



Defining Regions for Building Economic Development Capacity in Newfoundland and Labrador

David Freshwater, Alvin Simms and Kelly Vodden
November 25, 2011





Defining Regions for Building Economic Development Capacity in Newfoundland and Labrador

David Freshwater, Alvin Simms and Kelly Vodden
November 25, 2011

Contents

Glossary of acronyms.....	2
1.0 Introduction and Overview.....	3
1.1 Research Approach.....	5
2.0 The Problem	6
3.0 The Past Policy Responses	8
3.1 Palliative Responses.....	8
3.2 Organizational Responses	9
3.3 Developmental Responses.....	11
4.0 Functional Regions	12
4.1 Defining Functional Regions in Newfoundland and Labrador	13
4.2 Functional Regions, Local Labour Markets and Economic Development.....	14
5.0 Regional Economic Capacity Index (RECI).....	15
6.0 Governance	18
7.0 Conclusions.....	20
Figures.....	23
Figure 1.0.....	23
Figure 2.0.....	24
Figure 3.0.....	25
Figure 4.0.....	26
Figure 5.0.....	27
Figure 6.0.....	28
Figure 7.0.....	29
Figure 8.0.....	30
Figure 9.0.....	31
Figure 10.0.....	32
Figure 11.0.....	33

Glossary of acronyms

ACOA	Atlantic Canada Opportunity Agency
CBDC	Community Business Development Corporation
DFO	Fisheries and Oceans Canada
EAS	Employment Assistance Services
EI	Employment Insurance
HRSDC	Human Resources and Skills Development Canada
JTW	Journey to Work
LSD	Local Service District
MNL	Municipalities Newfoundland and Labrador
NCARP	Northern Cod Adjustment and Recovery Program
NRP	New Rural Paradigm
OECD	Organization for Economic Cooperation and Development
RDA	Rural Development Association
RECI	Regional Economic Capacity Index
REDB	Regional Economic Development Board
RS	Rural Secretariat
TAGS	The Atlantic Groundfish Strategy
TCH	Trans Canada Highway

Defining Regions for Building Economic Development Capacity
in Newfoundland and Labrador¹
David Freshwater, Alvin Simms and Kelly Vodden²
October, 2011

1.0 Introduction and Overview

This report synthesizes the results of a multi-year effort to identify a more effective way of organizing economic development efforts in Newfoundland and Labrador. This synthesis collects the main ideas and results from the various interim reports and tasks conducted over the life of the project. More detailed information is available from these publications, including references to primary and secondary sources, available from Municipalities Newfoundland and Labrador (MNL)³.

One main idea underlying the work is a belief that most individual communities in the province are too small by themselves to be viable economic units; therefore, to obtain the critical mass needed to expand economic opportunity there has to be some form of aggregation of local resources. This is a well understood situation. The province has for decades identified a number of alternative development regions that were meant to provide a structure for multi-community collaborations. But, the periodic redrawing of the boundaries of these development regions is in itself evidence that boundaries defined by provincial or federal governments have not always led to meaningful collaboration and better development outcomes.

The second key foundation idea is that economic opportunities vary by region, and within a region they also vary over time. This makes it hard to define development strategies for regions at the provincial level. While provincial governments can target specific sectors as being high potential, it is much more difficult to identify which firms will be involved and where they will physically locate. By way of analogy, in Canada the federal government often determines high level national goals, but provinces generally insist that only they have the competence to develop

¹ The paper provides a synopsis of the results of a multi-year project undertaken at Memorial University that was conducted under the auspices of the Canadian Rural Revitalization Foundation (CRRF). The objective of the work was to develop a better understanding of economic development opportunities in the various communities of the province. Multi-year support for the project was provided through the Canada-Newfoundland and Labrador Labour Market Development Agreement. Rob Greenwood was project chair, Craig Pollett led knowledge mobilization and provided project administration through Municipalities Newfoundland and Labrador and Pat Curran provided project management through the Irish Loop Development Board.

² Freshwater is a Professor, Department of Agricultural Economics, University of Kentucky and Adjunct Professor, Department of Geography, Memorial University; Simms is an Associate Professor, Department of Geography, Memorial University; Vodden is an Assistant Professor, Department of Geography, Memorial University.

³ See: http://www.municipalitiesnl.com/?Content=Programs/Rural_Urban

the specific means for achieving them because conditions vary by province. In the same way, communities can be best placed to define the economic development approach that most suits their particular situation.

Combining these two principles leads to the use of regions as the basic unit of economic development. But specifically, regions that are grounded in local communities. The approach adopted here is to use existing patterns of economic interaction – primarily the local labour market, to define regions based on groups of communities that are already integrated in terms of a key aspect of economic development – labour supply and demand. Local labour markets show which communities already have an ongoing economic relationship. And, our belief is that where there is already some economic integration, there is the potential for more. These “functional regions” reflect the current labour market relationship (Figure 1.0). But if the local economy changes in a significant way, say a plant closing or a significant improvement to a major road, then we would expect the boundaries of the labour market to change (Figure 2.0).

While functional regions show how people in communities are currently interacting, the boundaries of these regions change over time. Indeed, if the communities in a region are successful in expanding the local economy through collaborative action, we would expect the local labour market to expand and a larger region to result. Conversely, weaker economic conditions in the various communities tends to lead to a shrinking and dividing of the local labour market and increased isolation of individual communities.

An important aspect of a functional region is the recognition that all the communities within the region play a role in the local economy. While each employer is located in a specific place, it tends to employ people from a number of other surrounding places. This means that the economic benefits from the firm are distributed over a larger geographic area. In addition, firms in one community may purchase inputs from firms in another community in the same region. This further expands the interaction within the region. While larger centers in a region may have more firms and host more government services than smaller communities, it is important to remember those firms exist mainly because of the aggregate population in the entire region and not just the population in that single community.

Functional regions are not a substitute for the administrative boundaries drawn by provincial and federal agencies to define public service areas, but they do provide a useful perspective on how current economic conditions are already linking specific communities. If communities are looking for potential partners to work with, primarily on economic development-related initiatives, but potentially in other arenas, those within the same local labour market are probably the best first choices. But it is also clear that there is more to successful collaboration than a common labour market. In particular, communities have to want to work together and have to be able to define a structure that allows this to happen. Thus improving local governance to facilitate collaboration is the second major issue for better economic development in the province.

The policy recommendations that come from the research focus on communities in the province other than the two largest cities of St. John's and Corner Brook. While these two cities and their surrounding communities make up local labour markets, there is no concern with lack of critical mass and generally there is adequate development capacity. In addition, the recommendations are also not applicable to those parts of the province where there is no settlement, or to communities that are so geographically isolated that they are not part of a larger labour market. While the tools we have developed are applicable throughout the province, the nature of the development problem in the two largest cities and also in the most isolated communities requires a different type of policy framework.

Broad conclusions from the research include the following points. Functional regions based on local labour markets offer a potentially valuable way to define opportunities for multi-community cooperation that make sense to local participants. With declining and aging populations in most small communities in the province, a regional approach to development offers more opportunity for success than independent action. Because economic opportunities within the province change over time causing people to adjust their work patterns, it is necessary to incorporate the possibility of shifts in the boundaries of functional regions in developing policy and programs. While this may be seen as a weakness of the approach, it does reflect the reality of how people and communities actually interact, and this reality offers a stronger way to develop regional cooperation than either static notions of region or administrative boundaries that do not correspond with patterns of daily life.

1.1 Research Approach

The research was conducted as two distinct, but connected, programs of work. One program was a modeling effort that first developed a set of functional regions for the province based on journey to work data. The second step for this component was to characterize communities within each region on the basis of their current economic structure and capacity. These characteristics are in a sense the underlying cause for the specific boundaries of each region and the observed labour market outcomes. A Regional Economic Capacity Index (RECI) was constructed that incorporates: demographic, current economic structure, spatial location and governance indicators. A web based application that incorporates RECI allows communities to assess their current status: within their functional region, within administrative regions, and across the province. Importantly, the application also provides some basic advice on how to improve aspects of the index where a community is under-performing. RECI can be accessed online at <http://www.mun.ca/harriscentre/RECI>.

The second work program focused on governance issues. For any community the element of RECI that is most subject to local influence is governance. As part of the development of RECI, basic indicators of governance were collected for communities across the province. In addition, detailed studies of various aspects of formal and informal cooperation were undertaken in three regions – one adjacent to

St. John's, one in an intermediate rural area and the last in a remote rural area. (Figure 3.0). These case studies provided additional information on governance and provided a way to validate the functional region boundaries developed in the model. The governance component also examined the history of provincial regional development programs, especially in terms of the boundaries adopted under various provincial development approaches, to see how congruent they were with the functional regions.

The research was guided by an advisory committee comprised of individuals representing key federal and provincial departments and agencies, small and large municipalities, and a number of development organizations. Advisory committee meetings were held throughout the program of research to review and advise on methodology and on emerging findings and their implications. . Together with our collaboration and communications with partner organizations in each of the three case study areas (the Irish Loop, Twillingate-New World Islands, and the Labrador Straits), this was a way to proof interim results and test policy implications. In addition, the ongoing work was presented semi-annually at various MNL meetings to obtain feedback from local elected officials. A workshop was also held jointly with the research team and advisory committees for the Social Foundations of Innovation Project in NL. See

<http://mun.ca/harriscentre/reports/research/2010/CelticRendezvousJune2010.pdf> for the report from that workshop, which informed the final conclusions of both projects. See http://mun.ca/harriscentre/reports/David_Speed_Report.pdf for an evaluation of the knowledge mobilization process of both projects.

2.0 The Problem

The province of Newfoundland and Labrador has historically had a highly dispersed settlement pattern that reflected the economics of resource capture and processing – fish, wood and minerals. For these industries there is a combination of: site specific resource availability and the necessity of relatively concentrated settlements. Unlike agriculture, where farmers disperse over the landscape, fishing, forestry and mining result in small self-contained settlements where there are: ports and fish plants; logging camps, sawmills and pulp mills; and mines. In particular, the fishery resulted in a large number of very small coastal communities that were dispersed along virtually the entire coast of the province and were in many ways in direct competition with each other.

The past reliance on the ocean for transportation also contributed to the isolation of individual communities. People in different places could only connect with each other on an intermittent basis and at relatively high cost. Even today the road network in the province is incomplete. The resulting limited connectivity can result in some communities being effectively cut off from their nearest neighbors because commuting is too expensive for workers both in terms of time and money.

Crucially, the resource extraction sectors of the province have experienced over two decades of pressure. The main forces acting on these industries include:

- Technological change, which has reduced the need for labour and has led to economies of scale so that fewer boats, fish plants and mills are required,
- Resource depletion in the form of, decimated fish stocks, limited stocks of harvestable wood, and mine depletion,
- Increased competition from other North American regions and from low cost developing countries, and
- Unstable prices that reflect both variability in Canadian dollar exchange rates and commodity price cycles that follow patterns of global demand and supply.

The result has been declining economic viability of the vast majority of the settlements in the province. Declining economic viability of rural places has been accompanied by major demographic changes. Fertility rates have plummeted since 1950 when families of 10 or more children were not uncommon. Now, at 1.46 children, the average family size is well below the natural replacement rate. In addition, small settlements have seen high rates of out-migration. This has taken two forms. The first is outmigration of youth who leave for further education or for career opportunities that are only available in larger places. The second is the outmigration of seasoned workers, who lose local employment and leave to find jobs in other parts of the province or country.

The effects on settlement structure are evident. In most small communities in the province there is an aging and shrinking population (Figure 4.0). Local employment opportunities are limited. With declining numbers it becomes increasingly difficult to maintain local public services and these are shifted to regional centers to reduce unit delivery costs for the province. Small and isolated places that are spatially distant from their neighbors face considerable difficulty in adopting the standard policy response to this situation – think regionally.

A shrinking population in rural communities is leading the province to consolidate public services in fewer places to control costs. Geographically larger service areas are required to capture enough people to justify a service provider. Communities themselves have also turned increasingly to regional cooperation as a potential solution to demographic and economic pressures. But geographically large areas lead to higher transport costs, whether they are paid for by the province or the service user, which reduces the benefits from consolidation. Most importantly these large administrative regions not only weaken the economic base of towns that lose public facilities, but there is often also a loss of social interaction among neighboring communities, because local trips have been replaced with more distant trips to the regional hub. Lower interest in cooperation among communities can result unless some other mechanism is found to bring people together.

In contrast to conditions in the rest of the province the metropolitan area of St. John's has grown rapidly. This reflects urban migration of the population, expansion of the provincial government and the development of an oil and gas industry that uses St John's as its service center. A number of other small urban centers in the province have also experienced growth. These places have typically been able to

combine roles as a regional service and retail trade centers with some continued revenue and employment from ongoing involvement with the resource industries. A common characteristic of the majority of these places is that they are on the Trans-Canada highway, illustrating the importance of the shift that has occurred in the province from primarily water to road-based transport. This shift has put the more than four hundred remaining towns and villages along the province's lengthy coastline at a competitive disadvantage (in most sectors) over those that are located along this now dominant transportation corridor (Figure 5.0).

3.0 The Past Policy Responses

Both federal and provincial governments have spent millions of dollars over the last fifty years in efforts to moderate the adjustments that are occurring in rural Newfoundland and Labrador. The policy responses can be characterized in one of three ways: palliative, organizational and developmental. Palliative responses provide financial or other support to individuals and communities to give them the resources to cope with and potentially bring about change. Examples of palliative support include seasonal Employment Insurance and crisis response programs such as the Atlantic Groundfish Strategy (TAGS) when the cod fishery was closed. Organizational responses include efforts to restructure either local government or provincial government so that it better serves rural areas and residents, and improves the quality of life or economic opportunity. Among these measures one might include: various restructurings of the provincial agencies responsible for economic development or municipal governments, both in terms of their administrative function and how they are spatially organized. Similarly, the transfer of gas tax revenue to local government provides new resources that can facilitate local action. Developmental responses are policy efforts that specifically focus on bringing about structural changes that can lead to economic growth. Some infrastructure investments fall into this category. These would include wharf rehabilitation in ports where the fishing industry is viable, road improvements that improve connectivity and expand local labour markets, investments in improving human capital through education and skill development, and support for business creation and expansion from either the provincial or federal governments.

3.1 Palliative Responses

Palliative responses seem to be both the most numerous and best funded. In essence these are largely income replacement policies that can be effective in the case of cyclical or other temporary downturns when the expectation is that demand for output and workers will recover. The closure of the cod fishery was initially seen as a temporary phenomenon and Northern Cod Adjustment and Recovery Program (NCARP), followed by TAGS provided workers with income replacement. However, the fish stocks did not recover and TAGS money froze workers in place over a period of time when their employment skills arguably deteriorated. In addition, while the cod moratorium was a single catastrophic event that impacted the entire Atlantic coastal fishery, it was clear that the fishery was in the midst of major structural

change that was reducing employment opportunities and the viability of many rural communities.

Moreover, the heavy reliance on seasonal EI in rural areas has had the effect of slowing labour market and industry adjustments. Seasonal Employment Insurance (EI) makes remaining in place an attractive option for workers, and in practice lowers the cost of labour for fish plant and other seasonal business operations, since it is in effect a wage subsidy. While younger and more skilled workers leave communities because the returns from work are higher for them, EI has made it more attractive for older workers who own houses and have fewer formal skills to remain in rural Newfoundland and Labrador.

It is difficult to conclude that structural change is not taking place in the province. Traditional industries are both shrinking in numbers and in employment opportunities, this in turn alters the viability of communities that rely upon them for their economic function. Even if the cod fishery rebounds to pre-moratorium levels, there has been twenty years of technological change and market adjustment, so it is highly improbable that many communities that were viable in 1990 would be so in the next decade. In this environment the use of palliative support is harmful if it discourages people, firms and communities from making necessary adjustments.

3.2 Organizational Responses

The second form of policy response is organizational. As conditions change governments respond by restructuring the policies and programs they provide and how they deliver them. Both the federal and provincial governments have recognized the necessity for providing policy support to rural communities and people. In particular the interest in helping facilitate economic adjustment has increased as the long term nature of the adjustment problem has become more evident.

Newfoundland and Labrador is a large, diverse and sparsely settled province, and the provincial government has long recognized that while it can frame broad economic development strategies in St John's they have to be delivered, if not also designed, at a regional level. In the province, individual communities are largely too small to be viable economic units and too small to be the specific focus of policy and programs. This means that an intermediate or regional level of policy delivery and coordination is required.

Prior to 1950, there was limited interest in regional policy by either local communities or the provincial government. The key policy of the late 1950s and early 1960s was to support large-scale resource and industrial development and to resettle remote outport communities, favouring regional growth centres. But as communities that had resisted resettlement continued to lose their population base and economic function and sought to meet growing expectations for modern services and infrastructure there was recognition that some form of collaborative action was needed. By the early 1970s, Rural Development Associations (RDAs) had

been established across the province (Figure 6.0). These associations were voluntary in nature and made up of local leaders from adjacent communities, but were not a formal association of community governments. The provincial government established the Department of Rural Development to act as a counterpart to the RDAs and provide them with funding and organizational capacity. The role of the RDAs expanded through the 1970s and 80s and more were established. However the RDAs occupied an awkward niche. They were voluntary in nature and so were not part of either a local or provincial formal government structure. Because they depended upon the quality of local volunteers their ability to carry out effective development work varied considerably by association. There were concerns that the RDAs were too small in size to be effective and lacked a strategic, planned approach. In 1986 the province began an effort to develop a stronger, more integrated and more formal regional development structure. This led to the province creating 5 distinct development regions, each with sub-offices. In 1992 the province proposed a new regional structure that was based upon 17 zones that would operate below the 5 regions with formal responsibility for strategic economic development and strong ties to the provincial government.

The Cod Moratorium in 1992 increased the pressure for a stronger federal and provincial response in rural areas. In 1994 a new structure was implemented. Twenty Regional Economic Development Boards (REDBs) were created to provide strategic oversight for economic development and allocate provincial and federal funds (see Figure 6.0). The RDAs were not eliminated, in part because they were not subject to government control, but they had lost the operating funding from the federal and provincial governments that they had come to rely upon.

Over the next two decades as the provincial government changed hands and as the economic decline in rural areas continued there were multiple reorganizations of the provincial delivery mechanisms for rural development support, including the creation of nine Rural Secretariat regions and regional councils created in 2005. Previously existing organizations were not always formally eliminated as new governments established new structures with new regional boundaries and different but overlapping mandates. Older organizations lost funding and/or policy priority, but many continued to exist in part because of multi-year commitments or projects, especially those with federal support or alternative revenue sources, ongoing organizational structures and local volunteer commitment. The result is a confusing set of regional administrative structures that have conflicting and competing mandates and weak authority.

In terms of federal government organizational response the main actors have been the Atlantic Canada Opportunity Agency (ACOA), Human Resources and Skills Development Canada (HRSDC), and Fisheries and Oceans (DFO). ACOA has been in existence since 1987 and serves all of Atlantic Canada. While specific program priorities change over time there is a longstanding focus in ACOA of investing, directly or indirectly, in economic development capacity, including funding support for REDBs and Community Business Development Corporations. In the last few

decades ACOA has invested significant resources in rural areas mainly with a view to improving community capacity and modernizing economic structure. ACOA investments are coupled with those from the provincial government, which also provides support for REDBs, capacity building and economic development programs. Over the years HRSDC in its various configurations, and through Federal/Provincial Labour Market Development Agreements, has provided support for labour market adjustment programs, including skill development programs and other forms of Active Labour Market Policy (much of which has recently been transferred to provincial responsibility). HRSDC has supported Employment Assistance Service (EAS) offices across the province through contracts with a variety of local delivery partners. Finally DFO has responsibility for managing the fishery and its decisions on fish quotas and licensing, fishing seasons and allowable fishing gear have a great impact on the nature and viability of fishing and fishery dependent communities.

3.3 Developmental Responses

Developmental responses can be characterized as starting from recognition that structural change is taking place and that the community and its citizens have to make fundamental behavioral changes if they are to experience economic revitalization. Palliative responses can provide financial capacity for change and organizational responses can improve the institutional capacity to bring about change but neither can be successful without a focus on new development opportunities.

The Organization for Economic Cooperation and Development (OECD) New Rural Paradigm (NRP) sets out a policy framework which supports rural development. In brief the NRP endorses a bottom-up, multi-sectoral approach that focuses on investments to improve economic competitiveness. For the NRP to be effective the community has to be able to identify activities in which it is economically efficient, develop markets and make the necessary investments to take advantage of these opportunities. National and provincial governments play a crucial supporting role in this process. They provide needed resources and facilitate linkages between the community and the rest of the world.

While there have been some significant successes in Newfoundland and Labrador in following the NRP the general thrust of policy response has not supported this approach. Over time many of ACOA's investments have been consistent with improving local economic capacity, and the provincial government has provided important forms of support through Community Accounts and funding for capital projects at the municipal level. But in many cases, communities have been unable to adopt the ideas of the NRP and have therefore not been able to make full use of federal and provincial support. While financial support for projects has been available there has not been a delegation of authority or sufficient ongoing resources to allow local leaders to create the kind of development strategy that allows synergies among projects.

4.0 Functional Regions

Development policy as conceived by the provincial and federal government has largely been delivered through administrative regions. In particular, the province has frequently redrawn delivery boundaries for its programs and services as it attempted to find better ways to support rural people and communities. As conditions changed the province redrew the boundaries and redesigned its programs. But then conditions changed again, compelling yet another organizational response. An apparent desire to create larger geographic regions in the name of efficiency has also been an influencing factor.

With dispersed small settlements a regional delivery approach is necessary for provincial services since it is both impractical to deal with every community on an individual basis, and more importantly, most individual communities are by themselves too small to be viable economic and social units. Given this the crucial question is how do regional boundaries get defined? Our approach has been to delineate functional regions that reflect actual movements of people. For our purposes a functional region can be defined as a geographic area, which has boundaries defined by the current behavior of people. Specifically, the boundaries for the regions are defined by local labour markets on the basis of commuting flows of workers. Clearly, as employment prospects change or commuting costs increase or decrease, the boundaries of the region will change.

Adopting a functional region approach has several advantages and some disadvantages. The main advantage of the choice is that regional boundaries reflect the actual behavior of people. If an objective of defining a region is to encourage collaboration within it, then the chances of this happening are higher with a functional region approach because there is already a degree of interaction among the people in the region. In addition, as conditions change and behavior patterns adjust, the boundaries of the region evolve to follow new patterns of interaction. In particular, if the objective of policy is economic development, then functional regions based on worker commuting flows map onto the local labour market (Figure 7.0). This means that policies and programs largely designed to increase income and employment geographically correspond to the current labour supply and demand. A focus on labour markets is further justified by the finding from this research that labour market development and, increasingly labour market and skill shortages, is seen as the most significant challenge to economic development in the province and in our case study regions.

A disadvantage of the approach is that the resulting regions are of inconsistent size and degree of interaction, so the internal coherence of various regions can differ considerably. In addition the use of functional regions can result in some portions of the territory not being included in a region because connections are too weak. Functional regions also tend to have “fuzzy boundaries” in that there are no precise edges to the region. Instead there is a zone of weak attachment that can be fairly large in size. Finally, while the flexibility of functional region boundaries over time can be an advantage, it can also be seen as a disadvantage because people and

communities may have to be added and dropped from a region and such changes can be difficult in practice due to existing structures and attachments.

To be sure there are good reasons for the use of administrative regions. If a well-defined program has to be delivered across the province – say health care or public safety - then establishing explicit boundaries for specific service providers makes sense. However, while the provincial government can define a set of economic development programs that are made generally available to communities, the decision of which specific communities should group together to maximize the benefits from these programs is probably best done on a voluntary basis, ideally through regional dialogue and with information support such as functional regions analysis.

4.1 Defining Functional Regions in Newfoundland and Labrador

Region boundaries were developed from Statistics Canada data using Journey to Work flows for 2001 and 2006. The data set includes people who work within their home community and people who commute to other places. Boundaries were initially calculated using 2001 data and then recalculated once the 2006 data became available (see Figure 7.0). While there were some changes in boundaries, the general patterns were largely consistent over the two data sets. The methodology to define regions uses the road distance among communities to establish travel distances and then iteratively identifies boundaries for commuting based on the existing numbers of workers who travel between places. The model can be calibrated to account for all travel patterns, but is currently set to reflect 90% of all reported journeys⁴. The model suggests that the vast majority of people commute less than 50 kilometers (90 percent of workers) and virtually no workers commute over 100 km. This leads to 28 distinct functional regions.

Where changes occurred between 2001 and 2006 they included: some regions merging into a single region; some cases of a region separating into two or more separate regions; and some regions disappearing (interaction became too weak) (Figure 8.0). Changes in the boundaries of regions reflect significant shifts in commuting patterns over the five year interval. Numerous factors account for changes in commuting flows within the province. Considerably faster economic growth in St. John's provided more employment opportunity and better wages within the city and this attracted more commuters from its hinterland. Similarly, other regional trade centers captured larger shares of retail trade and employment. In some places the major employer, typically a fish plant, closed and workers were pushed to other communities. In others, new major employers (such as a mine) created new flows from outlying communities. The road system in the province is being steadily improved and this can lower commuting time and increase commuting distances. Provincial policy also played a role in the sense that consolidation of public service delivery in a smaller number of places tends to

⁴ If 100 percent of all commuting flows are used then only two labor markets exist in the province, - one based on St. John's and the other on Corner Brook.

increase employment in those places and reduce it in the communities where government offices were closed. Most importantly, because this is a small province in terms of the number of workers in local labour markets, small changes in flows can influence functional region boundaries.

An important feature of the approach is that there are numerous cases where a community is not part of a functional region. These communities lack sufficient commuting flows to connect them to other places. Visual inspection shows that this occurs where communities are particularly isolated, either because they are a long way from other places, or because road connections are poor or non-existent (Figure 9.0). In addition, cursory analysis shows that these are mainly very small places with a low labour force participation rate, mainly because of high proportion of older residents. In reality these places are connected to other communities, if only through social services and shopping links, but given the critical role of labour flows in defining economic integration it is problematic in many cases to argue that they are part of a region for economic development purposes.

While the regional boundaries used in the analysis are defined on the basis of Journey to Work data, other factors, including retail trade patterns, media markets and how people form social relations can influence functional region boundaries. Initially, retail trade markets were also incorporated in the algorithm to define regional boundaries. This, however, added no additional predictive value. Media markets in the province tend to be provincial in scope, or break into an east-west pattern with St. John's and to a lesser extent Corner Brook being the two places large enough to have significant media influence (local papers also exist, typically based out of regional centres).

Finally, surveys were conducted in the three pilot regions to solicit information on how far people travel to engage in recreational and sport or volunteer activities, for example, and what resident perceptions of "their region" are. Overall this information was consistent with the boundaries developed from the Journey to Work data, which provides qualitative support for the boundaries, at least in the three pilot regions. In the Twillingate-New World Island area there is also a strong sense of region and retail and service flow affiliations with an area larger than the functional region that includes the service centres of Gander, Lewisporte and Grand Falls-Windsor.

4.2 Functional Regions, Local Labour Markets and Economic Development

At an abstract or conceptual level there is little disagreement with the importance of adopting a region-based development approach in the province. Almost all communities are now too small to carry out effective development autonomously, and the shift to a road-based transport network has better linked places that were once more isolated. However, two important and linked barriers to region-based development exist. The first is the difficulty in defining appropriate regional boundaries, and the second is the existence of long-standing patterns of mutual

mistrust among communities reflecting a perception that local economic development is a zero sum game where growth in one community will lead to decline in neighboring communities.

The province has over time constructed multiple versions of regional boundaries to be used as the basis for development efforts. In some of the resulting regions it has been possible to point to considerable collaboration among communities within a specific region. And this is true for any of the regional structures that have been used. But, it is also generally true that none of the approaches that have been tried can be said to be broadly effective. An inherent problem with all administrative regions is the inability to know *a priori* how people behave. Without this analysis boundaries are formed that do not correspond to actual behavioral patterns. In addition, when provincial agencies draw boundaries they typically want to “exhaust the territory” and ensure that all people and places are included in some region, and also to construct regions that are large enough to be efficient from a management perspective. Where services or programs have minimum efficient scale, or economies of scale, it is tempting to include enough people in a region to reach these scale effects. However, in a rural environment, where people are dispersed, ignoring travel time and costs, especially if they are borne by individuals, as well as factors such as historic relationships, leads to regions that are often too big to be effective in practice.

Because functional regions are defined by existing patterns of spatial interaction they avoid the problem of placing boundaries in inappropriate places and of making regions too large. In addition, because the people within a functional region are already inter-acting to a significant extent, it may be easier to overcome the key problem of animosity among communities, which seems to be breaking down in some areas but remains a significant barrier to regional collaboration in others.

Functional regions based on local labour markets offer one other important advantage. While economic development is not just about expanding employment opportunities and increasing incomes, these are both central and necessary elements. By connecting the regional economic development strategy to the local labour market it is far easier to ensure that development strategies fully reflect the capabilities and weaknesses of the local labour force. With a strong coupling it is easier to determine which development initiatives are consistent with existing workforce capacities and which skills need strengthening if a particular economic development objective is to be achieved.

5.0 Regional Economic Capacity Index (RECI)

Each functional region defines a local labour market. That is, the vast majority of the currently employed labour force live and work within this region. But the map of regions by itself provides no explanation for why the boundaries are currently where they are. Nor do these maps suggest how boundaries might change in the future. Recall that between 2001 and 2006 a number of regions experienced significant boundary changes. To be useful for economic development strategies

additional information is required. Some of this information reflects the underlying supply and demand functions in the labour market. Demographic information and worker skill levels influence the supply of labour. The economic structure of the communities in a region influences labour demand. But in addition success in implementing local development strategies is likely to depend on how effective local leaders are in defining and implementing their strategy, so understanding local governance structures is also important in understanding the dynamics of local labor markets. It is this type of information that makes up RECI. Understanding the current economic, demographic and governance structures of the communities in a specific region provides information on how their individual and collective economies might evolve in the future.

Essentially RECI provides a way to summarize the current economic status of a community. If communities and regions are to play lead roles in creating locally based, bottom-up development strategies, as envisioned in the NRP, they need basic information on their current condition. And, if the provincial government continues to play a lead role in supporting and defining broad development strategies for different parts of its territory, it too needs this type of local information. The provincial government has already invested in developing Community Accounts as a user-friendly community level database that allows local leaders and the public to identify current socio-economic conditions in their community⁵. For a community understanding the information provided in Community Accounts is the first step before using RECI. Thus RECI can be seen as complementary to Community Accounts in that it provides a structure to combine the information in Community Accounts into a comprehensive regional planning tool.

RECI starts from a conceptual model of how a local economy operates (Figure 10.0). Many of the aspects that influence a community are largely beyond its control. In particular, geographic location and resource availability are given. In the short to medium term the demographic structure of a community, but not necessarily its local labour, market are also given. In particular the attributes of the local workforce are a crucial factor that should influence development strategies. Employment opportunities are determined by the current mix of firms and industries. The ability of a community to maintain or expand existing businesses is a key aspect of development success, so the particular mix is important because some firms are more subject to local influence than others. In addition, new firms are often influenced by the types of existing firms in a specific labour market.

In practice, the RECI employs a set of indicators that measure aspects of importance to the economic structure of the community. Values for each indicator are rescaled over the +1 to -1 range with the provincial average as 0. An algorithm is then used to compare the level of each of these indicators across communities for various geographic units. At this time, the specific functional region, the Rural Secretariat

⁵ For more information on Community Accounts see:
<http://www.communityaccounts.ca/communityaccounts/onlinedata/getdata.asp>

regions, and the province, are the geographies employed to provide a measure of current performance. Individual indicators are aggregated into sub-index components following the conceptual structure in Figure 10 and finally an aggregate score is reported.

In terms of mechanics the model currently assigns equal weights to all indicators and to all sub-indices. However, the model has been designed to allow different weights to be assigned within a sub-index if this is desired and to allow different sub-indices to be weighted differently in the final score. Similarly, it is relatively easy to remove specific indicators and add new ones if this is seen as appropriate. While the model reports a specific score, it is important to note that in reality what is reported is a relative score that varies for a community depending upon the set of other communities that are included within the specific geography. Thus, a community can currently see how it compares to communities within the same functional region, to communities in the same Rural Secretariat region, or to communities across the province.

RECI provides two important pieces of information. The first is an assessment of the current strengths and weaknesses of the community in terms of factors that are important for its economic vitality. The second is an indication of the competitive position of the community relative to peers. This latter function is particularly useful. Within a specific region communities can be substitutes or complements. Some communities may serve a specialized function, such as a fish plant location, while others may be more oriented to the provision of retail or public services. As such, nearby communities would have different strengths and probably different development strategies, especially if individual strategies recognized the larger regional context. On the other hand, some communities may be competing for similar functions within a region, because they have similar structures. Ideally, even in this case, two places could choose different strategies so they are able to reduce direct competition in the future. Understanding the extent of resident interaction and nature of inter-community flows can also inform the design of regional services.

The specific geography for comparison is important. At the functional region level communities share labour forces and increased or decreased employment in one place has implications for all communities in the region. Most importantly, growth anywhere in the region has positive spillover effects for other communities because the local labour market expands. At the Rural Secretariat level, there is less of a connection among different places, but if the province uses this geography to set policy and allocates funds by region then individual places within the region are likely to be in direct competition with each other for these resources. At the provincial level while it is possible to compare places of similar size, vast differences in location mean space dictates very different opportunities and constraints, so there is less that can be concluded from these comparisons.

6.0 Governance

Examining differences in governance was a key objective for the research. Bottom-up development approaches, like that advocated by the OECD under the NRP, rely upon local governance structures that have the capacity and the will to define and implement a local development strategy. Yet one reason that provincial and national governments continue to play lead roles in economic development in rural areas is a lack of local capacity. As noted earlier, when the development approach is regional in nature the problem becomes even more intractable, if only because adding more people may not increase the level of capacity, and it clearly complicates the decision process since more opinions must be considered.

Two clear differences between the functional regions and the administrative regions designed by the province are the generally smaller geographic size of the functional regions and the large amount of territory in the province that is not part of a functional region. For the most part this territory is largely unsettled and much of it is unincorporated so there is no unit of local government present. However a significant number of communities remain outside any functional region.

Governance is a major sub-index of RECI. In practice it is the element of economic structure that is most under local control. But while people may want better governance the process of achieving it is neither clear nor simple.

The smallest places in the province face major governance challenges. Not only do they have small populations, they also tend to have a very large share of elderly residents who may not have a strong focus on future economic conditions. Many of these places tend to have difficulty in finding candidates for public office or volunteer roles, and local tax capacity is so small that there are few resources for any sort of investment.

Because Newfoundland and Labrador lacks an intermediate level of government, such as a county, regional development has been managed by committees or boards made up of representatives of individual communities or organizations who participate voluntarily. In some cases these are locally initiated and in others they have been established through provincial and federal government policies and programs, where members are appointed. In both cases governance structures are weak. In the first case because there is no guarantee that all the right people and places are part of the organization or that they have policy or program support, and in the second case because governments tend to establish regions that reflect its interests, which may not correspond to local interests or patterns of activity. REDBs were the product of a federal-provincial task force, with representation from non-governmental organizations, but they have failed to gain sustained government support, financially or in policy terms.

Despite the absence of a formal regional government structure there is no shortage of regions in the province (Figure 11.0). Nor is there any great consistency in how the province is divided into regions. The most common way to divide the province is

into 6 or fewer regions, but some organizations (or types of organizations) have more than 40 regions. Clearly the appropriate number of regions depends upon the objectives of the organization involved. And since most organizations with a regional structure are single purpose entities they choose the structure that optimizes their specific function. But a consequence of this is that when there is an effort to achieve cross-cutting objectives, like a broad development strategy, there is no consistency in the regional boundaries used by the participants in the meetings. Further, considerable confusion results about what constitutes a region and regional identity in the province.

For example, in the three pilot regions, the number of entities involved in various types of local development activities was enumerated. In the Irish Loop, with a population of 8,410 there were at least 90 groups. In Twillingate - New World Island with a population of 6,280, there were also approximately 90 groups identified. In Labrador Straits, with a population of 3,008, there were 93 groups. This count includes: federal agencies, provincial agencies and departments, regional/multi-community organizations and community based organizations noted by local participants. It would appear that scarce organizational resources are being dissipated across too many organizations for effective planning and implementation. Of these 240+ agencies, offices and organizations serving populations of less than 17,000, approximately 25 percent operate at the regional (variously defined but all multi-community) scale.⁶

The set of functional regions developed in the research reflect labour market behavior which in turn reflects employment opportunities and commuting potential. Whether this is an appropriate geography for governance structures is a debatable issue. Certainly functional regions should be a consideration for economic development planning. However, there is also some evidence that these local labour markets have a strong degree of congruence with self-organization at the political level. As noted, initial efforts to stimulate multi-community approaches to development encouraged the formation of RDAs in the 1960s-80s. Each association was defined largely on a voluntary basis by adjacent communities agreeing to act collectively. While support was provided to some of these associations by the province, providing an incentive to collaborate, the boundaries of these collaborative entities were largely self-defined. With the loss of operational funding in the mid-1990s, some of these associations still remain active while others are dormant. There is also a number of Joint Councils that are once again voluntary organizations made up of mayors and councillors from communities that see value in collective decision making for certain issues. Thus there are two sets of governance organizations that can be called self-organized, in that there was no external determination of who should be members of a specific group.

⁶ This number represents individual towns and Local Service Districts (LSDs), and only counts agencies that are active in more than one region once.

When the functional regions were mapped into other regional economic development structures to determine if there was any degree of congruence, it was these self-organized governance entities that provided the best fit. 13 functional regions correspond most closely to RDA boundaries, 6 correspond closely to Joint Councils, 7 correspond to REDBs and the rest have no clear congruence with any other regional organization. In sum, just over 70 percent of the functional regions closely correspond to the geographic boundaries of a self-selected governance organization.

Congruence between economic institutions, like local labour markets and governance institutions has clear advantage for development planning. As noted in the section on functional regions, local labour markets and economic development are interdependent, linked concepts. Yet they are often treated independently in planning and program development, in the organizations responsible for these aspects of local development and the boundaries within which these organizations operate. Engaged governance at the regional level is crucial if there is to be a bottom-up development process, and the potential for governance to identify policies and projects that “make sense” in terms of the local economy is enhanced if geographic boundaries are common. Existing discontinuities between the administrative and governance boundaries within these arenas therefore require further attention, a discussion that the results of this research can help inform.

7.0 Conclusions

Rural communities in Newfoundland and Labrador place a high value on their independence. Because the majority of communities were largely autonomous, in the sense that they did not rely on neighboring places for their economic viability, there has been little tradition of cooperation. This was reinforced by the dependence on water transport until relatively recently when the road network was installed (some locations remain water access only). Water transport did not require regular contact with nearby communities, only with the places that supplied goods and that handled exports. And, in many cases there was direct economic competition among places as sites for natural resource processing.

With the decline of the traditional resource industries the majority of rural places in the province have struggled to adapt. Not only are they facing structural economic change, they are also dealing with major demographic decline. In this environment only the largest centers in the province have the capacity to define an independent future. For the rest it will be necessary to form regional coalitions to reach any sort of critical mass in terms of: leadership, financial capacity, local markets and labour supply. While individual communities may still see themselves in competition with their nearby neighbors for jobs and services, it is now the case that the only hope for economic prosperity is to pool resources and act collectively. The relatively wide spread development of the RDAs starting in the 1960s demonstrates that this is an idea that has at least some acceptance in the province.

For decades, the province has focused on regional solutions to the economic development problems of communities outside St. John's. Efforts to provide provincial support and direction are hampered, however, by the absence of an intermediate level of government and there has been little success in the effort to create this level through the establishment of regional, sector-specific agencies. Various administratively defined regions have largely failed to resonate with local populations and have been so tied to specific Premiers that they have been undermined when political parties change power. Resistance to previous resettlement and later amalgamation policies has left the province's political leaders reluctant to demand the creation of a regional government structure. A renewed dialogue about the potential for regional government is underway, led by the provincial municipal association, but this has been controversial and is in its early stages.

Finally, it is widely believed, as advocated by the OECD, that effective local economic development is a bottom-up process. The diversity of conditions and opportunities across the province make it hard for the provincial government to identify appropriate development strategies in any particular place. Moreover, when the province provides a particular type of support in one community or region, it triggers demands for at least the same level or type of support in other regions, whether this makes sense or not. This pressure to treat all places equally whenever a top down process is employed inevitably dooms it to failure, because different places need different types and levels of support. If groups of communities can identify their own strategy then they are more likely to ask for support from the province that makes sense for that strategy, than to ask for exactly the same thing as another region received.

There seems to be little support for either forced consolidation of communities, or the creation of a new tier of government, like counties. This means that another way to achieve collaboration is needed. Organizing economic planning and development by functional regions, based on local labour markets is a viable candidate. Such regions are based upon existing economic interaction, so there is already a basis for collaboration, and they map the boundaries of economic interdependence among communities. As was demonstrated in our research, they also correspond reasonably well to how communities self-organize at the local government and voluntary association level. Most importantly, they are not imposed. Functional regions can be used by existing organizations, such as REDBs today, or even regional governments should they be formed in the future, for economic planning purposes. The dynamic nature of functional regions may also facilitate changes in planning boundaries that reflect changes in local contexts over time

But functional regions defined by local labour markets are not a panacea. Like the RDAs before them they are of varying size and varying capacity. Because a functional region exists now does not mean it will exist in the same form, or even at all, in the future. Thus they are not necessarily stable economic units. While flexibility can be seen as a positive element to introduce within the governance

system, indeed the main challenge in most of the regions is how to increase economic stability. A second problem with the approach is the significant amount of territory outside any functional region. In particular, the presence of a considerable number of isolated communities in the province demands that a separate approach be created to address their futures. But it is clear that, whatever it is, this approach will not involve regions.

Relying on local economic development initiatives based upon functional regions can be particularly problematic for provincial and federal governments. In the first place the resulting geographic regions can vary in terms of population size and area. Large population regions have different capacities and potential than smaller regions, which makes it more complex to manage interactions. Because labour flows and the region's size and strategy can change this introduces another form of instability that increases this complexity. Finally, devolution of responsibility and decision making exposes federal and provincial governments to more complex accountability problems. The combination of diverse approaches to economic development and diffuse decision making processes can make it hard to be sure that federal and provincial funds and other forms of support are being used in a prudent manner, particularly in the absence of strong local (regional) governance structures.

RECI provides a potentially useful tool for both communities and regions. It is a way to assess where a community or region stands in terms of a set of indicators that aggregate into a model of how a local economy functions. Because RECI imposes a structural relationship on the set of indicators it is possible to draw inferences about how local leaders should act to improve economic development opportunities. Obviously the validity of the underlying model determines the validity of the actions recommended. Further, capacity must be built within communities and regions to utilize this tool to their advantage.

While planning may not lead to economic prosperity, it can increase the odds of it happening, particularly if it incorporates developmental responses where they are required. But for planning to be a useful exercise it has to be grounded in a governance system that is both effective and accepted by the local population. A clear problem in the province in the past has been the inability of top-down planning structures to gain traction locally. In part this has reflected too large geographic units, but it has also reflected a tendency to keep too much control at the provincial level. Without effective and appropriate devolution of resources and responsibility no regional policy can be effective.

Figure 1.0
Avalon Peninsula Functional Labour Regions versus REDB Boundaries Functional Labour Regions

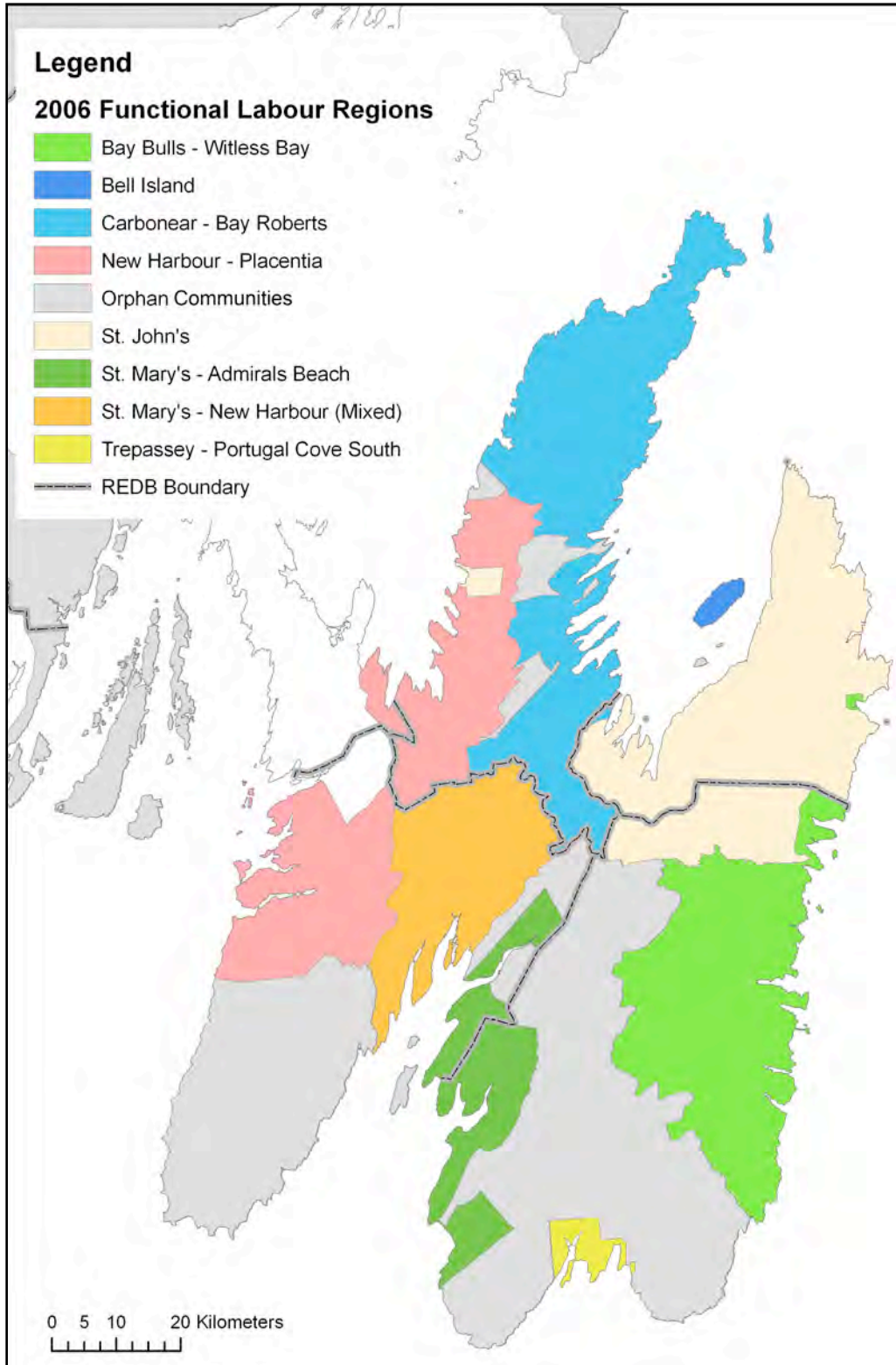


Figure 2.0
Dynamic Nature of Functional Regions: Changes from 2001 – 2006

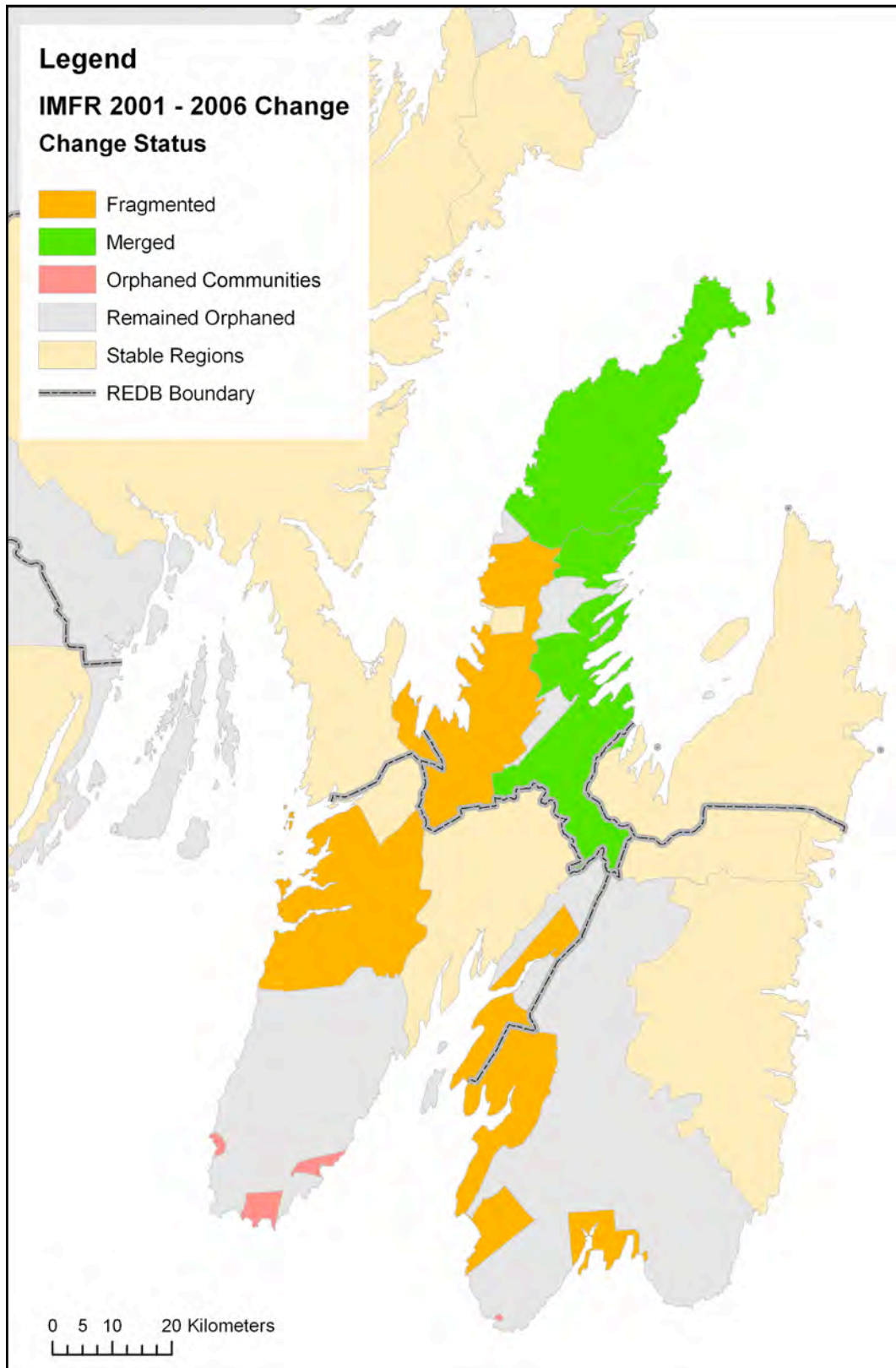


Figure 3.0
Pilot Study Areas



Figure 4.0
Demographic Structures by Community

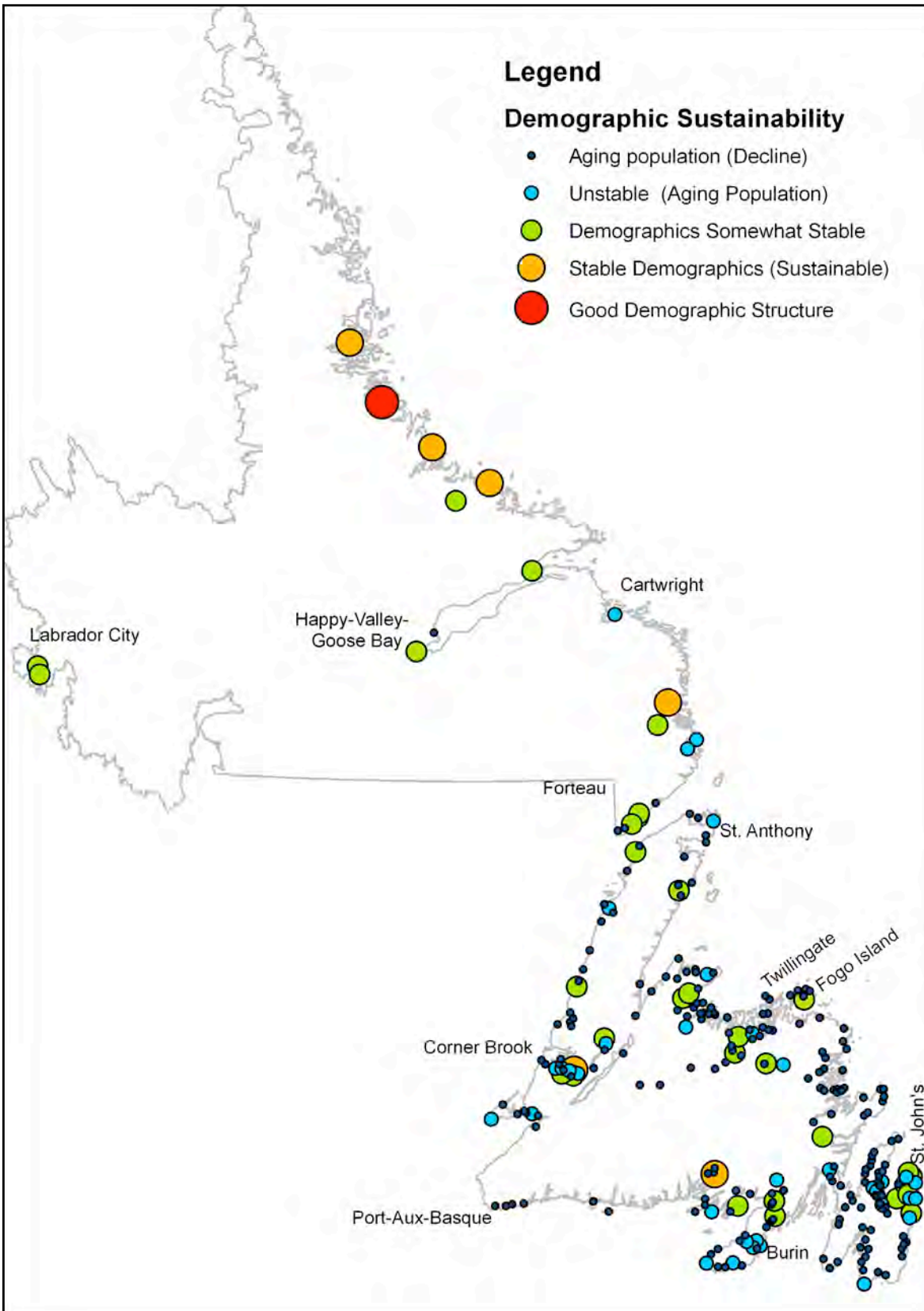


Figure 5.0
Community Retail Rank and Transportation Network

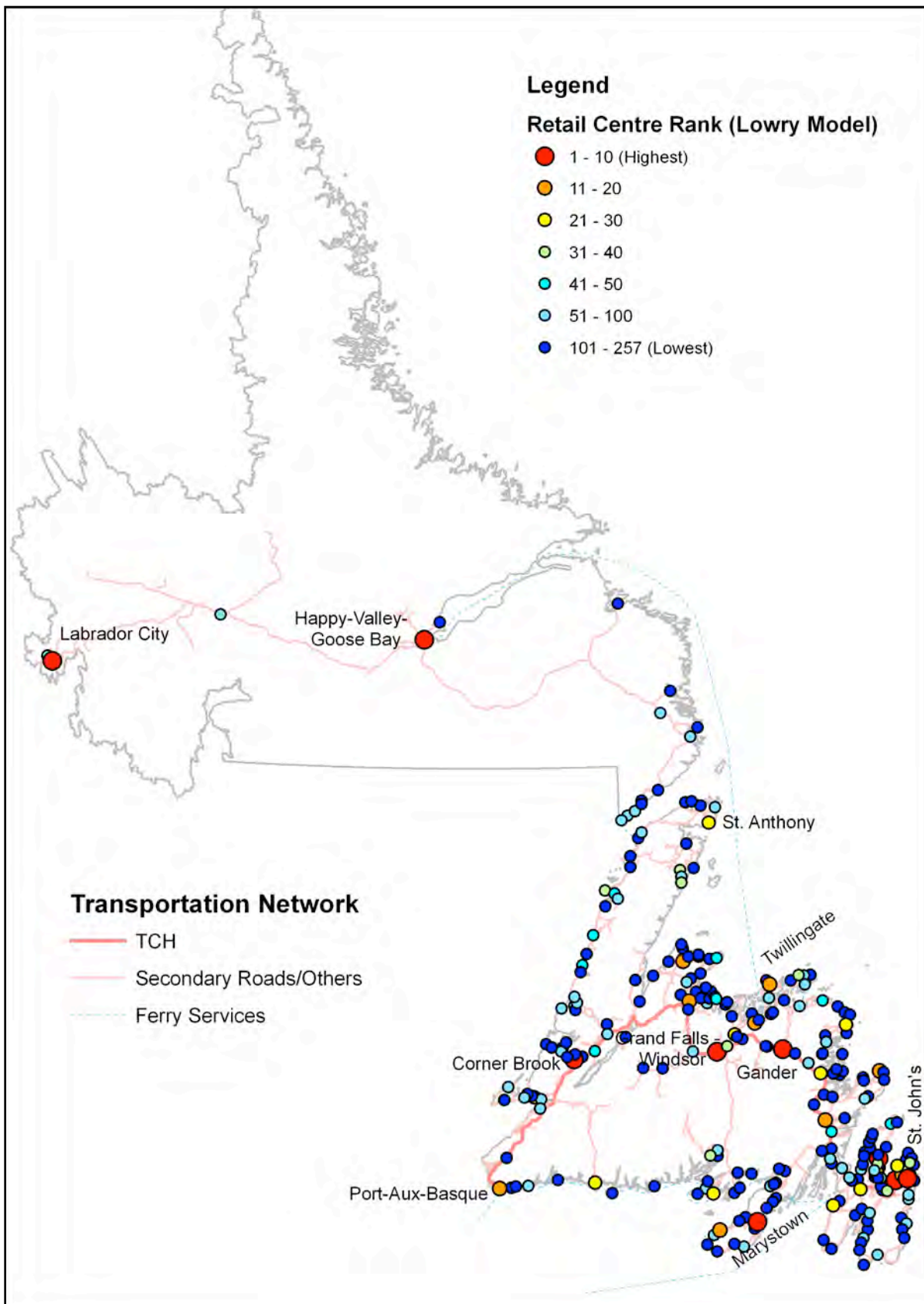


Figure 6.0
RDA(s) Versus REDB(s)



Figure 7.0
 Functional Labour Regions – 2006 Journey to Work Results

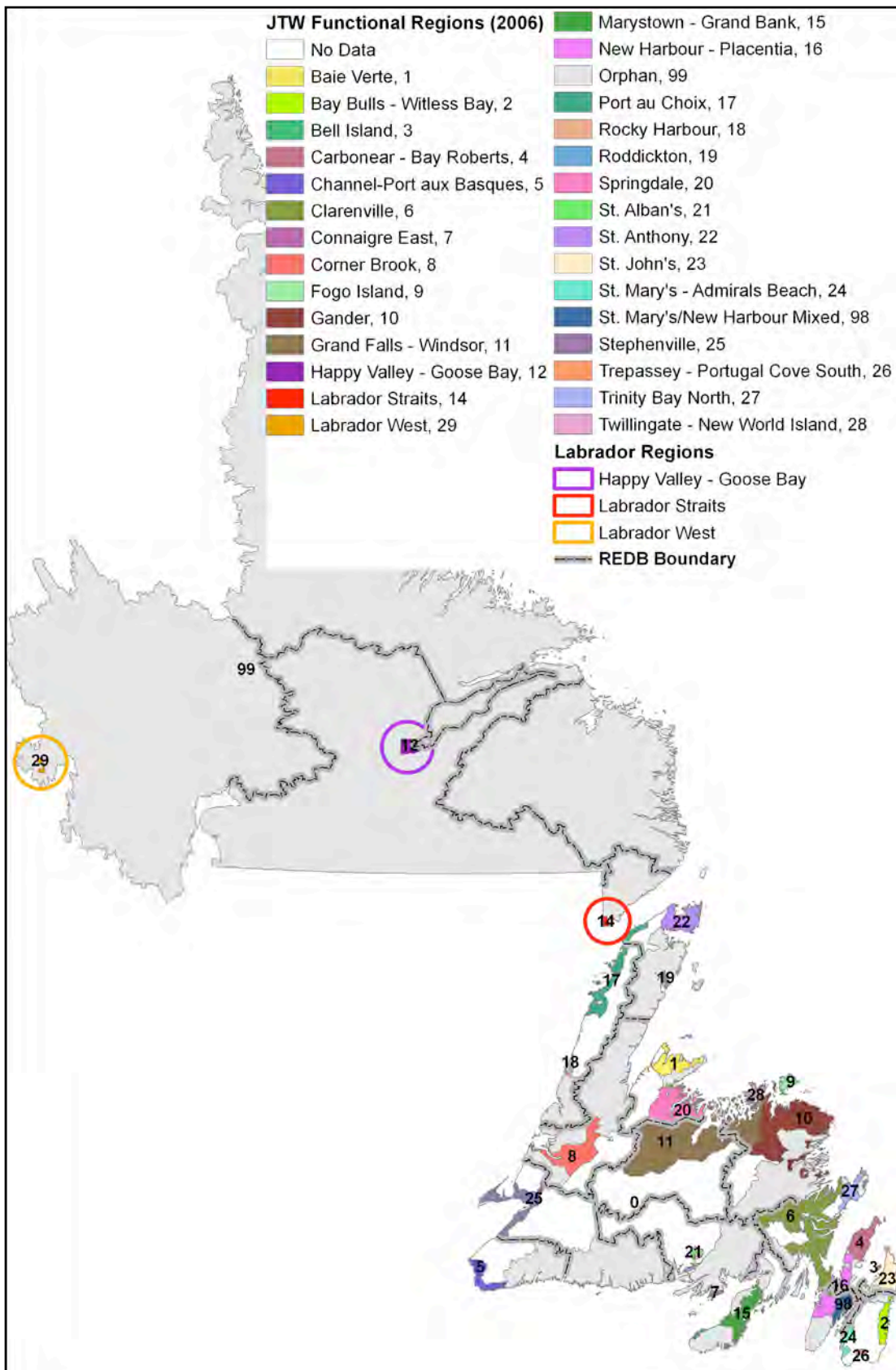


Figure 8.0
Functional Region Changes – 2001 to 2006 Journey to Work Results

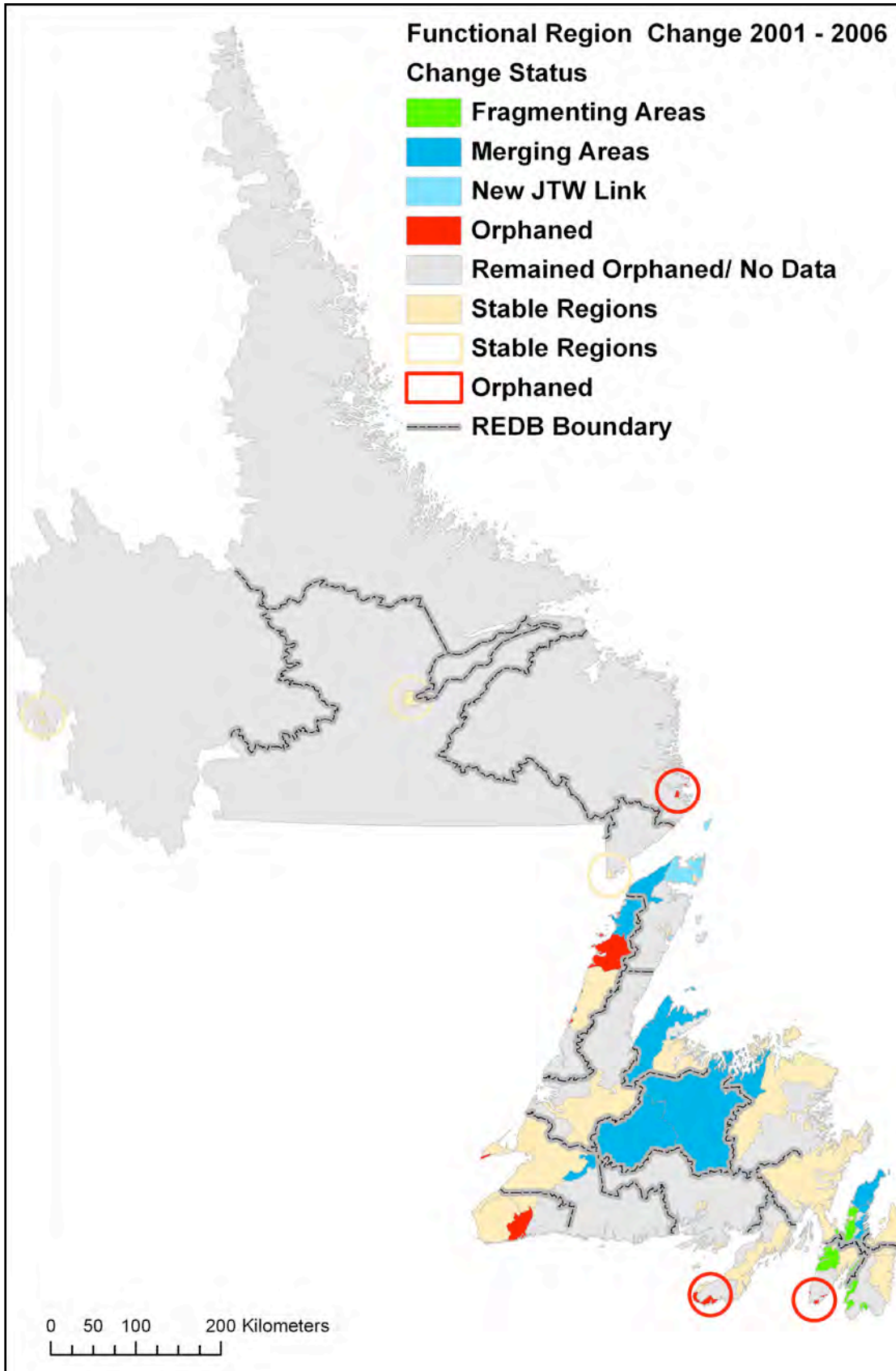


Figure 9.0
 Orphan Communities and Distance From First Order (highest number of trips)
 Journey to Work Destination Centres

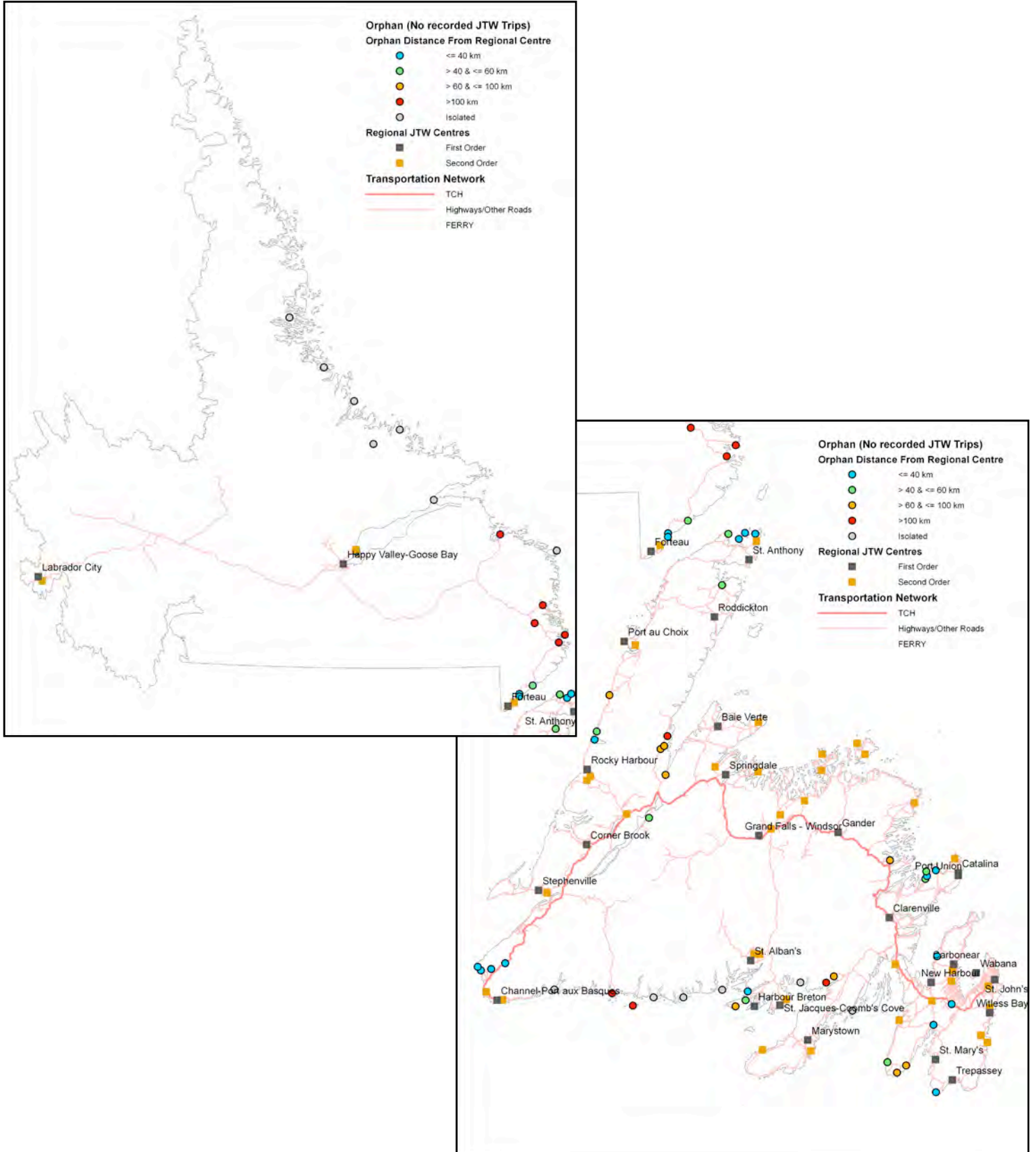


Figure 10.0
Regional Economic Capacity Index (RECI) Inputs

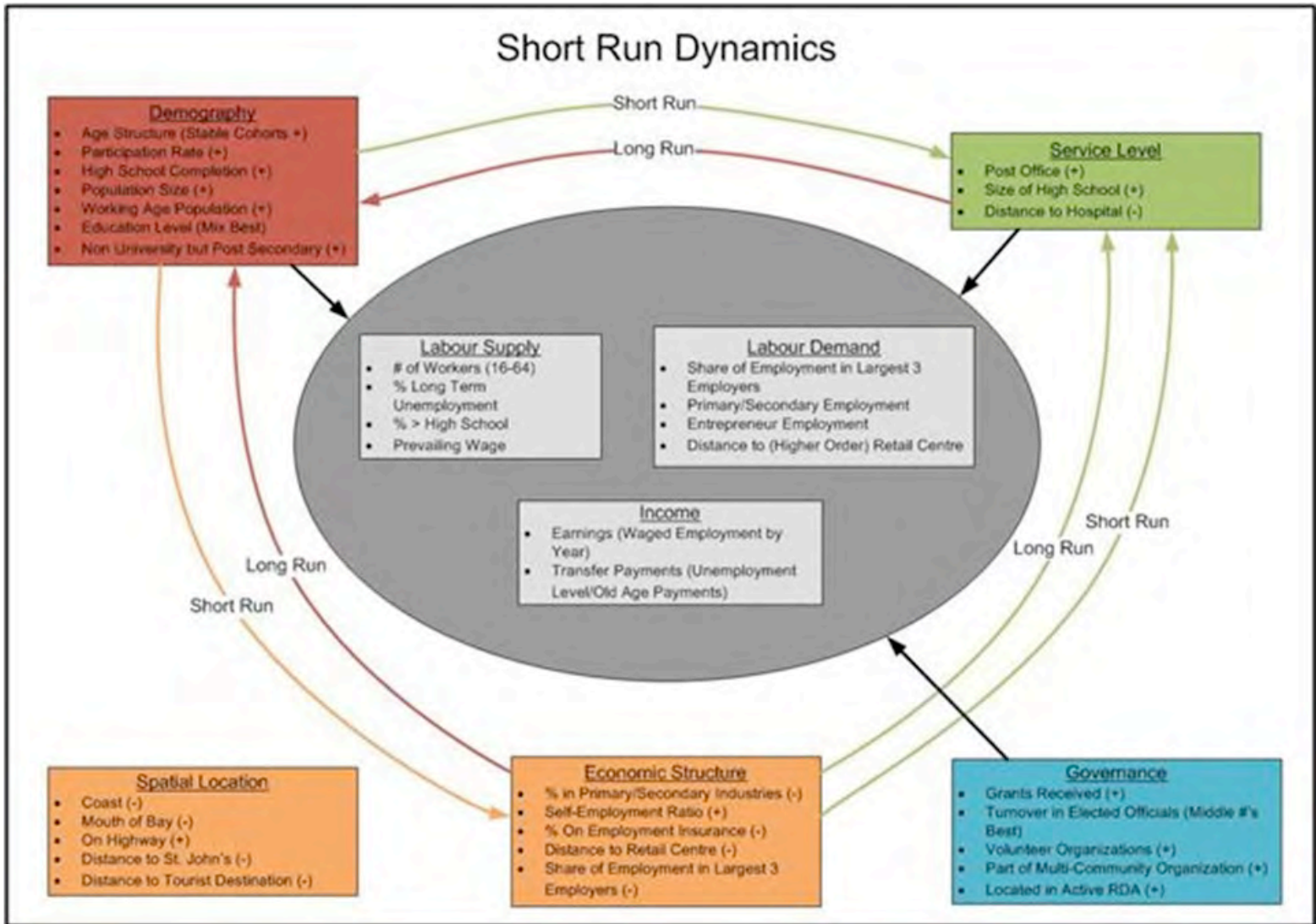


Figure 11.0
RDA(s), Joint Councils, Functional Regions and REDB(s) Boundaries

# of Regions	Types of Organizations and Departments/Agencies
0-3	Lions Club districts, Forest Service regions, DFO sub-regions, LOMAs
4-6	REDB, RDA and MNL regional caucuses, 4-H districts, Boy Scout, hockey league and Skate Canada regions, M.A, AES (HRLE) and IBRD (INTRD) regions, Tourism Department & DMOs, NLOWE regional offices, Health, School Boards, Library Board divisions, DFA and Dept of Government Services regions, Wellness Coalitions, District Labour Councils, Search and rescue districts (NLSARA)
7-9	Rural Secretariat regions, Women’s Centres/Councils, ACOA local offices, 50+ Club regions
10-12	Girl Guide and Women’s Institute Districts, Lions Club zones, CYNs, soccer regions, RNC Districts, Violence Prevention Coordinating Committees, agricultural offices
13-15	CBDCs, Service Canada regional offices, Career Work Centres, Service NL Service Centres, Police Districts, Rotary and Knights of Columbus districts
16-24	REDBs, regional tourism organizations, Chambers of Commerce, IBRD (INTRD) sub-regions, forestry districts, snowmobile clubs
25-30	AES (HRLE) regional locations, Family Resource Centres, Crime Prevention Committees, Search and Rescue teams (number of identified Functional Labour Regions)
50+	Former RDAs, EAS offices/service areas, multi-community schools and school councils, youth, seniors, service and recreation clubs, Transportation and Works operations (winter), municipal service sharing arrangements

For details refer to the “Understanding Regional Governance in Newfoundland and Labrador” project background.