

Looking to the Future:

Assessing current understandings of the impacts of large-scale industrial development in West Labrador and Isthmus regions and identification of future research needs and potential mitigation strategies

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Executive Summary	4
Introduction	6
Methods	7
Literature Scan	8
Media Scan	16
Deliberative Dialogue Sessions	17
Next Steps	23
Suggested research and suggested participants	23
Conclusion	25
References	29

Executive Summary

Context

This report is the first phase of what is intended to be a research project which investigates specific negative social impacts of large-scale industrial activity which have been identified as priority issues in the Isthmus region and Labrador West in Newfoundland and Labrador. This report is intended to be an exploration of potential research opportunities as identified by community members and leaders who were participants at either of two deliberative dialogue sessions hosted by the provincial Rural Secretariat. This report suggests priorities for future research which may occur in phase two.

Suggested research and suggested participants

Recommendations for future research are supported by the the media scan, discussions during the two deliberative dialogue sessions, and the voting results using Turning Point voting technology provided by the provincial Rural Secretariat. All these sources identified and discussed the priorities that are listed here, and these same impacts were also found in the review of academic literature on the subject. For the purposes of this project, most weight was placed upon priorities identified during the deliberative dialogue; however, the fact that these identified priorities have also been identified in the academic literature only add strengths to the veracity of the results listed here.

Labrador West

Voting and discussion identified the following priorities for possible future research:

- housing issues, including lack of housing stock for newcomers, rising housing costs, and a lack of affordable housing for lower-income residents
- insufficient transportation infrastructure

Additional suggestions include:

- increasing stress upon health and emergency services.
- labour force demands
- infrastructure stress

Isthmus Region

Voting and discussion identified the following priorities for possible future research:

- the social impacts upon specific populations (low income, people with disabilities, women, seniors), and
- labour force demands.

Additional suggestions include:

- planning for after industry shrinks/leaves
- strategies to increase student participation in the workforce

From the literature scan

Three of the additional research priorities identified during the deliberative dialogue are highlighted here because they were also identified in the academic literature as areas with strong potentials for future research which would be useful to community planners.

These are:

- assessment/exploration of community/regional collaboration and governance strategies and options,
- identification of strategies for non-industry rural businesses to join global supply chains and networks outside of industry-created chains and networks,
- instigation and evaluation of regional planning for post-oil economic sustainability

Who should be involved?

The deliberative dialogues did not result in the identification of people/organizations who should be involved in future plans to organize to minimize impacts. However, the results from the literature scan suggested that collaboration with certain key organizations/groups was most effective in identifying and employing effective impact minimization strategies. Collaborative efforts could/should include representatives from:

- industry
- non-profit organizations
- various levels of government
- community organizations
- community members
- various segments of the community (youth, seniors, minorities/immigrants, women, people with low-income etc)
- university researchers
- experts (in rural development, economic development, collaboration etc)

Additional research priority:

- identification of potential key participants who can maximize community-based research strategies, possibly with a focus upon which kinds of collaborative partnerships are most effective and/or sustainable, how effective collaborations are formed, and what mix of people/organizations produces effective change.

Introduction

This report is the first phase of research project intended to investigate the negative social impacts of industrial activity as they are occurring in the Isthmus region and Labrador West in Newfoundland and Labrador. This report is intended to generate discussion about the kinds of impacts being experienced and the different intervention/mitigation strategies which may be initiated by communities in each region.

This report assumes that what Miranda et al. state about mining specifically is true in general about all large-scale industrial activity:

Although some degree of disturbance is inevitable even in the best-managed mines, *nearly all negative social and environmental impacts are avoidable* if companies would operate according to the best possible standards. Unfortunately, existing frameworks have not consistently ensured responsible behavior in mining operations, and negative environmental and social impacts occur more frequently than they should. (Miranda et al. 2005, 1)

Overview

This report consists of background research about impacts occurring in each region which will inform future research on the subject. The background research conducted is necessarily narrow in scope (in order to fit the project within the three months timeframe provided). Therefore, this report represents preliminary, exploratory research from existing sources and does not represent new or original research.

This report provides three main pieces of information. There is a brief analysis of academic literature and regional documents about impacts that is relevant to the project and the context of each region. There is a brief analysis of a qualitative scan of relevant media sources which reported about the social impacts of the industrial activities occurring within each region. And finally, there are summaries of data collected by the provincial Rural Secretariat at two meetings with provincial and community leaders (one in Goose Bay and one in Port Blandford) which lead to suggested next steps with regards to organizing to mitigate the negatives social impacts which are occurring in each region.

This project emerged from a community-based research project focusing on how five communities in the Isthmus can maximize benefits and minimize the costs of industrial activity in the region, called *The Analysis of Municipal Readiness for Socio-Economic Development Opportunities in the Communities Located on the Isthmus of Avalon Region* (2012). During the course of this project, it was observed that negative social impacts were occurring and that communities could organize to mitigate those impacts. Representatives from the provincial Rural Secretariat identified Labrador West and the Isthmus region as key study areas.

There are many working definitions of social impacts. For this report social impacts are defined as “consequences to human populations of any public or private actions - that

alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society” (Interorganizational Committee on Guidelines and Principals 1994, 1). An impact is an experience of an individual, family, household, community or society.

This project takes a different approach than the kind of detailed socio-economic analysis undertaken elsewhere. Rather than looking at overall numbers and statistics, this project looks at the current issues that have been the subject of discussion as reported by the media and in other recent academic research. This project assumes that negative impacts have occurred and are occurring, and also that both regions have the capacity to organize in a way that the negative social impacts can be minimized. This project is not evaluating the severity or frequency of identified negative impacts, but this project does list some of what has been identified as social impacts in the two study regions as a result of the academic literature scan, the media scan and a scan of certain community planning documents.

Areas of Study

The two major communities which make up Labrador West are Labrador City and Wabush. They were built in the early 1960’s as mining towns. One report about the impacts of mining upon Labrador West and Wabush noted that these communities “only exist because of the ore bodies below and near them” (Coumans 2005). Wabush Mines and the Iron Ore Company of Canada mine are the major source of employment for the region.

According to NL Statistics’ Local Area definition, the Isthmus of Avalon, includes all communities from Goobies to Chapel Arm and Long Harbour-Mount Arlington Heights. In another related project, Clarenville has also been collaborating with these communities and certainly Clarenville area also experiences impacts from industrial development on the Isthmus. For this reason, there is overlap between impacts which affect Isthmus communities and those which are impacting Clarenville. The Isthmus area has hosted the construction of the Bull Arm facility and its use for the Hibernia, Terra Nova and White Rose projects. The Isthmus has also hosted the construction and subsequent expansion of the Newfoundland Transshipment Terminal, at Whiffen Head. Construction is now underway of the Vale nickel processing plant at Long Harbour which will provide several thousand jobs during construction and a permanent workforce of 450 during operations. Construction of the processing plant began in April 2009 and is expected to be completed in February 2013.

Methods

Three complementary methods were employed. For the literature scan, academic databases were searched using key words used in social impact research. Bibliographies were scanned for additional relevant sources. A selection of planning documents were assessed to provide background information about the needs of communities in each region. Documents accessed were filtered through an analysis as to its relevance to the regional context. This scan does not represent a comprehensive

or detailed account of the academic literature on the subject, but represents a general overview of relevant documents.

The media scan consisted of searching website databases of four news sources: *The Aurora*, *The Telegram*, *The Packet* and the CBC website. Key search words included terms for different kinds of social impacts identified in previous research and academic literature and new search terms were used which were identified in news stories. Relevant news stories were collected from each site. This media scan is not quantitative, but is rather a representative media scan. At least one story on each identified social impact topic found was collected. On topics which appeared in the media many times, more stories on the same topic were collected, but no quantitative analysis was completed. This decision was made for two reasons: the representative media analysis allowed us to widen the scope of social impacts that were identified by capturing stories from a much wider time-frame (from 2007 to the present) than would be practical for the completion of a quantitative analysis (within the timeframe the completion of a quantitative analysis would likely be narrowed to the previous six months); and second, because we recognize that what is printed in the newspaper does not and cannot represent everything that is actually going on in the communities, the nature of this media scan would only be a partial knowledge about what was going on, thereby rendering even a quantitative analyses of the media an incomplete representation of negative social impacts occurring in each region. For these reasons, the representational media scan was employed.

Important to this research was the data collected by the Rural Secretariat at two meetings, one in Goose Bay and the other in Port Blandford. During these meetings, people in the audience (community leaders, academics, municipal/provincial/federal government representatives, regional/provincial residents) were asked about the social impacts which are relevant to the region being discussed, either the Isthmus or Labrador West. Participants were able to discuss their concerns and rank topics by priority. The longer session in the Isthmus allowed more time for the provincial Rural Secretariat staff to gather more data, asking participants to discuss next steps/actions and identify people/groups/organizations who could be involved in community efforts to address social impacts. This data may help identify future priorities for the next phase of research on social impacts of industrial activity.

Literature Scan

This is a review of selected academic literature relevant to the context of the regions identified and is not intended to be an exhaustive review on the topic. The focus was to provide an overview of the knowledge about the kinds of social impacts which have appeared in other relevant jurisdictions and how these were addressed by affected communities/governments/organizations/industries.

This scan has general topic areas. One focuses upon mining-related literature and the other focuses upon oil and gas-related literature. However, because the knowledge generated about community response to boom-bust cycles in single resource towns as a result of one kind of industrial activity may be useful, at least partially though

imperfectly, to the boom-bust cycles which occur as a result of another industry, this literature review does not separate the two areas. It should be noted that there is a longer history of academic research into the contexts of mining towns around the world and in Canada than there exists with regard to oil and gas contexts.

Overview

A Mining Watch report *No Rock Unturned: Revitalizing the Economies of Mining Dependent Communities* noted that academic literature “on single industry towns, including mining, enjoyed a peak in the early 1980s, stimulated by a downturn in industry employment.... Many of the Canadian case studies, literature reviews, conferences and policy think tanks date from that time” (Kuyek and Coumans 2003). Foundational literature cited by this report include: the work of the Canadian Association of Single Industry Towns (CASIT); the work of the Centre for Resource Studies at Queen’s University (Douglas 1984, Glass & Lazarovich 1984, Roberts & Fisher 1984, Graham 1982, Centre for Resource Studies 1978); and Canadian case studies (Himmelfarb 1976 and Robson 1986).

Wilson (2004) noted that the earliest studies (before the 1970’s) tended to focus on positive impacts. But by the 1970’s and particularly the 1980’s attention shifted toward analysis of the negative impacts. Much of the focus of this early critical work was upon the macro-economic context of mining towns, environmental issues and impacts, the social composition and population of mining towns, political economic infrastructure, long distance commuting, economic diversification, economic development and policy (Kuyek and Coumans 2003). However, Wilson further observed that the majority researched negative impacts in the shorter term and pointed to a study conducted by M.D. Smith (2001) which found that over time the negative impacts identified in earlier studies tended to lessen over time. Wilson stated that “[s]tudies of other types of “dependent” towns and cities reveal that the actions of local elites and development specialists can either help or hinder restructuring after downsizing” (2004, 262).

More recent studies which have analysed the different factors which influence how impacts are experienced by communities have also pointed to community response to change, community leadership, and community control in decision making as important factors which can alter a community’s relationship with, and experiences of, impacts (Martinez-Fernandez et al. 2012, Storey 2010, Gibson and Klinck 2005, Stedman 2004, Wilson 2004, Kuyek and Coumans 2003, Storey and Jones 2003, Shrimpton and Storey 2001). In fact, recent studies show that each industry town is unique and responds to an array of factors which include culture of involved corporations, descriptions of the resource and its location, and a community’s attitude toward and history of change as a result of industrial activity (Stedman 2004).

Research in the Isthmus region (Porter and Vodden 2012) found that for the community to maximize benefits and minimize impacts of industrial activity, the region’s next steps should focus upon increasing community collaboration. It was found that the region’s capacity for regional collaboration was low and that this hindered regional efforts to

maximize the potential benefits which could flow from the nearby presence of large-scale industry.

One tool noted by Kuyek for the development of community capability and resilience in the face of industrial activity is *The Centre for Community Enterprise's Community Resilience Manual*, a tool which, "has been used effectively in a number of communities in Canada and elsewhere (Kuyek 2003, 12).

Negative social impacts more recently studied and recognized with regard to Canadian resource towns highlight community dependence upon networks established by industry, networks which disappear when industry leaves (Kuyek 2003, 12). These include power grids, chain stores, imported grids, transportation networks, new goods and services, recreation, infrastructure such as rail and roads, waste disposal, etc (Bowman & Baker, 2000; Halseth 2000; Gylfason et al., 1999; Clemonson, 1992; Lithman, 1984; Locke, 1986; Canadian Association of Threatened Single Industry Towns, 1985; Lithman, 1984; Bowles, 1981). "Companies tend to put money into infrastructure like schools, hospitals, and the arena, but not into soft services," (Kuyek 2003, 12) but this infrastructure becomes a liability when the company leaves and tax revenue can no longer maintain the buildings.

Common Characteristics of Mining Communities

The literature shows that mining communities share some general characteristics, although the circumstances can vary a great deal. Martinez-Fernandez et al. (2012) observe that mining communities generally share five characteristics: They are dependent upon resources which are nonrenewable; Mining communities tend to be peripheral economically and/or physically to large metropolitan areas; Third, economic instability tends to be the rule; Fourth, most are left out of international knowledge flows, while industry is highly connected; Fifth, mining communities must cope with environmental degradation.

Resource Towns and Implications for Municipal Planning

Martinez-Fernandez et al. argue that the predictability of the bust portion of the boom-bust cycle has important implications to municipal planners, "providing an impetus for these officials to develop and activate strategies anticipating a smaller city long before the shrinkage phase starts.... Unfortunately, most responses to decline in mining cities are developed *after* decline has begun, and these strategies, which may be undertaken by various community actors, have produced mixed results" (2012, 246).

The article provides case studies, including one in Sudbury, Canada which provides lessons for municipalities planning for future shrinkage, suggesting that the creation of economic networks not associated with industry can sustain communities at least for the short-to-medium term. The case studies "suggest that the fortunes of many mining communities are intimately tied to corporate fortunes and the way corporations run their operations in town" (Martinez-Fernandez et al. 2012, 256).

Martinez-Fernandez et al. argue that the parallel economy in single-resource towns rely upon the same economic and cultural connections created by the dominant industry. When industry leaves, these connections fail.

They write: “From the development of the earliest mining towns to the present, both the economy and the culture of mining cities have been dominated by global mining conglomerates. This level of corporatization produces parallels between workforce and population fluctuations such that the strategies of the main company determine, to a great extent, future developments of the town” (Martinez-Fernandez et al 2012, 245) . They state that important questions to ask are: to what extent does the industry link the community to the global economy--energy grids, food, shelter--in irreversible ways? And how dependent is the community on the mine for services such as rail, road, hydro, water, waste disposal, recreation and municipal governance?

Stedman (2004) made similar observations in his overview of research. Stedman pointed to the research of Freudenburg and Gramling (2004) which noted “that the degree to which resource extraction and processing becomes linked to subsequent economic development and infrastructure is key to fostering well-being as long as the associated development is relatively independent of the parent resource industry. If it is not, shocks to the resource industry will reverberate through the linked industries, potentially exacerbating rather than counterbalancing shifts in wellbeing” (Stedman 2004, 215).

The challenge, according to Martinez-Fernandez et al., is that

“[t]he corporations (and their mines) make use of global knowledge networks while the mining cities remain isolated from truly global knowledge, receiving the part of the impact that is more ‘place-dependent’ while the global knowledge where the corporation is located is ‘footloose’ (Martinez-Fernandez and Wu, 2007a). Ultimately, when corporations move on—taking with them the financial bases of the city—it is the environmental and unused infrastructure legacy that stays, not the global knowledge” (2012, 248)

Martinez-Fernandez et al. present three **recommendations** for municipalities who seek to plan for a future that continues even when the dominant industry leaves. **First**, policymakers need to find ways to increase innovation transfers from industry to the municipality as a whole so that innovators among non-industry stakeholders can connect to international networks outside of those created by industry. **Second**, the article calls for a review of planning and strategic solutions that have had only mixed success--such as attraction of tourism or ICT-based services--and a consideration of other industries which show more promise. **Third**, studies show that strong community leadership and engagement appears in communities making transitions to sustainable economies, so the article recommends that planning needs to “embrace the public in a much more vigorous manner” (Martinez et al. 2012, 256).

Common Impacts Experienced by Single-Resource Communities

Kuyek and Coumans state that “[a] large and growing body of literature establishes a link, on a macro economic level, for national economies in developing countries, between a predominantly resource extraction based economy and economic stagnation and even decline from prior levels of economic growth” (2003, 2). The term “Dutch disease” has been used to describe the patterns that occur refers to the overall economic decline that occurred in the Netherlands after the 1959 discovery of of natural gas.

From the Canadian context, Stedman (2004) said that there is not enough research into the challenges faced by Canadian resource towns. More research would help communities and planners decide how to build sustainable economic development plans. Changes in the way provincial and rural governments support rural areas and resource towns have required that these communities find new strategies of resilience.

A study of the anticipated and actual impacts of the Hibernia, the first of East Coast’s offshore oilfields found that most of the anticipated negative impacts were avoided through effective planning (Storey and Jones 2003). This observation was reinforced by Porter and Vodden’s study about industrial benefits in the region when, during interviews, study participants said that the largest fears regarding negative impacts did not materialize in the region. However, many participants interviewed for another study were also not satisfied with the level of benefits as compared to impacts (Porter and Vodden 2012).

Gibson and Klinck (2005), Wilson (2004) and Stedman (2004) document a variety of general impacts which can and have occurred in various areas as a result of industrial activity. These include: mental stress, depression, post-industry lay-offs, road fatalities during commutes, addiction and high risk behavior as coping mechanisms, changing family roles, increasing partner conflict including family violence, minorities and women unable to get jobs, loss of culture, growing inequality, increasing poverty, housing pressures, environmental degradation, health impacts from industry-related pollution, risk to fishers’ livelihoods and post-oil finances. Shrimpton and Storey (2001) document the impacts and benefits of offshore employment in the Petroleum industry.

Of particular concern currently are the impacts of the fly-in/fly-out or long-distance commute (LDC) model. Storey (2010) documents the specific impacts of the fly-in/fly-out context, pointing to different impacts for both the adjacent/host areas and the communities from which the workers originate. Storey notes that it is still too early to gauge the impacts on community sustainability for communities like Marystown, from which many workers commute to Alberta because of an absence of local employment opportunities. Storey wrote that the kind of economic effects of fly-in/fly-out that a community feels is largely due to the amount of control the community or region can have over the resources in question. The government can act to help regions and communities to offset costs associated with the stresses of resource booms. However, if government decides its role is to focus on generating revenue from the project, “then the community or regional authority may be largely on its own when trying to deal with

demands for additional infrastructure and services to cope with development-related demands” (2010, 176). This suggests that one strategy available to communities may be to persuade the relevant governments to play a role, however that role is defined, in working to offset negative social impacts from industrial development, even if that means compelling companies involved to work to offset the negative social impacts experienced by adjacent/resource towns.

Although LDC work arrangements are said by companies to prevent negative social impacts because there is no mining town, the literature shows that LDC work arrangements result in a mix of benefits and impacts. In these arrangements:

...the social costs of LDC are externalised to the communities the workers come from and mine owners are not easily held accountable for these indirect consequences. If the mine is near or in a populated area or First Nation, or is a staging area for mine workers, then these existing communities and the region they are in will become a de facto “mining town” (Favreau & Ninacs, 1992). However, the impacts are rarely recognized by industry or government, and no municipal taxes come from the company to compensate for the additional services that are required. (Kuyek 2003, 13).

Negative impacts cited by Kuyek’s overview of a broad range of literature include increased income inequality, drug abuse, displacement of responsibility to communities at closure, potential for problems at camp, monitoring becomes difficult and local expertise is not developed when it is flown in from elsewhere.

The literature shows that “local communities bear the brunt of the environmental and health costs during and after the mine, and are often ill equipped to protect their interests” (Kuyek 2003, 11). Specific health and environmental impacts upon women which result from mining in Labrador West have been documented (Coumans 2005, Labrador West Status of Women council 2004). Issues of concern in this region include contamination of dust and contamination of nearby bodies of water through waste and acid drainage. Coumans noted that the “[h]ealth effects related to environmental degradation are largely undocumented” (2005, 9). In the Isthmus region, potential risks to fishers’ livelihoods as a result of a spill has been a concern (*Hebron Project Socio-Economic Impact Statement and Sustainable Development Report 2011*) as has worker safety and air quality (Porter and Vodden 2012). Porter and Vodden (2012) identified municipal priorities in the Isthmus region (for participating municipalities) going forward, which include: demographic, economic, recreation, housing, infrastructure, health, small business, education, tourism, environment, regional cooperation and governance. All of these priorities are impacted by large-scale industrial development. Regional Cooperation Community Planning documents, including ICSP’s and identify infrastructure stress/gaps and economic diversity issues as major challenges going forward for some Isthmus municipalities.

Four Insights from the Literature

1. Impacts are responsive to local contexts.

The literature does not provide a blueprint for avoiding the impacts of and obtaining benefits from industry because these experiences respond to context and the particularities of community, geography and industry interactions (Porter and Vodden 2012, Storey and Shrimpton 2010, 2008, 1989, Coumans 2005, Stedman 2004, Wilson 2004).

However, the literature does suggest that communities can have a clear and effective role in shaping their experiences with benefits and impacts from industrial activity (Storey and Shrimpton 2008, Wells 2005, Fuchs 1986). The size and complexity of an industrial project has less influence upon a community's positive or negative experience than variables in the community itself, particularly a community's (1) experience with previous change, (2) its attitude toward further change and (3) the extent to which that community feels empowered to act on their own behalf and manage change to their own benefit (Fuchs 1986).

Stedman observed that it appears to be a mistake to think that "resource-dependence" per se has a "typical" effect on community well-being, as we find a great deal of industry-based variation in these relationships (Stedman 2004, 214). Stedman also noted that when assessing a community's well being in response to industrial activity the indicator chosen to represent well-being can influence the assessment. Stedman wrote that "[t]he indicator chosen to represent well-being also matters: mining dependence appears to have more positive effects when the measure of well-being is income rather than poverty or unemployment" (2004).

Wilson noted that the kind of impacts felt may depend upon a wide range of factors, "including although not limited to, the characteristics of the resource, region, companies and communities as well as the actions of the numerous parties that produce and/or respond to changes that affect" (2004, 264) the industry involved and surrounding areas. Factors such as a levels of dependence, the geographic distribution of the resource, as well as community leadership can influence how impacts are felt.

2. Residents' experiences of impacts are relevant

Wilson pointed out that "[w]hile the identification of general patterns provides a vital understanding of socioeconomic conditions...insight may also be gained from additional studies that clarify the local circumstances that influence the impacts" of industry.... it is important to ask how residents, workers, and the companies experience and respond to the changes associated [with industry]" (2004, 265). Wilson wrote that studies show that "responses to change can affect socioeconomic well-being and residents' experiences of that change" (2004, 263). Further, she emphasized that the stories about impacts told by residents can provide unique, contextual information about how impacts are experienced differently by different populations. Kuyek and Comouns recommendations for organizing for change include the observation that how people in the community *feel* matters--"people need to feel like they have control over their lives" (2003, 26)--and so paying attention to how they feel matters too.

3. Collaborative partnerships can offset negative impacts

The results of a cross-country international research project stated that “more collaborative action and stronger partnerships between mining companies, government, civil society organizations and donors are needed to unlock the full potential of mineral wealth” (ICMM, 2008a). As a whole, the development of “more partnerships between companies and other stakeholders, can be the most effective way to strengthen mining’s social and economic contribution (ICMM, 2010c)”.

Case studies analysed by Storey and Shrimpton (2008) support the idea that collaboration and cooperation are vital. Storey and Jones note that some “communities and groups may be dependent on government, acting on their behalf, to broker arrangements with the resource companies” (2003, 1175). When this occurs, communities can feel they are dependent upon the provincial government to allocate benefits specifically to them. Further, communities can employ professional advisors to assist in achieving accommodations from/with oil companies (Sinclair 2011). Without collaborative measures, communities risk becoming divided and threatening their long-term sustainability.

4. There is not enough knowledge about Canadian resource towns

In 2004, Stedman suggested that there is a need for more studies about the social impacts across industries in Canadian resource towns. He wrote: “there are no broad, comparative, comprehensive studies of this type in Canada, a nation that is demonstrably more dependent on the extraction and processing of raw material natural resources” (Stedman 2004, 214). More knowledge would guide communities as they seek resilience in the face of industry-related economic changes.

Different Industries, Different Impacts

Stedman (2004) noted that different industries tend to experience different impacts. Usually associated with the most negative impacts are fishing reliance and forestry dependence, with high poverty and unemployment rates. According to Stedman, mining is associated with many negative outcomes about half of the time, depending on the indicator used to assess outcome and upon context. Energy dependence (the comparatively “newest” industry) is the resource industry most consistently associated with positive outcomes: such as higher in-migration, lower rates of family poverty, lower unemployment, and higher median family income (Stedman 2004, 225).

Possibilities for Future Research: Academic Recommendations

Future research recommended by Martinez-Fernandez et al. include: comparative studies of how mining corporations make use of technological advances; how mining technology sectors might help diversify the economy; case studies analysing how community activism changed the course of the impacts of development; and discussions of the roles and responsibilities of mining companies in municipalities and how this can be organized to produce best results.

Stedman (2004) noted that more research is needed to assess which theories about the relationship between resource reliance and well-being best fit different resource industries and different contexts. Wilson (2004) recommended that additional studies would be useful which combine time-series data with comparative case studies of mining communities because “this approach would allow for identification of both local and broader factors that influence socioeconomic well-being” (2004, 265). Gibson and Klinck (2005) suggested more research into resilience and well-being indicators and how these link to how benefits and impacts are experienced, allowing researchers to track the distribution of these elements.

Kuyek’s recommendations for future research focus on discovering the kinds of and extent of linkages between the community and global economic networks and assessing community dependency upon large-scale industrial networks (2003).

Media Scan

Media scan methods were determined in response to desired outcomes and a limited timeframe. It was not possible in this project’s limited time frame to conduct a comprehensive media scan which identifies every, or even most, stories relating to the negative social impacts which have resulted from industrial activity. In this case, such a detailed media scan is not even desirable, as the purposes of this project is not to criticize the extent or content of the media scan, but simply to use selected media stories as discussion starting points and to help create a general snapshot of the issues in the region. Additionally, it is recognized that issues which are published in the media do not reflect all the issues which are important to communities. For these reasons, it was decided that the completion of a comprehensive media scan was not the best use of the time allotted for this project.

The media scan completed here can be termed a representative media scan, meaning that a selection of stories were chosen as representative from the results of keyword searches of the on-line data base of four news sources: The Packet, The Aurora, The Telegram and cbc.ca. These choices were made based upon a number of factors: the most current stories were given more weight; when there were numerous versions of the same story, only a few were selected to represent the issue; and efforts were made to find stories that represented a wide variety of issues which were identified in the academic literature. The focus here was to choose stories which provided context for the issues and/or summarized a variety of issues which are going on in the region.

While priority was given to the most recent stories, and the majority of identified stories were printed in 2012 and 2011, search terms results included relevant and/or interesting stories from 2008 and even one from as far back as 2007 (Trouty Plant closure will impact entire region: *The Telegram*, Nov. 19, 2007). This media scan relied heavily on subjective evaluations by the researcher about stories and relevant issues. Additionally, the results of this media scan were impacted by the quality of internet archives maintained by each news source; stories which were not tagged with proper search terms in the online news archives would not have been made available to the search.

For example, if an environmental story was not tagged with the search term 'environment,' this media scan might not have resulted in the identification of that story.

It should be noted here that the main purpose of the media scan was to generate discussion and feedback at the two sessions organized by the provincial Rural Secretariat (which are summarized in the next section), and that the recommendations as to potential future research areas are almost completely shaped by the input received at those sessions, rather than by the results of this representative media scan.

Keywords used to search for stories include: social impacts, industrial activity, names of the communities, housing, environment, environmental review, Hebron, Hibernia, health, education, mining, oil industry, Hebron review, addiction, domestic violence, women, diversity, regional economic development, socio-economic impacts, jobs, union, employment, affordable housing, infrastructure, roads, transportation, traffic, sewage, health and environmental issues; education, work and safety, fishing, wage inequalities, crime, violence, sharing of benefits, small businesses, equity, marginalization.

Selected stories--their headlines and text--were copied and pasted into a document, which was later analyzed to assess the most common themes and identify those which appeared to be most urgent to the current context of the region. Other information was gathered from the selected stories, such as any descriptions of solutions and the names of people and/or organizations involved in addressing the identified issues.

In all, 54 stories were selected, representing a wide variety of themes and issues of concern in the Isthmus region and Labrador West. Housing issues appeared more times than any other and while 11 stories were selected which identify 3 different aspects of the issue (housing for lower-income families, not enough housing for workers and newcomers, housing is difficult for students to find), many more stories which followed the same issue were not included. When a story appeared more frequently, more than one story was selected to represent that story.

A list of the headlines of the selected stories appears in the appendix.

From the collection of issues represented in these stories, seven themes were identified to initiate discussion at the provincial Rural Secretariat's two sessions, outlined below. Not all identified issues were included in order to provide space for the session participants to change, re-write and add to the identified themes. These seven themes were: housing stress, gender equity, individual/family health, infrastructure stress, public services, labour force demands and economic diversity/bust economy.

Deliberative Dialogue Sessions

The provincial Rural Secretariat organized two deliberative dialogue sessions, the results of which shape the recommendations in this report. During these sessions, participants listened to a 15 minute presentation on the research conducted (as described above) and were given a chance to vote upon priorities using the Rural Secretariat's Turning Point technology.

Labrador West

The first session, which focused on Labrador West, took place in Goose Bay on February 24. This was a lunchtime session during the Combined Councils of Labrador's Annual General Meeting. This session was allotted 1.5 hours. This is less time than was provided for the session in the Isthmus region and so fewer questions were asked, there were fewer voting opportunities and less data was collected as compared to the second session.

Community leaders from across Labrador attended and as a result the results of the voting were skewed toward Labrador-wide priorities and did not represent only the priorities identified by Labrador West. For this reason, although housing issues were not identified as a strong priority in voting, it is listed as one the top recommended areas of study. Discussions with Labrador West leaders after the voting results were shared revealed that Labrador's West's regional top regional priorities were housing issues. This is further backed up by the media scan: housing issues in Labrador West make up the highest number of stories in the representative scan.

In this deliberative dialogue session, participants were first asked to develop a list of priority issues for possible future research and then asked to vote on their top priorities.

Identified in this session as priorities for the development of future research projects were: economic impacts and benefits from industry, housing shortage, lack of affordable housing, crime and addictions, lack of infrastructure (water, sewer), lack of land available for development, long-term impacts of environmental degradation as a result of industrial activity, family dysfunction/breakup, spread of STDs, lack of effective development planning, infrastructure issues (waste management, electricity), training local workforce and skilled worker shortage, substandard health and educational facilities, cost/availability of childcare, potential for more recreational activities, shortage of workers for lower-wage, non-industry jobs, attraction/retention of immigrants, comparatively low wages for important jobs such as home support work, economic diversification, changing cultural activities, transportation, increasing the tax base, communities farther from industry are disadvantaged, stress on healthcare, lack of communications, fly-in/fly-out workforce impacts, inadequate emergency services, encourage innovation, impacts on specific populations (aboriginal people, low income etc), education/training of youth and aboriginals, impacts of concentration of youth in one area (most move to Labrador West), loss of culture and traditional jobs, hours of work/overtime creates stress and family strain.

Voting identified insufficient transportation infrastructure as the top priority for those who participated in the deliberative dialogue. The second priority identified for possible future research was the increased demand on health and emergency services. The third priority identified were workforce shortages and lack of skills. Next were infrastructure, increased family/individual/community stress and impacts upon an at-risk population.

Increased housing demands followed and the last issue identified as a priority was the increased demand upon the educational system.

There was no time for extended discussion of any of the priorities at this session.

Isthmus Region

The second session focused on the Isthmus region took place in Port Blandford on March 16 as part of the Harris Centre's regional workshop. This was also a lunchtime session. Slightly more than two hours were provided for this session. The following data was gathered using Turning Point technology. Participants were affiliated with Memorial University, the College of the North Atlantic, industry, municipal government, provincial government, federal government, economic development organization, non-profit organization, regional council and other. Most of the participants lived outside the Clarenville-Bonavista region, but the majority of the rest came from Smith Sound-Random Island. Others came from the Isthmus of Avalon, Southwest Arm area, Smith, Sound-Random Island, Trinity-Trinity-Bay Area, Chandlers Reach, Catalina area, Bonavista area, Black Head Bay area, and Southern Bay area. Those who lived in one of the identified sub-regions were mostly affiliated with fishing and fish processing, but many others came from government, tourism, and oil and gas and mining as well.

Participants asked for three additions to the list of impacts: environmental impacts, impacts on specific populations (seniors, persons with disabilities, youth, newcomers etc) and public transportation patterns. Although environment had been dropped from the media scan list for space reasons during the session, participants clearly felt it was important and wanted it to remain on the list of potential study themes. Additionally, participants interpreted the list as not specifically inclusive of childcare, which was an important issues. For this reason, the word child was added to Individual/Family Health and it was decided that would represent childcare as well.

Participants were asked to prioritize which impacts should be the focus of future research.

Social Impacts on Specific Populations

The top choice for future direction of research was the social impacts on specific populations (seniors, persons with disabilities, youth, newcomers, low income etc).

Many participants expressed concern about the inability of seniors (and others on fixed incomes) to absorb the higher costs of living, particularly the rise in housing costs. Difficulties in attracting/keeping newcomers, immigrants and youth were also linked to the cost of housing. It was felt that different solutions would address the particular issues of each group. A need was identified for research on supportive/affordable housing and how government policy could positively impact the situation.

Identified challenges for seniors included the need to find more innovative ways to care for seniors, with the possible creation of support centres which can provide different

types of support for different seniors. Potential research could include assessing the services needed by services and identifying which needs are not being met.

There was concern about the number of underemployed people in the region. There was particular concern about the role gender inequity played in this, that women were possibly not getting apprenticeships and/or jobs because of their gender. Identified specifically was the possibility of a study which looked at the number of underemployed people and compared their specialties to the deficit of trades, including a gender analysis.

Of concern were the impacts upon people as a result of non-industry wages being much lower than industry-wages. Possibilities for research include: impacts on residents and those not working in the industry, impacts on small businesses who can't recruit workers because they can't afford to pay the wages, impact upon industry when support services aren't available because support service wages are too low to attract required workers.

Other issues identified included youth retention, barriers to regional collaboration, access to medical care, barriers for people living with disabilities, impacts on the school system.

Future research could look at how planners/stakeholders can build boom/bust cycles into strategic plans. Identified as a resource were case studies, particularly from Scandinavia.

Labour Force Demands

The second choice for future direction of research identified was labour force demands.

Participants identified apprenticeships and work terms for students as key issues which needed exploring. Questions asked included: are we effectively training youth for employment? How can we anticipate demand for trades? What changes in regulation could help inexperienced workers to get the needed expertise?

Participants said that there wasn't much effort on the behalf of companies to recruit from the local populations at the high school level. Why aren't more people aware of the opportunities for employment?

Concern about labour mobility was expressed. What are the impacts upon workers and host communities? Also, how can we keep our young workers here instead of losing them to Alberta?

Sustainability is an issue identified as an area for potential research. Who has responsibility to address what comes after the industrial activity leaves? What is the role of industry in this? It was suggested that a study focus upon how other jurisdictions dealt with economic development post-project.

Small businesses are struggling to retain workers on a wage that often no longer covers housing costs. Childcare was identified as key to increasing women's participation in the workforce. Also identified for possible future research were the stresses associated with increased commuting, such as safety, and the quality of work life. How can industry infrastructure benefit other local businesses? Are unions playing a positive or negative role in work-related issues?

Additional Priorities

Voting identified labour market issues as important to themselves individually and community collaboration and governance as important for the region. Additional voting identified the increase of practical experiences for students was identified as important to individuals as well as planning for after industry leaves as important regionally.

Other social priority issues identified for consideration include: a study on the most appropriate types of housing for this region; survey of housing and planning alternatives in and out of Canada; how does a community become empowered in the face of many challenges?; analysis of housing regulations; what kinds of financial stresses are being faced by municipalities due to increased demands upon infrastructure and services?; statistical analysis of people in need of shelters (homelessness, additions, domestic abuse); rural adaptation to boom and bust industry; environmental impacts of industry, including deforestation for housing, recreational needs etc; economic diversification alternatives; waste management challenges; how transportation systems can support rural living; how can rural companies join global supply chains; conflicts between new development and traditional or heritage uses; who benefits from the boom?; how does the European rural context apply to NL rural contexts?; how can rural areas be compensated for the stress on their infrastructures?; how can industry play a role in community development?; how can access to doctors and health care professionals be improved?; What makes a viable/sustainable/resilient community?; how has crime changed in response to industry?

Who should be involved?

Organizers of the second deliberative dialogue session asked interested participants to add their names to a list if they wanted to be involved in future research and/or projects on the topics of impacts on specific populations and labour force. This information will assist the next phase of research. While the deliberative dialogues did not result in the identification of people/organizations who should be involved in future plans to organize to minimize impacts, the results from the literature scan suggested that collaboration was most effective in identifying and employing effective impact minimization strategies.

Collaborative efforts could/should include representatives from:

- industry
- non-profit organizations
- various levels of government

- community organizations
- community members
- various segments of the community (youth, seniors, minorities/immigrants, women, people with low-income etc)
- university researchers
- experts (in rural development, economic development, collaboration etc)

Because the deliberative dialogue sessions were not able to identify specific people/ organizations who should be involved, this report will not identify specific people/ organizations. Instead the choice was made to list general categories who should be included in any collaborative efforts. This choice was made to respect the wide range of people and organizations who have been involved in previous work in minimizing negative social impacts and who will be key players in future efforts. The narrow scope of this research and the lack of time for the deliberative dialogue sessions to capture that information means that any list provided would be partial and run the risk of omitting key and important people and/or organizations. The partiality of this list would be further due to the the limited time constraints in which the project was completed and to the representative nature of the media scan (rather than comprehensive). Instead, this report identifies this area as an area for future research. This report recommends further research about the nature of effective collaborations which have been formed to successfully address an issue. Particularly relevant would be research which considers how effective collaborations are formed, what mix of people/organizations produces effective change and ways to ensure these collaborations are sustainable through change.

Next Steps

Suggested research and suggested participants

Recommendations for future research are supported by the the media scan, discussions during the two deliberative dialogue sessions, and the voting results using Turning Point voting technology provided by the provincial Rural Secretariat. All these sources identified and discussed the priorities that are listed here, and these same impacts were also found in the review of academic literature on the subject. For the purposes of this project, most weight was placed upon priorities identified during the deliberative dialogue; however, the fact that these identified priorities have also been identified in the academic literature only add strengths to the veracity of the results listed here.

Labrador West

Voting and discussion identified the following priorities for possible future research:

- housing issues, including lack of housing stock for newcomers, rising housing costs, and a lack of affordable housing for lower-income residents
- insufficient transportation infrastructure

Additional suggestions include:

- increasing stress upon health and emergency services.
- labour force demands
- infrastructure stress

Isthmus Region

Voting and discussion identified the following priorities for possible future research:

- the social impacts upon specific populations (low income, people with disabilities, women, seniors), and
- labour force demands.

Additional suggestions include:

- planning for after industry shrinks/leaves
- strategies to increase student participation in the workforce

From the literature scan

Three of the additional research priorities identified during the deliberative dialogue are highlighted here because they were also identified in the academic literature as areas with strong potentials for future research which would be useful to community planners.

These are:

- assessment/exploration of community/regional collaboration and governance strategies and options,
- identification of strategies for non-industry rural businesses to join global supply chains and networks outside of industry-created chains and networks,
- instigation and evaluation of regional planning for post-oil economic sustainability

Who should be involved?

The deliberative dialogues did not result in the identification of people/organizations who should be involved in future plans to organize to minimize impacts. However, the results from the literature scan suggested that collaboration with certain key organizations/groups was most effective in identifying and employing effective impact minimization strategies. Collaborative efforts could/should include representatives from:

- industry
- non-profit organizations
- various levels of government
- community organizations
- community members
- various segments of the community (youth, seniors, minorities/immigrants, women, people with low-income etc)
- university researchers
- experts (in rural development, economic development, collaboration etc)

Additional research priority:

- identification of potential key participants who can maximize community-based research strategies

Conclusion

This project was founded upon the belief that negative social impacts of large-scale industrial development can be minimized and/or avoided. This project emerged from a previous project which focused on maximizing benefits which can result from large-scale industry, called *The Analysis of Municipal Readiness for Socio-Economic Development Opportunities in the Communities Located on the Isthmus of Avalon Region* (Porter and Vodden, 2012). The type of collaborative approach seen during the course of that community-based project can inform collaborations which are organized to address any of the identified negative social impact priorities. While the results from that project focused upon support for continued collaboration, Porter and Vodden (2012) noted that during interviews community residents often spoke about negative social impacts which made their experiences with large-scale industry less positive than it otherwise could have been. This project was designed as a first step toward identifying which of these negative social impacts are priorities for the two regions involved in this project: Labrador West and the Isthmus of Avalon. Vital to this project is the assumption that communities can and should take part in shaping future research priorities. Feedback from community members and leaders who took part in the two deliberative dialogue sessions clearly demonstrated just how important it is to people to have a stake in future research which can positively impact their communities and also how important it is to ensure that those who design research projects recognize that the communities in which the research occurs are invested, aware, and ready to take part in research in a way that ensures positive outcomes occur for their communities.

The literature review uncovered contributions academic research has made toward recognizing the many kinds of negative social impacts felt as a result of the presence of large-scale industry and the different kinds of responses that have been attempted. For communities seeking increased resilience in the face of these negative social impacts, it is clear that what has worked for one community will not necessarily work for another. However, the literature review noted that collaborations involving multiple stakeholders which recognize the importance of local impacts and local experiences seem to result in more positive experiences with large-scale industries. This report observed four basic insights: 1. Impacts are responsive to local contexts; 2. Residents' experiences of impacts are relevant; 3. Collaborative partnerships can offset negative impacts; 4. There is not enough knowledge about Canadian resource towns. Particularly, relevant to community planning, the literature scan noted the recent work of Martinez-Fernandez et al. (2012) who recommend that successful sustainable community planning consider three factors: 1. Finding ways to increase innovation transfers from industry to the municipality as a whole; 2. Reviewing strategic solutions which have had only mixed success, such as the attraction of tourism or ICT-based services, and more serious consideration of other industries which have demonstrated more promise for the particular place; 3. Increasing public engagement and working to develop strong community leaders. These recommendations can be used to guide future government policy development.

Through the media scan, seven main themes were identified as discussion starters at the two deliberative dialogue sessions. Due both to the partial nature of what gets reported in the media and the representative approach of the media scan, these categories do not pretend to represent every actual impacts which was being experienced in both regions. However, the themes were used as discussion starters at the two deliberative dialogue sessions. Participants, made up of community leaders, university affiliates, and community and government planners then discussed the themes and added to, rewrote and deleted from the list until they were satisfied it reflected their regional priorities.

The deliberative dialogue sessions with the use of the Turning Point technology supplied by the provincial Rural Secretariat became a powerful tool for allowing participants to identify priority potential for future academic research. The lists generated in these two sessions cover a wide range of experienced impacts. By voting, participants were able to quickly identify the most important from these lists, providing rich and layered information. Researchers, governmental organizations and community groups will be able to use this data to design research projects which have been identified as priorities by community members themselves, thereby ensuring the research remains relevant to the communities who are being researched. As such, this project represents a sound starting point from which future academic research can unfold.

Appendix

The headlines of the selected stories are listed below. The headlines indicate the subject matter.

The Aurora

Affordable housing

Wabush apartment building bought by contractors, residents evicted, extension given until summer

Homelessness in Labrador West requires housing support worker

More funding for social housing

Habitat for Humanity

2010--Hope Haven

College of the North Atlantic, Labrador West

Diversification

A first for Labrador Hazardous waste facility coming soon

Quest for clean air

More recycling needed

Back to basics

CBC online

Tenants in Labrador boom town told to clear out

Wabush mayor says airport needs full-time firefighters

Mayor Pushes for Fire Service at Wabush Airport

Wabush mayor Ron Barron - Census number are too low!

Wabush Mines Owners to by Bloom Lake Mining Operation

District profile

Cliffs Natural Resources deals for Wabush mines

Wabush Mines to rehire laid-off workers

Scheduled layoffs take effect at Labrador iron ore mine

Western Labrador boom creating worker shortage

Labrador West debate focuses on growing pains

Housing group putting down stakes in Labrador

New Underpass for trains in Labrador West

Western Labrador daycare babysteps closer to opening

Fly In Fly Out Debate Continues for Miners in Labrador West

Lab West Reacts to IOC Fly In Proposal
New Housing Subsidy Guidelines in Labrador West
Labrador West Pre-Budget Meetings

The Packet

Towns present wishes at pre-budget hearings
Isthmus towns get water/sewer dollars
Turning on the tap
Interchange to be built at Sunnyside-Come By Chance
Wanted: Doctors
Trouty plant closure will impact entire region
Towns, union hoping for job solution at Come By Chance refinery
New doctors coming
The long road to prosperity
Alberta boom driving real estate costs in Clarenville
Survey underway to determine local demand for child care
Hebron opportunity
Towns seek Hebron benefits
Sunnyside will benefit from Hebron project

The Telegram

Findings from Transportation Safety Board report on helicopter crash
Tradeswomen want in on offshore
Construction begins on US \$2.2-billion nickel plant in Long Harbour
Clarenville mayor wants divided highway in area
One industry risking another: McCurdy
RDC calls for new agency
Changing the health and safety model
Hebron developers hoping to bring NL workers home
Hebron Public Review focuses in on environment
Risks well known

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