Collecting Baseline Socio-Economic Data for Socio-Economic Impact Assessment: The Metlakatla Membership Census

by

Tanishka Gupta

B.A. (Environmental Studies), University of Alberta, 2014

Project Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Resource Management (Planning)

in the
School of Resource and Environmental Management
Faculty of Environment

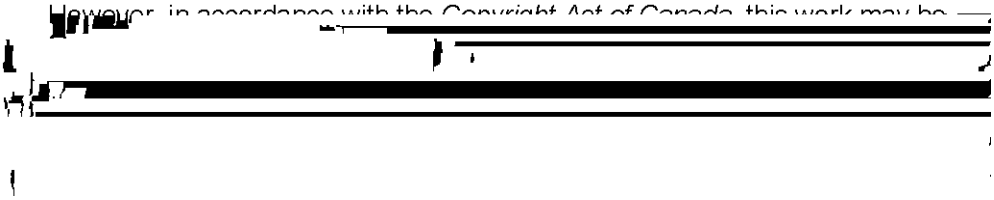
Report No. 682

© Tanishka Gupta 2017

SIMON FRASER UNIVERSITY

Fall 2017

All rights reserved.
However, in accordance with the *Copyright Act of Canada*, this work may be



Approval

Name:	**Tanishka Gupta**
Degree:	**Master of Resource Management (Planning)**
Report No.	**682**
Title:	***Collecting Baseline Socio-Economic Data for Socio-Economic Impact Assessment: The Metlakatla Membership Census***
Examining Committee:	**Chair:** Sarah Robertson Master of Resource Management Candidate

Murray B. Rutherford
Senior Supervisor
Associate Professor

Thomas Gunton
Supervisor
Professor

Date Defended/Approved: December 03, 2017

Ethics Statement

The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

[redacted]

Acknowledgements

First and foremost, I am immensely grateful to Metlakatla First Nation for the opportunity to work on such an important and ground-breaking initiative on cumulative effects. I would like to extend my deepest gratitude to Taylor Zeeg and Anna Usborne for your wisdom, guidance, and support throughout the Census program. Thank you so much to Mona White, Yvonne Ryan, Sharon Morven, Rebecca Ryan, and Nikita Leask for being such great census administration assistants. I would like to thank Metlakatla staff and department managers for sharing your invaluable contributions to the development of the Census. And finally, a huge thank you to the Metlakatla community members for your time, efforts, and patience in participating in the Census program. I will forever cherish the hospitality and kindness showed by Metlakatla.

I would like to thank my supervisor, Dr. Murray Rutherford, for your invaluable guidance and support through this project and throughout my time as a REM student. I am deeply grateful for your mentorship and everything I have learned from you as my professor and supervisor. Thank you so much to Dr. Tom Gunton for your wisdom, guidance, and constant encouragement. It has been such a privilege to be your student.

Thank you so much to Katerina Kwon for being such an awesome Project Lead and mentor. I truly appreciate the opportunity to work so closely with you and learn so much from you. Thank you as well to my colleague and cherished friend, Celina Willis. Our time together in Prince Rupert is a fond memory I hold dear. Thank you to the REM staff, faculty, and students for being such a generous source of wisdom, kindness, and support.

Finally, my appreciation for my family and friends knows no bounds. Thank you so much to Aaju, my Mum and Dad, my sister, Sooravi, my brother-in-law, Kartike, and Cheeni for supporting me in every way possible. Words cannot express my gratitude for your unfaltering love, support, and encouragement. Thank you to Arlene and Tara for being the most wonderful and supportive friends anyone could ask for. Lastly, to Jacob, thank you for always believing in me and loving me. Thank you for everything you do for me.

This research project has been funded with support from the MITACS-Accelerate Cluster program, the Metlakatla First Nation and Simon Fraser University.

Table of Contents

Approval ii
Ethics Statement iii
Abstract iv
Dedication v
Acknowledgements vi
Table of Contents viii
List of Tables x
List of Figures xi
List of Acronyms xii

Chapter 1. Introduction 1
1.1. Research Context 1
1.2. Overview of Research Objectives 3
1.3. The Case Setting – Metlakatla First Nation and the CEM program 4
1.4. The Metlakatla CEM Research Collaboration 6
1.5. Report Structure 6

Chapter 2. Baseline Data in Socio-Economic Impact Assessment and Cumulative Effects Assessment 7
2.1. Socio-Economic Impact Assessment and Baseline Data 7
2.2. Current Practices in Baseline Studies in Impact Assessment in Canada and BC 9
2.2.1 Purpose of Baseline Studies 9
Tc 0.007 Tw 1-4 .....007 Tw 0.337 0dA ( )Tj 11.DC /T3 Tc .DC /T3 rence </T3 Tc .DC

List of Tables

Table 1: List of VCs and Condition Indicators for each VC (Metlakatla First Nation, 2015). 33

Table 2: Survey Design Components of Other First Nation Community Surveys (Adapted from Gupta & Willis, 2016). 37

Table 3: Summary of Sources of Questions in the MMC 2015 Questionnaire (Gupta and Willis, 2016). 43

Table 4: Recommended Practices for the Metlakatla Membership Census 2015 (Adapted from Gupta & Willis, 2016). 48

Table 5:

Chapter 1.

Introduction

1.1. Research Context

Socio-economic impact assessment (SIA) is a vital component of environmental impact assessment and cumulative effects assessment. SIA is a tool to assess the social, economic, health, and cultural impacts of a proposed plan or activity (IAIA, n.d.; MVEIRB, 2007). The Interorganizational Committee on Principles and Guidelines for Social Impact Assessment (2003) defines social impacts as:

> *The consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society. The term also includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalize their cognition of themselves and their society* (p. 231).

In British Columbia (BC) and the.141 TDTj -2o-pos t needsn0dS,social Ipacts oarm y. ph peo

Soe efe toposts2007-0.002 Tc 0.002 Tw 0.283 032d ( )Tj by Tc 0 Tw 1.

A crucial step in SIA is the development of good baseline information, because changes to social valued components may be more easily identified and assessed when they are compared to a baseline. The *Principles and Guidelines for Social Impact Assessment in the USA* emphasize the importance of the collection of baseline information (Interorganizational Committee, 2003). The first of these principles states, “Achieve extensive understanding of local and regional settings to be affected by the action of a program or policy” (Interorganizational Committee, 2003, p. 234). Despite being a crucial step in SIA, developing baseline information is often overlooked and is perhaps the least understood step of SIA (Beanlands, 1990).

For SIAs in Aboriginal communities, baseline socio-economic data are often unavailable or deficient. While broad national or regional surveys, such as the Canadian Census, can be helpful in providing large-scale data for Aboriginal communities, these surveys may not provide a sufficient level of detail at the community level for a specific baseline community profile for the purposes of an SIA (Saku, 1999; Bruce et al., 2010; Swimmer & Hennes, 1993; Wright, 1993). Also, surveys at large scales that are administered to the general population may not collect relevant data for Aboriginal communities due to differences in the ways in which Aboriginal and non-Aboriginal participants interpret the questions. In addition, the frequency of data collection and the timing of [illegible]

database of consistent information through time. The data collected through the MMC

Figure 1:

1.4. **The Metlakatla CEM Research Collaboration**

The Metlakatla CEM program is a collaborative research initiative between Metlakatla First Nation, Compass Resource Management, and the School of Resource and Environmental Management (REM) at Simon Fraser University. Taylor Zeeg (Metlakatla Stewardship Society) is the lead coordinator of the CEM program. The researchers collaborated with Metlakatla on gathering best practices and developing a long-term work plan organized in phases for the CEM program. The focus of Phase 1 (July 2014 to May 2015) was to develop a CEM framework, characterize priority values and associated indicators, and identify management triggers and benchmarks (Metlakatla First Nation, n.d.). In that first phase, the researchers developed a new methodology for identifying and selecting VCs for the CEM program (Kwon, 2016). In Phase 2 (May 2015 to February 2016), Celina Willis (REM) and I developed and administered the MMC with the support of Katerina Kwon. The contents of Chapter 4 of this report are a result of a joint effort by Willis and myself. As part of Phase 2, Brennan Hutchison (REM) examined cultural values that are important to Metlakatla and how best to capture those data in the MMC. The CEM program is currently in its third phase which involves establishing management benchmarks and responses, and implementing monitoring for pilot values.

1.5. **Report Structure**

In the second chapter of this report, I discuss the importance of baseline data in SIA and CEA, as well as the deficiencies in obtaining this data in current processes. The third chapter provides a more detailed description of the research setting and the Metlakatla CEM program. I discuss case study research in general and the Metlakatla case in particular. A detailed description of the methodology for the conception, design, and administration of the MMC is presented in Chapters 3 and 4. In the fourth chapter, I discuss the design and administration of the MMC, and the results from the first two years in which it was administered (2015 and 2016). Chapter 5 discusses the strengths, limitations, and areas for further improvement of the census methodology. Finally, the report concludes with a summary of the research and recommendations for future study.

Chapter 2.

Baseline Data in Socio-Economic Impact Assessment and Cumulative Effects Assessment

2.1. Socio-Economic Impact Assessment and Baseline Data

Despite the substantial amount of literature on social assessment that offers best practice frameworks, direction, and other recommendations for improvements within the field, there has not been a consistent and reliable approach to addressing socio-economic impacts in environmental assessment processes in Canada (Carniol et al., 1981; Burdge, 2004). Several factors contribute to the inconsistencies; however, a recurring and persistent problem is the conceptualization and contextualization of socio-economic impacts (Torgerson, 1981; Taylor, Bryan, & Goodrich, 2004).

The Mackenzie Valley Environmental Impact Review Board (2007)

2. Profiling: overviewing and analysing the current social context and historical trends through baseline studies (Burdge, 2004; MVEIRB, 2007; Olsen et al., 1977; Taylor et al., 2004).

3. Estimating and projecting effects: examining and analyzing potential socio-economic impacts (Burdge, 2004; MVEIRB, 2007; Olsen et al., 1977; Taylor et al., 2004).

4. Evaluating significance: determining if the proposal is likely to cause significant adverse impacts on valued components (MVEIRB, 2007; Olsen et al., 1977).

5. Monitoring, mitigating, and management: collecting data on actual effects during project or policy implementation, mitigating negative effects, and managing change (Burdge, 2004; MVEIRB, 2007; Taylor et al., 2004).

6. Evaluation: reviewing the social effects of the change and the assessment process itself systematically and retrospectively (Taylor et al., 2004).

This report focuses on the second step in the SIA process: collecting baseline information on the community being impacted. There does not appear to be a universally accepted definition of “baseline studies”, as more than 15 formal definitions have been recorded (Beanlands, 1990). Vague definitions of “baseline” often cause difficulties for baseline studies. For the purposes of this report, “baseline” refers to “a time line and associated social, cultural and community information from which to start the assessment” (Interorganizational Committee, 2003). This report focuses on aspects related to the socio-economic environment including economic, social, health, and cultural conditions of a community. The primary objective of socio-economic baseline studies is to gather a community profile that maps the existing conditions and past trends associated with the human environment in which the proposed action is to take place.

2.2. Current Practices in Baseline Studies in Impact Assessment in Canada and BC

2.2.1 Purpose of Baseline Studies

The scoping phase and the profiling phase are known as the preliminary assessment of a project or program (Taylor et al., 2004). The profiling phase should follow the scoping phase closely: measuring existing conditions of identified valued components within clear assessment boundaries defined in the scoping phase. The success of an impact assessment process may depend largely on how well the preliminary assessment is conducted (Beanlands, 1990). Impact assessment processes are often conducted in circumstances with limited time and resources, which makes the preliminary phase particularly important as it guides the rest of the assessment process (Beanlands, 1990 Beanlands conditstant

2.2.2 Guidance on Conducting Baseline Studies for SIA

A demographic analysis of the characteristics of the affected population is often the first step within SIA (Finsterbusch, 1980). However, one of the more universal issues with baseline studies is that they are often undertaken without clearly defined objectives. This leads to superficial surveys being conducted that provide only reconnaissance-level data that may not be relevant later in the process (Beanlands, 1990). To avoid this, baseline studies should be tailored to address issues identified in the scoping and planning phase as closely as possible (Branch et al, 1984; Armour et al. 1977). The methodology to obtain baseline data should consider what is realistic and appropriate. The key is to use a methodology that will collect sufficient data while keeping in mind that SIA does not require absolute comprehension. Rather, it is important to focus efforts on obtaining the most important and relevant data (Carley, 1983; Taylor et al., 2004).

Baseline studies should consider gathering both quantified and unquantified data. While quantified data should be obtained where available, qualitative data are also important (Carley, 1983; Tester & Mykes, 1981). Tester & Mykes (1981) and Taylor et al. (2004) suggest that the myth of quantitative data being superior to qualitative data has resulted in failure at the methodological level in achieving a better understanding of the usefulness of, and the relationship between, the different forms of data. As the Mackenzie Valley Pipeline Inquiry illustrates, both quantitative and qualitative information can make unique contributions to the assessment process (MVEIRB, 2007).

In provincial EA processes, practitioners often rely on provincial government guidance concerning collecting baseline information. However, most of the available BC guidance for baseline studies focuses on biophysical elements of the environment. For example, the BC Environmental Assessment Office (BC EAO) advises practitioners to

otf fo how Technical guidance 7 22 [(I)-9(am)-6(pl)7(o)1nnerionsc 0 Tw -e t2013)

assessments consider the impacts to the socio-economic environment. Practitioners and proponents rely on the Application Information Requirements (AIR) developed by the BC EAO individually for each project to determine what data should be collected and assessed (BC EAO, n.d.). The AIR, however, typically do not provide specific guidance on how socio-economic data should be collected from Aboriginal communities.

The BC Ministry of Agriculture and Lands Strategic Land Policy and Legislative Branch published the *Guidelines for Socio-Economic and Environmental Assessment (SEAA): Land Use Planning and Resource Management Planning* in 2007. These guidelines were developed to provide a framework for analysing scenarios for large scale strategic land and resource management planning, and they include consideration of the social and heritage implications specific to local Aboriginal communities. The guidelines state that discussions with Aboriginal leaders and representatives are an integral part of any resource management planning process. While these guidelines emphasize the importance of considering Aboriginal-specific implications, they do not provide any best practices on gathering information from Aboriginal communities.

The lack of clear methods, approaches, and measures for SIA in Aboriginal communities is not limited to BC, as it is an issue that affects environment assessment processes across Canada. Aside from the Yukon Environmental and Socio-economic Assessment Board (YESAB) and the Mackenzie Valley Environmental Impact Review Board (MVEIRB), no other jurisdictions in Canada have a legislative framework for proper SIA at this time (Reid et al., 2017). Clear and transparent standards for SIA are necessary to ensure consistent methods and quality (Reid et al., 2017).

As shown in this section, most of the existing guidance on the collection of baseline information for impact assessment focuses on biophysical components of the environment being studied. There is little guidance available on socio-economic baseline requirements. Guidance and academic literature on collecting socio-economic baseline data from Aboriginal communities is severely lacking. As a result, issues regarding social, cultural, economic, and health aspects within Aboriginal communities are often disregarded or unaddressed. The next section describes the current practices used by

SIA practitioners in British Columbia and Canada to collect socio-economic data from Aboriginal communities.

2.3. **Baseline Studies Methodologies**

Baseline studies for SIA in Aboriginal communities require community-specific data that are not currently available from sources such as broad national or regional surveys. Moreover, there is no comprehensive guidance available for collecting baseline socio-economic data specifically from Aboriginal communities for SIA. In the field of SIA, and more broadly, EA, methodologies, best practices, or recommendations for collecting baseline socio-economic data specifically from Aboriginal communities are not available. Although there has been substantial research on gathering traditional ecological knowledge (TEK) from Aboriginal communities, these methodologies may be distinct to TEK. I discuss TEK and the methods for gathering this knowledge in section 2.4. Here, I provide an overview of more general methodologies available for baseline studies in SIA, including: secondary sources; interviews; workshops and community meetings; and field trips and observational studies.

In SIA, the aim of gathering information from various sources is not necessarily to gather as much comprehensive data as possible, but rather to gather the specific data necessary to adequately assess impacts (Carley, 1983; Taylor et al., 2004). Data gathering should use an issues-oriented approach that focuses on concerns and VCs identified in the scoping phase. The methodology of data collection should ensure that the data are relevant and valid so that the primary objectives of the SIA can be achieved (Taylor et al., 2004). The methodologies described in this section can be used to collect quantitative and qualitative data.

For any research on or with Aboriginal communities, principled methodologies with appropriate ethical standards should be emphasized and implemented. Research in which Aboriginal communities are the focal interest either directly or indirectly should honour principles of partnership, protection, and participation (FHSD, 2003; Panel on Research Ethics, 2015). The Aboriginal community should be fully informed about use and interpretation of data and researchers should obtain informed consent prior to the

beginning of any study. Research should empower Aboriginal people and be conducted in collaboration and partnership with Aboriginal communities to the fullest extent possible (FHSD, 2003; Panel on Research Ethics, 2015). These principles should be understood and implemented prior to conducting any of the methodologies described below.

2.3.1 Use of Secondary Sources

Secondary data are data that were originally collected for a different purpose than the purpose for which they are now to be used. Sources of existing data can be identified during the scoping phase of the SIA. Secondary data can be used in SIA to supplement and validate primary data (Branch et al., 1984). Additionally, secondary data may be helpful to cover topics for which primary data collection is not possible, and can be used throughout the assessment process as key sources of information and to provide social context (Branch et al.,1984;Taylor et al., 2004).

There are two principal ways to use secondary data in SIA: descriptively and analytically (Branch et al., 1984). Sources such as Canadian Census data, previous environmental impact statements, state reports, local newspapers, and local histories can provide valuable descriptive information about the community, the region and past development to broaden understanding of the community being impacted. From an analytical approach, secondary sources can also be used to analyze what type of information is perceived to be important, what types and magnitudes of impacts may occur, and how the community would be affected overall. In addition to focusing the SIA, existing data sources can provide an empirical basis and analytic framework for forecasting project impacts (Branch et al., 1984). Additional data sources may include provincial, federal or university publications, journal articles, local housing and real estate agencies, public and private museums, community centers, public health centers, news sources, and business directories (Branch et al., 1984; Taylor et al., 2004).

The use of secondary data may save time and money in conducting a baseline study. First, data that are publically available are often easy to obtain, which may save time in the course of an SIA (Taylor et al., 2004). Second, secondary data are cost-effective when compared to primary sources of data such as interviews and surveys. A

variety of different data sources can provide historical background and social trends for the assessment area. Secondary data are also useful for making comparisons between assessments for similar areas under similar circumstances. Taylor et al. (2004) emphasize that descriptive information such as maps, written histories, local and regional newspapers, and previous studies or assessments can be beneficial at the initial stages of an SIA as part of a scoping exercise that can then inform what additional, detailed information is required. Furthermore, historical documents collected over time can be used for trend analysis which is an essential aspect of SIA, particularly in forecasting future changes (Motz, 1983).

Secondary data sources can add substantial value to an SIA; however, they must be used in combination with one or more other methodologies in order to develop a complete understanding of the community profile. While existing data are helpful in defining community and demographic characteristics, existing institutional structure, and community history, the information available is often limited. Existing data may be out of date or incomplete, especially for communities that are rapidly changing (Branch et al., 1984). “Fugitive” documents, studies that are conducted for internal purposes by government agencies or private consultants, can be a rich source of information. However, such material is difficult to identify and hard to obtain. There may also be concern about the validity and reliability of the secondary data, depending on the source (Motz, 1983). For these reasons, primary data are also needed to profile a community and fill data gaps, regardless of how comprehensive the available existing information is (Branch et al., 1984; Taylor et al., 2004).

2.3.2 Questionnaires and Surveys

There is extensive literature and guidelines on developing, administering and interpreting surveys in social research. The purpose of this section is to provide an overview of the use of surveys in SIA and baseline studies. The specific guidance and methodology used for the MMC is described in detail in Chapter 4.

A survey is the process of gathering information for analysis by asking people questions. A questionnaire is a set of questions that are typically printed or written and

methodologies of survey research. When designed and administered properly, survey research can provide valuable information to contribute to a community profile in an SIA. However, SIA practitioners should be aware of the advantages and disadvantages of each survey methodology in order to ensure that the methodology is appropriate for the target population and acquires the required information identified in the scoping phase of the assessment.

2.3.3 Interviews

Interviews are a specific form of survey research that can be used to collect primary data for SIA. Interviews can range from unstructured conversations to highly structured formal questionnaires. Structured interviews are interviews where questions are standardized so that differences between the questions asked in interviews are minimized (Bryman & Bell, 2016; Walliman, 2006). In contrast, unstructured interviews are interviews with a flexible format where the interviewer may have topics or guides for questions but the discussion is more open ended and subject to the choices of the interviewer and interviewees. Branch et al. (1984) recommend a semi-structured format for interviews in SIA. Semi-structured interviews contain strzed

to-face interviews also have several disadvantages. First, they are resource and time intensive (Branch et al., 1984; Bryman & Bell, 2016; Walliman, 2006). Second,
-

Field trips require sufficient planning and preparing to be effective. Researchers should familiarize themselves

Federal, provincial, and territorial governments are engaged in the collection and analysis of Aboriginal data in Canada; however, most of these processes collect administrative data and do not gather primary socio-economic information (Saku, 1999; Swimmer & Hennes, 1993). Broad national and regional surveys can be very helpful in obtaining information at large scales from Aboriginal and non-Aboriginal communities across the country and there is an abundance of large scale surveys administered to the general population that may be used to obtain these data. For example, the Centre for Education Statistics (2010) conducted a scan on federal education data sources and found 15 major sources of data that included Aboriginal identifiers and asked questions about education. Three of these surveys focused solely on Aboriginal peoples: the Aboriginal Children's Survey; the Aboriginal Peoples Survey (APS); and the Census of the Population (Canadian Census). While these larger sources of data provide some information on Aboriginal peoples, they are administered at the individual level rather than at the household level, and the level of detail on Aboriginal identifiers such as Aboriginal ancestry, Aboriginal identity, Registered or Treaty Indian Status, and Indian Band or First Nation membership, differs between these surveys (Centre for Education Statistics, 2010). As such, these data sources, depending on the specific Aboriginal identifiers obtained, may not provide sufficient data at the community-level to constitute useful data for a baseline community profile for the purposes of an SIA.

The Canadian Census and the APS, developed and administered by Statistics Canada, are often relied upon because they provide the most comprehensive information on Aboriginal communities in Canada (Saku, 1999; Swimmer & Hennes, 1993). The Canadian Census is one of the few surveys that gathers information for on-reserve and off-reserve Aboriginal people and has been a major source of information on the characteristics of Aboriginal communities (Wright, 1993). The APS was designed to gather detail on certain socio-economic aspects such as education, economic participation, sources of income, financial well-being, physical and mental health, and sense of belonging (INAC, 2017). However, the APS includes only Aboriginal peoples living off-reserve.

There are several other broad surveys that collect information from First Nations in Canada. The First Nations Information Governance Center (FNIGC) administers three

surveys to people of all ages living on-reserve and in northern First Nations communities: 1) the First Nations Labour and Economic Development Survey, which will be administered for the first time in 2018; 2) the First Nations Regional Early Childhood, Education, and Employment survey, for which a full report was released in 2016; and 3) the Regional Health Survey (RHS) (INAC, 2017; FNIGC, 2017). In addition to these surveys, the Assembly of First Nations (AFN) administers the AFN School Survey, which is targeted towards gathering information from each First Nation school in Canada (AFN, 2013). The AFN School Survey interviews directors of education or principals but does not collect information directly from the students themselves.

The Canadian Census and the APS tend to focus on gathering nation-wide information, while the needs for Aboriginal data in SIA are frequently community based (Swimmer & Hennes, 1993). Several issues arise with the reliance on larger survey data to profile individual Aboriginal communities for SIA. First, since most data regarding Aboriginal communities in BC and Canada are collected through regional and national surveys, the data exist in aggregate form (Saku, 1999; Bruce et al., 2010; Swimmer & Hennes, 1993; Wright, 1993). The *Statistics Act* requires that information be kept confidential, and for communities with small populations, data are suppressed or rounded to hide individual identities (Saku, 1999). Confidentiality constraints also affect other surveys administered to Aboriginal groups. As such, community characteristics for SIA are often estimated based on larger databases from regional or national surveys or studies; this may not provide an accurate representation of smaller communities and their profiles. Another way larger survey datasets preserve individual confidentiality is by reducing the level of detail in the data by aggregating data into less detailed categories (Wright, 1993). The removal of detail is not ideal and may limit the analysis that can be performed. As Swimmer and Hennes (1993) note in their overview of government data for the use of Inuit statistics, researchers and Inuit organizations have to conduct surveys themselves because government surveys are not adequate to meet their data needs.

A second major issue with large-scale surveys is that non-Aboriginal and Aboriginal people may differ in their interpretation of questions within surveys that target the general population, such as the Canadian Census (Swimmer & Hennes, 1993). This

Finally, another major issue with the use of national, regional, or special surveys is variability in the timing of data collection and reporting (Bruce et al., 2010, Gramling, 1992). The timeframe (frequency of data collection) and the release date of the data into

specific requirements of a particular EA process. This level of detail may not be available

are the most appropriate method to investigate traditional knowledge (Armitage & Kilbun, 2015; Garvin et al., 2001; Huntington, 2000; Simmons et al., 2012). Focus groups or workshops are another means to provide avenues for guided discussion on a given subject within TEK (Armitage & Kilbun, 2015; Huntington, 2000). Questionnaires and surveys may not be suitable for research on TEK, because they may be too restrictive in the language and context used (Armitage & Kilbun, 2015; Huntington, 2000). Additionally, many guidelines suggest concentrating some effort on understanding which community members should be interviewed, with many also recommending to begin with community leaders and elders (Armitage & Kilbun, 2015; Garvin et al., 2001, Simmons et al., 2012). However, researchers should not rely solely on elders as a source of information because other community members may have specialized knowledge through their own experiences, and may be able to provide information about the communication of TEK from generation to generation.

Chapter 3.

The Metlakatla Nation and Cumulative Effects Management

3.1. Metlakatla First Nation

The Tsimshian, a group of culturally and linguistically related peoples, live in northwestern British Columbia in the area of the Nass and Skeena rivers (Halpin & Seguin, 1990). The Coast Tsimshian, one of the major Tsimshian groups, is comprised of two distinct First Nations: Metlakatla and Lax Kw'alaams (Metlakatla Governing Council, 2015). The main Metlakatla community, called Metlakatla Village, is located roughly 7 kilometers northwest of the city of Prince Rupert and 25 kilometers south of the home community of Lax Kw'alaams. Metlakatla First Nation's traditional territory spans approximately 20,000 square kilometers of land and sea in the Great Bear Rainforest. The traditional territory ranges from Hecate Straight in the west to where the Kitnaywakna River and Zymoetz River meet in the east, and extends north to the headwaters of the Sutton River and south to just below Klewnuggit Inlet along Grenville Channel (Metlakatla Governing Council, 2015).

As of May 2017, there were roughly 950 registered members of the Metlakatla First Nation, with approximately 100 members residing in Metlakatla Village and 850 members living off-reserve (INAC, 2017). Roughly 300 individuals of the off-reserve membership reside in the city of Prince Rupert (Metlakatla Governing Council, 2015). Due to the limited participation by Metlakatla members in the Canadian National Household Survey in 2011, there is little publically available demographic data on the Metlakatla community (INAC, 2017). However, Metlakatla managers have observed a changing demographic in their membership and a decline in their on-reserve population (Metlakatla Governing Council, 2015).

Historically, Metlakatla people harvested resources from their traditional territory based on seasonal availability (Halpin & Seguin, 1990). Metlakatla relied mainly on marine and freshwater resources for their traditional and cultural activities and livelihood (Metlakatla First Nation, n.d.). From the end of the winter through to spring, members harvested eulachon and seaweed. Summer was

are managed (Metlakatla First Nation, n.d.). Under their land use planning initiatives, Metlakatla have established 28 conservancies in their traditional territory, each with specific management goals and objectives. In addition to implementing internal programs, Metlakatla also collaborate with the Province of BC pursuant to a Strategic Land Use Planning Agreement (SLUPA), and have worked as part of the Coastal First Nations through the "New Relationship" initiatives to develop a Land and Resource Protocol Agreement (LRPA) with the province (Metlakatla First Nation, n.d.). Metlakatla are in the process of developing a new marine use planning initiative based on Marine Use Zones that designate specific areas for appropriate uses. Metlakatla also engage with the province and other First Nations on marine planning initiatives such as the Marine Plan Partnership for the North Pacific Coast (Metlakatla First Nation, n.d.) According to the MSO, these collaborative strategies have helped to equip Metlakatla with the ability to manage the marine and terrestrial resources within their traditional territory in accordance with their values while exploring opportunities to engage in sustainable development activities (Metlakatla First Nation, n.d.).

3.2. **Development in Metlakatla Traditional Territory**

linked to liquefied natural gas (LNG) production, transportation, or export. In February 2012, the BC provincial government adopted an LNG Strategy that focussed on expanding LNG extraction, production, and export. In the strategy, the Province asserted the goal of having three LNG plants in operation by 2020 (Province of BC, 2012). If the strategy's goals were met, natural gas production in BC would approach 3 trillion cubic feet per year by 2020. The North Coast region of BC is a focus for LNG development. Proposed LNG developments within the Prince Rupert area, Stewart, and Kitsault are within Metlakatla Traditional Territory and have the potential to impact the natural resources and the Metlakatla way of life. While Kitimat is outside of Metlakatla Traditional Territory, LNG facilities proposed in the Kitimat region have potential impacts on the Metlakatla First Nation through shipping routes.

3.3. **Overview of the Metlakatla Cumulative Effects Management Program.**

In response to recent and proposed industrial development, in July 2014 Metlakatla First Nation initiated a Cumulative Effects Management (CEM) program within Metlakatla Traditional Territory. The CEM program is a values-based framework that is founded on Metlakatla values, priority valued components (VCs), indicators, and management triggers and actions (Compass Resource Management Ltd., 2015a). The program aims to track changes to priority VCs, monitor and mitigate impacts, and implement strategies to manage cumulative impacts. Metlakatla's approach to CEM aims to inform decisions at two levels: 1) at the individual project scale via federal and provincial EA processes and 2) at a territory-wide scale to inform marine, land, and community planning and establish key considerations for future development (Compass Resource Management Ltd. 2015a; Metlakatla First Nation, 2015).

The CEM program defines values as things that are important for maintaining the integrity of Metlakatla members, Metlakatla way of life, and the natural environment (Compass Resource Management Ltd., 2015a). Valued components are elements of the human and natural environment that will be measured and monitored to protect Metlakatla values (Metlakatla First Nation, 2015). The CEM program uses two types of indicators to monitor the status of valued components: condition indicators and stressor

us(at)-7/nt.66(s)-2e()-37E1(fM)-6-upac-04>BDC-9(-04>B2 T33.554>5 Tw -3.772 p)6(r(a

indicators. Condition indicators are metrics used to measure the overall status of a VC. Stressor indicators are metrics that measure changes in factors that may impact condition indicators

monitoring. The “cautionary zone” triggers restorative action. The red zone means that the condition of a VC is critical and requires stringent measures to quickly restore the VC to a preferred zone, if possible. These tiered triggers assist in addressing uncertainty and incorporate a precautionary approach (Metlakatla First Nation, 2015).

The design and development of the CEM program is taking place in two phases. Phase 1 focussed on the development of the CEM values foundation, including the identification of priority values, associated indicators, comparison benchmarks, and preliminary management triggers. Working with Metlakatla managers and community members, the research team determined that the program would

Metlakatla will reassess priority VCs and indicators that will be monitored through the CEM program.

3.4. **Metlakatla Membership Census**

The need for a process to collect community-specific baseline socio-economic data was identified in phase 1 of the CEM program, because the CEM project managers determined that the available primary socio-economic data specific to the Metlakatla community were not sufficient. For example, although the National Household Survey gathers demographic, social, and economic information about people in Canada, including Aboriginal peoples, it has obtained little demographic information about Metlakatla members due to lack of participation from the First Nation in the NHS (INAC, 2017). In the next chapter I discuss the design and administration of the MMC, which was developed to collect the necessary baseline socio-economic data for the CEM program.

Chapter 4.

living within the Metlakatla Traditional Territory. For the purposes of the MMC, youth were defined as people from 15 to 24 years of age; adults were defined as those from 25 to 64 years of age; and elders were defined as those of 65 years of age and over.

The process of designing and developing the MMC began with a literature review to determine best practices for general survey methodology and specific practices for

Table 2: Survey Design Components of Other First Nation Community Surveys (Adapted from Gupta & Willis, 2016).

	Tsawwassen First Nation Community Survey	Stellat'en First Nation Membership Survey	Curve Lake First Nation Community Survey

This combination of literature, background material and other surveys was used to guide the sample design, questionnaire design, and data collection methodology for the MMC.

In addition, recommendations for obtaining TEK were applied in the design and planning of the MMC. These recommendations include focused workshops and interviews with elders, which

4.1.1 Sample Design

There are two main kinds of surveys: sample surveys and censuses (Statistics Canada, 2010). Censuses collect data from an entire defined population, whereas sample surveys collect data from a small portion of the population that ideally represents the broader population. There are advantages and disadvantages of both survey types and the decision to use one or the other depends on the population being surveyed, the goals of data collection, and the resources available to implement the survey.

A sample survey can be a more economical method of data collection than a census. Since sample surveys are implemented on a smaller scale, they are also easier to control and monitor. However, because sample surveys only collect data from a fraction of the population, proper sample frames and stratification need to be determined in order to yield results that accurately reflect the characteristics of the population (Parker, 2011; Statistics Canada 2010). On the other hand, censuses can be costly and time-consuming, but they may more accurately capture data on the entire population than a sample survey does and they can provide better demographic data across the population (Parker, 2011). Censuses can be the preferred data collection methodology for small population sizes or when data are required for small geographic areas (Statistics Canadavera(T6)11())-6(.)]TJ 0 Tc 0 Tw 11.467 0 Td ( )Tj 0.272 0 Td ( )Tj EMC /P <</MCID

is predominantly located in the Prince Rupert region. The defined population and the geographical location of the members made it feasible to contact survey the entire population. Additionally, the Metlakatla department managers suggested that promoting the project as a census would help communicate the goals and importance of the CEM program and could create a feeling of responsibility for members to participate in the MMC and the CEM program as a whole. Due to the types of data required for the CEM program, the research team determined that the census would collect more relevant data if administered at the individual-level rather than at the household-level.

The research team also decided that a single combined survey that collected a broad range of socio-economic information, rather than multiple topic-specific surveys, would be the most appropriate approach for the Metlakatla census, for the following reasons (Compass Resource Management Ltd., 2015b.). First, the process of developing, administering and interpreting a combined census survey could improve coordination and communication between departments. Departments would be able to align objectives, share knowledge and understanding of issues facing the community,

with questions on other topics that could be added or removed in any particular iteration of the census depending on whether the specific data were required or not for that year. Copies of the questionnaires used for MMC 2015 and MMC 2016 can be found in Appendices A and B, respectively.

The modules designed specifically for the CEM program included Cultural Activities, Economic Prosperity, and Health. Additional modules designed for other individual Metlakatla department needs included Crime Perception, Land Code, Governance, and Communications. While Governance is also a pillar under the CEM program, it was included in the MMC as a general module and not a CEM-specific module. The reason for this is that the VC for governance in the MMC is “ability to steward” and the indicator is “stewardship ability.” This indicator could not be reliably measured with a census survey. Instead, the Governance module of the questionnaire included general questions pertaining to respondent’s perceptions of Metlakatla governance.

For the Cultural Activities Module, the 2015 census focused on individual levels of effort and participation. The indicators for the FSC participation VC under the Cultural Identity pillar were: level of effort, youth participation and household participation. Since the MMC was administered on an individual level and not a household level, questions regarding the third indicator for FSC participation, household participation, were not included.

Figure 3: 42

Table 3: Summary of Sources of Questions in the MMC 2015 Questionnaire (Gupta and Willis, 2016).

MMC 2015 Module	CEM Indicators	Primary Sources
Personal Information	NA	• Curve Lake First Nation Community Survey 2014 • Stellat'en First Nation Member Survey 2014
[redacted]	NA	Questions provided by the Metlakatla Communications department
Land Code	NA	Questions provided by the Metlakatla Land Code department
Governance	NA	• Curve Lake First Nation Community Survey 2014 • Calgary Citizen Satisfaction Survey 2015

Since the CEM program is unique to Metlakatla, examples for questions pertaining to some CEM-specific indicators were unavailable from other sources. In these instances, new questions were developed that would gather information required to assess the specific CEM indicator. Once a set of questions for each module was developed, a Metlakatla manager reviewed the questions to select those that would be most appropriate and best suited for their needs.

4.1.3 Data Collection Methodology

Questionnaires can be administered using interview-assisted methods or

faster and more efficient (Statistics Canada, 2010). Additionally, the computer-assisted method allows researchers to use complex question structures and logic such as

Table 4: Recommended Practices for the Metlakatla Membership Census 2015 (Adapted from Gupta & Willis, 2016).

	Tsawwassen First Nation Community Survey	Stellat'en First Nation Membership Survey	Curve Lake First Nation Community Survey	Metlakatla Membership Census	Rationale
Data collection method	Personal interviews, with option for telephone interviews	Self-administered, paper and online version of questionnaire	Self-administered paper questionnaire	Self-administered, paper and online version of questionnaire	More frequent and accurate reporting of sensitive information
Survey Length	90 minutes	12 pages, 43 questions	16 pages, 40 questions	18 pages, 54 questionsi2495.2401 T5i 0.t311(s)- m (NA)Tj ET Q28 re f4	NA

4.2. **Metlakatla Membership Census 2015**

4.2.1. MMC 2015 Administration

The MMC 2015 was the pilot census for the CEM program and was administered between August 21 and September 10, 2015. The number of Metlakatla members in the target population and their contact information were determined through band member records provided by the Metlakatla Communications Department. According to these records, the total number of Metlakatla members of 15 years of age and over residing in Metlakatla Traditional Territory at the time of the MMC 2015 was 309. Of these, Metlakatla records had 296 members with confirmed addresses out of which 275 members' phone or email contact information was known.

The administration of MMC 2015 initially followed the original census administration plan closely. The researchers organized a census testing workshop and invited band staff to attend. Most attendees were staff members of the Metlakatla Band Office. This included adult members, non-members, elders, and youth. Researchers received feedback on the phrasing of questions and questionnaire format, as well as suggestions for additional questions to ask on issues that concerned the community. The time it took participants in the workshop to complete the questionnaire ranged from roughly 25 minutes to an hour. While the questionnaire length was not decreased at the time because of the priority topics the questions addressed, the questionnaire was revised to incorporate suggestions on question phrasing, structure, and questionnaire organization. During the workshop, participants were given the option of testing either the paper survey or the computer-assisted method and provided feedback on the ease of use of the computer-assisted method as well as the paper method.

While the proposed census administration plan was helpful at the beginning of the administration process, researchers changed certain aspects during administration of the census due to circumstances. Due to scheduling conflicts with their work with the Metlakalta Band Office, the high school students were unable to assist with census administration. Instead of high school students, three adult 9(t)-7(ude)11(nt)-7(s)-

census administration team provided these census administration assistants with temporary employment, the opportunity to participate in an important Band initiative, and work experience. These assistants were familiar with the communities in Metlakatla and in Prince Rupert. They assisted the researchers by contacting members to inform them of the census and following-up with members who had already been contacted. The census administration assistants received a full day of training on the purpose and process of the census, and the importance of confidentiality and methods to maintain confidentiality.

researchers antas y.asm

fMo-

The second crucial change in the administration plan was in how the census was actually administered to participants. As proposed in the census administration plan, researchers anticipated that the computer-assisted method would be the preferred method for members to complete the census. However, as census administration proceeded, researchers noted that despite encouraging participants to use the electronic

onlino u9Td [x6(a)112(i)set7 ortonl13(t)d ( )Tj -0.002 Tc 0.039 Tw 0 -1.71.40 [(i)3(n e)11(f)-17(e)11(r)

for improvement. These recommendations are specific to the MMC and are targeted towards increasing the reach of the census and the response rate as well as improving the quality of responses.

1. Administer a paper based census, and maintain an online census option

While many participants opted to complete the census on iPads, most members said that they preferred to complete a paper version of the questionnaire. For the next iterations of the census, researchers recommended distributing paper copies of the questionnaire while still keeping the online census platform available for members to use with their own iPads or other computers. Eliminating the provision of iPads in the administration process would reduce the cost of administering the survey while still maintaining the option for members with access to computers to complete the census online at their convenience. Additionally, keeping the online census option available would help reach members who are not available through the door-to-door method or who reside elsewhere within the traditional territory.

2. Distribute questionnaires through personal, scheduled drop-

2.availstinair6-6(es)]TJ 0 Tc 0 Tw3.0

appeared to encourage respondents to complete the questionnaire. Additionally, employing and training Metlakatla members to administer the census develops capacity within the community.

4. Reduce the total length of the questionnaire.

The 2015 questionnaire was lengthy and it took some members more than one hour to complete. The questionnaire included some questions that were later determined to be unnecessary or ineffective. Therefore, researchers recommended that questions that did not collect essential information on the membership should be removed in subsequent iterations of the census. A shorter questionnaire would be less onerous for respondents and may achieve a higher response rate. As the census evolves over time, administrators will be able to learn more about which modules and specific questions within modules are required every year and which can be repeated at more extended intervals.

5. Organize two census testing workshops prior to census administration.

The census testing workshop was a critical element in the design of the MMC because researchers had the opportunity to incorporate feedback on the design and administration of the census and to adapt the questionnaire and administration plan to the community's specific characteristics. However, due to time constraints, for the pilot census researchers were unable to fully incorporate some suggestions from the workshop because more follow-up and discussion about the details would have been required. Once the census was revised after the initial workshop, another test of the questionnaire would have been helpful to ensure that the revisions were appropriate and sufficient. A second testing workshop would allow the census administrators to research suggestions provided by the participants in t

were left unanswered or were answered incorrectly, which

format as MMC 2015 but incorporated lessons learned from the first iteration in order to achieve better response rates and gather more information from the community. Administering the MMC annually reinforces to Metlakatla members that it is an ongoing and necessary census. However, as a more complete set of baseline data is established and trends are better understood, the frequency of the administration of the MMC or some of the modules may change over time.

Most of the lessons learned from MMC 2015 were incorporated into the design and administration of MMC 2016, with the exception of the recommendation that two census testing workshops be held. It was not possible to schedule a second workshop in 2016 because of time constraints. This recommendation is still a valuable suggestion and should be incorporated into iterations of the census in the future.

The MMC 2016 was administered from August 10 to August 26, 2016 using primarily paper-based questionnaires that were distributed using the scheduled door-to-door methodology. An online questionnaire was also available for members who could not be reached in person or who lived outside the Metlakatla Village/Prince Rupert region. Census administrators contacted members via telephone to inform them of the census and requested a time for a drop-off or suggested that the member complete the census online if an in-person meeting was not possible. Additionally, Metlakatla members familiar with the community were hired to accompany SFU researchers to assist with census administration.

The participant recruitment strategy for MMC 2016 included publishing announcements through community newsletters and social media, reminder emails to the members for whom Metlakatla managers had email addresses, and personal invitations to members through email and phone. The announcements through email and social media also included the link to the online survey. The questionnaire followed the same modular structure as MMC 2015 and included six modules: Communications, Land Code, Cultural Activities, Health, Base and Demographic Module, and Adequate Housing. The Communications and Land Code modules were modules designed for specific Metlakatla department needs and were not components of the CEM program. While MMC 2016 included the same modules and covered similar topics as MMC 2015,

the questionnaire in 2016 was shorter and had 41 questions, whereas MMC 2015 had 54 questions.

As a result of Hutchison's (2017) research on Metlakatla cultural values, the questions in the 2016 questionnaire pertaining to cultural activities were more specific and detailed than in 2015. The questionnaire asked members to (1) estimate how many days per year they participate in va

living in the traditional territory increased to

socio-cultural activities, and knowledge of Sm'algyax, the Metlakatla language (Hutchison and Kwon, 2017).

The health pillar for the CEM program includes individual health conditions, access to health services, adequate housing, and personal safety as priority values. While data on perceived personal safety was gathered in MMC 2015, researchers and Metlakatla managers determined that it did not need to be addressed in MC 2016 because data on perceived crime severity was unlikely to change in a single year in the

on-reserve and off-reserve employment levels. As reported in the in the Aurora LNG EA and based on MMC 2015, approximately 20% of membership surveyed living on-reserve were employed full-time compared to 51% of membership surveyed living off-reserve. These statistics depict the percentage of individuals employed in the population surveyed, rather than the employment rate, which is the percentage of individuals within the labour force who are employed. The average income level on-reserve was $ 20,000-24,999, as compared to $ 30,000-39,999 off-reserve. Through MMC 2015, Metlakatla managers were also able to provide data on education and training levels. Fifty-one percent of the membership surveyed had a high school diploma or higher. Roughly 28% of the membership surveyed had completed grade 12 only, 9.9% held a trade certificate or diploma, 8.5% a collage diploma and 4.3% a university degree. Compared to males, a greater number of surveyed female Metlakatla members held a postsecondary certificate, diploma or degree (27.5% vs. 17.8%)

The iterative design of the MMC program, which allowed revisions to the survey design and administration, may have contributed to the improvements in the overall response rates and the quality of data collected between MMC 2015 and MMC 2016. Additionally, response rates for questions pertaining to sensitive information such as income or health conditions improved as there were fewer non-responses for questions pertaining to individual and household income levels and individual health conditions in MMC 2016 than in MMC 2015. For example, the non-response rate for the question pertaining to household income decreased from 44% in 2015 to 26% in 2016 (Kwon, 2017a). The value and use of the MMC results for the CEM program and other Metlakatla decision-making processes are discussed in the next chapter.

Beyond the CEM program and the Aurora EA, the MMC data are being used in various other Metlakatla decisiond tMde-8 [(ar22.12 0 Td [(in)-3( )(her)-63.598c 0.088 C)3(E)ora E a (. T

od Tm(prodaM)1ua1va0decM0(M)52 T56yr2015ar9i3 Tw 09(M1(M

can be employed by the community to gather the necessary socio-economic data. Community surveys can be used to address issues such as lack of any data for desired indicators; lack of recent data for indicators; and data that are not otherwise available at the local community level due to confidentiality issues.

The importance of community-designed and administered surveys goes well beyond impact assessment:asbe usf

FNIGC, 2016). Community surveys that are initiated, managed, controlled, and owned by Aboriginal communities are one of many tools that communities can use to assert and maintain Indigenous data jurisdiction (FNIGC, 2016).

Turning specifically to SIA, Aboriginal communities may be more equipped to participate in the assessment process if they have the means and capacity to collect and monitor data pertaining to their own communities. In Canadian federal

develop partnerships with provincial and federal agencies such as Indigenous and Northern Affairs Canada, Statistics Canada, and others involved in data collection, to ensure that the most appropriate data are collected and made available in a timely manner. This may include, for example, financing or introducing new surveys or activities to obtain data that are not presently collected, or resolving data sharing concerns (Bruce et al. 2010).

5.3. **Lessons Learned**

This research, conducted in collaboration with Metlakatla First Nation, sought to develop a methodology to effectively collect baseline socio-economic data on Metlakatla communities for the purposes of SIA and CEA. The recommended methodology is based on principles of the Metlakatla First Nation while also integrating guidance from the literature on socio-economic data collection methodologies and previous surveys of Aboriginal communities. ie recolaborslogns 0.91002 Tw 0b1.717 Td ure on

-

proponents, which may be perceived to be biased and not have as much integrity (Fluker and Yewchuk, 2017). While the MMC was designed and implemented in a very specific context, the recommendations outlined in Chapter 4 may assist the administrators of other community surveys for similar purposes.

5.3.2. Effectively engage a community throughout the design and

survey methodologies to Metlakatla department managers, who then offered

benefits to reporting community survey results to the community. Disseminating findings from community-based research is a critical aspect of collaborative research as it contributes to inclusivity throughout the process (Ferrieria and Gendron, 2011; Horowitz et al., 2009; KAHR, 2008; Panel on Research Ethics, 2015). Through this work, communities can learn about the importance of the research and how it may benefit them (Horowitz et al., 2009). In SIA, specifically, the dissemination of results of baseline data gathering can provide the community with an opportunity to understand and critique their own community profile and be able to compare it to other communities. It is important that the results are communicated using methods and language that allow members to understand the results and their implications (Horowitz et al., 2009; KAHR, 2008). Addressing [(a)2(d-27([(A)2(d-21(d)5(m)-1(i)-1(n)-1(i)-2(s)-1(t)-2(r)-6(i)3(nat)-7(i)3(ng)-1g)-11(e)] rsu

the Land Code department and the Communications department. Data pertaining to these areas of concern were provided to the departments to use for their own purposes. Additionally, data collected for a particular purpose may be of use for other needs as well. A protocol should be in place to ensure that access to the data is granted to those who need it for valid reasons, provided that appropriate confidentiality measures are in place. Ultimately, as part of the principles of data governance, it is the community's and the leadership's authority to decide what the data protocol would entail according to their own principles and needs, subject to obtaining informed consent of individual respondents at the time that they complete the questionnaire.

5.3.4. Formalize an understanding of the confidentiality, ownership, and use of data and information

This recommendation closely relates to the preceding recommendation on dissemination of results and maintaining protocols for access to the information. Information collected through community surveys may contain sensitive personal data, such as personal and household income, health, and contact information. Confidentiality can be a particular concern for small community populations because, even if personal identifiers are removed, there is a risk that the identities of individuals will be apparent with smaller aggregate collections of data (AFN, 2009). In such cases, it may be necessary to change the grouping of data so that the aggregate data cannot be deconstructed to the individual level.

Researchers working with First Nations communities have an obligation to establish privacy and confidentiality measures early in the engagement process (Panel on Research Ethics, 2015). The extent of disclosure of personal information should be decided by local authorities together with the researchers (with the informed consent of individual respondents), and is largely determined by the community's perspectives of ownership, control, access, and possession. An understanding of confidentiality and use of the data should be formalized, especially if data are being shared with agencies outside the community.

Any researchers or staff involved with the collection and handling of data should undergo proper training in confidentiality protocols and ethics in research. Communities

	• Having an assistant who is a member of the community to help conduct interviews can be key to the success of the study (Jonk, 2009)
Disseminate the data collected back to the community and make it accessible for community leadership and staff to use (with appropriate safeguards to maintain the integrity of the data)	• Dissemination is a critical aspect of collaborative research as it creates inclusivity throughout the process (Ferrieria and Gendron, 2011; Horowitz et al., 2009; KAHR, 2008; Panel on Research Ethics, 2015) • Communities can learn about the importance of the research and how it may benefit them (Horowitz et al., 2009) • In SIA, specifically, the dissemination of results of baseline data gathering can provide the community with an opportunity to understand and critique their own community profile and be able to compare it to other communities
Formalize an understanding of the confidentiality, ownership, and use of data and information	• Researchers working with First Nations communities have an obligation to establish privacy and confidentiality measures early in the engagement process (Panel on Research Ethics, 2015)
Conduct an ex-post evaluation of the community survey to help improve future iterations	• Developing lessons learned from previous iterations of a survey can help improve future iterations • Survey administrators can seek feedback from survey participants to understand how to improve survey administration from the respondents' perspective

5.4. **Limitations and further research**

There are several limitations to this research, primarily related to the case study approach and the unique context of the MMC and the CEM program. The CEM program is a specific community-driven initiative for which Metlakatla First Nation has a vision and to which it has dedicated substantial resources. This specific Metlakatla context must be taken into account when considering the applicability of the MMC methodology for other Aboriginal communities.

The case study approach was chosen for this research because case studies allow researchers to examine complex phenomena holistically (Yin, 2014). The case study methodology enabled development of an in-depth understanding of the intersections of various variables that could influence the success of

References

Adams, M., Carpenter, J., Housty, J., Neasloss, D., Paquet, P., Service, C., … Darimont, C. T. (2014). Towards increased engagement between academic and indigenous community partners in ecological research. *Ecology and Society*, 19(3), 5. doi: 10.5751/ES-06569-190305

Alberta Environment and Parks, (2013). Guide to preparing environmental impact assessment reports in Alberta. Government of Alberta. Retrieved from http://aep.alberta.ca/land/land-industrial/programs-and-services/environmental-assessment/documents/GuidePreparingEIAReportsAlberta-2013A.pdf

Armitage, P. & S. Kilburn. (2015). Conduct of Traditional Knowledge Research – A

BC Ministry of Environment (BC MOE). (2016). Water and Air baseline Monitoring Guidance Document for Mine Proponents and Operators. [Victoria, BC]. Ministry of Environment. Retrieved from: http://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/water_air_baseline_monitoring.pdf

BC Ministry of Environment (BC MOE). (2012). Values: A consistent approach to describing values in natural resource assessments. [Victoria, BC]: Ministry of Environment.

BC Ministry of Agriculture and Lands (BC MAL). (2007). Guidelines for Socio-Economic and Environmental Assessment (SEEA): Land Use Planning and Resource Management Planning. Victoria, BC. Retrieved from: https://www.for.gov.bc.ca/tasb/slrp/policies-guides/SEEA_guidelines.pdf

BC Ministry of Jobs, Tourism and Skills Training (BC JTST), Economic Development Division. (2016). *BC major projects inventory September 2016.* Retrieved from BC Ministry of Jobs, Tourism and Skills Training website: http://www2.gov.bc.ca/gov/content/employment-business/economic-development/industry/bc-major-projects-inventory

Beanlands, G. (1990). Scoping methods and baseline studies in EIA. In Wathern, P. (Eds), *Environmental impact assessment: Theory and practice.* (pp. 33-46). Taylor & Francis Ltd.

Berkes, F. (2008). *Sacred ecology*. Second edition. Routledge, New York, New York, USA.

Bernard, H. R. (1998). *Handbook of methods in cultural anthropology*. Walnut Creek, California: AltaMira Press.

Booth, A. L., & Skelton, N. W. (2011a). Improving First Nations' participation in environmental assessment processes: recommendations from the field. *Impact Assessment and Project Appraisal*, *29*(1), 49–58.

Booth, A. L., & Skelton, N. W. (2011b). "We Are Fighting for Ourselves" — First Nations' evaluation of British Columbia and Canadian environmental assessment processes. *Journal of Environmental Assessment Policy and Management*, *13*(03), 367–404.

Branch, K., Hooper, D.A., Thompson, J., & Creighton, J. (1984). *Guide to social assessment: A framework for assessing social change*. Boulder, CO: Westview Press. Inc.

Bruce, D., P. Doyle-Bedwell, & W.K. An-Jager. (2010). Baseline Data for Aboriginal Economic Development: An Informed Approach for Measuring Progress and Success. The Atlantic Aboriginal Economic Development Integrated Research Program. Darthmouth, Nova Scotia. Retrieved from: http://www.apcfnc.ca/images/uploads/FinalReport-BaselineIndicators.pdf

Bryman, A., & Bell, E. (2016). *Social research methods.* (Fourth Canadian ed.) New York: Oxford University Press.

Burdge, R.J. (2004) Social impact assessment: definition and historical trends. In Burgde R.J. *The concepts, process and methods of social impact assessment.* Middleton, WI: Social Ecology Press.

Canadian Environmental Assessment Agency (CEAA). (2016). Cumulative Effects Assessment Practitioners' Guide. Government of Canada. Retrieved from http://www.ceaa.gc.ca/default.asp?lang=En&n=43952694-1&toc=show&offset=3

Canadian Environmental Assessment Agency (CEAA). (2017). *Canadian Environmental Assessment Registry.* Retrieved from htp83 0 Td [(R)14(et)(a/)-7(050)11(/)-7(i)Bu9dNtp:reA -0.00d

Finsterbusch, K. (1983) Survey research. In K. Finsterbusch, L. Llewellyn and C.P. Wolf (eds). *Social impact assessment methods*. Beverly Hills, California: Sage Publications.

The Firelight Group. (n.d.) Some Principles Underlying Effective Socio-economic impact assessment with indigenous communities. Retrieved from: http://www.thefirelightgroup.com/thoushallnotpass/wp-content/uploads/2017/03/Firelight-Principles-of-SEIA-updated-march-20-2017.pdf

9pploadsneon Gic1w 0 -oID 4,p47(w)3(w7)Tj -0.013 Tc://(a)11(t)Ap47cce-7(ss a-7(nrc2dons) Pp47o-7(sse-

Metlakatla First Nation. (n.d.) Stewardship. Retrieved from http://www.metlakatla.ca/overview/stewardship

Metlakatla First Nation. (2015). Metlakatla Cumulative Effects Management: Phase 1 Executive Summary. Retrieved from: http://www.metlakatla.ca/sites/default/files/CEM%20Phase%201%20Executive%20Summary%205June15.pdf

Metlakatla Governing Council. (2015) Strategic plan. Metlakatla First Nation. Retrieved from http://www.metlakatla.ca/sites/default/files/MGC%20Strategic%20Plan%2007May15.pdf

Motz, A.B. (1983). Historical Documents. *Social Impact Assessment Methods*. Eds. K. Finsterbusch, L.G. Llewellyn, & C.P. Wolf. Beverly Hills, California: Sage.

Mustel Group Market Research. (2008). Tsawwassen First Nation Member Survey. Retrieved from http://www.bctreaty.ca/sites/default/files/Tsawwassen_Member_Survey.pdf

Nadasdy, P. (1999). The Politics of TEK : and the “Integration” of Knowledge. *Artic Anthropology*, 36(1), 1–18.

Olsen M., Melber, B.D., & Merwin, D.J. (1977). A methodology for conducting social impact assessments using quality of social life indicators. In Finsterbusch, K. &

Statistics Canada. (2014). Canadian Community Health Survey: Annual Component – 2014 Questionnaire. Government of Canada. Retrieved from http://www23.statcan.gc.ca/imdb-bmdi/instrument/3226_Q1_V11-eng.pdf

Stellat'en First Nation and the Firelight Group. (2014). Stellat'en First Nation Member Survey. Retrived from http://www.stellaten.ca/wp-content/uploads/2016/03/Firelightsurveyon-reserveDec82014.pdf

Swimmer, E. & D. Hennes. (1993). Inuit Statistics: An analysis of the categories used in government data collections. Royal Commission on Aboriginal Peoples. Retried from: http://data2.archives.ca/rcap/pdf/rcap-77.pdf

Takasaki, A. A. K. (2014). Environment, development, trust, and well-being in the Tsawwassen First Nation (T). University of British Columbia. Retrieved from https://open.library.ubc.ca/cIRcle/collections/24/items/1.0165848 (Original work published 2014).

Taylor, C.N., Bryan, C.H., & Goodrich, C.G. (2004). *Social assessment: Theory, process and techniques.* Middleton, WI: Social Ecology Press.

Torgerson, D. (1981). SIA as a social phenomenon: The problem. In Tester, F. & Mykes (Eds), W. *Social impact assessment: Theory, method and practice* (pp. 55-67). Calgary, AB: Detselig Enterprises Ltd.

Tourangeau, Roger, and Ting Yan. (2007). "Sensitive Questions in Surveys." *Psychological Bulletin* 133:859–83.

Truesdale, C. (2014). Canada launches new Aboriginal and treaty rights information system. JFK Law Corporation. Retrieved from http://jfklaw.ca/canada-launches-new-aboriginal-and-treaty-rights-information-system/

Usher, P. (2000). Traditional ecological knowledge in environmental assessment and management. *Arctic, 53*(2), 183.

Vehovar, V. & K.L. Manfreda

Yin, R. (2014). *Case study research : Design and methods.* (Fifth ed.). Thousand Oaks, California: Sage.

Appendix A.

Metlakatla Membership Census 2015 Questionnaire

METLAKATLA FIRST NATION

METLAKATLA MEMBERSHIP CENSUS

FALL 2015

Version 1: Adult Member

Introduction

Many projects and activities are being proposed within Metlakatla's Traditional Territory. These projects offer benefits but may also have unintended impacts on the things we care about.

In response, the Metlakatla First Nation has developed a Cumulative Effects Management (CEM) program to better understand the impacts and benefits. Cumulative effects, in simplest terms, are changes to Metlakatla values due to past, present and future actions. The CEM Program attempts to track and manage these values over time. A major challenge is the lack of information specific to Metlakatla

members on certain social and economic values. Good baseline information helps Metlakatla managers make good decisions because we cannot manage what we don't know.

The Metlakatla are working with Simon Fraser University researchers to conduct a Metlakatla Membership Census. This census will collect consistent information about our membership over time and find out "how Metlakatla members are doing." From this point forward, we hope to ask members to complete the census on all topics once a year.

As a member of the Metlakatla First Nation, you are asked to participate in the Census. To show our appreciation, you will be entered into a draw for some great prizes, including five $100 gift cards and six iPads Airs. Please note that the geographic scope of the census is intended for Metlakatla members living within the Traditional Territory. We ask that you please take the time to complete the census.

Participant Information

What is your band number? _____

What is your age? _____

What is your gender? ¹ Male ¹ Female ¹ Other

What is your address?
Street Address: _____
City: _____
Postal Code: _____

Is your primary place of residence in the Metlakatla Village? ¹ Yes ¹ No

Section 1: Communications

1. How do you receive information about Metlakatla programs and initiatives? Please select all that apply.
   - ¹ Email
   - ¹ Facebook/Social media
   - ¹ Website
   - ¹ Newsletter
   - ¹ Other (please specify): _____

2. Are you satisfied with the level of information you receive from the Metlakatla Communications Office? Please select on a scale of 1-5.

Not satisfied at all				Very satisfied
1	2	3	4	**5**

Section 2: Governance

3. Did you vote in the last Metlakatla First Nation General Election?
   - ¹ Yes

5. Are you satisfied with the **current election process** for the Metlakatla First Nation Chief and Council? Please select on a scale of 1-5.

Not satisfied at all				Very satisfied
1	2	3	4	5

6. Do you have any 6

Section 3: Land Code

This portion of the census is about the Metlakatla Land Code. The Land Code initiative is about resuming and exercising control over Metlakatla reserve lands and resources.

Developing the Metlakatla Land Code is a community driven process and the final version will be put to a vote before the Metlakatla membership in the Fall of 2016. If the vote is successful, the authority and management of Metlakatla's reserves will be transferred from the Federal government to the Metlakatla, and remove us from roughly 25% of the Indian Act.

11. In your opinion, should the Federal government continue to manage Metlakatla's reserve lands or should the authority and management of these lands be transferred to the Metlakatla First Nation?
    - ¹ Federal government should continue to manage Metlakatla's reserve lands
    - ¹ The authority and management of Metlakatla's reserve lands should be transferred to the Metlakatla First Nation
    - ¹ Don't know

12. Overall, how familiar are you with the Metlakatla Land Code?
    - ¹ Very familiar
    - ¹ Somewhat familiar
    - ¹ Not very familiar
    - ¹ Not at all familiar **[Skip to Question 16]**

13. Overall, do you support or oppose transferring the authority and management of Metlakatla's reserve lands from the Federal government to the Metlakatla First Nation?
    - ¹ Support strongly
    - ¹ Support somewhat
    - ¹ Oppose somewhat
    - ¹ Oppose strongly
    - ¹ Don't know

14.

The following tables are about FSC participation.

18. Please fill out the following information about participation in **food harvest activities.** If you did not participate in the activity, please put '0'.

	In the past 12 months, how many days did you participate in each activity? **(# of days/year)**	How often did you participate with another Metlakatla member for each activity? **(% of time)**
Fishing		
Harvesting other seafood (e.g. crab, clams)		
Hunting		
Trapping		
Harvesting marine plants (e.g. seaweed)		
Collecting land-based plants and berries		
Gardening		

19. For the activities you **want to participate in more**, please **check the <u>top 3 barriers</u>** that prevented you from participating.

	Lack of gear or equipment	Lack of time	Lack of knowledge	Lack of companionship	Competition	Water quality	Government regulations	Access to resource	Health/Age/ Disability
Fishing									
[redacted]									

20. Please fill out the following table about participation in **food preparation activities.** If you did not participate in the activity, please put '0'.

	In the past 12 months how many days did you participate in each activity? **(# of days/year)**	How often did you participate with another Metlakatla member for each activity? **(% of time)**

22. Please fill out the following table about participation in **social activities.** If you did not participate in the activity, please put '0'.

	In the past 12 months, how many times did you participate in each activity? **(# times/ year)**	How often did you participate with another Metlakatla member for each activity? **(% of time)**
Feasts		
Traditional arts (e.g. cedar weaving, dancing, drawing, carving or regalia making)		
Language courses		

23. For the activities you **want to participate in more**, please **check <u>the top 3 barriers</u>** that prevented you from participating.

Cost Lack of time Lack of

24. How do you access food fish (salmon and halibut)? Please select all that apply.
    - ¹ I fish
    - ¹ Someone in my household fishes
    - ¹ From friends
    - ¹ Food fish distribution program
    - ¹ Other (please specify): _____

25. How well can you speak Sm'algyax?
    - ¹ Very well
    - ¹ Relatively well
    - ¹ With effort
    - ¹ Only a few words
    - ¹ Can't speak it at all

26. Are you interested in learning Sm'algyax?
    - ¹ Very interested
    - ¹ Somewhat interested
    - ¹ Not interested
    - ¹ Not applicable

27. Which services and programs would you like to see available in Metlakatla Village? Please rank the following options from highest priority to lowest priority, with **1 being the highest priority** and **5 being the lowest**.
    - ___ Language immersion
    - ___ Communal processing facility (e.g. shared smokehouse)
    - ___ Elder-youth education programs
    - ___ Traditional arts workshops
    - ___ Exploring/learning about the Traditional Territory

33. In the past 12 months, how many times have you been admitted to the hospital for **each of the following conditions**? If none, please put '0' for each.
    _____ Seizures (grand mal status)
    _____ Chronic obstructive pulmonary disease, COPD
    _____ Asthma
    _____ Heart Failure and/or pulmonary edema
    _____ High blood pressure (hypertension)
    _____ Severe chest pain (angina)
    _____ Diabetes

34.

37.

41. What other people usually live in your home? Please select all that apply.

45. For the previous year, please think of your **total household (combined) income** from all sources before tax.
By household income, we are asking for the total sum of wages and salaries of all contributing members in the household. For the purpose of this census, a 'household' is a group of people (often a 'family') who live in the same dwelling and share meals and living space together. A single dwelling may be considered to contain multiple "households" if meals or living space are not shared.

1 No income	1 $30,000 - $39,999
1	

Section 8: Adequate Housing

49. How many children live in your residence?
For those between the ages of 5-17, please list how many children of each gender live in the home. If none, mark '0'.

	Number of females	Number of males
Children 0-4 years old		
Children5-17 years old		

50. How many bedrooms does your residence have? _____

51. Does your residence need repairs? Note that:
    - ***Major repairs include****: defective plumbing or electrical wiring, structural repairs to walls, floors, ceiling etc.*
    - ***Minor repairs include****: missing or loose floor tiles, bricks, shingles, defective steps, railings, siding, etc.*

    ¹ Yes, major repairs
    ¹ Yes, minor repairs
    ¹ No, only regular maintenance is required (painting, furnace)
    ¹ Don't know

52. Do you own or rent your residence? ¹ Own ¹ Rent

53. a. What is your monthly rent or mortgage payment? _____
    b. What are your monthly costs of electricity, heat, water, property taxes, and/or condo fees? _____
    c. What are your monthly costs of transportation between Prince Rupert and Metlakatla Village? _____

54. If an appropriate house is available on Metlakatla Village, would you choose to live there?
    ¹ Yes
    ¹ No

    a. ***If no***, why?
    _____

Contact Information

The following personal information is needed for the Communications Department, so that we can contact you with information from the Treaty Office and the Land Code Department. It is also required to enter you into the prize draw, so that we can let you know if you win! Each participant will be entered in a draw for one of five $100 gift cards (gas card or VISA gift card) or one of six iPad Airs.

Your personal information will be separated from your census responses.

What is your email address? _____
What is your phone number? _____

How do you prefer to be contacted for information on Land Code, Treaty and other Metlakatla programs?

- [1] Email
- [1] Phone
- [1] Mail
- [1] Other (please specify): _____

Appendix B.

Metlakatla Membership Census 2016 Questionnaire

METLAKATLA FIRST NATION

METLAKATLA MEMBERSHIP CENSUS

FALL 2016

Participant Information

What is your band number? _____

What is your age? _____

What is your gender? ¹ Male ¹ Female ¹ Other

What is your address?
Street Address: _____
City: _____
Postal Code: _____

Is your primary place of residence in the Metlakatla Village? ¹ Yes ¹ No

Section 1: Communications

1. How do you receive information about Metlakatla programs and initiatives? **Please <u>select all</u> that apply.**
   - ¹ Email
   - ¹ Facebook/Social media
   - ¹ Website
   - ¹ Newsletter
   - ¹ Other (please specify): _____

2. How do you usually receive and read the newsletter?
   - ¹ Email
   - ¹ Mail
   - ¹ Other (please specify): _____

3. Are you satisfied with the level of information you receive from the Metlakatla Communications Office? **Please select on a scale of 1-5.**

Not satisfied at all				Very satisfied
1	2	3	4	5

Section 2: Land Code

This portion of the census is about the Metlakatla Land Code. The Land Code initiative is about resuming and exercising control over Metlakatla reserve lands and resources.

Developing the Metlakatla Land Code is a community driven process and the final version will be put to a vote before the Metlakatla membership in the Fall of 2016. If the vote is successful, the authority and management of Metlakatla's reserves will be transferred from the Federal government to the Metlakatla, and remove us from roughly 25% of the Indian Act.

4. In your opinion, should the Federal government continue to manage Metlakatla's reserve lands or should the authority and management of these lands be transferred to the Metlakatla First Nation?
    - [1] Federal government should continue to manage Metlakatla's reserve lands
    - [1] The authority and management of Metlakatla's reserve lands should be transferred to the Metlakatla First Nation
    - [1] Don't know

5.

Section 3: Cultural Activities

The Metlakatla First Nation identifies Food, Social, and Ceremonial (FSC) Activity as a priority cultural value. FSC activity is defined as harvesting (including fishing, gardening, gathering, hunting, or trapping), processing, preparing, or consuming any traditional foods. Harvesting, processing and preparing can be grouped together under the category of FSC Participation.

8. Please fill out the following table about participation in **food harvesting activities.** If you did not participate in the activity, please put '0'.

9. Who do you usually participate with in these food harvesting activities? **Please <u>select all</u> that apply.**

¹ Alone
¹ Spouse
¹ Youth/Children
¹ Friend(s)
¹ Parent(s)

10. How often do you participate with youth (someone under the age of 24) in these food harvesting activities?
    - ¹ Never
    - ¹ Less than 50% of the time
    - ¹ About 50% of the time
    - ¹ Over 50% of the time
    - ¹ Always

11. Who did you learn your food harvesting skills from? **Please <u>select all</u> that apply.**

¹ Parent(s)
¹ Elders
¹
¹ Community Members
¹ Knowledge Holders

14. How do you access **most** of your food fish (salmon and halibut)? **Please select <u>one.</u>**
    - ¹ I fish
    - ¹ Someone in my household fishes
    - ¹ From friends
    - ¹ Food fish distribution program
    - ¹ Other (please specify): _____

The following information about the harvest of wildlife species will help the Metlakatla Stewardship Society (MSS) to make wildlife management decisions that allow continued access for Metlakatla membership. Wildlife harvest numbers will be especially important as the MSS begins to engage with the province as part of their required consultation with First Nations.

15. Please fill out the following table about the **harvest of wildlife species** listed below.

Species	In the **past 12 months,** how many of each species did you harvest?	In the **past 12 months,** how many full days did you spend hunting for each species?	What was each species used for? (e.g., food, ceremonial, other)	Were you able to harvest enough of each species to meet your needs? **(Yes or No)**
Moose				
Grizzly Bear				

16. Please fill out the following table about participating in **food processing and preparing activities.** If you did not participate in the activity, please put '0'.

17. Who do you participate with in these food processing and preparing activities? **Please <u>select all</u> that apply.**

[1] Alone [1]

- [1] Intermediate
- [1] Basic
- [1] Only a few words
- [1] Can't speak it at all

24. Are you interested in learning Sm'algyax?
    - [1]

27. For the following types of health, in general, would you say that your health is:
Emotional health includes feelings of love, loneliness, stress, etc.

	Excellent	Very Good	Good	Fair	Poor
Physical Health					
Mental Health		[redacted]			

31. What is your current employment status? **Please select the <u>best answer</u>.**

- ¹ Full-time employed (35 hours per week or more)
- ¹ Part-time employed (Fewer than 35 hours per week)
- ¹ Self-employed
- ¹ Unwaged Caregiver
- ¹ Unemployed – able and looking to work
- ¹ Unemployed – disabled/unable to work
- ¹ Employment Insurance (EI)
- ¹ Retired
- ¹ Student

32. Which of the following best describes your marital status?
    - ¹ Single
    - ¹ Married
    - ¹ Living with partner (Common-law)
    - ¹ Widowed

We recognize that income can be sensitive, personal information and you may choose not to answer the following questions on income. However, please note that your answers to the following questions will help us understand if our goals for economic development are being reached by members of our community.

33. For the previous year, please think of your **total individual income** from all sources before tax. What income range does it fall under?
    By personal income, we are asking for your total personal wages and salaries including commissions, investment income, bonuses, tips, research grants, royalties, CPP, and EI etc. in the past year before any tax deductions.

- ¹ No income
- ¹ Under $5,000
- ¹ $5,000 - $9,999
- ¹ $10,000 - $14,999
- ¹ $15,000 - $19,999
- ¹ $20,000 - $24,999
- ¹ $25,000 - $29,999
- ¹ $30,000 - $39,999
- ¹ $40,000 - $49,000
- ¹ $50,000 - $59,999
- ¹ $60,000 - $79,999
- ¹ $80,000 - $99,999
- ¹ $100,000 - $124,999
- ¹ $125,000 and over

34. What is the highest level of education you have completed? **Please select <u>one</u>.**
    - ¹ Grade 8 or lower

[1] Grade 9-10
[1] Grade 11
[1]

	Number of females	Number of males
Children 0-4 years old		
Children 5-17 years old		
Adults 18 – 64 years old		
Elders 65+ years old		

38. How many bedrooms does your home have? _____

39. Does your home need repairs? Note that:
    - ***Major repairs include****: defective plumbing or electrical wiring, structural repairs to walls, floors, ceiling etc.*
    - ***Minor repairs include****: missing or loose floor tiles, bricks, shingles, defective steps, railings, siding, etc.*

    ¹ Yes, major repairs
    ¹ Yes, minor repairs
    ¹ No, only regular DC - 9Tw [N)7nt6El

The following personal information is needed for the Communications Department, so that we can contact you with information from the Treaty Office and the Land Code Department. It is also required to enter you into the prize draw, so that we can let you know if you win! Each participant will be entered in a draw for one of five $100 gift cards (gas card or Walmart gift card) or one $500 VISA gift card.

Your personal information will be separated from your census responses.