Inuvialuit groups involved in the work.
- Cultural and historical context – a description of the history, culture and traditional use patterns of Inuvialuit communities whose traditional territory may be affected by the proposed project, and/or who are involved in the traditional knowledge study for the impact assessment.
- Regulatory context – a description of regulatory requirements and/or expectations regarding the collection and use of traditional knowledge for the assessment. This may be brief description of relevant legislation, policy, or simply a presentation of the project terms of reference as relevant to traditional land use and traditional environmental knowledge.
- Methods – a detailed description of scope, approach and nature of the traditional knowledge study conducted for the assessment. Participants' names would be listed here, if not provided in an acknowledgements section at the beginning of the report. (Unless specific release was granted, personal quotations used from various individuals are normally coded to protect a participant's identity.) Dates of interviews, types of material covered and questions asked, the manner in which assessment conclusions were derived would all be described in a methods section.
- Baseline – summary of background research.
- Results – results information would include a summary of the traditional knowledge information collected, the issues and concerns raised by participants, and recommendations (may be separate section) provided by traditional knowledge participants.
- Summary and Conclusion – a synopsis of results and conclusions reached as a result of discussions with traditional knowledge participants.
- Proponent Commitments – the proponent may wish to add information on mitigation or monitoring programs pertinent to Inuvialuit stakeholders and/or the traditional knowledge collected.

These categories of information may be presented together in a single report that contains both baseline and assessment information or separately as stand-alone baseline and assessment reports. The sections on baseline and assessment reports that follow describe the contents stand-alone documents.

## 5.2 Baseline Report

### ***What does a traditional knowledge baseline report look like?***

The traditional knowledge baseline provides the cultural and historical context, including traditional territories, for potentially affected Inuvialuit groups. It may also include a summary of issues from existing, published documentation. However, this type of information should not be presented until the Inuvialuit group(s) has given its agreement to work with the proponent, as Inuvialuit group(s) may see it as ‘stealing’ their traditional knowledge or, in worse cases, as a proponent trying to avoid negotiations or discussions with legitimate stakeholders.

Traditional knowledge information presented in the baseline is focused on information that is relevant to the assessment of potential impacts. It should be sufficient to support an independent decision as to whether potential effects on traditional use might arise from a proposed development, or whether a particular Inuvialuit group’s traditional territory will be implicated. More detailed study (i.e., effects assessment) is required to determine the nature and scale of potential effects.

A baseline report may also include a summary of the traditional environmental knowledge collected, or other baseline-type information collected during site visits and traditional knowledge interviews.

## 5.3 Assessment Report

### ***What does a traditional knowledge assessment report look like?***

Although the details of how and where impacts are assessed will change from assessment to assessment, it is most appropriate to create a separate section for the assessment of impacts to traditional use. This section would include information on mitigation and monitoring recommendations specific to the Inuvialuit stakeholders involved in the traditional knowledge study, and detail how traditional knowledge is used in the assessment.

The assessment of impacts to traditional use is largely a qualitative exercise that involves editing and applying information from traditional knowledge participants. However, quantitative analysis can be applied to berry picking or hunting areas by modeling the potential area lost due to project effects. This is appropriate if adequate context is added to permit a culturally appropriate interpretation of impacts. Cumulative effects can be illustrated by showing how access to the traditional use areas has been restricted by various developments.

The methodology section of the traditional land use assessment should clearly state the assumptions and limitations underlying the traditional knowledge study. For example, the age, number and gender of participants should be described, and any constraints on participation should be outlined. As with other impact assessment sections, the analysis and assessment of impacts must be defensible in a hearing.

It is recommended that the traditional land use impact assessment report avoid presenting and cross-referencing the conclusions of the other impact assessment disciplines. The issues and concerns raised by traditional knowledge participants leads to the development of an analysis of impacts from *their* perspective, and deserves presentation in that context. The presentation of ‘answers’ or ‘solutions’ from a western science perspective

in the traditional land use assessment has been commented on as being ‘dismissive’ by a number of traditional knowledge participants. A separate section for proponent commitments or strategies for mitigation may be included to ensure that RAs know that issues and concerns raised during the traditional knowledge study are being addressed.

## 5.4 Community Report

### ***What is a community report?***

A community report contains all of the traditional knowledge information gathered during site visits and participant interviews. This may include stories or personal histories that are not directly relevant to the impact assessment, but that do reflect values and traditions important to the Inuvialuit stakeholder, and which they wish to have documented. It may also contain information that is considered sensitive or confidential; information traditional knowledge participants do not want to reveal to the general public. Unlike the baseline and assessment documents, the community report is not a public document. Distribution of this document is controlled by the stakeholder.

## 5.5 Verifying Results

### ***How do I ensure that the results of the traditional knowledge study are accurate?***

The verification of results from the *traditional knowledge study* is essential, not just to ensure that the traditional knowledge was recorded correctly, but also to make certain that the Inuvialuit group’s values, perspectives and impressions of potential impacts are presented accurately (i.e., significance determinations). This step is a fundamental part of the process of completing a traditional knowledge study. Traditional knowledge participants and/or community representatives need to review and comment on how the traditional knowledge information provided is being used and presented for the impact assessment. In some cases, this will involve follow up meetings with traditional knowledge participants to present and review results. Traditional knowledge reports can only be finalized after the Inuvialuit stakeholder has reviewed and commented on the draft documents.

## 5.6 Mapping

### ***Can I present traditional knowledge results on maps?***

The mapping of traditional environmental knowledge and traditional land use sites or areas can be a delicate process if information considered confidential or sensitive needs to be shared to discuss potential project effects. Some potential concerns may be addressed through the process of creating traditional knowledge collection protocols. Details on how (or even if) sensitive information is to be presented may be available from such protocols. As with all other aspects of the traditional knowledge study and reporting, the desires and needs of traditional knowledge participants and community representatives have to be respected. Traditional knowledge facilitators, in obtaining informed consent, will discuss the fact that participants are not obliged to share any information that they feel to be of a sensitive nature. If the traditional knowledge participant feels that it is necessary to mention such areas to ensure that they will be

protected, interviewers can discuss how the exact location of important sites and/or areas might be protected through various mapping techniques (e.g., buffer zones, offsetting central points, setting boundaries of ‘red zones’ or areas that need protection).

Professional experience indicates that ‘real’ problems with presenting or using traditional knowledge are relatively rare in impact assessment practice. Traditional knowledge participants and Inuvialuit stakeholders are as anxious, if not more, to ‘protect’ the environment as impact assessment practitioners are, and to make sure that appropriate resource management is implemented.

Traditional knowledge information may be presented in any number of ways on maps. Traditionally used sites and areas may be represented. Significant or intensely used areas other may be ranked to illustrate where the majority of activity is (or was) taking place. It may be used to develop a constraints map illustrating areas that need to be avoided or protected. The important thing is that maps created for traditional knowledge reports accurately and appropriately reflect the nature and importance of the information gathered during the traditional knowledge study. The verification of mapped information can be done in conjunction with the follow up exercises required for the draft reports (see Section 5.5: Verifying Results).

## 6 Concluding Statements

### ***What are some of the major challenges facing the collection and use of traditional knowledge?***

Some of the major and fundamental challenges to the collection and use of traditional knowledge in impact assessments are summarized below. These issues need to be addressed to fully and effectively make use traditional knowledge in the impact assessment process.

- *Resource Management.* Traditional knowledge and its use in impact assessment is really about resource management. For Inuvialuit communities, the impact assessment process is not just about assessing the effects of a particular project; it is really about managing cumulative effects and environmental sustainability. Issues regarding informed consent, intellectual property, meaningful consultation and participation, and decision-making power must be addressed, so that impact assessment can become effective and meaningful to the Inuvialuit.
- *Meaningful Participation.* The Inuvialuit need to play a role in all aspects of impact assessment. The assessment of impacts to traditional use must include Inuvialuit perspectives; otherwise effects to traditional use are not really being assessed. This can only be done when the Inuvialuit become full and active members of the impact assessment team early in the process. Meaningful participation and consultation is not just about information sharing and the provision of reports and maps; it entails discussion, explanation and dialogue. If this approach is taken, it will be almost impossible to not ‘incorporate’ traditional knowledge into the assessment.
- *Funding and Training.* Informed consent and participation also requires the ability to fully understand and take part in impact assessment process and procedures, which in many cases involves the provision of funding and training. Adequate training and fiscal support is an essential part of the meaningful consultation and participation of Inuvialuit in the impact assessment process. Training is also necessary to improve proponent, RA, impact assessment managers, practitioners and scientists understanding of Inuvialuit cultures and the value of traditional knowledge.
- *Project Schedules and Timelines.* In addition to training, and funding to support such capacity building activities, project schedules and timelines are an additional hurdle. The Inuvialuit frequently do not become involved in an impact assessment until after biophysical baseline work and project definition is complete. It is difficult, if not impossible, for impact assessment scientists to make use of traditional knowledge after their scoping and baseline research has been completed. Proponent timelines often do not permit enough lead-time for discussion of the project and impact assessment process, including the consideration of the advisability of providing traditional knowledge or the identification of the specific questions to be addressed by the traditional knowledge study. Serious consideration of Inuvialuit involvement and traditional knowledge usually requires adjustments to project timelines.

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## Appendix A Sample Consent Form



## Traditional Knowledge Research Sample Consent Form

### **PART 1**

Participant Name: \_\_\_\_\_ Participant Code: \_\_\_\_\_

Date of Interview: \_\_\_\_\_ Family Affiliation/Community: \_\_\_\_\_

Participant Address: \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Length of residence on the land: \_\_\_\_\_

Elder \_\_\_\_ Harvester \_\_\_\_ Community Member \_\_\_\_

Male \_\_\_\_ Female \_\_\_\_

Was a language other than English used during the interview? Yes \_\_\_\_ No \_\_\_\_

Which? \_\_\_\_\_ Interpreter Name: \_\_\_\_\_

### **PART 2**

#### *Researcher Statement*

Interviews are being done in the communities of \_\_\_\_\_. Elders, harvesters and/or community members are being asked to share their knowledge, experiences and wisdom about the areas that are being studied to assist in \_\_\_\_\_ *[goals of project/study]* \_\_\_\_\_. The study team recognizes that the local communities and individuals maintain ownership and rights of distribution for their traditional knowledge.

As per the Traditional Knowledge Collection Protocols with your community, the study team agrees to:

- Respect restrictions on the use and distribution of information provided,
- Respect and present the information provided by the participants accurately and appropriately in our interpretations and analysis, and
- Provide drafts of any interpretations and analysis of traditional knowledge in a timely manner to community representatives and/or participants, who shall have the right to review the information to ensure its accuracy.

*Page 1 of 2*

**PART 2 (cont'd)**

*Participant Statement*

\_\_\_\_\_ *[Study researcher's name]* has talked to me about the work they are doing for  
\_\_\_\_\_ *[project/study name]* and I agree to provide information for this study.

I understand that the information collected will be used to \_\_\_\_\_ *[how the information will be applied;  
usually 'one-time' application]* \_\_\_\_\_.

I understand that a copy of working materials (e.g., maps, tapes, meeting minutes, reports, presentations) will be returned to \_\_\_\_\_ *[designated community organization]* for archival, and that I will be sent a copy of my individual interview transcripts and/or my interview tape(s) *(if applicable)*.

I give permission for my statements to be used in study reports: Yes \_\_\_ No \_\_\_

I would like my quotes to be used, but I would like my name protected: Yes \_\_\_ No \_\_\_

I consent to have my picture taken and used for this work: Yes \_\_\_ No \_\_\_

**PART 3**

\_\_\_\_\_  
*Participant (print name)*

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Interpreter (print name)*

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Interviewer (print name)*

\_\_\_\_\_  
*Signature*

## Appendix B Sample Interview Checklist

## Interview Checklist

### Traditional Knowledge Interviews

### Devon Offshore Exploration Drilling Program

#### *Part A: Assessment of Potential Impacts*

The topics below are introduced to provide us with a picture of where and how the proposed project may interact with or affect traditional land uses. This information is needed to conduct an assessment of the potential impact that the project may have on traditional land users.

Traditional land use information may be collected on a wide variety of things. Some examples include things such as camps, graves, fishing areas, travel routes, hunting spots, and spiritual sites. For each activity and or site, the questions of who, what, when, where, why and how should be asked. The mark-up map, with notes on associated activities, will be used to record these activities. Topics to be covered include:

- Which animals (includes birds and fish) do you use? Please include Inuvialuit names if they are not already recorded.
- How is the animal used and what role does it play in Inuvialuit life? For example, is it used for food, ceremonial purposes, to strengthen social customs (e.g., communal sharing of meat)?
- What is the relative importance of animals harvested? Or of areas used?
- Please identify areas of concentration by:
  - Types of activities taking place there (e.g., harvesting, camping, traveling)
  - Location (on map)
  - Type(s) of animal species
  - Time of year, season
  - Animal movements, migration
- Please identify type and methods of harvest:
  - Group or solitary hunting?
  - Family or group camps? Who, where, when?
  - What species are being harvested? Age, sex?
  - How harvested? Tools or equipment used?
- Please discuss the significance of relevant species and/or locations.
- Identify the changes that may result from project, and any negative or positive impacts that the participant may be concerned about.

*Page 1 of 5*

### ***Part B: Collection of Traditional Environmental Knowledge***

Based on the discussion of preceding two topics, the interviewer will likely have some idea of which of the following topics is relevant to the participant's particular area of expertise or traditional knowledge. These topics are related to the impact assessment components for the Devon project, and will help us provide traditional knowledge that can be used in the assessment.

Many of the generic questions regarding hunting and fishing will likely be covered by the questions in Part A. These questions have been italicized in the text below. If you have already covered them, skip these and go on to questions in plain text.

- Wildlife – marine mammals (seals, whale and polar bears)
  - Where is participant hunting?
  - When are they hunting in those areas?
  - What species are they hunting?
  - What are most important species and/or hunting locations?
  - Will there be any potential impacts on the hunting activities described above from the proposed project?
  - Does the participant foresee any impact on animal habitat or animal migrations?
  - Do polar bears use any of the areas that are targeting for drilling?
  - What about seals?
  - Are there any other wildlife species that may be affected by the proposed project?
  - Trends and changes. Note any changes have been observed and over what time period. Were changes noticed in participant's lifetime or in stories heard from Elders? What is the cause of the changes?
- Wildlife – marine birds
  - Where does the participant hunt birds?
  - When are they hunting in those areas?
  - What species are they hunting?
  - What are most important species and/or bird hunting locations?
  - Will there be any potential impacts on the bird hunting activities described above from the proposed project?
  - Does the participant foresee any impact on bird habitat or migrations as a result of the proposed project?
  - Where are birds gathering in the spring (when the ice is starting to open)?
  - Are there areas near the proposed project that are important for birds? For nesting? Or for staging (places where birds gather in preparation for migration)?
  - Trends and changes. Note any changes have been observed and over what time period. Were changes noticed in participant's lifetime or in stories heard from Elders? What is the cause of the changes?

*Part B: Collection of Traditional Environmental Knowledge (cont'd)*

- Fish (includes benthos – bottom-dwelling creatures - and plankton – small aquatic creatures that live in the water above the ocean floor, whale food):
  - Where is participant fishing?
  - When are they fishing in those areas?
  - What species are they fishing?
  - What are most important species and/or fishing locations?
  - Does the participant foresee any potential impacts on the fishing activities described above resulting from the proposed project?
  - Does the participant foresee any impact on fish habitat or fish migrations?
  - What is participant's knowledge of fish species presence? Season? Movement? Size of fish populations, or observed changes to this? How close are the fish to shore?
  - Trends and changes. Note any changes have been observed and over what time period. Were changes noticed in participant's lifetime or in stories heard from Elders? What is the cause of the changes?
- Coastal processes (erosion along the shoreline):
  - Where are the most active and least active areas on erosion along the coastline in the study area?
  - What direction does sediment moving towards in these areas?
  - Have any changes been observed in storm patterns? More often? Summer/fall? Shorter/longer? Bigger waves? Abnormal winter storms? Water levels nearshore during storms higher (storm surge)?
  - How does the level of boat traffic near the lease area compare to the 1970s and 1980s?
  - Trends and changes. Note any changes have been observed and over what time period. Were changes noticed in participant's lifetime or in stories heard from Elders? What is the cause of the changes?
- Ice and physical oceanography:
  - What are observed changes in ice conditions over time, particularly in Devon's lease area? Changes in when and how it forms in fall and breaks up in spring? Seeing same changes every year, or very different each year? More or less ice nearshore in summer? Is the old polar ice in summer different (i.e., heavier or lighter)?
  - Observed changes in ice thickness? Is it thinner or thicker during freeze-up? Early winter? Mid to late winter?
  - Changes in position or movement of landfast ice? Is the moving ice edge to the west of the Tuk Peninsula closer to shore than it used to be? Changes in cracks and small openings in the landfast ice?

*Page 3 of 5*

*Part B: Collection of Traditional Environmental Knowledge (cont'd)*

- Ice and physical oceanography (cont'd):
  - Changes in ice ridges or rubble fields (ice rocks or boulders)? Bigger/smaller? More/less? Is the ice smoother or rougher?
  - Is there more or less snow, changes in fall and winter winds or other factors that are causing changes in landfast ice conditions?
  - Observed historical changes in ocean currents?
  - Observations and concerns with respect to climate change and resulting changes in ice with respect to Devon's proposed project?
  - Concerns about changes in landfast ice that may result from the Devon project? (For example, a past concern - in the late 1970s and early 1980s - was the potential extension of the fast ice edge further offshore, thereby forcing the polar bear hunt further seaward.)
  - Trends and changes. Note any changes have been observed and over what time period. Were changes noticed in participant's lifetime or in stories heard from Elders? Note specific years if possible. What is the cause of the changes?
- Socio-economic:
  - Issues and concerns with respect to changes in employment, family income, cost of living, community infrastructure and demands on family life?
  - Changes to traditional land use and/or cultural values?
  - Impacts on overall community health and well-being?
  - Trends and changes. Note any changes have been observed and over what time period. Were changes noticed in participant's lifetime or in stories heard from Elders? What is biggest change participant has seen in their lifetime? What caused this change?
- Chemical oceanography (ocean water quality):
  - Does the participant have any issues or concerns regarding the impacts of the proposed project on ocean water quality?
  - Trends and changes. Note any changes have been observed in water quality and over what time period. Were changes noticed in participant's lifetime or in stories heard from Elders? What is the cause of the changes?

4 of 5

*Part B: Collection of Traditional Environmental Knowledge (cont'd)*

- Geotechnical (sea floor (bottom of sea) and sea bed (under sea floor)):
  - Does the participant have any issues or concerns regarding the impacts of the proposed project on the ocean floor or bed?
  - Trends and changes. Note any changes have been observed and over what time period. Were changes noticed in participant's lifetime or in stories heard from Elders? What is the cause of the changes?
- Air emissions:
  - Does the participant have any issues or concerns regarding the impacts of the proposed project on air quality?
  - Trends and changes. Note any changes have been observed and over what time period. Were changes noticed in participant's lifetime or in stories heard from Elders? What is the cause of the changes?
- Noise:
  - Does the participant have any issues or concerns regarding the potential negative impacts of the proposed project on noise levels?
  - Trends and changes. Note any changes in noise levels that have been observed and over what time period. Were changes noticed in participant's lifetime or in stories heard from Elders? What is the cause of the changes?
- Land and Resource Use:
  - Record any mention of potential impacts to sport, commercial or recreational (non-Inuvialuit) activities on the land.
- Other:
  - Does the participant have any other issues or concerns that they want to express?
  - Are there any topics that they want to discuss that have not been covered in the interview thus far?

5 of 5



## **Appendix C Workshop Report**

# **ESRF Traditional Knowledge Manual Review Workshop**

**JUNE 7 – 8, 2007**

**INUVIK, NWT**

**Prepared For  
Environmental Studies Research Fund**

**Prepared by  
KAVIK-AXYS Inc.**

**March 2008**

**ESRF-06-090**

## Executive Summary

A workshop was held in Inuvik on June 7<sup>th</sup> and June 8<sup>th</sup>, 2007 to review the draft Traditional Knowledge Manual: Using Traditional Knowledge in Impact Assessments. The workshop was attended by representatives of the Hunters and Trappers Committees (HTC), and Elder Committees from the six communities within the Inuvialuit Settlement Region (ISR), as well as a representative of the Environmental Impact Screening Committee. Requests for representatives from the Inuvialuit Cultural Resource Centre and Inuvialuit Game Council were also made but these organizations were unable to send representatives to the workshop.

The draft manual was developed with funding from the Environmental Studies Research Fund to address perceived deficiencies in and the lack of standard methodology in the collection, use, application and reporting of traditional knowledge in impact assessments in the ISR. The original drafting of the manual did not include direct Inuvialuit input. The workshop was used to obtain direct Inuvialuit feedback on the manual to ensure a common understanding and agreement on the process by which traditional knowledge will be used in the environmental impact assessment process. Tacit approval was achieved by obtaining acceptance of the process described in the manual and obtaining further input on how the process may be enhanced. Agreement for the purpose of this workshop does not refer to a formal endorsement by workshop participants. A formal endorsement would require separate statements of endorsement from each HTC and Elders Committee.

Community organizations were provided with extra copies of the draft manual for other members of their organizations who wished to provide comment. Several HTCs were visited on an opportunistic basis and briefed on the manual and its purpose. A presentation was made to the Environmental Impact Screening Committee and the Fisheries Joint Management Committee on the content and purpose of the manual. The Inuvialuit Game Council was presented with the results of the Traditional Knowledge Manual consultations at their September 2007 meeting. No concerns regarding the manual were raised at this meeting.

The manual was well received with the exception of a few individuals. These individuals did not see value to having the manual; this may have been due to confusion over the purpose of the manual and its audience. Comments received both during and after the workshop were very constructive. Comments were provided both on the review process for the manual as well as on the content of the manual. Overall, the manual was seen as a good tool to guide the collection, use and recording of traditional knowledge for use in environmental impact assessments in the Inuvialuit Settlement Region.

There was a consistent message from workshop participants and other community organizations that it would have been preferred if the manual was vetted through each community separately. Travelling to each community was not possible for the review of this manual and this was explained to workshop participants and Inuvialuit organizations. Consulting with individual communities should be considered as the preferred option for any new guidance documents related to traditional knowledge.

There were no comments or suggestions on Volume 1 of the manual; all comments and suggestions pertained to Volume 2. A number of the suggestions made at the workshop were ideas that had been captured in the manual. Most new suggestions and comments would enhance the manual if incorporated. This report documents the comments and suggestions made at the June workshop and other consultations on the Traditional Knowledge Manual. Suggestions incorporated into the manual are identified in this report by Manual Section.

It was suggested at the workshop that the Traditional Knowledge Manual should be referred to as a guide instead of a manual. For this report the original name of Traditional Knowledge Manual will be used but the revised document will be renamed a Traditional Knowledge Guide.

## Résumé

Les 7 et 8 juin 2007, un atelier a été tenu à Inuvik dans le but d'examiner l'ébauche du *Manuel des connaissances traditionnelles : utilisation des connaissances traditionnelles dans l'évaluation des répercussions environnementales*. Participaient à l'atelier des représentants des comités de chasseurs et de trappeurs et des comités des Sages des six communautés de la région désignée des Inuvialuit, ainsi qu'un représentant du Comité d'étude des répercussions environnementales. Avaient également été invités les représentants du Centre des ressources culturelles des Inuvialuit et du Conseil Inuvialuit de gestion du gibier, mais ces organismes n'ont pu envoyer leurs représentants.

L'ébauche du manuel a pu être réalisée grâce à un financement accordé par le Fonds pour l'étude de l'environnement en vue d'examiner les lacunes perçues et l'absence de méthode standard pour collecter, utiliser, appliquer et faire rapport des connaissances traditionnelles dans le cadre des évaluations des répercussions environnementales dans la région désignée des Inuvialuit. La première ébauche du manuel ne comprenait pas la contribution directe des Inuvialuit. L'atelier visait donc à obtenir les commentaires des Inuvialuit pour alimenter le manuel et ainsi parvenir à une compréhension et une entente communes sur le processus par lequel les connaissances traditionnelles seront utilisées lors des évaluations des répercussions environnementales. Une entente tacite a été réalisée en obtenant l'acceptation du processus décrit dans le manuel ainsi que leur contribution à l'amélioration du processus. L'entente ainsi réalisée durant l'atelier ne signifie pas que les participants y ont adhéré officiellement. Pour cela, il faudrait des déclarations d'acceptation de la part de chaque comité de chasseurs et de trappeurs de même que du comité des Sages.

Les participants à l'atelier ont reçu des exemplaires supplémentaires de l'ébauche du manuel pour les remettre aux autres membres de leurs organismes respectifs qui souhaiteraient exprimer des commentaires. Plusieurs comités de chasseurs et de trappeurs ont été rencontrés lorsque l'occasion se présentait pour leur expliquer les visées du manuel. Une présentation a été faite au Comité d'étude des répercussions environnementales et au Comité mixte de gestion de la pêche sur le contenu et les visées du manuel. Le Conseil Inuvialuit de gestion du gibier a pu prendre connaissance des résultats des consultations sur le Manuel des connaissances traditionnelles lors de sa réunion de septembre 2007. Aucune préoccupation à l'égard du manuel n'a été alors exprimée.

Le manuel a été bien accueilli, sauf par quelques personnes, qui ne croyaient pas à son utilité. Cela est peut-être dû à la confusion existant autour des visées du manuel et des personnes ou organismes auxquels il s'adresse. Les commentaires reçus durant et après l'atelier se sont révélés très constructifs; ils portaient à la fois sur le processus d'examen du manuel et sur le contenu du manuel. Dans l'ensemble, le manuel est considéré comme un bon outil pour guider la collecte, l'utilisation et la consignation des connaissances traditionnelles qui serviront aux évaluations des répercussions environnementales dans la région désignée des Inuvialuit.

Les participants à l'atelier et d'autres organismes communautaires ont déploré que le manuel n'ait pas été soumis à l'approbation de chacune des communautés. Or il n'était pas possible de se rendre dans chacune d'elles pour qu'elles en fassent l'examen; cela a été expliqué aux participants à l'atelier et aux organismes Inuvialuit. Par contre, il faudrait dorénavant consulter chacune des communautés chaque fois qu'un nouveau document d'orientation sur les connaissances traditionnelles est envisagé.

Il n'y a eu aucun commentaire ni aucune suggestion sur le volume 1 du *Manuel*; les commentaires et suggestions concernaient tous le volume 2. Plusieurs des suggestions faites à l'atelier avaient déjà été abordées dans le *Manuel*. La plupart des nouveaux commentaires et suggestions exprimés amélioreraient le *Manuel* s'ils y étaient incorporés. Le présent rapport prend en compte les commentaires et suggestions exprimés lors de l'atelier du mois de juin et d'autres consultations menées à propos du *Manuel*. Les suggestions incorporées dans le *Manuel* sont identifiées dans le présent rapport, selon la section.

Lors de l'atelier, il a été suggéré de remplacer le mot « manuel » par le mot « guide ». Pour les fins du présent rapport, l'appellation *Manuel des connaissances traditionnelles* sera maintenue, alors que le document révisé s'appellera le *Guide des connaissances traditionnelles*.

## Table of Contents

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
<b>2</b>	<b>Purpose of Workshop .....</b>	<b>1</b>
<b>3</b>	<b>Workshop Methodology .....</b>	<b>2</b>
<b>4</b>	<b>Workshop Feedback.....</b>	<b>3</b>
<b>4.1</b>	<b>Review Process: .....</b>	<b>3</b>
<b>4.2</b>	<b>Manual Comments by Section: .....</b>	<b>4</b>
<b>5</b>	<b>References .....</b>	<b>16</b>
<b>Appendix A</b>	<b>List of Participants.....</b>	<b>A-1</b>
<b>Appendix B</b>	<b>Workshop Agenda.....</b>	<b>B-1</b>
<b>Appendix C</b>	<b>Workshop Pictures.....</b>	<b>C-1</b>
<b>Appendix D</b>	<b>Letter from the Inuvialuit Environmental Impact Screening Committee ...</b>	<b>D-1</b>

## Abbreviations

CEAA.....	Canadian Environmental Assessment Act
EIA.....	Environmental Impact Assessment
EISC.....	Environmental Impact Screening Committee
EIRB.....	Environmental Impact Review Board
ESRF.....	Environmental Studies Research Fund
FJMC.....	Fisheries Joint Management Committee
HTC.....	Hunters and Trappers Committee
IFA.....	Inuvialuit Final Agreement
IGC.....	Inuvialuit Game Council
ISR.....	Inuvialuit Settlement Region

## 8 Introduction

Kavik-Axys was contracted by the Environmental Studies Research Fund (ESRF) to conduct a review with representatives of Inuvialuit communities of the draft Traditional Knowledge Manual: Using Traditional Knowledge in Impact Assessment (ESRF-06-090). The ESRF, which was established under the *Canada Petroleum Act*, sponsors environmental and social research to assist in decision making and planning for oil and gas exploration and production on frontier lands.

The Traditional Knowledge Manual was developed under an earlier ESRF contract (ESRF-04-048). The manual is designed for use by proponents, consultants and responsible authorities who use or are required the use of traditional knowledge in the environmental impact assessment process in the Inuvialuit Settlement Region (ISR). The manual discusses and provides approaches to developing protocols and strategies for the collection, application and reporting of traditional knowledge in environmental impact assessments (EIA). The manual was developed based on past examples of traditional knowledge use in environmental impact assessments, and on in-house expertise of staff in the collection and use of traditional knowledge.

In the ISR, “the Environmental Impact Screening Committee (EISC) has a legislated responsibility to screen all proposed developments in the ISR which may negatively impact the environment and/or Inuvialuit wildlife harvesting” (EISC 2004). This legislated responsibility is established through the Inuvialuit Final Agreement (IFA). If the EISC determines that a given proposal may result in a significant environmental impact then it may recommend rejection of the development or refer it to the Environment Impact Review Board (EIRB) for environmental review.

Neither the operating guidelines nor procedures of the EISC and EIRB specifically state a requirement for the use of traditional knowledge in an environmental impact assessment; however it is often expected by communities or government agencies that traditional knowledge will be used in environmental impact assessments. The EISC does require information on traditional and other land uses (EISC 2004). The EIRB operating procedures does require that “supplementary documentation necessary to support statements made in the Environmental Impact Statement or assist in the evaluation of potential negative impacts” be provided (EIRB 2004). This supplementary information may include traditional knowledge.

The Canadian Environmental Assessment Act (CEAA) does make reference to the use of traditional knowledge in environmental impact assessments but does not make it mandatory. Section 16.1 of CEAA states, “Community knowledge and aboriginal traditional knowledge may be considered in conducting an environmental assessment.” Although not mandatory through CEAA, it is becoming a more accepted practice to use traditional knowledge, when available, in environmental impact assessments.

## 9 Purpose of Workshop

The purpose of the workshop was to undertake a review of the Traditional Knowledge Manual with community representatives from the ISR. This review was necessary as the Inuvialuit were not directly involved in the development of



the draft manual. The workshop was designed to solicit feedback on the draft manual and to foster common understanding and agreement on the process by which traditional knowledge will be collected, analyzed, applied and reported in the environmental assessment process. Agreement in this case does not refer to a formal endorsement by workshop participants. Although the workshop participants were representatives of HTC's and Elder Committees, they did not have the power to make endorsements on behalf of their committees. The workshop aimed instead, at achieving agreement by acceptance or tacit approval of the processes described in the manual with enhancements suggested by workshop participants.

## 10 Workshop Methodology

A two day workshop was held in Inuvik on June 7 and June 8, 2007. Two representatives were invited from each Hunters and Trappers Committee (HTC) and Elders Committee from all six Inuvialuit communities (Appendix A). Invitations were also sent to the Inuvialuit Cultural Resource Centre, Environmental Impact Screening Committee (EISC) and Inuvialuit Game Council (IGC).

The workshop format was to include a combination of full group forums and break-out groups. The agenda (Appendix B) outlines the content and flow of the workshop. On Day one of the workshop, participants were provided with background information on why and how the draft manual was developed, followed by a high level overview of both Volume 1 and Volume 2 of the Manual.

The high level overviews were followed by a more detailed review and discussion of Volume 1. Volume 1 contains the results of an evaluation of traditional knowledge literature, definition of terms used in Volume 2 and a discussion on the direction of traditional knowledge studies. Essentially Volume 1 is a support document for Volume 2. No further discussion was held on Volume 1.

On the afternoon of Day 1 a broad overview of Volume 2 was provided followed by a more detailed summary of Sections 1, 2 and 3 of Volume 2. Prior to dividing into break-out groups a discussion was held on whether to stay as one group or continue, as proposed, into break-out groups. Workshop participants decided they preferred to stay as one group so that comments on the manual could be heard and discussed by all at one time. It was also decided that the remainder of Day 1 would be used to go through the summaries of the other sections of Volume 2 and that Day 2 would be used for discussion and comment.

On Day 2 the participants and facilitators were seated in a circle. This provided a more informal setting and allowed everyone to see the speaker. When it appeared that only a few individuals were commenting on any one section, opinions of other participants were solicited by the facilitators to obtain the most information as possible. At the end of the workshop, everyone around the table was asked to provide a final comment.

Hand written notes on the workshop were taken by the workshop facilitators. The workshop was also recorded using digital recorders.

As a follow-up to the workshop, letters were sent out to the participants of the workshop inviting any further comments on the draft manual. Letters inviting comments, and copies

of the manual were also sent to the different organizations represented at the workshop to allow other members of those organizations to provide comment.

Presentations were also made to the Environmental Impact Screening Committee (EISC) and the Fisheries Joint Management Committee (FJMC) to explain the purpose of the manual and to answer questions regarding its contents.

## 11 Workshop Feedback

Comments and suggestions made at, and outside, the workshop all pertained to Volume 2 of the Manual. No comments or suggestions were made regarding Volume 1; therefore, the Results section only pertains to Volume 2 of the manual.

Comments and suggestions from the workshop and subsequent consultations can be divided into two categories; those dealing with the review process of the manual, and those dealing with specific content of the manual.

### 11.1 Review Process:

All comments regarding the review process for the draft Traditional Knowledge Manual were related to a desire for more Inuvialuit input. This included Inuvialuit input at the drafting stage of the manual and the opportunity for greater input during the review process itself. Comments on the process included:

- An Inuvialuit representative should have been involved to guide the writing of the draft manual;
- The draft manual should have been presented separately to all Inuvialuit communities and their organizations;
- Workshop participants would have preferred to have more time to review the manual and to consult and present information about the draft manual and the workshop to their respective organizations;
- The draft manual should be vetted through all community organizations (HTCs, Elders Committee and Community Corporations);
- A request was made for an additional workshop to review changes made and to provide follow-up comments or suggestions on the draft manual, and
- The Inuvialuit should have been consulted prior to the development of the draft manual.

#### ***Summary and Follow-up***

A consistent message given at the workshop was that the manual should be presented to each community and community organization separately. People are strongly tied to their traditional knowledge. People who hold the traditional knowledge want to ensure they have a say on its collection, reporting and application. Some workshop participants were not comfortable with a few individuals being selected to speak on behalf of the whole community on matters pertaining to traditional knowledge.

It is suggested that any new initiative pertaining to traditional knowledge in the ISR be vetted through each community separately.

## 11.2 Manual Comments by Section:

### ***General Comments:***

Generally there were favourable comments on the purpose of the manual stating and its utility for people when conducting new studies. There were several comments questioning the necessity of having a traditional knowledge manual. The rationale given for not requiring a traditional knowledge manual was that the necessary guidelines for collecting and using TK already exist in documents such as the EISC Operating Guidelines and the Inuvialuit Final Agreement. Also it was felt by some that those conducting traditional knowledge in the ISR already knew how to conduct traditional knowledge studies. There was one comment that a manual cannot be written for obtaining traditional knowledge. The rationale provided for this last comment was that traditional knowledge is gathered by the people in the community and grows with individuals as they grow in age. It was also commented that traditional knowledge is not passed-on by writing but orally between people and that traditional knowledge should not be passed on by non-Inuvialuit.

Neither the EISC Guidelines nor the Inuvialuit Final Agreement provides guidelines for the collection and use of traditional knowledge. New researchers who come into the ISR may not have the same understanding of how to proceed with a traditional knowledge study in this region. These comments may have arisen from a misunderstanding of the purpose of the manual and that it is not intended to guide Inuvialuit in obtaining traditional knowledge but instead aimed at guiding others (non-Inuvialuit) on how to gather traditional knowledge from the Inuvialuit for the purpose of using it in environmental impact assessments. Other general comments and suggestions on the manual included:

- Keep the language in the manual simple – many of the words used are difficult for some people to understand; and
- Remove the word “Manual” from the title and provide a more descriptive title instead. It was commented on that the word “manual” in the context of traditional knowledge was confusing for some. It was suggested that the word “guide” be used in place of “manual”.

### ***Summary and Follow-up:***

Several workshop participants felt that there were too many difficult words in the manual making it hard to understand. It was suggested the manual be written in plain language. To turn the manual into a complete plain language document would require a complete rewrite. An alternative to a plain language document would be to replace some of the more difficult terms with simpler terms or phrases. It also should be noted that the main target audience for the manual is proponents, consultants and responsible authorities. The terminology used in the manual can have specific meanings to those for whom the manual is intended.

The term manual was felt by many at the workshop to imply too rigid a process for conducting traditional knowledge studies. They used the example of a car manual, which has very specific instructions that must be followed. However the guide was perceived as being more flexible in nature, which is the best approach to traditional knowledge study.

**Follow-up:** The suggestion to use more plain language may be considered in any future revisions of the manual.

**Follow-up:** Replace the term manual with guide in the title.

### ***Section 2.1: Fundamental Research Principles***

Two comments made at the workshop related to traditional knowledge research principles. These comments were:

- Traditional knowledge is owned by the people (in this case Inuvialuit); and
- Traditional knowledge needs to be respected.

#### ***Summary and Follow-up:***

The first comment which pertained to ownership of Inuvialuit traditional knowledge is covered in Section 2.1 of the manual. In this Section, the principle of ownership is expanded to also include control of the knowledge. The guide states “Aboriginal people own and control their traditional knowledge.” The second comment referred to the need to respect traditional knowledge. The manual refers to respecting the traditional channels of authority and levels of approval. The manual also states that researchers need to be culturally respectful at all times. However being culturally respectful and respecting channels of authority may not infer respect for traditional knowledge itself.

**Follow-up:** Respect for traditional knowledge should be added to the list of fundamental research principles. Respect for channels of authority and researchers being culturally respectful at all times should remain as principles as well.

### ***Section 2.2: Collection Protocols***

There was only one suggestion made regarding traditional knowledge collection protocols.

- People participating in traditional knowledge studies should be acknowledged in the resulting report(s).

#### ***Summary and Follow-up:***

Workshop participants stated that those participating in traditional knowledge studies should be acknowledged in the resulting report(s). The manual makes reference to this acknowledgement in Box Key B of Section 2.2 where it states “Recognition of the contributions to the study by elders and community workers.” Recognition in this case is synonymous with acknowledgement. However the statement in the box key refers to only elders and community workers. The reference to elders is too limiting in terms of who receives recognition. Non-elder adults and youth may also be participating in the study and should be acknowledged.

**Follow-up:** Change statement of recognition in Box Key B to read, “Recognition of contributions to the study made by interviewees and community workers.”

### ***Section 2.4: Study Format***

The results of discussions on Section 2.4 of the manual focused on two main themes. The first theme was on project descriptions that are presented to communities. Community representatives commented that project descriptions are not always complete nor presented in a format readily understandable by all people in the community. The second theme pertained to which organizations should be contacted initially when proposing to

conduct a traditional knowledge study. For example the local community HTC and Elders Committee are the logical starting places for collecting traditional ecological knowledge. For information regarding social and economic traditional knowledge, local Community Corporations should be contacted. In most situations these organizations would be initial contact points within a community. Comments on Section 2.4 included:

- When presenting a project to the community, make sure all elements of the project description are provided. Information on timing and activities in any given area are required for scoping purposes. Reasons why and when certain activities are occurring should also be provided in the project description;
- Use plain language in project descriptions when meeting with community members;
- The initial contact with the community should be through the HTC, and later with the whole community when presenting draft research protocols;
- Organizations should be asked whether they prefer to meet individually or together;
- Meet with Elders Committee before the HTC;
- Those to be interviewed should be chosen by HTCs, Elders and Community Corporations;
- Interviewees for environment and wildlife should be chosen by HTCs and Elders;
- Interviewees for social and economic considerations should be selected by Community Corporations; and
- Go to community organizations for background information.

### ***Summary and Follow-up:***

The comments provided by community participants when reviewing this section could also be applied to Section 3, which deals more with community engagement and the collection of traditional knowledge. Providing complete and clear understandable information on project descriptions will assist in defining the scope of a traditional knowledge study. Discussing the project with the appropriate organizations and individuals is valuable in determining the format of the traditional knowledge study to be conducted. There was a difference in opinion between which organization should be contacted first. In such cases it would be beneficial to discuss this subject with others who have previously worked in the community.

**Follow-up** A statement has been included under the first question, “What determines the size and type of traditional knowledge study I need to undertake?” The statement notes that the project description should be complete and presented in a format (plain language) that is readily understood by all community members.

**Follow-up:** Under the second question of Section 2.4 “What role will the community play in how the traditional knowledge study is carried out?” a generic statement has been added stating that the appropriate community bodies need to be consulted during the initial discussions on study methodology.

**Box Key C: Before you start:**

A comment on Box Key C was to add “determine timing of the study”. The rationale provided with this comment was that the time when a study is conducted can play an important role in the quality of information obtained and even affect the success of a study. For example, it would not be beneficial if the study was conducted when key individuals might be out on the land; also it may be advantageous to conduct a study just after people have returned from the land or harvesting so that the area and events are still fresh in their minds.

**Summary and Follow-up:**

As discussed in the results section, important considerations are determining when the best time to consult on conducting a traditional knowledge study and when is the best time to conduct the study in any given community.

**Follow-up:** Add community timing considerations to Box Key C.

**Box Key D: Traditional Knowledge Facilitators:**

There was only one comment regarding Box Key D. It was felt that the box was difficult to read in its present format as one long paragraph. The responsibilities of the facilitator were difficult to identify in this format.

**Summary and Follow-up:**

**Follow-up:** The format of this key box has been modified. The box begins with a short definition of what a traditional knowledge facilitator is, followed by bullets describing their responsibilities.

**Section 3.1.1: Community Workers**

There was very little comment on this section of the manual except for the following suggestion.

- Local community employment offices may be helpful in identifying interviewers.

**Summary and Follow-up:**

**Follow-up:** Community employment offices as a potential vehicle for hiring community interviewers has, been included in Section 3.1.1.

**Section 3.1.2: Traditional Knowledge Participants**

This section elicited a thorough discussion. The general intent of the comments and suggestions made were ensuring that the most knowledgeable people were interviewed during a traditional knowledge study. Suggestions brought forward were:

- All interviewees should be paid at the same rate of pay;
- The local HTC should identify or recommend the interviewees;
- Use interpreters when interviewing elders;
- Include men, women and younger people in the study as they may use the land differently and have different perceptions or experiences about an area or animal;

- Ensure that those interviewed have experience in the area where the project is to occur; and
- Consider interviewing outfitters.

***Summary and Follow-up:***

Comments on using men, women and youth as potential interviewees and consideration of their experience in a proposed project area are already contained in Section 3.1.2 of the guide. There was discussion at the workshop on having equality of pay for those interviewed such as between an adult non-elder and elder, or a woman and a man. However whether the rate of pay for youth should be the same as an adult was not as clear. Rate of pay is an important factor in any kind of study within a community as it may be an important source of income for many community residents. Also, if varying rates are paid to participants, this could lead to conflicts between individuals in the community, and reflect negatively on the study lead or proponent. Other comments such as the use of translators and the consideration of outfitters as potential interviewees are also not captured in the draft manual.

**Follow-up:** A brief discussion regarding the need for consistency and equality on rates of pay for interviewees has been included in the manual.

**Follow-up:** The potential requirement of using a translator when interviewing elders and consideration of interviewing outfitters have both been added to Section 3.1.2.

***Section 3.2: Information Needs***

Information needs refers to both the collection of traditional land use and traditional environmental knowledge. Comments received centered on the requirement for traditional knowledge researchers to have a basic understanding of the area of study and its use by local people. Comments also identified pitfalls which researchers may fall into such as when several places can have the identical name. Comments on Section 3.2 are as follows:

- Conduct background research first to see what other information has been collected from past studies;
- Use correct and/or local names of places and identify these locations on a map;
- Different places may have different uses and times of use (e.g., fishing camps, community gathering places like Shingle Point, medicine places where medicinal plants grows and camping places;
- Expectations from companies: What can companies give back to communities (e.g., donations to local traditional dancing groups);
- When possible use Inuvialuit words for better understanding – languages have different meanings;
- Take note of myths and taboos; and
- Consider people's way of life.



**Summary and Follow-up:**

The comment to conduct background research is already contained in the manual under Sections 3.2.1 and Section 3.5.1 Baseline Research. The comments referring to different places having different uses and time; to take note of myths and taboos; and to consider peoples way of life are already covered in Section 3.2.1. The question of what companies can put back to communities is addressed under Section 3.2.3 Information Needs - Communication. The comments on considering people's way of life is also covered in this Section (3.2.1).

**Follow-up:** Statements referring to the use of local or official location names and the fact that some names may be used more than once for different locations have been added to Section 3.2.1. A statement on using Inuvialuit words for better understanding has been added to Section 3.1.2 Traditional Knowledge Participants.

**Section 3.3: Information Sharing:**

Comments on this section are listed below:

- How information is shared may be specific to a given project and not apply to all studies.
- Community input is required on how information should be shared.

**Summary and Follow-up:**

**Follow-up:** Both statements have been incorporated into Section 3.3

**Section 3.3.1: Informed Consent**

In Section 3.3.1 there is a short list of information requirements on what the minimum documentation requirements are for an interview. One of the information requirements is stated simply as the "length of residence on the land". Many of the workshop participants felt that the "length of residence" was vague and that more information is required to properly understand the completeness of the knowledge a person may have about an area or activity.

**Summary and Follow-up:**

**Follow-up:** Under the bullet "length of residence on the land", sub bullets have been added which provide more descriptive detail on the length of residence of an individual. These include what seasons are spent in the area, what type of experience or use occurs in the area, last time spent in the area, and history of residence in the area.

**Section 3.3.1: Box Key H: Obtaining Informed consent:**

Obtaining informed consent is a primary responsibility of traditional knowledge facilitators. Box Key H provides a list of actions and concepts for obtaining informed consent. Comments and suggestions from workshop participants focused on ways of ensuring that both parties understand how a traditional study would be conducted and on how information would be used and included:

- Ensuring there is a commitment by a company about how traditional knowledge will be used and stored.



- Clearly explaining the project and all its components before obtaining consent.
- Obtaining consent for the use of photographs.
- Obtaining agreement between both parties on how information is to be used.
- Repeating what has been agreed to before consent form is signed – ensure both parties understand what is being consented to.
- Ensuring that consent is written out and copies are held by community organizations and traditional knowledge facilitators.

***Summary and Follow-up:***

As discussed in the Results section of this report, much of the discussion on this topic centered around ensuring that both parties understood what they were consenting to. Some of the comments made at the workshop are already contained in this Box Key, such as explaining the project and its components. As well obtaining permission to use photographs is covered in the text of Section 3.3.1 Informed Consent. However, other comments made will strengthen the process and understanding of obtaining informed consent. For example, some workshop participants did not equate explaining how traditional knowledge will be used with a commitment on how the knowledge would be used.

**Follow-up:** In Box Key H, statement number 3 now reads “Explain and commit to how and where traditional knowledge will be used...”

**Follow-up:** Point 12 has been added to Box Key H which refers to repeating what has been agreed on to ensure that both parties understand what is being consented to.

**Follow-up:** Point 13 has also been added which states that the use of a consent form (see Section 3.3.1), although not always necessary, is generally recommended.

***Section 3.4: Scheduling and Timing***

Workshop participants noted that timing and scheduling of interviews are important to the success of a traditional knowledge study. Suggestions were:

- Schedule traditional knowledge studies around special times (community harvest periods);
- Consider the timing of community activities and events when scheduling a study;
- The time of day when interviews are conducted can be important;
- Consider individual needs of the interviewee (timing, length of interview, place);
- Seasonal timing of interviews is important. Different communities have different seasons (e.g. spring break-up occurs earlier in Inuvik than Sachs Harbour); and
- Talk to communities shortly after a hunt so the area and activity are fresh in their minds.

***Summary and Follow-up:***

Some suggestions such as working around community harvest periods or community events have already been captured in Section 3.4. Other suggestions made pertained to fine-scale or large-scale scheduling. Fine-scale scheduling suggestions include

coordinating the time of day for conducting a specific interview. For some people or even communities, interviews in the morning may not be feasible. Also some interviewees may require more time or need to have interviews spread over several days. An example of a large-scale scheduling consideration is to schedule a traditional knowledge study after a hunting event such as caribou or geese hunting, so that the species and area visited are still fresh in people's minds.

Spring in one community in the ISR does not necessarily occur at the same time in another community. For example spring break-up or spring goose hunting may happen one month earlier in Inuvik than in Sachs Harbour. This is important to recognize when planning studies in different communities within the ISR.

**Follow-up:** Fine scale scheduling considerations such as time of day for conducting interviews and individual needs of the interviewee such as (timing, length of interview, place) have been included in Section 3.4. Large scale scheduling considerations, such as conducting interviews after the end of a hunting season, have also been included in Section 3.4.

**Follow-up:** The fact that all communities do not necessarily share the same times for seasons and harvesting events has been added as a timing consideration.

### ***Section 3.5: Baseline Work***

Workshop participants indicated that individuals who are developing questionnaires and conducting interviews should have a basic knowledge of the species in the area of interest. Conducting baseline work in advance of the interviews would contribute to the knowledge required by community workers or traditional knowledge facilitators to respond to answers with supplementary questions and to ensure an understanding of the information being provided by the interviewees. Suggestions included:

- Community workers and facilitators should have a basic knowledge of species in the area of interest.
- Facilitators should review studies which are publicly available.
- Interviewers and facilitators should self-educate themselves prior to conducting interviews.

### ***Summary and Follow-up:***

Suggestions on baseline work required prior to conducting a traditional knowledge study have already been captured in the manual with the exception of one suggestion that the interviewer have a basic knowledge of the animals in the area. This suggestion is important in that having a basic understanding of the animals discussed will assist in the development of the questionnaire and help the interviewer ask the relevant supplementary questions to responses given.

**Follow-up:** Having a basic knowledge of the species that may be discussed in the study has been included in this Section. A basic knowledge of a specie's life history may include information on migration, diet, mortality, calving or spawning etc. In some cases it may be useful to discuss possible questions with a local biologist.

**Section 3.5.2: Participant Interviews**

Most of the suggestions provided in this section related to respect for the interviewee and respect for traditional knowledge itself. There was one comment regarding the importance of interviewers understanding how people obtained their knowledge. This comment both reflects the need for respect of the interviewee and their knowledge, as well as an understanding of the completeness of the information being provided. For example, if an individual only spent short periods of time in an area and only participated in one activity in that area then their knowledge may not be as complete as someone who spent more time and conducted more activities in that same area. Suggestions included:

- Conduct interviews in person and not by phone;
- Accommodate the interviewee's schedule – do not have them fit your schedule;
- Do not use big words – use plain language;
- Consider the language used in questions. Consider having questions reviewed by a local person or translator;
- Have an interpreter present when possible;
- Come out to site (e.g. fishing camp) and watch and help out. Conduct the interview during this period;
- Interview elders at home but check with each individual to see where they would be most comfortable;
- Conduct the interview at the proposed project site when possible;
- Make the interviewee comfortable;
- Understand how people obtained their knowledge;
- Ask interviewees if they are tired and come back another day if required. This may also help people to remember new things;
- Provide ample lead time for scheduling the interview and ask the interviewee when the best time of day is to be interviewed;
- Have maps and pictures of the species or landscape available during interview;
- Conduct interviews in small groups and work around maps;
- Form a local working group in the community to help guide the traditional knowledge study;
- Researchers should request any previously approved questionnaires from the local Community Corporation;
- Standard sets of questions could be built and housed in each community for reference purposes;
- Consult with all communities which have individuals who use the area under study; and
- Ask people how you should record information (e.g. tape recording or writing).

**Summary and Follow-up:**

The suggestions provided regarding conducting site visits for interviews are covered in the manual under Section 3.5.3 Site Visits. The use of small groups, maps and pictures of species are also covered in the manual under Section 3.5.2.

A number of the suggestions were related to the issue of respect and provided additional guidance beyond what is already contained in the manual. It is important that the interviewee understands and agrees to the way information is being recorded. This is especially true when using tape recordings. It is also important to note the importance of accurate recording so that interpretation and analysis of the information provided can be conducted accurately.

The suggestion to form local working groups to help guide traditional knowledge studies may be useful for large traditional knowledge studies, but could become cumbersome and expensive for smaller traditional knowledge studies. An alternative would be to seek advice from the Inuvialuit Cultural Centre.

There was also a suggestion that all communities be consulted on traditional knowledge studies. This suggestion is not always practical or warranted. The communities that are consulted would be determined during the scoping of the study. It should be remembered that the traditional knowledge study is in support of an environmental impact assessment and therefore should be limited to the geographic extent of potential project effects. Often proposed projects are large distances from some communities with no potential for any possible effects occurring. Also knowledge of community members of areas outside their community harvest or use areas are generally limited compared to those individuals from communities who do use those areas. If there is doubt about when a community should be included in the study it is best to ask that community directly to determine their level of interest and potential involvement.

**Follow-up:** In the Section regarding respect, the following points were added.

- Interviews should not be conducted by phone.
- Interviews should be conducted to fit the interviewee schedule;
- Ensure the interviewee is comfortable.
- Give interviewees sufficient lead time when setting up interview times.

**Follow-up:** The following points were added to the manual:

- Consider the language used in developing questions.
- It may be useful to have questions reviewed by a local person or translator.
- Do not use big words in questions.

**Follow-up:** A brief section on recording the information from an interview has been added. This includes the importance of good reporting and the need to obtain permission for different types of recording from the interviewee.

**Follow-up:** The following points were added:

- Researchers (facilitators) may want to review previous traditional knowledge questionnaires for the area.
- To facilitate obtaining questionnaires, copies of questionnaires should be housed in the community for future reference. This suggestion has been included in Section 5.2 as part of Baseline Studies.

### ***Section 4.1: Applying Traditional Knowledge***

Workshop participants provided the following suggestions on how traditional knowledge may be used for project planning and design.

- Use traditional knowledge when estimating timing for break-up or freeze-up and how ice moves;
- Traditional knowledge can help determine where to place a rig or other project related activities;
- Use traditional knowledge for identifying lakes for certain purposes (e.g. water withdrawal) or which ones should not be used; and
- Traditional knowledge could help improve timing considerations to help avoid nesting and calving periods.

#### ***Summary and Follow-up:***

The application of traditional knowledge to project planning and design has been either misunderstood or not understood by many project proponents, especially those proponents new to using traditional knowledge. The manual has provided real project examples to demonstrate traditional knowledge value in project planning and design. Some suggestions made on how traditional knowledge can be applied to project planning and design during the workshop have been used in the manual. It was suggested that it would be beneficial to have a box key with additional examples of the application of traditional knowledge in project design and planning.

**Follow-up:** This suggestion may be considered in any future revisions of the manual.

### ***Section 4.2.5: Monitoring and follow-up***

There was limited discussion on the use of traditional knowledge for monitoring and follow-up activities.

- Local and traditional knowledge can help with monitoring such as observations of changes to important waterbodies or in selection of waterbodies to be monitored.

#### ***Summary and Follow-up:***

Only one suggestion was provided on the use of traditional knowledge for monitoring and follow-up. The suggestion is in this section of the manual as well as in Section 4.2.1, which also discusses the selection of indicators. No further changes are required to this component.

### ***Section 4.3.3: Traditional Knowledge Hearings***

An important element raised during the workshop discussion was the notification of community members when traditional knowledge was to be used in hearings. This was especially important if video or pictures from family members were to be used. It was also felt that if a representative of the participants in a traditional knowledge study assisted with the presentation of this knowledge then they would be in a better position to answer any questions regarding the knowledge in the study. Suggestions included:

- Having a local person who participated in the traditional knowledge study giving or assisting with the presentation of traditional knowledge at meetings;

- The HTC should be notified when information is to be presented;
- If a video is made during a traditional knowledge study, the families who may be on the video should be notified prior to it being shown at the hearing; and
- Copies of videos should be distributed to individuals in the study.

### ***Summary and Follow-up:***

The following two statements have been incorporated into the manual.

**Follow-up:** Consider using a local person who participated in the traditional knowledge study to assist with the traditional knowledge presentation.

**Follow-up:** The local HTC should be notified when the information is to be presented

### ***Section 5.0: Traditional Knowledge Reporting***

Numerous participants commented on the need to report back on the information gathered from a traditional knowledge study. Suggestions were:

- Report back to community;
- The report should be provided to the people who participated in the study;
- Reports should go back to the HTCs, Elders and Community Corporations;
- A presentation of the report should be made to the community;
- Allow some interviewees to review the report; and
- Use a community working group to guide and review the report.

### ***Summary and Follow-up:***

Suggestions and comments made regarding traditional knowledge reporting centered around the reporting responsibility of the facilitators back to the community. This responsibility is discussed in the manual during the establishment of protocols and partly in Section 5.4 Community Report. The community report is a separate document from the report filed publicly in an environmental assessment process. It would be advantageous to the reader of the manual to be reminded that any report on traditional knowledge should also be brought back to the community. This includes providing copies to community organizations and often to study participants. It would also be beneficial for a community interviewee or worker to review the report before release. A suggestion was made to use a working group but, as discussed earlier a working group may be useful in larger studies, but may not be practical for use in smaller studies.

**Follow-up:** An additional question to be answered was added to Section 5.0. The question reads “How do I meet my commitment to the community on reporting of the traditional knowledge study?” This would include review by community individual(s), presentation to the community, acknowledgement of study participants and reports back to community organizations and participants.

**Follow-up:** Additions in this Section include the use of videos and the need to contact family members if video is shown publicly so they may have an opportunity to view it. Also note copies of the video should be sent to the participants who may be in the video.

### ***Comments Received After Workshop***

A number of comments were received or discussed after the workshop was held. These comments were as follows:

- Add as a separate document or appendix a quick “field guide” version of the manual which contains a brief plain language description of key elements to conducting a TK study and a series of checklists or “things to consider” tables. Many of these checklists would be drawn from the key boxes in the manual;
- Box Key D: Traditional Knowledge Facilitators. This box key consists of one long paragraph. The box key should either become part of the text or be simplified for easy comprehension. The box may be more useful if it focused on the role of the facilitator and used bullets for the facilitator’s responsibilities; and
- If the focus of the manual is on the Inuvialuit Settlement Region then the term “aboriginal” should be replaced by Inuvialuit” and there should be reference to HTC’s, Elder Committees and other Inuvialuit and community organizations. A separate section with Inuvialuit organizations listed may also be useful.
- The Environmental Impact Screening Committee provided the following comments via a letter to KAVIK-AXYS (Appendix D).
  - “The manual ... should help the developers working in the Inuvialuit Settlement Region.”
  - “The Committee felt that any further input the project could receive from the communities could only benefit the final project.”

### ***Summary and Follow-up:***

A shorter version of the manual, such as a pocket guide or series of checklists would be beneficial to those working on a study within the community as a quick reference guide. The comment regarding Key Box D has already been dealt with from comments received at the workshop. The comment to replace the term aboriginal with Inuvialuit provides a clearer focus on the area for which the manual is intended. Listings of community organizations and contacts are available through organizations such as the Joint Secretariat and does not require duplication in the manual. Comments made by the EISC require no further follow-up. The manual has a strong community focus and the intent of the manual was to help developers in the ISR with understanding how to collect and use traditional knowledge in their project assessments.

**Follow-up:** The term aboriginal has been replaced with Inuvialuit, where appropriate.

## **5 References**

CEAA. 2003. Canadian Environmental Assessment Act. Justice Canada.

EIRB. 2004. Environmental Impact Review Board Operating Procedures. 52 p.

EISC. 2004. Environmental Impact Screening Committee Operational Guidelines and Procedures. 56 p

## Appendix D List of Participants



<b>Name</b>	<b>Organization</b>	<b>Community</b>
Annie B. Gordon	Elders Committee	Aklavik
Billy Archie	HTC	Aklavik
Donald Aviugana	HTC	Aklavik
Rhoda Kayotuk	Elders Committee	Aklavik
Ron Gruben	EISC	Inuvik
Sarah Tinhmiak	Elders Committee	Inuvik
Abel	Elders Committee	Inuvik
Joseph Haluksat	HTC	Ulukhaktok
Jean Ekpakohak	Elders Committee	Ulukhaktok
Sadie Joss	HTC	Ulukhaktok
Margaret Kanayok	Elders Committee	Ulukhaktok
Fred Thrasher	Elders Committee	Paulatuk
Bob Ruben	HTC	Paulatuk
David Ruben	HTC	Paulatuk
Mary Green	Elders Committee	Paulatuk
Jean Harry	Elders Committee	Sachs Harbour
Margaret Carpenter	Elders Committee	Sachs Harbour
Fred Wolki	Elders Committee	Tuktoyaktuk
Jean Gruben	Elders Committee	Tuktoyaktuk
James Pokiak	HTC	Tuktoyaktuk
David Nasogaluak	HTC	Tuktoyaktuk
<b>Facilitators</b>		
Doug Chipertzak	KAVIK-AXYS	
Michael Fabijan	KAVIK-AXYS	

## Appendix E Workshop Agenda

## **Agenda**

### **Traditional Knowledge Manual Review Inuvik, June 7 – 8 Midnight Sun Recreation Complex 9 am to 5 pm**

#### **Day 1: Thursday, June 7**

1. Prayer
2. Greetings & Introductions
3. Introduction to workshop
  - a. ESRF – what is it?
  - b. How the manual came about?
  - c. Purpose of workshop
  - d. Structure of workshop
  - e. What happens to the findings from the workshop?
4. High-level Overview of the Traditional Knowledge Manual (Volumes 1 and 2)
  - a. Purpose of the manual
  - b. How the manual was constructed.

#### **Morning Coffee Break**

5. Overview of Volume 1

#### **Lunch (Provided)**

6. Review of the morning findings
7. Overview of Volume 2
8. Sections 1 and 2 (Introduction and Research Philosophy)
  - a. Section Overviews
  - b. General discussion

#### **Afternoon Coffee Break**

9. Section 3: Collecting Traditional Knowledge
  - a. Section overview
  - b. Break-out groups
  - c. General forum to bring together results of working groups and further discussion

**End of Day 1**

## **Day 2: Friday, June 8**

### 10. Day 2 Introduction

- a. Review of Day 1 findings
- b. Process for Day 2

### 11. Section 4: Applying Traditional Knowledge

- a. Section overview
- b. Examples or case studies

### **Morning Coffee break**

- c. Break-out groups
- d. General forum and review of comments

### **Lunch (Provided)**

### 12. Section 5: Traditional Knowledge Reporting

- a. Section overview
- b. Examples
- c. Break-out groups
- d. General forum and review of comments

### **Afternoon Coffee break**

- 13. General forum and discussion
- 14. Next steps
- 15. Thank you

## Appendix F Workshop Pictures



**Photo 1** Workshop Participants and Facilitators



**Photo 2** Workshop participants discussing Traditional Knowledge Manual

## **Appendix G Letter from the Inuvialuit Environmental Impact Screening Committee**





## ENVIRONMENTAL IMPACT SCREENING COMMITTEE

September 14, 2007

Kavik-Axys  
Box 2320  
Inuvik, NT X0E 0T0

ATTENTION: MICHAEL FAIJAN

Dear Mr. Faijan,

RE: ESRF TRADITIONAL KNOWLEDGE STUDY

The Environmental Impact Screening Committee would like to thank you for making a presentation on the above-mentioned project on August 11, 2007. Learning more about the study, its origins and the objectives for the project was very helpful and informative.

Developers are encouraged to use the best knowledge they can obtain to prepare their project descriptions. This includes both Traditional Knowledge and scientific knowledge. The manual developed as part of this project should help the developers working in the Inuvialuit Settlement Region.

The Committee felt that any further input the project could receive from the communities could only benefit the final project.

Yours sincerely,

Fred McFarland

Chair  
Environmental Impact Screening Committee