

ASSESSING THE FACTORS IMPACTING THE SUSTAINABILITY OF THE CLARENVILLE-BONAVISTA RURAL SECRETARIAT REGION: PHASE TWO FINAL REPORT



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Executive Summary

The Clarendville-Bonavista Region, much like other communities and regions throughout the province and rest of Canada, faces significant challenges with respect to sustainable development and maximizing future opportunities. Environmental, economic, and social considerations coalesce in mapping present and future challenges, as well as defining the ways in which a truly sustainable future may prevail for the region. A principled and inclusive design is necessary for any such strategy to ultimately be successful.

Building off of the research and design in Phase One of this project, this document has expanded on the indicators framework necessary to monitor and promote the sustainability of this region, as well as the existing barriers. Consideration of sustainability priorities as expressed by the Regional Council, survey respondents, and the general public via our public engagement sessions have been crucial to the formulation of this document. It is our hope that the development of the indicators approach outlined will aid the Regional Council in working towards a sustainable development strategy and action plan and provide a framework to monitor and measure the extent to which the goals of this strategy are being achieved in the future.

In terms of methodology, Phase One was primarily a literature review on sustainable development indicators and their use, including examples from initiatives in other regions and jurisdictions, followed by the development of an indicators framework designed for use in the Clarendville-Bonavista Region. This Phase Two has then focused on finalizing, populating and interpreting our indicators framework, as well as identifying priorities, strategies, and/or policy support necessary to assist in moving towards comprehensive sustainability planning and action. Solution ideas were generated with Regional Council and residents, as well as drawing from previous research and advice documents. Phase Two has focused on the following four major research components:

- Refining indicators and measures
- Household (public) survey
- Public engagement sessions
- Analysis and assessment of priority issues and potential strategies

Our indicators framework, and principally the data measures therein, has evolved a great deal since inception. From the consultations with the Regional Council to develop the first iteration, to the present state in which we have a clearer sense of regional standing, conversation and open-dialogue have been critical. The data compiled represents a “snapshot in time” across a broad selection of information regarding the sustainability of the Clarendville-Bonavista Region. Trends over time are also presented through Temporal Indicator Performance Signs (TIPS).

As part of this “snapshot,” we identify six critical areas where our TIPS give a downward pointing, or negative indication:

- **Affordable housing** is critically unavailable and in need of workable solutions. Affordability has eroded since the availability of previous data.
- **Stabilizing the regional population** has not occurred – the population has dropped, despite a very significant rise in the population of Clarendville (+14%).
- **Access to good food and nutrition** appears to have diminished, with the rise in overweight and obese citizens.
- **Community connectedness** has diminished in terms of sense of belonging, life satisfaction, and perceived community safety.
- **Viability of the agriculture sector** has decreased over time, with less workers and less land under production.
- **Sustainable fisheries** remains an elusive objective, as fish stocks have not recovered from historic levels, and shellfish biomass is in decline.

Our research has identified several critical regional sustainability concerns, through both the public survey and the public engagement sessions, but also several future directions for addressing these concerns. By way of this collaborative process, we make the following recommendations on necessary future steps in this process, including developing new programs and harnessing and building on existing ones. We also recommend that changes in the region be monitored over time so that successes can be recognized and celebrated and sustainability actions plans modified where required in a learning, adaptive process.

A. Continue to utilize and revisit the indicator framework:

- Continue to work with and treat this as a “living document.” For example, the Fraser Basin Council in British Columbia, once having established their indicators framework, has continued on to produce an annual “Sustainability Snapshot” for the region.
- Revisit indicators after 2016 census. The next round of data from the census and National Household Survey will be the next major opportunity to update our indicators framework with new data and begin to draw trends.
- This may involve adaptation of the framework over time as lessons are learned, data becomes more or less available, and priorities change.

B. Make the results of this work publicly available:

- Produce a brochure, pamphlet, or workbook could effectively engage a broader public interest. Readability and user-friendly formatting is key. Engage local media to provide interviews and/or newspaper articles or inserts.
- Explore potential linkages to Vital Signs. A form of “community check-up,” Vital Signs engages communities and develops platforms for action based on certain needs and criteria. Vital Signs was just recently launched in Newfoundland and

Labrador in 2014 with a province-wide report, but with some regional analysis included and the potential to provide additional local level analysis in the future (see <http://www.mun.ca/harriscentre/vitalsigns/>).

C. Develop an action plan:

- Meet with relevant stakeholders to examine the ideas raised throughout this work, assess the relevance and feasibility of the ideas presented above and others they may bring forward, prioritize and develop next steps accordingly.
- Ensure the necessary linkages between government and public consultation remain entrenched.

Based on the results of our research and engagement activities we suggest that program development and action planning be pursued within six priority areas. Within each of these areas several specific suggestions have been raised throughout this research phase, as outlined above. Keeping these suggestions in mind as action plans for moving forward are developed, we recommend that regional stakeholders seek to:

1. Solve the affordable housing crisis through increasing the housing stock, increasing publicly subsidized housing, and controlling the rise in rents;

2. Retain young people by investing in them;

3. Capture and increase the benefits of “close to home” jobs, while preparing for and investing in a greener, more diversified future;

4. Improve health outcomes through a strengthened emphasis on preventative care and education;

5. Support local food networks through community planning, education, and corporate sponsorships; and

6. Raise awareness of the important role of environmental sustainability by linking environmental health to the health and sustainability of the population and region as a whole.

Ultimately, the future is ours to make. Through responsible, responsive, collaborative decision-making, we may ensure that future generations are positioned to thrive. In recognizing that there are no simple solutions to the monumental task of sustainable development, we may take comfort in that our efforts are part of a much bigger process. The research contained within this set of reports represents a stepping-stone towards the necessary actions associated with a process of striving for sustainability within the Clarenville-Bonavista Region and beyond.

I. Background and Origins

The primary mandate of the Rural Secretariat Regional Councils is to provide recommendations for public policy advice on critical social, economic, cultural and environmental issues that impact the sustainability of a rural region. In 2013-2014, the Regional Council for the Clarenville-Bonavista Rural Secretariat Region (Regional Council) expressed its interest in understanding what are the important elements of a strategy to sustain the people and communities of their region, as well as defining the barriers to regional sustainability. These interests determined the research questions for this two-phase study:

1. What is our definition of sustainability and what outcomes would tell us we are there (or moving in the right direction)?
2. What are the key factors or characteristics necessary for sustainability in the Clarenville-Bonavista Region? What barriers exist?
3. How can the Regional Council best proceed with determining which of these core sustainability factors currently exist in the Clarenville-Bonavista Region and what are the gaps?
4. Based on public input and research results, what priorities, strategies and/or policy support are necessary to assist in moving towards sustainability assessment and ultimately sustainability in the Clarenville-Bonavista Region?

Following from these key questions, in Phase One we developed our purpose for this research based around four foundations for a sustainable development strategy:¹

1. Common Framework for Action

The first role of a strategy should be to construct a guiding vision for sustainable development within the region. The Regional Council has produced such a document, entitled *Vision 2020*, which provides a rationale for the project as well as a basis for how to proceed with sustainable development goals in the region. This document creates a foundation for developing an action framework.

2. Consistency of Definition and Appraisal

Sustainability and sustainable development can mean different things to different people, and in different contexts. That is why it is important to identify and articulate common principles of sustainable development in the Clarenville-Bonavista Region in order to underpin the necessary actions of the involved institutions. In Phase One of this

¹ Network of Regional Governments for Sustainable Development, "Indicators for Sustainable

project the Regional Council articulated a working definition for sustainable development specific to this region:

Sustainability in Clarenville-Bonavista means an integrated response to economic, social and environmental imperatives, while emphasizing intergenerational equity with regard to resource use and future opportunities.

Likewise, the indicators framework must be used in a manner consistent with critical the factors, indicators, themes, and structures iterated throughout this report.

3. Opportunities, Strengths, and Concerns for the Region

The third role of a strategy is to explain why action is needed and how the strategy will build on the needs and strengths of the region. The steps that must be taken to pursue sustainable development will differ greatly between regions depending on their characteristics and circumstances – that is one of the reasons why action at the regional level is so vital. Setting the vision in a clear regional context ensures that the vision is relevant, and that institutions and the public will understand how it relates to their goals, needs, and expectations.

4. Common Indicators and Measures

The fourth role of a strategy is to provide a basis for measuring progress and appraising policies for their impact on sustainable development. Indicators of progress are crucial for measuring the effectiveness of relevant policies and programs meant to enhance regional sustainability.

This project explores the key factors impacting the sustainability of the Clarenville-Bonavista Region, building on a review of sustainability literature and previous research about the region conducted in Phase One of this project in 2013-2014. Key elements for this Phase Two research have included the design and implementation, in consultation with the Regional Council and the Organizational Sponsor's staff, of a telephone survey of residents of the region and a series of public engagement sessions. The main engagement pieces in this research – a telephone survey and engagement sessions - explore resident practices and perceptions related to the important sustainability issues in the region, and strategies for moving towards enhanced sustainability in the future. After refining and populating the proposed indicators framework a gap analysis of our critical factors was conducted to aid in the assessment of priority issues. Based on these elements, recommendations to improve the region's sustainability are also considered. This will ultimately inform the Regional Council's recommendations to the Government of Newfoundland and Labrador and their own future activities in working towards a broader sustainability approach. This is also intended to be a working document from which indicators research will continue to be monitored, and to foster regional dialogue and action.

II. Rationale

The information compiled from this research is used to better understand how the region is doing in terms of social/cultural, economic, and environmental sustainability. The cohesion of these three elements is referred to as a “triple bottom line”: consideration of one element cannot be adequately addressed without attention to the challenges and realities of the other two.

The information is being used to complete a report on sustainability within the region that will be available to the public, and the information will further be used to initiate public dialogue on the region's performance in achieving these sustainability goals. The results of this research will be communicated to the general public via web posting of this report and ongoing public engagement sessions held in the Clarendville-Bonavista Region by the Office of Public Engagement (OPE).

Public participation in this project has been critical to this community-based research, and to public engagement on sustainability issues more broadly. Participation has helped to provide a better understanding of the region's situation as far as sustainable development, and future imperatives to improve in this regard. Ideally, this research will also initiate a dialogue within communities and local areas on these topics.

Sustainability is not well understood at present in terms of how well a community or region is doing, and where it ought to be in terms of achieving the expressed goals of the population therein. Through public survey, data retrieval, public engagement, and ensuing dialogue, we can better grasp the critical elements for sustainability issues going forward. This research will add to the literature on regional sustainability in Newfoundland and Labrador, as well as to the literature on sustainability more broadly. This research may also serve as a prototype for further research on sustainability in other regions.

III. Phase Two Methodology

In terms of methodology, Phase One was primarily a literature review on sustainable development including examples from initiatives in other regions and jurisdictions, and the development of an indicators framework. In so doing, the Phase One report focused on answering research questions one through three as articulated in Section I, Backgrounds and Origins above. This work was done in consultation and collaboration with the Regional Council. This Phase Two has then focused on finalizing and interpreting our indicators framework, as well as identifying priorities, strategies, and/or policy support necessary to assist in moving towards a comprehensive sustainability assessment. Phase Two has focused on the following four major research components:

- Refining indicators and measures
- Household (public) survey
- Public engagement sessions
- Analysis and assessment of priority issues and potential strategies

Refining Indicators and Measures

The most significant work conducted during Phase One of this project was to: a) develop an agreed upon definition of sustainability, drawing from the literature and input from Regional Council; and b) develop an indicators framework that could serve as a foundation as well as springboard for future monitoring. Past research suggests that indicators are most effectively used in a planning process and do not drive policy in themselves, but rather influence it through a process of conversation and learning. Their influence is felt most through a “collaborative learning process” as those who develop and use them jointly make sense of why the indicators are important, what they mean, and their implications for changes in actions and policies. To ensure that this process occurs, the full range of anticipated users (i.e., those whose decisions one hopes will be influenced by the indicators) must be involved in the selection, development of and collaborative discussions regarding the meaning of the indicators.²

Furthermore, indicators should reflect basic selection criteria that instill consistency and confidence amongst users. Indicators ought to embody the following qualities:³

- *Available* – Data are available and easily accessible.
- *Understandable* – Data are easily understood by a diverse range of non-technical audiences.
- *Credible* – Data are supported by valid, reliable information and interpreted in a scientifically defensible manner.
- *Temporal* – Data have the capacity to measure trends over time.
- *Relevant* - Data/indicator reflects community values and interests.
- *Integrative* – Data demonstrates connections among key dimensions of sustainability.
- *Comparable* – Data can be compared across regions.

Picking up from Phase One, and the initial iteration of our indicators framework, we have moved on to refine and finalize the structure of the framework and to populate

² Innes, J. E. and Booher, D.E. “Indicators for Sustainable Communities: A Strategy Building on Complexity Theory and Distributed Intelligence,” Institute of Urban and Regional Development, University of California at Berkeley, Sept. 1999, p. 5.

³ Fraser Basin Council, “Measuring and Reporting on Sustainability: A Report on Lessons Learned,” (2011) p. 7.

this framework with currently available data to assess strengths and challenges in the region with respect to sustainability. This is not to say that our indicators framework is henceforth “set in stone,” but rather that we have a benchmark set in place for future reference and monitoring to determine trends.

Household Survey

Telephone survey design began in September 2014 in collaboration with the Regional Council and the Office of Public Engagement. The Newfoundland and Labrador Statistics Agency (NLSA) also provided input. The agency reviewed the survey instrument and provided feedback on survey content and structure. Through the survey we sought to help answer the question, with regards to sustainability of the region, “*where are we now, and how far have we got to go?*”

The survey was designed to expand upon the critical factors and indicators defined in the Phase One of this research. Data retrieved through the telephone survey was used to fill in data gaps identified through the initial attempt in Phase One to populate critical factors and indicators framework. Perhaps even more importantly, the survey was intended to provide insight into how residents themselves prioritize sustainability issues and indicators. Thus, the survey was designed around the critical factors and indicators identified in Phase One, which served as organizing themes for the survey.

Survey delivery was carried out by the research team, which included a critical contribution from a class of business students from College of the North Atlantic in Clarenville. Under the guidance of Mr. Paul Tilley, instructor of business administration, students of a Business Marketing class conducted the telephone survey in accordance with the professional and ethical guidelines ascribed by Memorial University. (Ethics clearance for this research was granted by the Grenfell Campus Research Ethics Board (GCREB)). In addition, student participation contributed towards a portion of their course completion. In total, 20 College of the North Atlantic students participated in the survey delivery, averaging a total of seven completed surveys per student. A small stipend was paid out to these research assistants for their contribution.

Survey participants (residents of the region) were contacted at random via telephone, with numbers accessed through the general directory. Telephone numbers were selected at random from the general directory. Based on consultation with NLSA, our aim was to achieve a level of 390 completed surveys. Estimating that 1 in 4 telephone numbers would result in a completed survey, we generated an initial list of 1200 random phone numbers. Having exhausted that list and reached the extent of contributions from the College of the North Atlantic, combined with time and budgetary constraints within the project, the sample target was revised to 300 surveys. Ultimately 299 surveys were completed by residents. Each response was entered into Fluid Survey online software by the student researchers as the telephone survey was completed.

In accordance with the project's ethical clearance, it was explained to the potential participants in detail at the beginning of the telephone conversation in which the survey took place that the survey was intended to assist the Regional Council to gain a better understanding of issues relating to the well-being and sustainability of their communities. It was also explained that the information from the survey was to be used to develop advice on enhancing the well-being and sustainability of the region and its population into the future. The survey took approximately 10-12 minutes to complete, with approximately 30 questions.

In an attempt to obtain the most representative sample of respondents possible across age group, gender, and community, a two-stage approach was taken wherein the second stage targeted underrepresented groups (e.g. younger populations, populations from under or unrepresented communities). During the second stage of surveying, target communities were those outside the major population centers of Clarenville, Bonavista, and to a lesser extent, Arnold's Cove. This was done in order to a) generate survey response from as many communities within the region as possible, and b) to ensure sub-regional representation relative to population sizes.

The survey team completed 299 surveys. In terms of demographic distribution, similar to the distribution of the region's population, males and females were surveyed equally (50% male, 50% female). The age distribution of respondents is presented in Figure 1. Respondents followed a fairly typical demographic pattern, although when compared to the region's population that is 18 years of age or older according to the 2011 Census, residents older than 60 years of age were slightly underrepresented in the respondent mix (34% of the population 18 years of age or greater were 60+ years of age in 2011 vs. 21% of respondents) and residents 18-29 (12% of 18+ population vs. 17% of respondents), 30-44 (22% of 18+ population vs. 25% of respondents), and 45-59 years of age (32% of 18+ population vs. 36% of respondents) were slightly overrepresented.⁴

The distribution of participation amongst communities within the region was also similar to the population distribution, with Clarenville (19% of surveys) and Bonavista (9% of surveys) contributing the highest level of participation. This is in close approximation to the population of these communities relative to that of the region (the population of Clarenville is 6036, or 22% of the regional population, the population of Bonavista is 3589, or 13% of the region). Survey response from these two centers was slightly below their relative population due to the research goal of reaching as many communities across the region as possible. Ultimately survey responses came from 72 of the 87 listed communities within the region (see Appendix II).

⁴ Population figures compiled by the Community Accounts Unit based on information provided from the Census of Population 2011 Statistics Canada. Census 2011: Detailed Populations by Age and Gender.

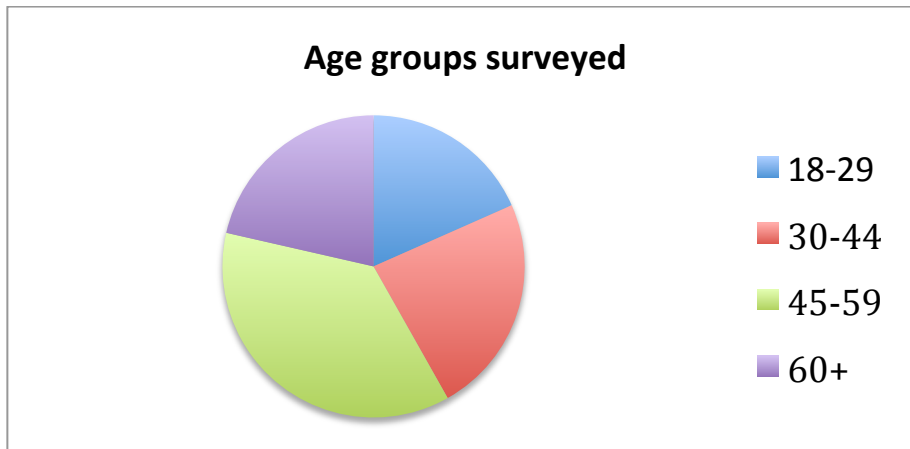


Figure 1. Age groups surveyed

In addition to analyzing the overall picture of the region according to survey results, results were analyzed with two specific comparisons: a) on a sub-regional basis to examine differences according to where survey respondents lived within the region, and b) according to age group, to explore generational differences and/or trends. This was done by generating and comparing basic descriptive statistics for each group, attained using Fluid Survey software. Results were broken down according to the aforementioned categories in order to determine similarities and/or differences. See Appendix II for a chart containing survey results.

Public engagement and consultation

The five most significant factors potentially having an impact on future sustainability of the Clarendville-Bonavista Region, according to survey respondents, became the thematic pillars upon which the Regional Council, in partnership with the OPE, designed three sub-regional public engagement sessions. The intent of these sessions was to engage the general public, communicate the results of our public telephone survey, as well as to seek feedback and generate ideas around solutions to these critical sustainability issues.

These events brought together community and regional stakeholders for an evening of discussion, learning and brainstorming. During each of the sessions, participants were provided a Participant Workbook, which provided information on five core themes identified through the survey analysis as well as a series of related discussion questions. Each session used a combination of formal presentations, round table dialogue, formal and electronic voting. Round table discussion ideas were recorded and themed and priorities were identified using an instant response voting software process. Participants voted on key challenges within each of the areas of concern identified in the survey, followed by discussion on solutions to these issues. They then voted on which were the best solutions that had been identified. The Participant Workbook was provided to help

them with recording thoughts and ideas, which were then discussed and incorporated into the live polling of the most commonly identified themes.

The sessions were designed by the Regional Council and OPE, in consultation with the researchers. Three sub-regional sessions were originally planned to reach out across a region of broad and unique characteristics. The sessions were planned for the Town of Come-by-Chance on the Avalon Isthmus, the Town of Lethbridge within the Clarenville area, and Port Union within the Bonavista Peninsula. Considerable efforts were made in the planning process to spread invitation to as wide an audience as possible. Individuals were invited to participate in the community engagement sessions through direct email contact, public notices (information flyers circulated by local municipalities) and through local media (radio). In addition, key stakeholders including mayors and town council members were consulted and asked to spread the invitation.

The weather-related realities of late February in Newfoundland and Labrador meant that less-than-favourable conditions, combined with low registration numbers, resulted in the cancellation of the session planned for Lethbridge. Weather conditions are also likely to have deterred some potential participants in the two sessions that did take place. The engagement session on March 2, 2015 at the Come by Chance Lion's Club attracted 16 attendees; the engagement session on March 4, 2015 at the Port Union Chalet in Port Union attracted 8 attendees from a variety of backgrounds. Response to the design and nature of the engagement sessions was positive, with registrants generally feeling that their voice was heard, that the sessions were well-designed, and that the sessions were a good use of time. The results from the sessions were shared with the Regional Council and have been used in developing the recommendations provided in this report.

Analysis and assessment of priority issues and potential strategies

These research components have guided an analysis of the current state of region based on measures within our indicators framework. Through the survey and public engagement session results, combined with our indicators framework, we have crafted an assessment of the priority sustainability issues for the region, as well as potential strategies and directions for moving the region towards a more sustainable future. Solution ideas were generated with the Regional Council, residents, as well as drawing from previous research and Regional Council advice documents.

IV. Our Indicators Framework

Sustainability indicators aim to report on approaching limits of our environmental and socio-economic life support systems, and they are meant to be **measurable, reportable,**

and *verifiable*.⁵ However they are not necessarily so much scientific, as they are a collaborative process based on a variety of values and understandings from within a community or region. Through the use of indicators, we hope to generate discussion amongst people from different backgrounds and viewpoints, and in the process, help create a shared vision of what the community or region should look like in terms of sustainable growth and development.

The purpose of our indicators is twofold. First, an indicator should be a *management tool*, to help a region develop implementation and monitoring strategies for achieving the sustainable development goals and to monitor progress. Second, a set of indicators acts like a *report card* of sorts, to measure progress towards achieving a target and ensure the accountability of governments to their citizens.⁶ Where possible, objective quantitative metrics are used, but subjective and perception-based indicators can also play an important role. Public input and collaboration, as has been the case with our survey and public engagement sessions, has been critical to this end.

As a broad starting point, our intent has been to identify the overarching themes/values we feel will point us in the right direction going forward in terms of how a sustainability plan should proceed in this region (i.e., our critical factors), followed by more specific information that describes the key elements of those critical factors (ii. our indicators), and finally to specific data to support those indicators (iii. measures) and to demonstrate how the region is doing. This includes strengths that can be built upon and protected, and areas where the region is experiencing challenges and improvement is needed.

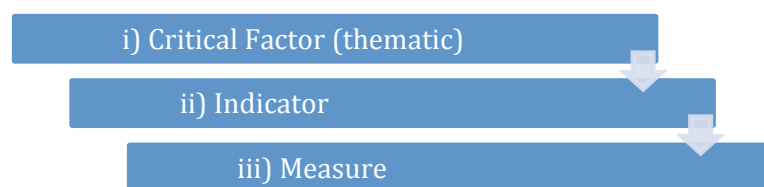


Figure 2. Indicators Flow Graph

There is no established number of specific indicators that is appropriate for a framework, however literature suggests that the number should depend upon the intended audience. Whereas indicators used by different departments within large organizations may use anywhere from 50 to 100, when using an indicators framework to keep the public involved and informed, 10 to 20 indicators may be appropriate.⁷

⁵ Meg Holden, "Sustainability indicator systems within urban governance: Usability analysis of sustainability indicator systems as boundary objects," 89.

⁶ Sustainable Indicators Solutions Network, "Indicators for Sustainable Development Goals," *Global Initiative for the United Nations (2013)*, 5.

⁷ Sustainable Measures, "Organizing Indicators," accessed 19 March 2015, <http://www.sustainablemeasures.com/node/96>

Through extensive review, inspiration from other jurisdictions, and collaboration with Regional Council, we have arrived at 22 indicators for our framework that adequately take into account the conditions, unique aspects, and imperatives of the Clarendville-Bonavista Region.

Touching on the *temporal* aspect of a sustainability indicators framework, we must attempt to measure change within specific indicators and measures *over time*. Only then may we identify progress or regression with regards to the performance of that specific indicator. While extensive temporal analysis of indicators data is beyond the scope of this research, we have attempted, where possible, to flag certain trends.

Therefore some indicators are associated with an upwards-pointing arrow, denoting positive change over a given timeframe, while for others we present a downwards-pointing arrow, denoting negative change in this aspect of regional well-being. We call these our Temporal Indicator Performance Signs (TIPS). TIPS are at this stage used only for easily measurable, well-defined, indicators for which reliable data is available, such as a rise or fall in regional population numbers based on census data.⁸

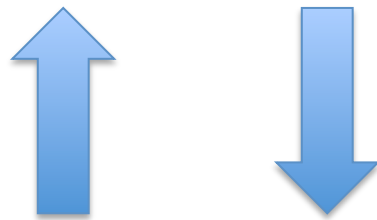


Figure 3. Temporal Indicator Performance Signs (TIPS)

The intent is that future monitoring of these indicators will build on our understanding of this temporal dimension.

Public Input on Priority Issues and Indicators

Overall, survey respondents and session participants were in agreement with the critical factors and related indicators being important for the region's future sustainability. A majority of respondents agreed that each of the issues asked about in the survey, were at least somewhat of a concern. In terms of the most significant factors impacting the

⁸ It should be noted that difficulties in looking at trends over time were introduced with the replacement of Statistics Canada's long form census in 2011 with the National Household Survey. The survey was given to approximately 30% of Canadian households and was not mandatory. This could result in non-response bias, despite techniques used to minimize this bias, which should still be taken into account when interpreting data changes from 2006 to 2011.

future sustainability of communities and their region, the priorities expressed in terms of level of concern appeared unambiguous: employment opportunities (57% indicating this is a major concern), affordable housing (54% major concern), ageing population (50% major concern), access to healthy, affordable food (44% major concern) and access to health care services (45%) ranked as the top five concerns related to future sustainability.

When analyzed according to age group priorities differed, however, as outlined in Figure 4. This is a significant finding. If we were to attempt to extrapolate meaning from this, it seems that younger respondents are most concerned with securing well paying careers, 30-44 year olds are more into the home owning phase and are concerned about this the most, 45-59 year olds presumably have housing secured for the most part and are concerned with employment to secure their retirement, and 60+ are most concerned with an aging population. Thus a critical theme from our survey results, perhaps somewhat unsurprisingly, is that there is a generational gap in terms of sustainability priorities and the factors that impact the region's ability to retain young people.




Figure 4. Sustainability challenges by age group

Regarding the most critical sustainability factors according to public perception, it is perhaps not surprising that meeting basic needs, tackling poverty, and promoting equity and the related subset indicators arose most frequently within our survey responses, as well as in dialogue in the public engagement sessions. In fact four of the five significant challenges to future sustainability, as found in our survey results, are encompassed within this critical factor. After all, if we fail to meet our basic daily needs, discussions around sustainability will inevitably grind to a halt. This critical factor is therefore considered the highest priority for assessment and action.

What follows is a discussion on each indicator within our framework, and the measures used to establish a current standing and trends, with the provincial average used as the yardstick from which we are measuring the region. Future directions for improving the sustainability of the region in each of these areas that were suggested through the research are also presented.

Meeting Basic Needs, Tackling Poverty, and Promoting Equity

Sustainable development should meet the fundamental needs of all the population. This includes the provision of employment opportunities, mobility and transportation, schooling, affordable housing, good food and nutrition, and healthcare. A key concern for the region, as economic development in the oil and gas industry and other major industrial projects has seen an upward trajectory, is access to affordable housing and other basic daily needs.


Meeting Basic Needs, Tackling Poverty, and Promoting Equity		
<p>1) Affordable Housing</p> 	<p>Median shelter costs in Clarenville (2011): \$843/month for home owners⁹, \$651/month renters¹⁰ (2006: \$758 home ownership/\$500 renters)</p> <p>% of owner households spending 30% or more of household total income on shelter costs in Clarenville: 12.2% (vs. 11.8% for NL)</p> <p>% of tenant households spending 30% or more of household total income on</p>	<p>National Household Survey¹¹</p> <p>National Household Survey¹²</p> <p>National Household Survey¹³</p>

⁹ Includes all shelter expenses paid by households that own their dwellings, such as the mortgage payment and the costs of electricity, heat, water and other municipal services, property taxes and condominium fees.

¹⁰ Includes all shelter expenses paid by households that rent their dwellings, such as the monthly rent and the costs of electricity, heat and municipal services.

¹¹ Statistics Canada, "NHS Profile, Clarenville," accessed 19 March 2015, <http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=1007013&Data=Count&SearchText=Clarenville&SearchType=Begins&SearchPR=10&A1=All&B1=All&Custom=&TABID=1>; Statistics Canada, "2006 Community Profiles – Clarenville," accessed 31 March 2015, <http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/details/Page.cfm?Lang=E&Geo1=CSD&Code1=1007013&Geo2=PR&Code2=10&Data=Count&SearchText=clarenville&SearchType=Begins&SearchPR=10&B1=All&Custom=>

¹² Ibid.

	shelter costs in Clarenville: 41.2% (vs. 39.3% for NL)	
2) Access to Transportation	94% of survey respondents have access to vehicular transportation 1.1 vehicles for every adult 15+ (vs. 1.03 provincial average)	Clarenville-Bonavista Public Survey ¹⁴ Statistics Canada ¹⁵
3) Access to Primary Healthcare	Access to a regular medical doctor (2011-12): 91% (91.2% provincial average) (2010: 87.5%) Average population per physician (2014): 580 (450 provincial average) Median age of death (2004-2012): 79 (1 st of 9)	Community Accounts ¹⁶ NLMA ¹⁷ Community Accounts ¹⁸
4) Employment Opportunities 	Employment rate (2011): 78% (2006: 74.8% vs. 76.7% provincial) Self-reliance ratio (2011): 73.6% (80.1% provincial rate)	Community Accounts ¹⁹ Community Accounts ²⁰

¹³ Ibid.

¹⁴ See Appendix II

¹⁵ Statistics Canada, "Motor Vehicle Registration, by Province and Territory," accessed 23 March 2015, <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/trade14a-eng.htm>; vehicle statistics were then divided by respective populations of the Clarenville-Bonavista region and province in order to obtain the ratios.


¹⁶ Community Accounts, "Canadian Community Health Survey, 2011-2012," accessed 23 March 2015, http://nl.communityaccounts.ca/table.asp?_=0bfAjydpawrnbSTh5-FvJudurVnhYOHelhsvZyxnr-aaPNy5E_

¹⁷ These figures were provided by the Newfoundland and Labrador Medical Association via telephone on 14 March 2015.

¹⁸ Community Accounts, "Clarenville - Bonavista Rural Secretariat Region Well-Being and Indicators," accessed 24 March 2015, http://nl.communityaccounts.ca/indicators.asp?_=vb7En4WVgbWy0nc_

¹⁹ The 2011 employment rate was provided by Community Accounts via email on 24 March 2014, as 2011 figures are not currently available on the Community Accounts web site. Figures reflect the rate of employment within the labour force ages 18-64.

²⁰ Community Accounts, "Income Summary," accessed 23 March 2015, http://nl.communityaccounts.ca/table.asp?_=0bfAjydpawrnbSTh5-FvKFreKWik8e4tWS4zZ97

	(6 th of 9) (2009: 70.9%)	
5) Access to Good Food and Nutrition 	Overweight or obese, 18+ (2011-12): 76.7% (66.3% provincial average) (2009-2010: 69.4%)	Community Accounts ²¹

1) Affordable Housing

Current status and trends:

A key concern for the region, in the face of economic development in the oil and gas industry and other major industrial projects, is access to affordable housing as a basic daily need. In 2006 the average monthly payment for a rental in the region was \$480. Since then, we know those figures have risen substantially. Unfortunately on a regional level, no more up-to-date housing cost indicators are available at this time. One recent report on housing and homelessness in NL provides an estimate of \$691 average monthly rent for the region in 2013 (44% increase since 2006) based on the estimated change of rental rates produced by CMHC in its rental market reports, although these reports are completed only for communities with populations of 10,000 people or more.²²

Because recent reliable regional data are not available we examined evidence from Clarenville, the regional growth centre and location in which affordable housing issues may be most acutely experienced. According to the 2011 National Household Survey the median shelter costs in Clarenville in 2011 were \$843/month for homeowners²³ and \$651/month renters²⁴ (average cost \$966/month for owners, and \$698/month for renters). These figures represent a significant rise from median shelter costs in 2006 of \$758 for home owners and \$500 for renters.

Beginning in 1986, the Canada Mortgage and Housing Corporation (CMHC) and the provinces began to measure housing affordability based on whether a household spends 30% or more of its average monthly total income on shelter costs.²⁵ In 2011, 12.4% of

²¹ Community Accounts, "Clarenville - Bonavista Rural Secretariat Region Well-Being and Indicators," accessed 24 March 2015, http://nl.communityaccounts.ca/indicators.asp?_vb7En4WVgbWy0nc_

²² OrgCode Consulting, "A Roadmap for Ending Homelessness in Newfoundland and Labrador," published October 2014.

²³ Includes all shelter expenses paid by households that own their dwellings, such as the mortgage payment and the costs of electricity, heat, water and other municipal services, property taxes and condominium fees.

²⁴ Includes all shelter expenses paid by households that rent their dwellings, such as the monthly rent and the costs of electricity, heat and municipal services.

²⁵ Canada Mortgage and Housing Corporation, "Core Housing Need in Canada," published 1991.

homeowners in the Clarenville vicinity spent more than 30% of total household income on housing, however that jumps significantly to 41.2% when looking at renters spending above 30% of total household income on housing. In both cases these percentages are slightly higher than the provincial the average. This highlights the housing crunch in the Clarenville area, and particularly the financial and housing pressures experienced by renters. In 2011, Clarenville experienced the highest amount of development in its history with 96 homes approved for construction. Moreover, the value of residential construction rose from \$5.1 million in 2004 to \$18 million in 2011.²⁶

- For 54% of respondents from our survey, affordable housing was a major concern for regional sustainability and for another 34% somewhat of a concern (88% are at least somewhat concerned about this issue).
- Participants in both Isthmus and Trinity Bay North engagement sessions agreed that the need for more affordable housing prices was the most important housing-related factor for the future sustainability of the region.
- Access to data related to the need for and impacts of the lack affordable housing is limited. Session participants pointed to the need to better understand the scope and scale of suffering in the region with respect to lack of suitable housing.

Attempts to address the issue to date have included: 110 subsidized housing units in the region; the establishment of the Regional Action Committee on Housing (2009); the formation of the Clarenville Chapter of Habitat for Humanity (2014); a Mayor's Committee on Housing (2015); and a Senior's Cooperative Housing Working Group (2015). The Newfoundland Housing Corporation (NLHC) owns 74 housing units, 42 of which are located within Clarenville. The NLHC also controls 13 rent supplement units in the region, 12 of which are within Clarenville. Finally, the Department of Advanced Education and Skills identifies the total number of cases where support was provided for shelter was 1280 in 2014, with almost half of these cases directed towards assistance with rent (620 cases), followed by assistance with board and lodging (377 cases) and home ownership with (78) and without (196) a mortgage.

We have assigned a downward TIPS for this indicator, reflecting the reality that housing costs have continued to rise and that persistent, long-term affordability issues have yet to be adequately addressed.

²⁶ The Packet, "Taking Action on Affordable Housing," accessed 5 March 2015, <http://www.thepacket.ca/News/Local/2014-06-26/article-3778102/Taking-action-on-affordable-housing/1>

Suggested future directions:

According to our public engagement sessions, housing affordability could most adequately be addressed through government funding programs, with direct housing subsidies as the best option to improve the affordability crisis. Additional suggestions from the sessions included:

- Increase the number of subsidized housing units in the region, including publicly-owned multi-unit rental housing.
- Foster government partnerships with charitable organizations such as Habitat for Humanity, which established a Clarendville chapter in 2013. Work with such organizations represents an investment with critical returns.
- Provide housing subsidies for those most in need (may include municipal tax breaks for families moving into the area).
- Increase control over rental properties and arrangements.
- Improve planning for industrial project needs, e.g. creation of subdivisions for mobile homes, which can be moved later if industrial boom ends.

2) Access to Transportation

Mobility is an essential part of people’s livelihoods in terms of accessing daily basic needs, getting to and from work, as well as general well-being, peace of mind, independence and leisure. Increasingly, as small businesses and services in local areas close, residents rely on travelling greater distances to shop in larger service centers such as Clarendville. Transportation is linked to virtually all aspects of rural living, and access to transportation will continue to increase in importance as current trends of reliance on regional centers for food, education, health services, etc. are likely to continue.

Current status and trends:

According to our survey, 94% of respondents either own a vehicle or have access to a vehicle when needed. This is positive, given that accessible transportation is so crucial in rural areas, however we also know that the presence of cars and trucks and the reliance on private vehicles for transportation across significant distances is detrimental to improved environmental outcomes. Perhaps somewhat surprisingly, a combined 54% of survey respondents indicated that they would consider using bus service or ride-sharing (“yes” or “maybe” responses), were it to be easy and available.

Combined with the availability of senior-focused bus service available in the Clarenville area, this can be seen as a positive indicator towards a potential long-term shift away from a heavy dependence on private vehicle ownership and the 19,026 cars and trucks registered in the region (1.1 vehicles for every adult 18+ in the region) and towards a transportation system that ensures all residents have access to required goods and services²⁷. Efforts involving both regional centers and surrounding communities will be needed, however, to facilitate a continued shift in this direction.

Further investigation is required to determine trends in this data.

Suggested future directions:

Programs such as the Random Age-Friendly senior's bus transportation in the Clarenville area are a positive development. This same type of service should, however, ideally be extended to all citizens, albeit with particular attention to groups unable to use personal vehicles (e.g. older seniors and youth). Lysenko (2012, p. 3) suggests that subsidized demand responsive door-to-door transportation services are "an optimal solution for areas with a low passenger demand" such as rural NL, operating only when booked in advance and offering a more individually tailored service when compared to the conventional transit service. Regional Council has suggested that a new policy be developed to improve the coordination of various forms of medical appointments and provide options for public transportation to transport medical patients for non-emergency care. For example, the senior bus at Golden Heights Manor in Bonavista could transport non-critical patients to Clarenville as a potential innovative way of resource sharing within the region.

3) Access to Primary Healthcare

Primary healthcare is consistently ranked as amongst the most significant concerns when it comes to sustainability and well-being of a community or region. While it is not an unreasonable expectation in [rural] communities to have to drive to major service centers for specialized care, such as the hospital in Clarenville or Bonavista, nearby primary health services are crucial to a community's social fabric.

²⁷ The statistic of number of cars and trucks licensed and registered within the region was provided by Newfoundland and Labrador Statistics Agency on 8 July 2014. This number was then divided by the regional population according to census 2011 figures.

Current status and trends:

Access to health care services was a major concern for regional sustainability for 45% of survey respondents and for another 38% somewhat of a concern. There are currently 48 physicians practicing in the region, with the majority centered in the Clarenville area. This represents on average one physician for every 580 citizens in the region, whereas the provincial average is one physician for every 450 citizens. This is perhaps a contributing factor to wait times for primary health services in the region. According to citizens involved in our public engagement sessions, wait times are especially high. Participants also described variation in wait times for emergency services throughout the region.

According to Community Accounts, 91% of citizens in the region have regular access to a medical doctor (similar to the 91.2% provincial average), and that number has improved from 87.5% in 2009-10. Based on a Community Health Needs Assessment for the Discovery Zone (Bonavista Peninsula), there is no major issue with access to family physicians, and several physicians are accepting new patients in the region.²⁸ We would, however, recommend caution when viewing these figures – nothing from our public engagement session suggested that access to primary healthcare has improved in the region, nor that general health outcomes have improved or that concerns related to physician attraction and retention been alleviated. In fact, improved recruitment of health professionals was a top concern raised in the consultations along with the need for improved emergency response capabilities (better training, more equipment and ambulances), followed by the need for promotion and education related to healthy lifestyles.

A significant concern in the Port Union engagement session regarding health services was the recent resignations of physicians from the Bonavista Peninsula Health Centre. A change in pay structures (fee-for-service vs. salary) was cited as a leading concern that precipitated this recent outflow of physicians from Bonavista. Overall for the region, the recruitment and retention of health professionals in the region will remain a challenge unless incentives for physicians are competitive with other jurisdictions.

Regional Council members and session participants also emphasized healthy lifestyles as critical to positive health outcomes. Wellness centers, recreation facilities and programs throughout the region are, therefore, valued elements of the overall health system.

²⁸ Eastern Health, “Determining the Big Picture: the Discovery Zone Community Health Needs Assessment Two-Year Update,” p. 3.

Suggested future directions:

A focus on recruitment of physicians to rural areas was a fixture of discussion amongst participants, as well as an increase in mobile services (e.g. specialists visiting smaller areas on monthly rotation). There was also a heavy emphasis on preventative medicine – keeping people healthy through education, prevention and awareness will not only lead to healthier citizens, but improved outcomes at hospitals and reduced costs. Based on our public engagement session participants’ concerns about primary care and physician recruitment and attraction, we have also drawn from the College of Family Physicians of Canada and of NL’s vision for primary care provided through a “Patient’s Medical Home”. The College has outlined a platform for stable “medical home bases” as hubs for the provision and coordination of all the health and medical services needed by each patient. This is a platform based on close-to-home familiarity, prevention, and wellness.²⁹

- Promote medical “home-bases” for patients with up-to-date technology and a stable workforce made up of a personal family physician for each patient combined with team-based care through inter-professional collaboration that includes family physicians and other health professionals (e.g. other family physicians and other consulting specialists).
- Explore the potential for these home bases to be mobile (e.g. clinics open in local areas on particular days of the week if a full-time center is not feasible) and for the team-based care model to avail of information and communications technologies, particularly when serving rural areas. Come By Chance session participants felt that mobile services could be effective for a range of services, from general practitioners to blood pressure testing and nutritionists.
- Ensure timely access to both primary care and referrals for specialized services through both face-to-face and, where appropriate, electronic communications between patients and providers.
- Improve recruitment and retention of all health professionals, such as promoting the “advantages of rural life” (suggestion from Come By Chance session).
- Enhance education and promotion related to healthy living.

²⁹ College of Family Physicians, “The Patient’s Medical Home,” accessed 24 March 2015, <http://www.municipalnl.ca/userfiles/files/Patient%20Medical%20Home.pdf>; www.cfpc.ca/uploadedFiles/Resources/Resource_Items/Bring20it20on20Home20FINAL20ENGLISH.pdf

4) Employment Opportunities

Sustainable development places a greater focus on quality rather than quantity of development. This will shift economies away from traditional, environmentally damaging forms of economic development. Well-paying jobs that are close to home will mean more time spent at home and more social, cultural, and economic investment in the region's communities.

Current status and trends:

The Clarenville-Bonavista Region, and particularly the Isthmus sub-region, has a strong industrial base, including the Bull Arm facility, Come by Chance oil refinery, the transshipment terminal at Whiffen Head, Arnold's Cove and Norman's Cove-Long Cove fish plants as well as Vale's Long Harbour site to the south. In addition, Clarenville serves as a retail and service-centre for the region.

While employment remains strong in the heavy industry sectors, long-term prospects remain uncertain. Another significant concern raised in the Come-by-Chance public engagement session was that local residents have a difficult time securing employment with major employers in the sub-region. Similarly, concerns were raised over the difficulty in finding employers to take on apprentices. Other concerns discussed included: number of available local jobs; recruitment and retention of workers (i.e., pull of workers); skills mismatch between employee/desired and employer requirements; number of work hours and conditions (short-term contracts, seasonal, few hours, etc.); wage and benefit gaps for non-unionized workers; long commutes; and an ageing workforce. The most important concerns according to participants are number of available local jobs as well as recruitment and retention of workers, followed by number of work hours and conditions and wage and benefit gaps for non-unionized workers.

- For 57% of respondents, employment opportunities were a major concern for regional sustainability and for another 31%, it is somewhat of a concern (89% at least somewhat of a concern).
- 39% of respondents were not employed and 27% travel outside of the region for work (rising to 35% for 18-29 year olds); 16% work out of province (21% of 18-29 year olds) and 18% commute 100-500 km to get to work.
- 19% of respondents were planning to leave the region within the next 5 years. Of these 57 individuals most plan to move for work, either because of lack of job opportunities in the region (39%) or just that they expect to obtain a job elsewhere (34%). Among the 49 survey respondents who fell in the 18-29 age group, 47% plan to move away. Their reasons were similar (again 38% due to lack of job opportunities).

The employment rate for the region improved from 2006 to 2011, from 74.8% up to 78%. This is a positive indicator, along with the fact that the regional self-reliance ratio

also experienced a rise from 70.9% up to 73.6%, from 2009 to 2011. This indicator thus received an upward pointing TIPS.

Suggested future directions:

Overall, while the employment rate improving, the region continues to fall below the provincial average and with low self-reliance ratio relative to other regions, improvement is needed to provide robust employment opportunities for all of the region's labour force. Moreover, the boon to employment experienced on the Isthmus is not being evenly felt throughout the region. Engagement session participants provided the following suggested actions:

- Encourage companies to hire local rather than looking outside of the area to fill positions. This will involve demonstrating the benefits of hiring local (e.g. reduced uncertainty associated with a commuting workforce and reduced cost requirements associated with housing).
- Ask employers in the region to commit to taking on a certain number of apprentices when it comes to projects and new developments. Government agencies can help to encourage this with subsidies and hiring requirements for companies.
- Establish a Legacy Fund from oil and gas and other large-scale operations to support investment in green technology and diversification (supporting growth in other sectors), and to guarantee benefits to future generations.

5) Access to Good Food and Nutrition

Good nutrition is essential for a healthy, vibrant population. Fresh, affordable foods that are minimally processed will result in a healthier, happier, more sustainable community. The agriculture industry and self-provisioning both play a role in access to healthy, affordable foods.

Current status and trends:

For 44% of survey respondents access to healthy, affordable foods was a major concern for regional sustainability and for another 41% somewhat of a concern (85% were at least somewhat concerned about this issue). One respondent specifically noted the lack of fresh produce available. 11% of respondents were regularly involved in growing, foraging/picking, or hunting for their own food, 49% sometimes - so 60% of residents do some "self-provisioning" for their food.

According to our public engagement sessions, social supports and capacity building, education and awareness related to producing and harvesting local food were seen as the biggest challenges (5/22 or 23% selected each of these options), followed by access to local, healthy foods in the community (4/22 or 18%). The high price of fruits and vegetables, especially throughout the winter months, was also a significant concern.

Other challenges related to access to healthy food and nutrition were: time to purchase and prepare healthy meals; physical ability to engage in gardening activities; and access to land for agricultural use.

Those obese or overweight in the region is significantly above the provincial average (76.7% vs. 66.3% provincial average), and moreover this has worsened since 2009-2010 when the rate was 69.4%. For this reason, we have assigned a downward pointing TIPS.



Suggested future directions:

Rethinking our diets, coupled with education, could play a critical role in alleviating this concern. Community gardens, supporting local producers, and returning to preserving, canning, and eating foods “in season” were leading recommendations towards finding solutions. The following is suggested, based both on our public engagement sessions as well as literature review and examples from other jurisdictions.

- Support and encourage community gardens, greenhouses, and pastures. Many municipalities have explored these alternatives, with varying success.
- Support local producers through education, promotion, and access to land.
- Support youth mentorship. Activities such hunting, fishing, farming, and foraging add important value to the household economy, as well as to social and cultural values.
- Examine food subsidy and transportation policies to prioritize and enhance food security and access to healthy, nutritious foods.

Promoting a Sense of Place while Valuing and Enhancing Physical and Cultural Identity

At the regional level, it is the sense of identity that perhaps most defines an approach towards achieving sustainable development. Sustainable development means building on distinctiveness, so that economic goals support cultural and environmental character. This will ideally serve as a strong point for Clarendville-Bonavista as a region – sense, and pride, of place must be harnessed at the regional level in order to maximize not only participation and buy-in, but also the overall return on investment.

Sense of Place, Physical and Cultural Identity		
<p data-bbox="235 296 573 327">6) Stabilizing Populations</p> 	<p data-bbox="782 296 1180 369">Residual net migration, 2006-2010: +0.14% (60 people)</p> <p data-bbox="782 411 1180 558">2011 population: 27,850 (-1.4% since 2006) (Province: +1.8%) (Clareville: +14.4%)</p> <p data-bbox="782 600 1180 747">Median Age (2006): 44 years (compared to 42 years of age in Province) (2001: 40 years)</p>	<p data-bbox="1200 296 1354 369">Community Accounts³⁰</p> <p data-bbox="1200 411 1354 485">Community Accounts³¹</p> <p data-bbox="1200 600 1354 674">Community Accounts³²</p>
<p data-bbox="235 768 634 800">7) Community Connectedness</p> 	<p data-bbox="782 768 1180 957">Very Strong or Somewhat Strong sense of belonging to community (2011-12): 85.6% (5th of 9) (2010: 89.4% (2nd of 9))</p> <p data-bbox="782 999 1180 1146">Very Satisfied or Satisfied with life in general (2011-12): 86.9% (7th of 9) (2010: 87.9% (5th of 9))</p> <p data-bbox="782 1188 1180 1335">Self-assessed community safety (2010): 95.6% (89.4% provincial) (2002: 100%)</p>	<p data-bbox="1200 768 1354 842">Community Accounts³³</p> <p data-bbox="1200 1041 1354 1115">Community Accounts³⁴</p> <p data-bbox="1200 1188 1354 1262">Community Accounts³⁵</p>
<p data-bbox="235 1356 708 1419">8) Preservation of Cultural Heritage and Local History</p>	<p data-bbox="782 1356 1180 1493">Approximately 69,709 visitors to the region between May-Oct, 2011 (18.7% of annual visitors to</p>	<p data-bbox="1200 1356 1338 1461">Dept. TCR Eastern region³⁶</p>

³⁰ Community Accounts, "Clareville - Bonavista Rural Secretariat Region Well-Being and Indicators," accessed 24 March 2015, http://nl.communityaccounts.ca/indicators.asp?_vb7En4WVgbWY0nc_

³¹ Ibid.

³² Ibid.

³³ Ibid.

³⁴ Ibid.

³⁵ Ibid.

³⁶ Department of Tourism, Culture, and Recreation, "2011 Exit Survey: Profile of Non-residents visiting the Eastern Region," accessed 20 March 2015,

http://www.tcr.gov.nl.ca/tcr/publications/2011/2011_Visitor_Exit_Survey_Visitors_to_Eastern_Region.pdf

	Province) Number of heritage sites and museums within region: 18	Community Infrastructure Mapping ³⁷
9) Social Inclusion and Diversity	% Immigrant population (2011): 1.04% (1.8% Provincial average) Percentage of residents perceiving their community as “Very” or “Somewhat” welcoming to newcomers: 85%	Community Accounts ³⁸ Clarenville-Bonavista Public Survey ³⁹
10) Active and Healthy Lifestyles	Self-assessed very good or excellent health (2011-12): 53.7% (2010: 62.5% (1 st of 9)) (2001: 71.9%) Prevalence of diabetes (2011-12): 8.4% (2010: 9.6% (4 th of 9)) (2001: 9.8%)	Community Accounts ⁴⁰ Community Accounts ⁴¹

6) Stabilizing Populations

A viable and sustainable demographic structure is an important component for any region to facilitate economic growth and support long-term sustainability. This is especially relevant in Newfoundland and Labrador, where outmigration and falling birth rates across much of the province have created less than ideal conditions for sustaining communities and regions. Declining populations, aging populations, and out-migrations pose significant challenges to sustainable development goals.

³⁷ Community Infrastructure Mapping System, “CIMS,” accessed 12 March 2015, <http://nlcims.ca/CIMS.aspx#layers:4,14,17,18>

³⁸ Community Accounts, “Clarenville - Bonavista Rural Secretariat Region Well-Being and Indicators,” accessed 24 March 2015, http://nl.communityaccounts.ca/indicators.asp?_vb7En4WVgbWy0nc_

³⁹ See Appendix II

⁴⁰ Community Accounts, “Clarenville - Bonavista Rural Secretariat Region Well-Being and Indicators,” accessed 24 March 2015, http://nl.communityaccounts.ca/indicators.asp?_vb7En4WVgbWy0nc_

⁴¹ Ibid.

Current status and trends:

The survey revealed that a strong majority of participants have lived in the region for 20+ years (43%), suggesting a strong connection to community and region as described in questions A3 and A4 (community and regional connectedness), and the general lack of intention to leave the region within the next 5 years (question A5). Generally, mobility decreases with age. Whereas 83% of 60+ don't plan to move in the next 5 years, this rises with every age category to the point where only 41% of 18-29 year olds don't plan to move in the next 5 years. This is a significant finding when discussing population trends and an aging population (see Figure 5).

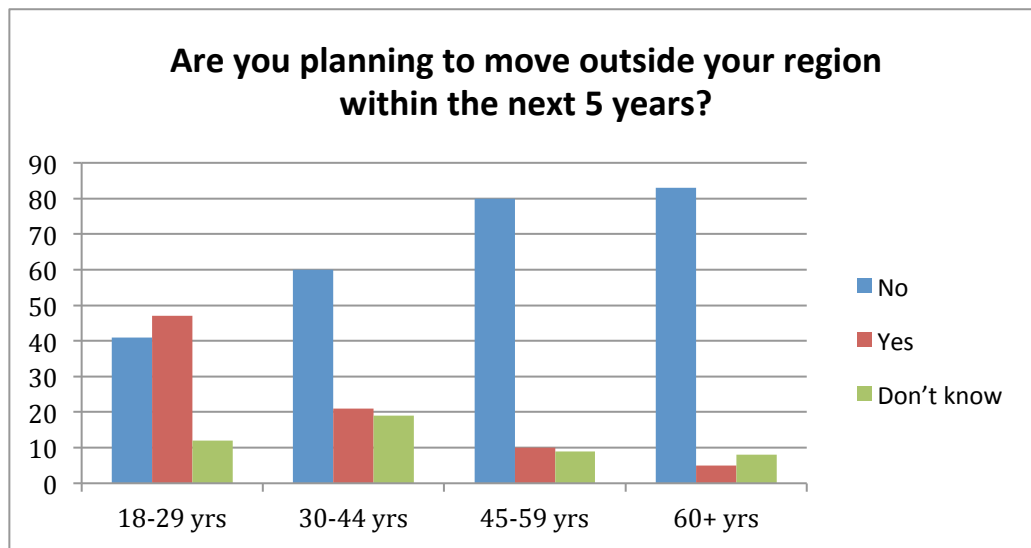


Figure 5. Are you planning to move outside your region?

Population trends show a less than positive outlook. The population of the region as a whole declined between 2006 and 2011, from 28,650 to 27,850 for a drop of 1.4%. Conversely, Clarendville's population rose by 14.4% throughout that same period.

As Clarendville-Bonavista is a dominantly rural region, and that populations throughout the region declined while Clarendville grew substantially, the challenge of sustainable population numbers is all the more highlighted for rural areas. Along with the region's median age being 2 years above the provincial average, population and demographic challenges will remain a key issue.

For these reasons, this indicator received a downward-pointing TIPS.

Suggested future directions:

Attracting newcomers and encouraging younger generations to stay will be critical in working towards solutions. In September 2014 the Regional Council submitted a policy advice document outlining advice on this issue entitled, *Population Growth Strategy and*

Workforce Development Strategy.⁴² Continued work with the Regional Council, and implementing the seven recommendations outlined in the document, will be necessary for a fully implemented strategy.

7) Community Connectedness

Community cohesion on a social level is crucial to overall wellbeing and sustainability: well-connected citizens with a deep sense of place are more invested and attached to that place.

Current status and trends:

Community connectedness registered highly amongst survey respondents overall, with 85% feeling either “very connected” or “somewhat connected” to their community (see Figure 6). It is important to note, however, the discrepancy amongst age groups and their response to this question. Whereas 60% of respondents aged above 45 years felt very connected to their community, only 34% of respondents aged 18-19 felt very connected.

Community connectedness is disparate along generational lines. Whereas older populations tend to be more rooted and invested in their communities, younger populations are more mobile and less attached. Our survey responses reflect this challenge. This lack of connection amongst younger generations will be a major challenge when attempting to retain them in the region. This mobility, while not uncommon, does not bode well for a region seeking to retain its population, and especially the younger generations, as much as possible.

⁴² Regional Council for the Clarendville-Bonavista Region, “Population Growth and Sustainability: a Regional Perspective,” September 2014, p. 20

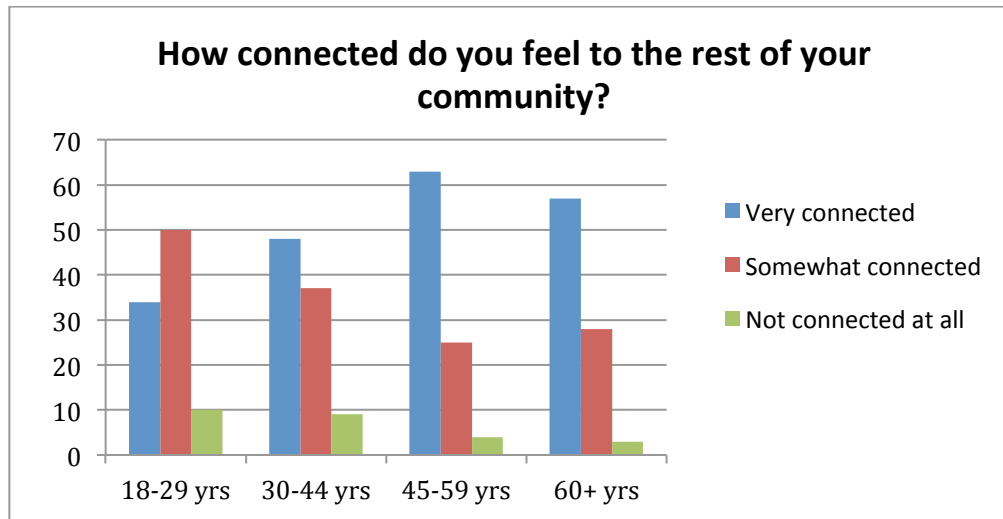


Figure 6. Community connectedness

In terms of trends, community connectedness has diminished over time according to data. Whereas 85.6% of citizens had a “very strong” or “somewhat strong” sense of belonging to community in 2011-12 (5th of 9), in 2010 that number was 89.4% (2nd of 9). Additionally, those “very satisfied” or “satisfied” with life in general diminished in 2011-12 at 86.9% (7th of 9), compared to in 2010 the figure being 87.9% (5th of 9).

Self-assessed community safety also diminished from 100% in 2002, to 95.6% in 2010, while still above the provincial average (89.4%). Despite ranking higher than the provincial average self-assessed community safety, community connectedness still appears to have diminished over time, and so this indicator received a downwards TIPS.

Suggested future directions:

Extensive work and research has already been done in the region towards strengthening communities. Continued efforts such as these are crucial for improving community connectedness and engagement. These have included The Welcoming Communities Initiative, a nationwide program bridging the gap for immigrants and minorities. The Initiative is a valuable tool to strengthen community togetherness. A Regional Council Advice document entitled *Community-based Leadership and Collaborative Practices in Rural Newfoundland and Labrador* (2010) outlines additional recommendations on how proceed with building capacity and connectedness at the community level. Community schools have specifically been noted as a potential community-building tool. A 2011 “*Community Schools: an integrated service delivery model for rural regions in Newfoundland and Labrador*”⁴³ concept paper outlines how regional schools can be used resource hubs for the delivery of programs and services to communities.

⁴³ Colin Holloway, “Community Schools: an integrated service delivery model for rural regions in Newfoundland and Labrador,” submitted to Government of Newfoundland and Labrador, 2011.

8) Preservation of Cultural Heritage and Local History

The Regional Council believes the protection of culture, identity and place is crucial to long-term sustainability. Rural communities are changing due to the impacts of population shifts. Programs, services and policies are necessary to protect the unique culture, identity and place. This region is relatively well situated in terms of culture, heritage, and preservation – there are multiple natural and built assets – though protection and preservation remains an ongoing challenge.

Current status and trends:

The Clarenville-Bonavista Region has a deep history and connection with the province's early fishing and trade industries. The region is considered to be of important historical and cultural significance to the province. One important site of significance is the community of Bonavista; John Cabot landed in Bonavista on his historic voyage of 1497.⁴⁴ Other important sites throughout the Region include: the Ryan Premises National Historic Site; The Matthew Legacy and the Cape Bonavista Lighthouse in Bonavista; the Port Union National Historic District of Canada; the community of Trinity; the community of Elliston; and the Random Passage Film Set in Trinity Bight.⁴⁵ Furthermore, the region is home to 5 of the 13 provincial historic sites.

According to our survey, 31.2% of respondents expressed a major concern with regards to a loss of cultural heritage and local history, with an additional 45.8% of respondents expressing this as somewhat of a concern.

Further investigation is required to determine trends in this data.

Suggested future directions:

In March 2012, Regional Council submitted a policy advice document on Protection of Culture, Identity, and Place. The document stresses that in conjunction with increasing collaboration amongst towns, local cultural uniqueness must be protected. The continued existence of heritage organizations such as the William Ford Coaker Foundation, and tools such as Community Infrastructure Mapping, will help to ensure preservation and passing on of cultural capital to future generations.

9) Social Inclusion and Diversity

Communities that are welcoming to diversity and newcomers will be crucial for regional sustainability in the future. Communities must find ways to reach out to groups beyond traditional lines, adapt to changing cultures, and embrace diversity. As Newfoundland

⁴⁴ Government of Newfoundland and Labrador–Rural Secretariat, “Clarenville-Bonavista Regional Overview”

⁴⁵ Ibid.

and Labrador has historically experienced difficulty in attracting immigrants relative to the rest of Canada, this will be a considerable challenge.

Current status and trends:

In a positive light, 85% of our survey respondents felt that their community was either “very welcoming” or “somewhat welcoming” to newcomers. As for how the region is doing in terms of actually attracting immigrants and newcomers, it is below the provincial average in terms of immigrant population as a percentage of total population (1.04% vs. 1.8% provincial average). However the region does rank third amongst Rural Secretariat regions, behind only the Avalon and Corner Brook – Rocky Harbour regions. This highlights the challenge that all rural areas face in attracting immigrants and newcomers, as the majority of newcomers tend to concentrate in major population centers, and St. John’s in particular.

Further investigation is required to determine trends in this data.

Suggested future directions:

- Encourage and support efforts such as the Welcoming Communities Initiative (WCI) to enable discussion and awareness on issues relating to inclusion and diversity.
- Continue to work with the provincial Population Growth Strategy and Workforce Development Strategy, in collaboration with regional and local level stakeholders such as the Regional Council, to bolster and retain newcomers to the region.

10) Active and Healthy Lifestyles

Physically active populations with plenty of recreation opportunities tend to be healthier and more engaged with their community.⁴⁶ This is in addition to the associated physical health benefits. People in a healthy, sustainable community also look after themselves and lead a healthy, active lifestyle. The feedback loop is positive.

Current status and trends:

In our survey 32% of citizens consider themselves very active, although another 51% said they are somewhat active and only 12% were not active at all. Citizens shared many reasons why they are not as active as they would like to be, including work and family responsibilities but also lack of recreation facilities and activities (14%). Age was also a factor in respondent’s reason for not being as active as they would perhaps like.

According to Community Accounts data, citizens with perceived “good” or “excellent health” diminished from 62.5% in 2010, down to 53.7% in to 2011-12. On the other hand, according to Community Accounts the prevalence of diabetes went down over

⁴⁶ Mark Roseland, “Towards Sustainable Communities,” p. 17.

that same time frame, from 9.6% to 8.4%. These mixed results should suggest continued monitoring and initiatives are required.

Suggested future directions:

Participants in our engagement sessions indicated that more could be done to promote and educate residents on healthy eating and active, healthy lifestyles. As only one third of respondents identified themselves as being very active, improvement in this regard could be a positive step towards happier, more engaged citizens and improved health outcomes. Participants in our survey and engagement sessions suggest:

- Increase community activities geared towards seniors, especially in the winter months.
- Grow recreation opportunities by way of increased and better access to facilities, hiking trails, etc.
- Increase education and awareness related to active and healthy living.

Intergenerational Equity


Sustainable development requires a long-term view. Too often, short-term decisions of the past have sown seeds of major problems in the future. Sustainable development means affording equal and ideally better opportunities for future generations. This means not only economic opportunities, but also opportunities to enjoy environmental and cultural amenities that are enjoyed by our current generations (see also Integration of Environmental, Social, and Economic Factors).

Intergenerational Equity		
11) Public Debt	Number of municipalities with a debt-service ratio + 20% (2014): 0	MIGA ⁴⁷
	Number of municipalities with a debt-service ratio + 15% (2014): 4	MIGA ⁴⁸
12) Youth Unemployment	Youth unemployment rate as of Feb. 2015 (provincial): 16.4% (Feb. 2010: 23.1%)	Statistics Canada ⁴⁹

⁴⁷ Debt-service ratio figures were provided by the Ministry of Intergovernmental Affairs via email on March 19, 2015.

⁴⁸ Ibid.

⁴⁹ Statistics Canada, "Labour force survey estimates (LFS), by sex and age group," accessed 6 April 2015, <http://www5.statcan.gc.ca/cansim/a26>

	Youth unemployment rate as of Feb. 2015 (Canada): 13.3% (Feb. 2010: 15.4%)	Statistics Canada ⁵⁰
13) Investment in Education 	Elimination of Provincial Student Loans	NL 2014 Budget ⁵¹
	Lowest average tuition fees in the country	Advanced Education and Skills ⁵²
	Citizens aged 18-64 holding High School diploma or higher (2011): 66.5% (5 th of 9) (1996: 53.6%)	Community Accounts ⁵³

11) Public Debt

Public Debt, mentioned in early consultation with Regional Council members, and reinforced by the precarious financial situations of many struggling municipalities, is a significant concern amongst municipalities and a possible hindrance to future sustainable development goals. The fear of passing on financial burdens to future generations has been a significant discussion point throughout

Current status and trends:

Of the 12 municipalities in the region with available data, none exceed a debt-service ratio (DSR) of 20%, four exceed 15%, seven exceed 10%, and five are under 10%. This is in addition to three municipalities with zero DSR whatsoever. There is no current official benchmark that describes an acceptable DSR in the province, however some literature suggests that a municipal DSR should not exceed 20%.⁵⁴ In this light, the region is doing positively. This, combined with overall satisfaction with the efforts of town council (59%), suggest that municipalities are doing well in the delivery of services while being fiscally prudent.

⁵⁰ Ibid.

⁵¹ Canadian Federation of Students, "NL Government to Reduce Student Debt Burden by Replacing all Student Loans with Grants," accessed March 15, 2014, <http://cfs-fcee.ca/nl-government-to-reduce-student-debt-burden-by-replacing-all-student-loans-with-grants/>

⁵² Newfoundland and Labrador, "A Strengthened Workforce and Renewed Vision for Communities," accessed March 15, 2014, <http://www.releases.gov.nl.ca/releases/2014/aes/0103n02.htm>

⁵³ Community Accounts, "Community Accounts indicators of well-being," accessed March 15, 2014, http://nl.communityaccounts.ca/indicators.asp?_vb7En4WVgbWy0nc_

⁵⁴ Wade Locke, "Municipal Fiscal Sustainability: Alternative Funding Arrangements to Promote Fiscal Sustainability of Newfoundland and Labrador Municipalities - The Role of Income and Sales Taxes," October 2011, p. 38

Further investigation is required to determine trends in this data.

12) Youth Unemployment

Youth unemployment and under-employment is a significant concern not only throughout Newfoundland, but the rest of Canada and much of the developed world.⁵⁵ A discouraged youth workforce will inevitably lead to a level of out-migration.

Current status and trends:

No statistics related to youth unemployment specific to the Clarenville-Bonavista Region are available, however province-wide the rate is 16.4% as of February 2015. This compares to a Canada-wide youth unemployment rate of 13.3%. Despite lagging behind the national average, the youth unemployment rate has improved significantly in recent years, as in February 2010 the rate was 23.1%. This is a positive trend, and must continue. As the retention of young people in this region is critical to its long-term sustainability, employment and education strategies clearly must focus their attention towards the next-generation workforce.

Youth unemployment and under-employment became a topic of discussion at our public engagement sessions, inevitably linked to issues related to employment generally, and investments in education and training specifically. The use of apprentices as a hiring requirement for companies was an important suggestion as a possible solution to getting young people more integrated into the workforce. An improved overall outlook for youth employment in the region requires a commitment from employers and government.

Suggested future directions:

- Reduce wait times for trades programs. Wait times of up to one to two years for certain trades programs, as voiced by citizens in our public engagement sessions, are too long for many to endure before seeking opportunities elsewhere.
- Invest in internships, apprenticeships, mentorships. A lack of government programs designed to integrate youth into the skilled workforce will lead to unemployment, under-employment, and out-migration from the region.
- Support youth in their own business ventures and as well as the development of social enterprise.

13) Investment in Education

⁵⁵ Mohamed Omar, "Unemployment plagues young people around the world," Huffington Post (accessed 14 April 2014) http://www.huffingtonpost.ca/2013/10/07/youth-unemployment_n_4059291.html

As our youth are the inheritors of tomorrow and intergenerational equity is a major element of sustainability, it is crucial to equip the younger generation with education, skills, and training opportunities that afford a new generation every opportunity to succeed. The availability and quality of public education services is the critical element in this commitment. Adult and lifelong learning are also important contributors to a sustainable region. Studies have shown that community colleges such as the College of the North Atlantic are significant assets and act as “economic engines” throughout rural regions. The region hosts two community college campuses in Bonavista and Clarenville.

Current status and trends:

Province-wide, Newfoundland and Labrador currently has the lowest average tuition fees in the country, and a commitment to public post-secondary education was reconfirmed with the elimination of provincial student loans (to be replaced with grants) in the 2014 Budget.

At the primary and early-childhood stages, there are 13 primary schools in the region, 5 of which offer a K-12 curriculum. Most childcare services are home-based in the region, with the only center-based care located in Clarenville. There are no public childcare services in the region.⁵⁶

Specific to the Clarenville-Bonavista Region, Community Accounts shows that 66.5% of 18-64 year olds hold a high school diploma or higher (5th of 9 Rural Secretariat ranking). Slightly lower, 59% of our survey respondents hold a high school diploma or higher as their highest level of education. Amongst those with a college diploma, equivalent, or higher, a majority of citizens attained their education outside of the region, with an additional 16% having split their schooling between inside and outside of the region.

This represents, potentially, an element of unnecessary outflow of people from the region to pursue their educational and professional endeavors elsewhere. That notion may be supported by the fact that 20% of citizens surveyed who intend to leave the Clarenville-Bonavista Region in the next five years plan to do so to pursue training and educational opportunities.

In all, education opportunities within the region and province are strong in that tuition is low compared to other provinces. This keeps barriers to entry low. However wait lists for trades programs and a general lack of education and training options specifically within the region remains challenging. Participants from the engagement session also suggested the need to encourage education related to both trades and non-trade occupations equally, expressing concern about a recent emphasis on trades education.

⁵⁶ This information was gathered from a presentation prepared for the Regional Council for the Clarenville-Bonavista Region on 16 February 2015 by Colin Holloway.

Suggested future directions:

According to our public engagement sessions, a commitment to education, training, and development was a major concern. The following suggestions factored highly:

- Provide opportunities such as work-terms and on-the-job training to bridge the gap between education and the workforce.
- Assist in upgrading skills and education for life-long learners and to prepare the regional labor force for existing and future opportunities.
- Explore free post-secondary tuition as a worthy investment for the province.

Good Governance and Participation

Sustainable development strategies must be prepared transparently on the basis of partnership and collaboration with the rest of the Province. Strategies should promote and strengthen civil society and people’s ability to engage meaningfully. This includes promoting awareness and education regarding sustainable development. Strategies should also reflect the need to innovate and work at different levels of governance.

Good Governance and Participation		
14) Commitment to Governance and Local Autonomy	Number of Local Service Districts (LSDs): 27 Number of municipalities: 20 Satisfaction with town council/LSD: 76%	Service NL ⁵⁷ Clarenville-Bonavista Public Survey ⁵⁸
15) Citizen Engagement, Vibrancy of Non-Recorded Activities	10.0% (+/- 5.6%) life stress as extreme or quite a bit (3 rd of 8)(2012) 75% volunteer, 25% never volunteer (only 46% reported volunteering in NL in 2013) ⁵⁹	Community Accounts ⁶⁰ Clarenville-Bonavista Public Survey ⁶¹

⁵⁷ This information was compiled using data taken from Service NL via email on 11 March 2015.

⁵⁸ See Appendix II

⁵⁹ Statistics Canada, "Volunteering and charitable giving in Canada," accessed 24 March 2015, <http://www.statcan.gc.ca/pub/89-652-x/89-652-x2015001-eng.htm#a3>

⁶⁰ Community Accounts, "Clarenville - Bonavista Rural Secretariat Region Well-Being and Indicators," accessed 24 March 2015, http://nl.communityaccounts.ca/indicators.asp?_vb7En4WVgbWy0nc_

⁶¹ See Appendix II

14) Commitment to Governance and Local Autonomy

As has been stressed throughout this document, citizen engagement is a crucial part of the process of establishing sustainable community development goals. Communities should seek to develop incentive programs to enhance regional collaborative efforts that are considered realistic and sustainable.

Current status and trends:

The presence of municipalities (as opposed to local service districts, which lack elected local representatives) ensures greater decision-making and accountability at the local level. Regional Council initiatives and municipal collaboration have made major strides to strengthen this sector. Satisfaction amongst respondents regarding the actions of town councils and local decision makers registered highly (59% responding yes), though that sentiment diminished somewhat when asked if provincial decision making adequately took into consideration local voices and concerns (39% yes, 35% somewhat).

Suggested future directions:

Volunteer bodies such as the Regional Council are mandated to work for and represent local and regional interests. Throughout the period of 2005 to 2014, Regional Council submitted 13 policy advice documents and 4 policy advice consultations. Such contributions are critical aspects of a commitment to governance and local autonomy.

15) Citizen Engagement, Vibrancy of Non-recorded Activities

Small communities face significant challenges when it comes to issues of capacity at the local level. Often times, there are champions or key stakeholders who assume many roles within their community's socio-political structure. This is crucial as well as potentially problematic, given the likelihood of 'burn-out' or fatigue to take place amongst those stretched too thin.

Current status and trends:

Our survey results seem to support this condition: rate of regular volunteering within communities is low. One quarter of all respondents (25%) never volunteer, with an additional 30% volunteering on a basis of no set time, or "whenever necessary." Volunteering trended downwards with every age category, from 53% of 60+ age group volunteering somewhere between daily - monthly, to 24% of 18-29 year olds volunteering between daily - monthly. Young people are simply not as engaged nor involved in their communities. This lack of commitment speaks to the realities of busy family and working lives, however volunteer work and "giving back" to the community are what vibrant communities depend upon.

Currently within the region, there are 264 not-for-profit groups, representing 7.2% of the provincial total.⁶²


Further investigation is required to determine trends in this data.

Suggested future directions:

- Continue to work with documents such as *Community-based Leadership and Collaborative Practices in Rural Newfoundland and Labrador* (2010), which outlines recommendations on how proceed with capacity building at the community level.

Integration of Environmental, Social, and Economic Factors

The essence of sustainable development is finding solutions that benefit the environment, the economy, *and* society, be it in the immediate term or the long run. We call this our “triple bottom line.” This is only possible if decisions and decision-making reflect all three aspects of, and that the impacts of these decisions are tracked from the local, to the regional, to the global level. Concepts such as full cost accounting, “living off the interest,” as well as a focus on quality rather than quantity of development will serve as important shifting points away from traditional economic development that often places excess pressures on ecosystems.⁶³

Integration of Environmental, Social, and Economic Factors		
<p>16) Viability of the Agriculture Sector</p> 	<p>Community Gardens in the region: 0 Community Pastures in the region: 2</p> <p>Number of workers in agriculture sector: 400 (2008)</p>	<p>Memorial University⁶⁴</p> <p>Discovery Regional Development Board⁶⁵</p>

⁶² This information was provided by the Office of Public Engagement via email on 23 March 2015.

⁶³ Mark Roseland, “Towards Sustainable Communities,” p. 31-35

⁶⁴ Memorial University, “Community Gardens in Newfoundland and Labrador,” accessed 3 March 2015, <http://www.mun.ca/botgarden/gardening/comgarden/comgarden.php>

⁶⁵ Discovery Regional Development Board, “Strategic Economic Plan: Zone 15,” Newfoundland and Labrador, 2008


17) Waste Reduction Strategies	Number of Green Depots in region: 2 (Clareville and Bonavista) Solid Waste Management Strategy to reduce landfill waste by 50% by 2020	MMSB ⁶⁶ Eastern Waste Management ⁶⁷
18) Air Quality and Health	Air Quality: 2-3 (Low Risk)	Environment Canada
19) Water Quality and Treatment	Public water system: 20 LSDs and 15 municipalities with public water systems Long-term BWAS (over 1 year): 10 LSDs and 2 municipalities Drinking Water Quality Index: 6 Excellent (4 LSD, 2 municipalities), 28 not ranked, 1 unknown	Minnes, Vodden and Team ⁶⁸
20) Energy Use and GHG Emission Reduction Measures	"Turning Back the Tide" Provincial GHG reduction initiative	
21) Ecological Protection	Ecological reserves: 1 Provincial parks: 2 Municipal Stewardship Agreements: 1 Federal marine conservation/protected areas: 0	Community Accounts ⁶⁹

⁶⁶ MMSB, "Green Depots – Eastern," accessed 12 March 2015, <http://www.mmsb.nl.ca/green-depots/eastern-region/>

⁶⁷ Eastern Waste Management, "Provincial Solid Waste Management Strategy," accessed 15 March 2014 2014, <http://easternwaste.ca/node/5>

⁶⁸ Sarah Minnes, K. Vodden and Research Team, "Exploring Solutions for Sustainable Rural Drinking Water Systems: A study of rural Newfoundland & Labrador drinking water systems," accessed 12 March 2015, http://www.mun.ca/harriscentre/Rural_Water_Report.pdf

⁶⁹ Community Accounts, "Ecological Reserves," accessed 10 March 2015, http://www.communityaccounts.ca/SESA/nl_mapcentre/ecological.pdf

22) Sustainable Fisheries Management 	% of workforce working in fisheries: 14.2% (2010) working in fish industry (2006) (-4%, 1996-2006)	Discovery Regional Development Board ⁷⁰
	Groundfish relative to conservation Limit Reference Point (2011): 85% below LRP	DFO ⁷¹
	Shrimp fishable biomass index: decreased by 92% from 238,000 t in 2007 to 18,000 t in 2013	DFO ⁷²

16) Viability of Agriculture Sector

While Newfoundland is rich in land, in-province agriculture accounts for only a minuscule amount of the food we eat. Understanding the successes and shortcomings will allow decision makers to identify areas for improvement. Provincially, the Newfoundland Federation of Agriculture has engaged in a five-year Agriculture and Agri-Foods Action Plan entitled, “Our Farms, Our Food, Our Future (2011).”

Current status and trends:

In Newfoundland, we currently produce only 10% of the fruits and vegetables that we consume. Skeard et al. (2011) provide a snapshot of agriculture in the region:⁷³

Dairy, beef, eggs, fruits (berries) and vegetables (particularly root crops), fur pelts, sod, landscaping and greenhouse products are all produced within the region by an estimated 40 commercial farms, with a concentration in the Lethbridge area (Discovery Regional Development Board, 2008). According to the Discovery Regional Development Board (2008) the agriculture industry employs approximately 400 people in Zone 15, producing a farm gate value of over \$20, 000,000.

⁷⁰ Discovery Regional Development Board, “Strategic Economic Plan: Zone 15,” Newfoundland and Labrador, 2008

⁷¹ DFO, “Northern (2J3KL) Cod Stock Update,” accessed 23 March 2015, http://www.dfo-mpo.gc.ca/csas-sccs/publications/scr-rs/2014/2014_030-eng.html

⁷² DFO, “Update of Stock Status Indicators for Northern Shrimp, *Pandalus borealis*, in Shrimp Fishing Areas 4, 5 and 6,” accessed 23 March 2015, http://www.dfo-mpo.gc.ca/csas-sccs/Publications/ScR-RS/2014/2014_021-eng.html

⁷³ Skeard et al., “The Analysis of Labour Market Factors Impacting Primary Industries in the Province,” p. 10-11, http://ope.gov.nl.ca/rural/whatweredoing/cbr_reports/12.AnalysisofLabourMarketFactors%20.pdf

As in other parts of the province, and despite significant market potential, the number of horticultural farms and acreage farms has decreased and operators cite lack of human resources as one of their key challenges, along with operating costs, lack of land use, lack of community and government support and unfair competition from other provinces.

According to one local representative, community-based initiatives such as community gardens, while important, account for about 2 percent of the food we need to feed the province.⁷⁴ Clearly, without more commercial production we will never come close to achieving meaningful food security for the province. In terms of business development, developing means and incentives, as well as eliminating barriers, for NL farmers to enter the market place with major grocery retailers is critical. It is estimated, for example, that consumer purchases of red meats in the province is in excess of 200 million dollars annually.⁷⁵ Nearly all of this supply is imported, due in large part to the lack of mandatory meat inspection and resulting barriers to exporting of meat products that limit NL farmers' ability to sell their meat products.

Suggested future directions:

- Promote agriculture as a viable, long term-business opportunity.
- Increase awareness around food security and food-related issues to help bolster the agriculture sector.
- Make provision for mandatory meat inspection. This will allow for in-province livestock production to enter the market with major grocery retailers.
- Adopt meaningful strategies and investment in the entire scope of food security, including agriculture and the fishery.
- Develop an updated valuation of the industry's standing and potential, and set realistic goals or milestones for achieving industry growth and higher levels of food security.

Suggested solutions and ways to overcome obstacles surrounding recruitment in the agriculture sector include recommendations from Skeard et al. (2011) as well as public engagement sessions:

- Develop industry-specific courses towards agricultural production.
- Hold information sessions in local schools on the value and strengths of the sector.
- Launch public awareness campaigns and explore immigration as strategies for filling human resource needs.

⁷⁴ This information was provided by Merv Wiseman, member of the Regional Council for the Clarnville-Bonavista Rural Secretariat Region via email on April 12, 2015.

⁷⁵ Ibid.

17) Waste Reduction Strategies

Everyone has a role to play in reducing the amount of household and commercial waste that we produce. Waste reduction is an important part of municipal services and policies, such as recycling programs and restrictions on waste collection. Ultimately these types of programs will change household decision-making.

Current status and trends:

As waste management is increasingly recognized as an environmental issue with important social and economic implications, action and reorganization is taking place. There are 3 jurisdictions tasked with waste management in the region: 1) the Isthmus area falls under Eastern Waste Management, 2) the Town of Clarendville has its own waste management system, and 3) the Bonavista Peninsula has created the Discovery Zone Regional Service Board (DRSB).

The DRSB is implementing a common waste management approach for the Bonavista Peninsula. The Board has developed a business plan that outlines a map creation and user database to track waste levels and usership levels. This information, along with a waste audit being conducted in Trinity Bay North and Bonavista in conjunction with the Multi-Materials Stewardship Board (MMSB), is expected to be available in summer 2015. For the rest of the region, the Town of Clarendville conducts its own municipal waste collection, while the Isthmus area is under the jurisdiction of Eastern Waste Management, which is currently implementing a solid waste management strategy to reduce landfill waste by 50% by 2020.⁷⁶

At the household level, according to our survey, 37.5% of respondents said they “always” actively reduce the amount of waste they produce, with an additional 51% of respondents saying that they do so “sometimes.” Only 7.1% said they never actively reduce their waste production.

Further investigation is required to determine trends in this data.

Suggested future directions:

Development of waste collection mapping and a user friendly database throughout the region will be critical for determining trends in waste reduction strategies, as is currently being done with the DRSB. Efforts towards a fully integrated, user-friendly system will ensure maximum public buy-in.

⁷⁶ Eastern Waste Management, “Provincial Solid Waste Management Strategy,” accessed 15 March 2014 2014, <http://easternwaste.ca/node/5>

18) Air Quality

Current status and trends:

As the Clarenville-Bonavista Region is a dominantly rural area, issues relating to air quality and contamination may not be as prevalent as in denser urban areas. It remains evident, though, that supported by our public survey, that heavily industrial areas on the Avalon Isthmus must continue to address concerns relating to air quality.

According to survey response, 88% of respondents from the Isthmus Area felt that air quality was either Major or Somewhat of a concern, compared with only 67% of respondents from the region as a whole. Additional comments from respondents from the Isthmus area reveal further insight. Respondents voiced concerns such as “the (Come by Chance) refinery causes air quality problems”.

North Atlantic Refining Limited operates monitoring stations at four locations in the Isthmus sub-region. These stations were installed to monitor emissions from North Atlantic’s refinery in Come-by-Chance and are located at Arnold’s Cove, Come-by-Chance, Sunnyside and at the refinery’s property boundary. For sulfur dioxide (SO₂), the ambient air criteria were not exceeded on any occasion in 2013; for particulate matter (PM_{2.5}) however, the 24-hour standard was exceeded on several occasions. Further, SO₂ appears to be showing an upward trend.⁷⁷

Further investigation is required to determine trends in this data.

Suggested future directions:

- Continue monitoring air quality and air quality improvements, particularly in heavily industrial areas on the Isthmus, to ensure air quality in the region.

19) Water Quality and Treatment

Current status and trends:

Clean, safe public drinking water supplies is a persistent challenge in rural Newfoundland. Comparing the region to the province in a recent province-wide municipal survey, over half of LSDs (56%) and 14% of municipalities reported experiencing boil water advisories that lasted longer than a year.⁷⁸ In this sense, the region is performing better than the provincial average. 15 of the 20 municipalities in

⁷⁷ Department of Environment and Conservation, “2013 Ambient air Monitoring Report,” published February 2014, p. 127-140, http://www.env.gov.nl.ca/env/publications/env_protection/2013%20Air%20Quality%20Annual%20Report.pdf

⁷⁸ Minnes et al, “Exploring Solutions for Sustainable Rural Drinking Water Systems,” accessed 12 March 2015, http://www.mun.ca/harriscentre/Rural_Water_Report.pdf

the region have a public drinking water supply system, with the remaining five subsisting off ground water sources.

In the same study it was found that out of the 4740 water quality rankings from 2009 - 2012, 3431 of those (72%) were "not ranked". This is due to the fact that once a water system goes on a BWA or is found to have levels of disinfectant by-products exceeding Health Canada guidelines, it no longer receives ranking. In the region this rises to 28 out of 35 systems (80%), which is above the provincial average.

According to our survey results, 33.6%, or one third of respondents felt drinking water quality was a major concern to future sustainability of their communities.

Further investigation is required to determine trends in this data.

Suggested future directions:

We arrive at mixed results with regards to consistently safe drinking water supplies. Trends need to be determined through continued water quality monitoring. As water systems that are put on a long-term boil-water advisories (BWA) or are found to have levels of disinfectant by-products exceeding Health Canada guidelines no longer receive a quality ranking, we suggest that this system be altered to improve overall monitoring. Continued efforts to reduce long term BWAs are also required.

20) Energy and GHG Emission Reduction Measures

Current status and trends:

According to our survey, 40.5% of respondents "always" seek to reduce the amount of energy (electricity, gas, oil) that they use, with an additional 49% responding that they "sometimes" seek to reduce their energy use. Incentives to reduce energy use may play a major factor: the high cost of energy at the household level should lead to awareness and sensitivity to energy saving. A majority (58%) of respondents have noticed effects of climate change in the past two decades, most notably related to changes in temperatures and precipitation, so general awareness of climate change and carbon footprints appears to be high.

In 2009 the Province of Newfoundland and Labrador initiated the "Turning Back the Tide" campaign, sponsored through the Office of Climate Change and Energy Efficiency. This is a positive step in the direction towards reducing energy use, reducing our carbon footprint, and increasing public awareness. An issue of such magnitude requires leadership from high levels of government. The program does offer incentives and tools that can be used on the local level, such as a Municipal Government Carbon Calculator.

Newfoundland Power does not, however, currently have available energy-use statistics at the local and regional levels.⁷⁹

A further step not currently taken by municipalities in the region could involve joining the Partners for Climate Protection, as part of the Federation of Canadian Municipalities.

Further investigation is required to determine trends in this data.

Suggested future directions:

Awareness and education on this issue could use improvement. With rising household incomes, particularly in the Clarenville and Isthmus areas, has come bigger houses, more vehicles, and increased energy use. Programs and incentives, energy saving devices, and affiliations such as the national Partners in Climate Protection, could help to this effect.

21) Ecosystem Protection

Protection and preservation of natural habitats and natural capital stocks is crucial to the preservation of our natural environment, both now and for future generations. Sustainable natural resource management in concert with protected areas, including forests, coastal areas and wetlands, are needed to ensure the region maintains a level of ecological integrity and natural capital for future generations.

Current status and trends:

The region is situated adjacent to Terra Nova National Park and to the Bay du Nord Wilderness Reserve, two vast expanses of parkland. There are 20 ecological reserves throughout Newfoundland and Labrador, including six on the Avalon. There are two (of 32 throughout the province) provincial parks within the region. Municipal Habitat Stewardship Agreements in the province focus on wildlife habitat protection, though only one community in the region (Come by Chance) is currently a partner in this form of wetlands and coastal stewardship.⁸⁰

NL currently has two Oceans Act Marine Protected Areas (Eastport and Gilbert Bay), neither of which are within the region, although the Eastport Marine Protected Area is located just to the north. There are also no National Marine Conservation Areas (marine areas managed for sustainable use with smaller zones of high protection) within the region or its surrounding waters.

⁷⁹ Based on discussion with a Newfoundland Power representative.

⁸⁰ Stewardship Association of Municipalities, "Wildlife Habitat Stewardship in Newfoundland and Labrador," accessed 31 March 2015, <http://www.municipalnl.ca/userfiles/files/Wildlife%20Habitat%20Stewardship%20in%20Newfoundland%20and%20Labrador.pdf>

Newfoundland is committed to sustainable forest management through becoming a signatory to the Canada Forest Accord.⁸¹ The Clarenville- Bonavista Region falls largely within the Department of Natural Resources Management District 2. Of the District's 420,104 hectares only 40% of the total land base is considered productive forest land. The annual allowable cut (AAC) for the Management District 2 increased by 4,960 square meters in the 2006-2011 Five Year Operating Plan, compared with the previous Five Year Operating Plan.⁸² It is unclear whether this increased allowable cut has had a negative impact on the sustainability of forestlands within the region.

Despite nearby protected areas the percentage of land base protected within the region remains low. Overall, natural habitats remain relatively intact in the region, however work must be done to ensure this remains the case in perpetuity.

Suggested future directions:

Continued promotion of and planning for conservation and protected areas will be key for ensuring the preservation of natural habitats. Work between government agencies, stewardship organizations and the general public will ensure the protection of a broad public interest, including that of future generations.

22) Sustainable Fisheries Management

Fisheries, once the life-blood of the regional and provincial economy, no longer provides the livelihood it once did and is in fact a lesson in itself on sustainability, management of resources over time, and the vital interconnectedness between ecosystem and economy.

Current status and trends:

Though the region's economy has diversified away from the commercial fisheries, the ties remain abundant. The fishing industry still has a considerable economic impact on the Region, as a large processing plant in Arnold's Cove employs approximately 300 residents and fish plants are still in operation within Bonavista, Clarenville, Norman's Cover, Long Cove, Plate Cove, and Hickman's Harbour.⁸³ In addition, there are smaller seasonal operations in Arnold's Cove and Fairhaven.

As of 2006, there were 1160 people employed in the fisheries, or 12.6% of the regional workforce, clearly down from previous historical levels. According to Skeard et al. (2011), the number of harvesters declined by 4% (50 individuals) in the region from

⁸¹ Department of Environment and Conservation, "Crown Forest Mgt. Dist. 1 Five Year Operating Plan," accessed 19 March 2015,

http://www.env.gov.nl.ca/env/env_assessment/projects/Y2006/1296/1296_section7.1_2.pdf

⁸² Ibid

⁸³ Porter and Vodden, "An Analysis of Municipal Readiness for Socio-Economic Development Opportunities in the Isthmus of Avalon Region," p. 35

1996-2006 and by 2.8% in the province.⁸⁴ The number of fish processing workers also declined by 8% over that same time period.

The Clarenville-Bonavista Region lies within NAFO Division 3L and Northern Shrimp area SFA 7. Since the mid to late 2000s there have been signs of a movement back to a groundfish-dominated fish community off the shores of Newfoundland and Labrador: shellfish have begun to decline, and traditional groundfish to increase. Capelin has also shown improvements. Although showing positive trends, it should be noted that “historically-dominating groundfishes (e.g. Atlantic Cod, American Plaice) and capelin remain well below their pre-collapse levels”. A conservation limit reference point (LRP) was established for Northern (2J3KL) Cod in 2010. This reference point defines the stock level below which serious harm is occurring. “The most recent assessment (March, 2013) concluded that the stock was 85 % below the LRP; at this level the stock is considered to have suffered serious harm and the ability to produce good recruitment is seriously impaired.”⁸⁵

While groundfish have not recovered, Northern Shrimp is now at or below the biomass levels observed in the mid-1990s and declining. The fishable biomass index in SFA 7 decreased by 92% from 2007 to 2013. Factors contributing to reduced shrimp production include a recent warming trend, early phytoplankton bloom, increasing predation, and fishing.⁸⁶

On a positive note, the exploitable biomass of snow crab has increased in Div. 3LNO, with the majority of the Snow Crab resource being present within Div. 3L. Trap survey results suggest that the Div. 3LNO exploitable snow crab biomass has almost doubled since 2008.⁸⁷

Suggested future directions:

Groundfish stocks are experiencing somewhat of a rebound. This was supported by dialogue from our public engagement sessions. Yet fisheries remains important to the regional economy and identity and sustainable fisheries management is imperative for the region to grow, develop, and ensure that collapses of industry and ecosystem alike are not repeated. Sustainable fisheries management requires a system that is open and adaptable to potential future shift in fish communities and market demands.

- Link concerns about the sustainability of the fishery to those related to access to fresh, local foods and healthy living. Projects such as community fish baskets could be explored to ensure access to and encourage the inclusion of fish within local diets.

⁸⁴ Skeard et al., “The Analysis of Labour Market Factors Impacting Primary Industries,” p. 22.

⁸⁵ Fisheries and Oceans Canada, “Short-term prospects for cod, crab and shrimp in the Newfoundland and Labrador region,” accessed 31 March 2015, http://www.dfo-mpo.gc.ca/csas-sccs/Publications/ScR-RS/2014/2014_049-eng.pdf

⁸⁶ Ibid.

⁸⁷ Ibid.

- Continue to increase use and integration of technologies into fisheries operations, as recommended by the 2012 fisheries symposium hosted by the Government of Newfoundland and the Discovery Region Development Board.⁸⁸

Summary – Sustainability Strengths and Gaps

Our indicators framework, and principally the data measures therein, has evolved a great deal since inception. From the first iteration from consultations with the Regional Council, to the present state in which we have a more clear sense of regional standing, conversation and open-dialogue have been critical. At present, the data compiled represents a “snapshot in time” across a very broad selection of information regarding the sustainability, both now and into the future, of the Clarenville-Bonavista Region.

As part of this “snapshot,” we can identify six critical areas where our TIPS give a downward pointing, or negative indication:

- **Affordable housing** is unavailable for many residents and critically in need of workable solutions. Affordability has eroded since the availability of previous data.
- **Stabilizing the regional population** has not occurred – the population has dropped, despite a very significant rise in the population of Clarenville (+14%).
- **Access to good food and nutrition** appears to have diminished, with the rise in overweight and obese citizens.
- **Community connectedness** has diminished in terms of sense of belonging, life satisfaction, and perceived community safety.
- **Viability of the agriculture sector** has decreased over time, with less workers and less land under production
- **Sustainable fisheries** remain an elusive objective, as fish stocks have not recovered from historic levels, and shellfish biomass is in decline.

Data gaps are most glaring concerning reliable, open, and available data regarding environmental indicators. The lack of linkage between environment, economy, and society was an important deficiency throughout the survey and public engagement sessions. Openness and transparency, while important, is not sufficient with regards to public information on fisheries management or sustainable forest management – straightforward, easily identifiable data needs to be more readily available to the public in order to both **quantify** changes in the environment, and then **qualify** those changes by grounding them in relevance and social/economic context.

V. Moving Forward and Developing Solutions

⁸⁸ Discovery Region Development Board, “Fishery Forum – Preliminary Report,” March 2012.

Our Phase One literature review indicated that internal barriers to sustainable development strategies are most commonly associated with a lack of capacity at the local and regional levels, and in the complexities of formulating sustainable solutions themselves. Research has found that during the assessment stages of community sustainability planning, rural communities in Canada are often faced with issues such as lack of access to information and a limited ability to mobilize post-planning and assessment. For these reasons, an open and transparent governance commitment is necessary. One way for rural communities and regions to address rural capacity issues is to leverage external capacity, working cross-regionally as well as with the Province. By developing new programs and by “bending” existing programs to support prioritized local initiatives, appropriate partners from within and outside the region can help to reduce potential implementation barriers in pursuing solutions to the region’s sustainability challenges.

In Phase Two, our research has identified several critical regional sustainability concerns, through both the public survey and the public engagement sessions, but also several future directions for addressing these concerns. By way of this collaborative process, we make the following recommendations on necessary future steps in this process, including developing new programs and harnessing and building on existing ones and monitoring changes in the region over time so that successes can be recognized and celebrated and sustainability actions plans modified where required in a learning, adaptive process.

A. Continue to utilize and revisit the indicator framework:

- Continue to work with and treat this as a “living document.” For example, the Fraser Basin Council in British Columbia, once having established their indicators framework, has continued on to produce an annual “Sustainability Snapshot” for the region.
- Revisit indicators after 2016 census. The next round of data from the census and National Household Survey will be the next major opportunity to update our indicators framework with new data and begin to draw trends.
- This may involve adaptation of the framework over time as lessons are learned, data becomes more or less available, and priorities change.

B. Make the results of this work publicly available:

- Produce a brochure, pamphlet, or workbook could effectively engage a broader public interest. Readability and user-friendly formatting is key. Engage local media to provide interviews and/or newspaper articles or inserts.
- Explore potential linkages to Vital Signs. A form of “community check-up,” Vital Signs engages communities and develops platforms for action based on certain needs and criteria. Vital Signs was just recently launched in Newfoundland and Labrador in 2014 with a province-wide report, but with some regional analysis

included and the potential to provide additional local level analysis in the future (see <http://www.mun.ca/harriscentre/vitalsigns/>).

C. Develop an action plan:

- Meet with relevant stakeholders to examine the ideas raised throughout this work, assess the relevance and feasibility of the ideas presented above and others they may bring forward, prioritize and develop next steps accordingly.
- Ensure the necessary linkages between government and public consultation remain entrenched.

Based on the results of our research and engagement activities we suggest that program development and action planning be pursued within six priority areas. Within each of these areas several specific suggestions have been raised throughout this research phase, as outlined above. Keeping these suggestions in mind as action plans for moving forward are developed, we recommend that regional stakeholders seek to:

1. Solve the affordable housing crisis through increasing the housing stock, increasing publicly subsidized housing, and controlling the rise in rents

Higher housing costs are almost certainly here to stay. However, that does not mean we forfeit the ability as well as commitment to ensuring that affordable housing may be secured for all. Industrial development, population growth in concentrated centers, and rising real estate prices are undoubtedly a boon to any region. The challenge, as has been well documented, is in ensuring the benefits are equitable and accessible to all citizens.

2. Retain young people by investing in them

Our youth are our greatest and most important investment for the future. At present, we know that youth unemployment in Newfoundland, and presumably especially so in rural areas, is significantly higher than the national average. We also know that young people are on average ready and willing to leave the region without the proper incentives to stay. A commitment to youth means investing in education, entrepreneurship, and quality employment opportunities once ready to enter the workforce.

3. Capture and increase the benefits of “close to home” jobs, while preparing for and investing in a greener, more diversified future

Well-paying jobs here in Newfoundland and Labrador are a critical aspect of long-term sustainability. Industrial developments of current and future projects, particularly within the Isthmus sub-region, are critical assets to this region. Residents see additional opportunities from these assets. Also while embracing these assets, citizens are generally aware that development in the oil and gas sector is not sustainable in the long run and that there are costs associated with a boom and bust economy associated with

commodity production. To transition from these developments into future green opportunities, and for purposes related to intergenerational equity, an Oil and Gas Fund could ensure funding investment in green technology and diversification, while maintaining the benefits of current developments. This could be expanded to include mineral-related development, including Vale nickel processing.

4. Improve health outcomes through a strengthened emphasis on preventative care and education

While longer wait times and driving considerable distances for specialist treatment are realistic expectations in more rural areas, measures need to be taken to improve satisfaction with the current health system as well as improve current health outcomes. Preventative care, overwhelmingly recognized by participants in our public engagement sessions, is critical to this end. Improved preventative care, including programs such as mobile clinics and “personal medical homes” (PMHs) will not only reduce wait times for medical care, but also drastically reduce the burden of cost to the system. Once again, education is a key aspect of this.

5. Support local food networks through community planning, education, and corporate sponsorships

The most highly ranked priority in ensuring healthy and affordable foods, according to our public engagement sessions, was the strengthened existence of social supports. By and large, education is crucial to this end. Educating our children about the fundamentals of healthy eating, which starts with local and minimally processed foods, is the necessary first step in meeting this goal. One piece of feedback from our public engagement session suggested that the absence of home economics courses in the public school system is a critical loss – without this basic education, our youth lack the life skills necessary for well-rounded nutrition, food preparation, and general food-issues awareness. Coupled with strengthened education and awareness, community planning will help with broader involvement in food awareness issues.

6. Raise awareness of the important role of environmental sustainability by linking environmental health to the health and sustainability of the population and region as a whole.

It is not sufficient, and remains a challenge, that social and economic indicators have relative availability for public use, while environmental aspects of our region are little understood. This was equally reflected in both the survey and the public engagement sessions, in which social and economic concerns rose to the surface and tended to take priority over environmental ones. Improved integration of environmental data into other sources of data for well-being in the province such as that gathered by Stats NL and Community Accounts is an important next step. This could facilitate bringing environmental considerations into the mainstream conversation, including increased understanding of the clear links between human health and clear air and water and production of fresh, local foods. Finally, development of environmental

entrepreneurship can reap great rewards. This could include funding programs and education that both increase environmental awareness, while creating incentives and linkages to economic considerations and business development.

VI. Conclusions

The Clarendville-Bonavista Region, much like other communities and regions throughout the province and rest of Canada, is posed with significant challenges with respect to sustainable development and maximizing future opportunities. Environmental, economic, and social considerations coalesce in mapping present and future challenges, as well as defining the ways in which a truly sustainable future may prevail for the region. A principled and inclusive design is necessary for any such strategy to ultimately be successful.

Indeed, regional governance bodies are crucial to the strategic development and implementation of sustainable development strategies, thanks in part to their relative scale and responsibilities and their ability to engage people and collaborate in designing specific policies and actions. In addition, the region is in a strategic enough location to make connections across wider areas. It is this interconnectedness with neighboring regions, the province, and beyond that makes a framework for a sustainable development strategy ideally both pragmatic and transferrable. The hope is to frame a sustainable development strategy that may serve as a launch point for eventually broader sustainability initiatives, both within as well as outside of the region.

Building off of the research and design in Phase One, this document has expanded on the indicators framework necessary to monitor and promote the sustainability of rural regions, as well as the existing barriers. Consideration of sustainability priorities as expressed by the Regional Council, survey respondents, and the general public via our public engagement sessions have been crucial to the formulation of this document. It is our hope that the development of the indicators approach outlined above will aid the Regional Council in working towards a sustainable development strategy and action plan and provide a framework to monitor and measure the extent to which the goals of this strategy are being achieved in the future.

Ultimately, the future is ours to make. Through responsible, responsive, collaborative decision-making, we may ensure that future generations are positioned to thrive. In recognizing that there are no simple solutions to the monumental task of sustainable development, we may take solace in that our efforts are part of a much bigger process. The research contained within this set of reports represents a stepping-stone towards the necessary actions associated with a process of striving for sustainability within the Clarendville-Bonavista Region and beyond.

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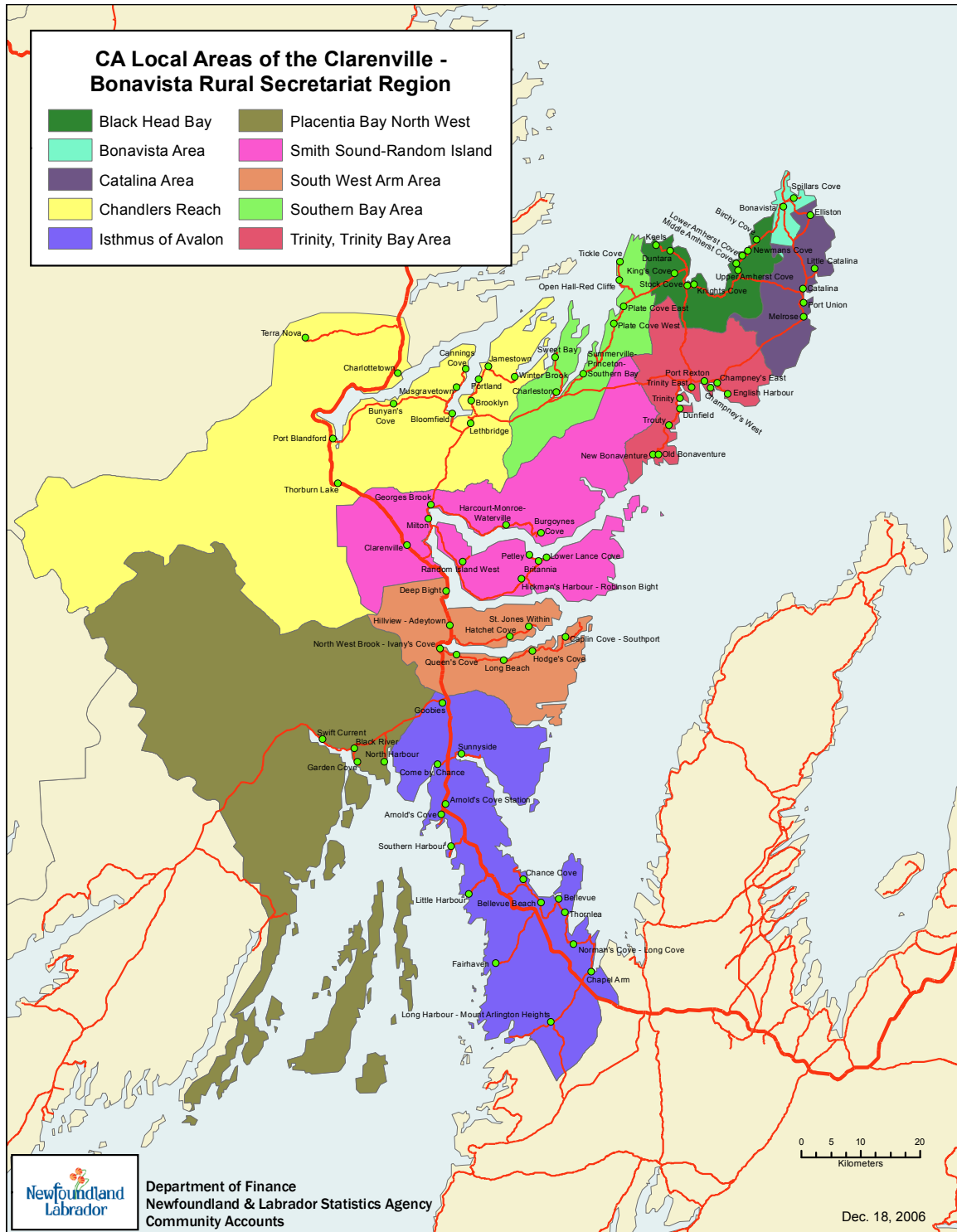
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Appendix I – Map of the Clarenville Bonavista Region



Appendix II – Survey Results

Table A. Survey Results

	Total #	%
Respondents		
A1. Communities	See Table B	n/a
A2. Time living in region	Less than 1 yr - 12 1-5 yrs - 23 6-10 yrs - 50 11-20 yrs - 85 Over 20 - 128 Other - 1	Less than 1 yr – 4% 1-5 yrs – 8% 6-10 yrs – 17% 11-20 yrs – 28% Over 20 – 43% Other – 0%
A3. Connected to community	Very connected – 156 Somewhat connected – 99 Not at all – 19 Don’t know – 20 Other – 4	Very connected – 52% Somewhat connected – 33% Not at all – 6% Don’t know – 7% Other – 1%
A4. Connected to region	Very connected – 84 Somewhat connected – 127 Not at all – 37 Don’t know – 49 Other – 4	Very connected – 28% Somewhat connected – 42% Not at all – 12% Don’t know – 16% Other – 1%
A5. Planning on moving outside region in next 5 year	Yes – 57 No – 204 Don’t know – 36 Prefer not to say – 2	Yes – 19% No – 68% Don’t know – 12% Prefer not to say – 1%
A6. Why will you be moving outside the region?	Lack of job opportunities – 23 Found job elsewhere – 20 Pursue training/education – 12 Move closer to family/friends – 17 Other – 10 Don’t know – 0 Prefer not to say – 2	Lack of job opportunities – 39% Found job elsewhere – 34% Pursue training/education – 20% Move closer to family/friends – 29% Other – 17% Don’t know – 0% Prefer not to say – 3%
A7. How welcoming is your community to newcomers?	Very welcoming – 125 Somewhat welcoming – 127 Not welcoming at all – 23 Don’t know – 22 Prefer not to say – 2	Very welcoming – 42% Somewhat welcoming – 43% Not welcoming at all – 8% Don’t know – 7% Prefer not to say – 1%
B1. How active is your current lifestyle?	Very active – 95 Somewhat active – 152 Not active at all – 37 Don’t know – 10 Prefer not to say – 4	Very active – 32% Somewhat active – 51% Not active at all – 12% Don’t know – 3% Prefer not to say – 1%

B2. What keeps you from being more active?	Work – 98 Family – 61 School – 19 Lack of facilities – 43 Other – 40 Nothing – 99 Don't know – 17 Prefer not to say – 6	Work – 33% Family – 20% School – 6% Lack of facilities – 14% Other – 13% Nothing – 33% Don't know – 6% Prefer not to say – 2%
B3. Are you currently employed?	Yes – 178 No – 116 Don't know – 4 Prefer not to say – 2	Yes – 59% No – 39% Don't know – 1% Prefer not to say – 1%
B4. Do you work inside or outside the region?	Inside – 111 Outside – 48 Both – 16 Don't know – 0 Prefer not to say – 1	Inside – 63% Outside – 27% Both – 9% Don't know – 0% Prefer not to say – 1%
B5. How far do you travel to work on average?	Less than 100 km – 108 100-500 km – 32 Out of province – 28 Don't know – 4 Prefer not to say – 4	Less than 100 km – 61% 100-500 km – 18% Out of province – 16% Don't know – 2% Prefer not to say – 2%
B6. How often do you volunteer in your community?	Never – 74 Daily – 15 Weekly – 46 Monthly – 43 Yearly – 18 No set time – 89 Other – 2 Don't know – 6 Prefer not to say – 3	Never – 25% Daily – 5% Weekly – 16% Monthly – 15% Yearly – 6% No set time – 30% Other – 1% Don't know – 2% Prefer not to say – 1%
B7. Do you own a vehicle?	Yes – 235 No – 57 Don't know – 1 Prefer not to say – 3	Yes – 79% No – 19% Don't know – 0% Prefer not to say – 1%
B8. Do you have access to a vehicle for transportation if needed?	Yes – 278 No – 12 Don't know – 5 Prefer not to say – 2	Yes – 94% No – 4% Don't know – 2% Prefer not to say – 1%
B9. If public transit were available, would you use it?	Yes – 66 No – 113 Maybe – 94 Don't know – 20 Prefer not to say – 1	Yes – 22% No – 38% Maybe – 32% Don't know – 7% Prefer not to say – 0%
B10. Have you noticed effects of climate change?	Yes – 173 No – 116 Prefer not to say – 8	Yes – 58% No – 39% Prefer not to say – 3%

If yes, B11. What changes have you noticed?	Temperature changes – 133 Precipitation changes – 136 Changes in veg. – 24 Changes in animal pop. – 20 Don't know – 3 Prefer not to say – 0	Temperature changes – 77% Precipitation changes – 79% Changes in veg. – 14% Changes in animal pop. – 12% Don't know – 2% Prefer not to say – 0%		
		Always	Sometimes	Never
B.12 How often do you engage in the following activities?	Reduce waste	111 (37.5%)	151 (51%)	21 (7.1%)
	Minimize energy use	120 (40.5%)	145 (49%)	23 (7.8%)
	Walk, cycle, use transit	42 (14.2%)	150 (50.7%)	98 (33.1%)
	Minimize water use	58 (19.6%)	161 (54.4%)	64 (21.6%)
	Grow/hunt/forage food	35 (11.8%)	144 (48.6%)	109 (36.8%)
C1. Are you satisfied with the efforts of your town council?	Yes – 173 No – 13 Somewhat – 50 Not applicable – 6 Don't know – 44 Prefer not to say – 8	Yes – 59% No – 4% Somewhat – 17% Not applicable – 2% Don't know – 15% Prefer not to say – 3%		
C2. Do you feel the Province listens to the public when making decisions?	Yes – 116 No – 51 Somewhat – 103 Not applicable – 2 Don't know – 19 Prefer not to say – 4	Yes – 39% No – 17% Somewhat – 35% Not applicable – 1% Don't know – 6% Prefer not to say – 1%		
C3. How much do you feel businesses in your community contribute to community?	A little – 110 A lot – 122 None – 12 Don't know – 49 Prefer not to say – 1	A little – 37% A lot – 42% None – 4% Don't know – 17% Prefer not to say – 0%		
C4. Do you feel businesses in your community are environmentally responsible in their operation?	Yes – 98 No – 34 Somewhat – 110 Not applicable – 2 Don't know – 50 Prefer not to say – 1	Yes – 33% No – 12% Somewhat – 37% Not applicable – 1% Don't know – 17% Prefer not to say – 0%		
D1. Factors having impacts on future sustainability		Major concern	Somewhat a concern	Not a concern at all
	Ageing population	146 (49.5%)	110 (37.3%)	15 (5.1%)
	Affordable housing	158 (53.6%)	101 (34.2%)	17 (5.8%)
	Employment opportunities	169 (57.3%)	91 (30.8%)	18 (6.1%)

	Loss of culture and heritage	92 (31.2%)	135 (45.8%)	40 (13.6%)
	Community involvement	81 (27.5%)	133 (45.1%)	52 (17.6%)
	Connectedness amongst residents	67 (22.7%)	135 (45.8%)	66 (22.4%)
	Access to health services	133 (45.1%)	111 (37.6%)	33 (11.2%)
	Educational services	116 (39.5%)	116 (39.5%)	42 (14.3%)
	Access to healthy, affordable food	131 (44.4%)	121 (41.0%)	25 (8.5%)
	Air quality	61 (20.7%)	130 (44.2%)	80 (27.2%)
	Drinking water quality	99 (33.6%)	121 (41.0%)	56 (19%)
	Sewage treatment	80 (27.4%)	119 (40.8%)	71 (24.3%)
	Green space and protected areas	51 (17.3%)	136 (46.3%)	79 (26.9%)
	Transportation infrastructure	71 (24.1%)	145 (49.2%)	54 (18.3%)
	Communications infrastructure	67 (22.8%)	136 (46.3%)	60 (20.4%)
	Retail and commercial services	65 (22.0%)	132 (44.7%)	74 (25.1%)
D2. Are there other concerns not mentioned?	Yes – 8 No – 251 Don't know – 29 Prefer not to say – 7		Yes – 3% No – 85% Don't know – 10% Prefer not to say – 2%	
E1. Please specify your gender	Male – 146 Female – 146 Other – 0 Prefer not to say – 2		Male – 50% Female – 50% Other – 0% Prefer not to say – 1%	
E2. What best describes your age?	18-29 – 50 30-44 – 75 45-59 – 107 60 or older – 61 Prefer not to say – 2		18-29 – 17% 30-44 – 25% 45-59 – 36% 60 or older – 21% Prefer not to say – 1%	
E3. How many people live in your household?	1 – 33 2 – 108 3 – 74 4 – 49 5 – 17 More than 5 – 9 Prefer not to say – 5		1 – 11% 2 – 37% 3 – 25% 4 – 17% 5 – 6% More than 5 – 3% Prefer not to say – 2%	

E4. What is your highest level of education?	Less than high school – 26 High school – 82 Some college/training – 35 College diploma/private training – 91 Some university – 14 University degree – 32 Don't know – 2 Prefer not to say – 13 Other – 0	Less than high school – 9% High school – 28% Some college/training – 12% College diploma/private training – 31% Some university – 5% University degree – 11% Don't know – 1% Prefer not to say – 4% Other – 0%
E5. Did you attend post-secondary within or outside the region?	Within – 56 Outside – 87 Both – 28 Don't know – 1 Prefer not to say – 0	Within – 33% Outside – 51% Both – 16% Don't know – 1% Prefer not to say – 0%