

INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC

Summary Analysis of the Impact of  
the Romaine Hydroelectric Project  
on the Health of the Population:  
Monitoring the Situation in the  
Municipality of Havre-Saint-Pierre





# Summary Analysis of the Impact of the Romaine Hydroelectric Project on the Health of the Population: Monitoring the Situation in the Municipality of Havre-Saint-Pierre

Vice-présidence aux affaires scientifiques

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## KEY FINDINGS

The Romaine project offers a good illustration of all the risks of implementing major development projects in northern Quebec. The first major hydroelectric site in many years to be established so close to a small community, this project is opening the way for many other large-scale projects. Havre-Saint-Pierre is one of the eight municipalities which, along with the two Aboriginal communities of Ekuanitshit and Nutashkuan, constitute the Regional County Municipality (RCM) of Minganie on the North Shore. Havre-Saint-Pierre is the central point of Minganie and the seat of the RCM and of many governmental, municipal and regional services. The local economy, traditionally centered on fishing, has branched out in recent years.

Hydro-Québec's Romaine project is aimed at the development of a 1 550 MW hydroelectric complex on the Romaine river north of the municipality. Construction work on this complex consisting of four generating stations began in May 2009 and should continue until 2020. When the work got under way, more than a thousand workers from all over Quebec converged on Havre-Saint-Pierre to work on the site. Since that time, two main camps have been built to house the workers. The first camp is located about 50 km northeast of the community of Havre-Saint-Pierre. The back-and-forth travel of workers moving between the various regions of Quebec, the other North Shore communities and the construction site is occurring side by side with daily life in the municipality. However, the border between the construction site and the municipality is not entirely clear, and the neighbourhood has not come together smoothly.

The following summary analysis proposes to describe briefly the principal impacts of the Romaine project on the population of the municipality of Havre-Saint-Pierre examined in light of the affected health determinants.

### ECONOMIC IMPACTS

#### A local economy in transition

While the economic effects of major projects like Romaine are undeniable, they are not always as profitable for the community as anticipated before the project. Four years after the work got under way, the area's stakeholders have a nuanced view of the economic impact predicted for the region, in light of the collateral impacts that have accompanied the work. Positive effects can be seen in the local economy: demographic growth which has stemmed the exodus of young people and attracted newcomers, a construction sector experiencing remarkable growth, and a booming job market. Additionally, investments in local infrastructure are bringing improvements at the municipal level. But these changes are producing harmful effects in other sectors which are struggling. Labour recruitment and retention are problematic, especially for community organizations, the fishing industry and small businesses lacking the means to increase their payroll. The businesses most affected sometimes have to raise prices or cut back on services, directly affecting the consumer.

Previously vulnerable and relatively dependent on the government economically, Minganie has gradually transformed into a vibrant place with a host of opportunities, suggesting that

there are prosperous years ahead, although they are not arriving as quickly as predicted. In certain cases, the expected impacts simply have not materialized. The construction of the large hotel complex in Havre-Saint-Pierre in anticipation of a large influx of businesses and workers to the community is a good example. In spite of all this, there is still hope that things will improve over time.

## **IMPACTS ON THE LIVING ENVIRONMENT**

### **A fragile environment out of balance**

Impacts on the living environment are primarily connected to road development and access to nearby services. The tranquility of the small coastal municipality is being disturbed by road development. As the new transport infrastructure increases access to the outside, users of Route 138, especially the older ones, feel less safe. Travel on Route 138 is a source of new concern for a population used to a lighter traffic flow. In addition, for people living along the road, there may be a more direct impact on the quality of life, especially due to traffic noise.

Access to nearby services such as retail stores, health services and child care services is reflective of the quality of life in an area. At this moment, however, local services available to the citizens are in decline in Havre-Saint-Pierre and throughout Minganie, since labour has been difficult to obtain or retain, and the services in place cannot meet the demand as customer traffic grows. The persistent housing shortage and the lack of child care spaces are two glaring problems with multiple consequences for the area. Many examples of actual loss point to the fragility of the environment: when a person leaves his or her job, the service often disappears as well. Thus although the hospital infrastructure is adequate to permit them, surgical, radiology and obstetric services are no longer available. Although these effects on services to the population cannot be directly attributed to the arrival of major projects, these projects contribute to the cumulative impact on services.

More generally, many services for citizens or businesses are also more difficult, or even impossible, to obtain. It is practically impossible to have certain services (maintenance, plumbing, electrical work) performed, or else the costs or wait times are prohibitive. The few contractors still in Havre-Saint-Pierre who do this type of work cannot meet the demands of the area. People interviewed in Havre-Saint-Pierre believe that the local rise in labour costs, caused by competition with highly paid jobs on the construction site or in the mines, has had a direct effect on the prices of consumer goods. In a context where the price of consumer goods is generally rising, it is difficult to measure the actual increase in comparison to Quebec overall, but certain households have been hit hard by the speed of rising prices in Minganie. Furthermore, demographic growth, increasing the pressure on services and housing, places the municipality of Havre-Saint-Pierre and the rest of the RCM in a crisis situation. This lack of balance in the environment has multiple impacts on the population, and their solutions will be complex.

## **SOCIAL IMPACTS**

### **A stormy social climate**

All the economic turmoil and its effects on the environment have social repercussions. Although social impacts are difficult to assess and stem from complex causes, especially in a relatively isolated community like Havre-Saint-Pierre, these impacts are palpable, especially in the area of social inequalities. It has been documented elsewhere that cohabitation with a job site in a *fly in/fly out* context, with the constant back-and-forth travel of male workers having a high disposable income and working in shifts, may lead to an increase in prostitution, STIs and unwanted pregnancies (Habitat, 2010). The presence in the region of a large number of people from the outside contributes to reducing the feeling of safety and may cause tensions among social groups within the community. This accumulation of diverse problems may gradually weaken the social fabric. The population of Havre-Saint-Pierre is already experiencing some of these impacts in ways both large and small.

An increase in social inequalities is perceptible in Havre-Saint-Pierre. The gap between the rich - those who have been able to find highly paid jobs or work under lucrative contracts - and the disadvantaged - those whose income has not increased - has widened considerably, reinforcing the isolation and the precariousness of the situation of certain community members. Women are especially disadvantaged, not only in access to employment, but because they are unable to return to work due to the shortage of spaces in child care centres. Increasing and increasingly complex psychosocial problems are seen by agencies offering services of this type. A few cases of homelessness have been reported in Minganie for the first time, including some new arrivals attracted by the economic boom. An increase in several types of consumption - drugs, alcohol, and gambling - is being witnessed. The increased consumption of luxury goods (boats, snowmobiles, recreational vehicles, etc.) is also a concern, especially in terms of its repercussions on household debt. Another cause for concern is the effect on the dropout rate and the value placed on education as young people are quickly brought into the employment market in order to make up for the labour shortage. A general discontent about the Romaine project and Hydro-Québec is also perceptible in the community. However, a renewed sense of solidarity is emerging around various citizen engagement movements with regard to governance issues tied to the region's autonomy and to northern development.

### **Foster the health of communities in northern development**

At the provincial level, the development of energy or mining resources in the northern territory may contribute to the collective wealth through economic stimulation and the resulting tax revenue. Monitoring of the impacts of the Romaine project on the Havre-Saint-Pierre population indicates that large development projects may also make a significant contribution to the well-being of the local population through improved economic conditions, infrastructure work or the opening of the territory. While they may not be enough to meet the needs of the population and the economic stakeholders in the region, the short-term and medium-term positive impacts of the Romaine project at the regional level remain undeniable, at least in terms of direct and indirect job creation, the payroll generated in the region, the purchase of goods and services from certain businesses, the funds that will go to

communities that sign impact benefit agreements or partnership agreements, as well as the reversal of the demographic exodus.

This summary analysis of the impacts of the Romaine project also recalls that the conditions under which these development projects are implemented may also weaken the social fabric and harm the health of the affected communities.

The identified economic and social impacts on the environment show how much the arrival of the Romaine project has disrupted life in this community at various levels. It can be concluded from the summary analysis of the situation in Havre-Saint-Pierre that for the north to play a role in northern development, it is essential to ensure not only maximum positive direct impacts for the communities living there, but also to mitigate as much as possible the potential negative impacts on these communities. Greater consideration for health impacts in the context of Quebec's environmental impact assessment (EIA) process could be one of the ways to achieve this. Finally, it would be desirable for the communities to be directly involved in finding the solutions most appropriate for their local contexts. Northern development will in this way be more sustainable and promote the health of the communities and their populations.

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## **1 BACKGROUND**

### **1.1 DEFINITION OF THE MANDATE**

The large projects developing in northern Québec present potential major impacts on the health of the local populations and on the demands for care and services in the regions concerned. To assess these impacts and better take them into account, the government has mandated the Ministère de la Santé et des Services sociaux (MSSS – Ministry of health and social services) to establish a health impact assessment (HIA) system to apply to large natural development projects in northern areas.

The expected impacts, both positive and negative, of this type of project on health and on health determinants are documented in the scientific literature. The MSSS is currently drafting a master plan for northern development which, among other things, identifies possible ways to prepare for the potential impacts of development projects on the health of the local populations affected.

To illustrate these impacts more concretely, the Department of Public Health of the North Shore Health and Social Services Agency, in accordance with an agreement with the MSSS, asked the Institut national de santé publique du Québec (INSPQ – Québec's public health institute) to conduct a summary analysis of the impacts of the Romaine hydroelectric complex on the health of the population of the municipality of Havre-Saint-Pierre. This profile will supplement and enrich the master plan for northern development by documenting, through a case study, the extent to which the potential health impacts of this kind of project can be seen in the Havre-Saint-Pierre community.

### **1.2 METHODOLOGY**

#### **IMPACTS ON HEALTH AND HEALTH DETERMINANTS**

Health and well-being depend on several interrelated factors which influence each other. These factors or determinants may depend on the individual or be connected to his or her social and economic environment, as well as the more general societal context.

Large natural resource development projects may, directly or indirectly, influence these determinants. Their repercussions, whether positive or negative, may be distributed unequally among the various groups within the affected population and accentuate the disparities already existing between these groups.

The summary analysis proposed emphasizes the principal health determinants affected by the Romaine project. Special attention is given to the question of social health inequalities: the disparities in the distribution of health within the population.

The following themes or health determinants are discussed:

- Income
- Housing
- Quality of life
- Child care services
- Health and social services system
- Equity
- Road safety
- Employment
- Cost of living
- Education/training
- Capacity of public services
- Community life
- Public safety

### **SOURCES OF DATA**

The data used to conduct this summary analysis come primarily from interviews with the stakeholders in the region who were interviewed in person in Havre-Saint-Pierre between May 13 and 15, or surveyed by telephone between May 20 and June 14, 2013. A total of 19 semi-structured interviews were conducted, lasting about one hour each.

Documentary research based on impact assessment documents from the various stakeholders (Hydro-Québec, RCM, HSSC (the health and social services centre), local agencies, etc.), the report of the Bureau d'audiences publiques sur l'environnement (BAPE – the office of public hearings on the environment) and submissions presented at hearings, the report of the Ministère du Développement durable (ministry of sustainable development), the Ministère de l'Environnement et des Parcs (MDDEP – Ministry of environment and parks), the reports of impact follow-up committees as well as certain minutes of meetings of local and regional authorities supplemented the qualitative data. A press review concerning the project was also performed.

Finally, quantitative data was collected from the various agencies involved: for example, the number of persons on housing waiting lists, the number of new builds on the territory, the number of new files opened at the HSSC, the number of children on waiting lists for spaces in child care, the number of road accidents, etc.

The analysis of qualitative data was based on an evaluation grid developed specifically for this project. This evaluation grid (see Appendix 1) includes several types of potential impacts (economic impacts, impacts on the living environment, impacts on services, social impacts). Each impact includes sub-categories, such as housing or equity. These potential impacts were selected based on the preliminary documentary research. This evaluation grid has evolved according to the data collected in the field. The interviews were recorded and transcribed. The interviews, quantitative data and documentary data were codified according to the evaluation grid. The analysts cross-validated the data.

## **LIMITS**

Due to the tight schedule of work around the drafting of the master plan for northern development, choices had to be made in order to be able to meet the deadlines and satisfy the mandate. The summary analysis presented is intended to be exploratory and does not take into account certain elements that should be documented, e.g., the comparison of anticipated impacts and the impacts felt or the effectiveness of the mitigation measures applied. Similarly, no environmental measure (noise exposure or air quality, for example) was collected or analyzed. Issues such as land use or occupation, the impact on the landscape or occupational health are not documented.

Moreover, the analysis performed is limited to the impacts on the municipality of Havre-Saint-Pierre. But the impacts of the Romaine project are felt throughout the Minganie region (and even more acutely in certain municipalities farther from the construction site). Sept-Îles, the biggest city close to the construction site, has also seen major changes since work got under way. Finally, the impacts of the dam project are also present in the Aboriginal communities, but these are not addressed here. The profile prepared also does not document the impacts on workers from other regions residing directly on the Romaine site.

It is important to note that the start of work on the Romaine site coincides with the resumption of work on another major lever of economic development in Havre-Saint-Pierre, the expansion of the iron and titanium mine operated by Rio Tinto. This massive ilmenite deposit located 43 km northeast of Havre-Saint-Pierre, discovered in 1946 and in operation since 1950, shut down for eight weeks in response to the world economic crisis of 2009. After work resumed, major investments were made and about one hundred new jobs were created. Additionally, the world economic crisis which disrupted the entire Quebec economy and affected consumer prices throughout the province is another factor that may have contributed to all the recent economic turmoil in Minganie. For these reasons, it is difficult to entirely isolate the effects attributable to the Romaine project from those connected to a broader economic context, including mining development in the region. Throughout the text, clarifications will be made to this effect.

Furthermore, the quantitative data must be interpreted with care, since it can be hard to assess the extent of changes when the numbers are small.

## **QUALITY ASSURANCE MECHANISM**

A pre-final version of the report was validated by a review committee including experts from the INSPQ, its Vice President of scientific affairs, representatives of the MSSS as well as the director of the North Shore Department of Public Health.



## 2 INTRODUCTION

The Romaine project offers a good illustration of all the risks of implementing major development projects in northern Quebec. The first major hydroelectric site in many years to be established so close to a small community, this project is opening the way for many other large-scale projects. In this sense, the lessons that can be drawn from the experience in the field since 2009 in the community where this project is installed are extremely instructive. The observations made must of course be modulated according to the specific implementation context of each project.

### 2.1 PROFILE OF THE MUNICIPALITY OF HAVRE-SAINT-PIERRE

Havre-Saint-Pierre is one of the eight municipalities which, along with the two Aboriginal communities of Ekuanitshit and Nutashquan, constitute the RCM of Minganie. The RCM of Minganie has a small population distributed in a string of small communities spread out over a vast coastal territory of over 300 km. These small communities are connected to each other by a single road, Route 138, which runs along the shore from Rivière-au-Tonnerre to Natashquan, including Anticosti Island. The entire territory has a population of 6 462 inhabitants (ISQ, 2012) 75.8% of whom are workers between 25 and 64 years old (ISQ, 2011).

The municipality of Havre-Saint-Pierre is the most populous, but it is also the central point of Minganie. It is the seat of the RCM and of many governmental, municipal and regional services. The local economy, traditionally centered on fishing, has branched out in recent years. A strong mining and hydroelectric potential also offers new economic prospects for the region.



## 2.1 HISTORY OF THE ROMAINE PROJECT

For decades, there has been interest in developing the hydroelectric potential of the Romaine River, whose mouth is 50 km from Havre-Saint-Pierre. Studies were produced on this subject in 1921, 1950 and 1957. A first project including four separate generating stations was studied in 1967 by Hydro-Québec, and other miscellaneous scenarios were considered subsequently.<sup>1</sup>

Since new studies in 2004 confirmed that it would be appropriate to develop the Romaine river in stages, Hydro-Québec drafted a strategic plan for 2006-2010 and officially launched its project to develop the hydroelectric potential of the Romaine river.<sup>2</sup>

Subject to Quebec's environmental impact assessment and review procedure (CQLR c Q-2) as well as to the federal environmental assessment procedure under the *Canadian Environmental Assessment Act* (S.C. 1992, c. 37), the project to develop a hydroelectric complex on the Romaine river proposed by Hydro-Québec was examined by a joint (federal provincial) review panel established in September 2008. Public hearings were held in October and December 2008. The Bureau d'audiences publiques en environnement (BAPE) then published the joint investigation and public hearing report in February 2009.<sup>3</sup> Other public hearings, held only in the context of the Quebec procedure and dealing with the project to expand the transport network in Minganie and connect it to the Romaine complex, took place from April to June 2010. The BAPE joint investigation and public hearing report on this transport network expansion project was published in August 2010.<sup>4</sup>

May 13, 2009 marked the start of work at the site. More than one thousand workers from all over Quebec then converged on Havre-Saint-Pierre. Since that time, two main camps have been built to house the workers: the des Murailles camp and the Mista camp, respectively located at kilometre 37.5 and at kilometre 84 of the Route de la Romaine starting at Route 138. The first camp is located about 50 km northeast of the community of Havre-Saint-Pierre. Since the camps were built, the back-and-forth travel of workers moving between the various regions of Quebec, the other North Shore communities and the construction site has occurred side by side with daily life in the municipality. In theory, there is little direct contact between these two worlds. The camps were designed as autonomous communities with their own infrastructure and services. For example, the des Murailles camp has an infirmary operating 24 hours a day, as well as social services (psychosocial practitioner, AA group, etc.) and recreation (workout room, organized sports, shows, etc.), all available on site. The camp also has its own security staff. In reality, however, the border between the construction

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<sup>1</sup> Hydro-Québec, 2008. "Résumé de l'étude d'impact sur l'environnement," p.19. Online. [http://www.hydroquebec.com/romaine/pdf/ei\\_resume\\_environnement.pdf](http://www.hydroquebec.com/romaine/pdf/ei_resume_environnement.pdf) (page consulted on May 27, 2013)

<sup>2</sup> [http://www.hydroquebec.com/publications/en/strategic\\_plan/pdf/plan-strategique-2006-2010.pdf](http://www.hydroquebec.com/publications/en/strategic_plan/pdf/plan-strategique-2006-2010.pdf) p.20

<sup>3</sup> BAPE. 2009. Investigation and public hearing report on the hydroelectric complex project (report 256).

<sup>4</sup> BAPE 2010. Rapport d'enquête et d'audience publique sur le projet d'expansion du réseau de transport en Minganie – raccordement du complexe de la Romaine (report 270). It should be noted that during the BAPE hearings, various groups made claims regarding the two Hydro-Québec projects. Starting in 2009 other protests were made at the same time, either through legal remedies by calling on the government, or by blockading Highway 138 in the direction of the Romaine construction site. The claims made are varied and deal as much with Aboriginal rights as with the economic repercussions or social impacts of the Romaine project.

site and the municipality is not so definite, and the neighbourhood has not come together entirely smoothly.

The following summary analysis proposes to describe briefly the principal impacts of the Romaine project on the population of the municipality of Havre-Saint-Pierre. The economic and social impacts on the area are examined in light of the health determinants affected. Some possible courses of action are then presented.



### 3 ECONOMIC IMPACTS

*"We used to chase after work, now it's work that's chasing after us"*  
(HSP — 05)<sup>5</sup>

Large development projects lead to the creation of new jobs which bring vitality to the nearby communities. The increased incomes and buying power of workers result in a greater injection of capital in the local economy. The massive influx of workers from other regions offers a new market and new customer base for businesses and shops. In addition, the partnership agreements between the communities and the developers may offer an opportunity to expand and revitalize municipal infrastructures or increase the potential of an entire region.

However, while the economic effects of major projects like Romaine are undeniable, they are not always as profitable for the community as anticipated before the project. Four years after the work began, the area's stakeholders have a much more nuanced view of the economic impact predicted for the region, in light of the collateral impacts that have accompanied the work.

#### 3.1 INCREASE IN SUPPLY OF JOBS

The parallel arrival of two large development projects connected to the Northern Plan - the expansion of the Tio mine and Hydro-Quebec's Romaine construction site - has contributed to the creation of new jobs for workers from the entire North Shore. The new openings offered by these two major employers have allowed many to increase their income and/or obtain better working conditions (for example, year-round work rather than seasonal).

In Havre-Saint-Pierre, the mine has directly contributed to creating 90 new jobs, i.e., posts filled by people who live permanently in Havre-Saint-Pierre (Minganie local job centre, 2013). For the Romaine construction site, however, the number of local jobs is not as high as the population had expected. For several reasons (unionization of the construction industry, rules on subcontracting, etc.), a good number of the contracts were given to subcontractors from elsewhere on the North Shore or from other parts of Quebec. These contractors generally operate by bringing in their own labour. According to Hydro-Québec, out of the contracts awarded in 2010, 48% were obtained by North Shore businesses<sup>6</sup> and the same year the construction site had an average of 819 workers per week, 58.1% of whom came from throughout the North Shore region (Complexe de la Romaine, Étude environnementale – Retombées économiques, 2011). Earlier this year, the regional weekly *Le Nord-Côtier* reported that out of the 787 workers on the job on April 5, 2013, 91 workers were from Minganie.

Hydro-Québec maintains that the rate of workers is close to the participation rate initially targeted (60%) for the entire North Shore. On the other hand, within the population of Havre-

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<sup>5</sup> A note to the reader: The interviews with stakeholders were conducted in French, and all quotations from those interviews appearing in this document have been translated.

<sup>6</sup> Hydro-Québec assesses the economic impact for the North Shore region, i.e., a territory that extends from Tadoussac to the border with Labrador.

Saint-Pierre, there has been some grumbling from business people who did not qualify for invitations to tender or were passed over in favour of businesses or workers from outside the region. Many are critical of the contract-awarding process because it does not favour businesses or workers from Minganie: "We thought if we had a big project like that, with some 2 000 workers, a few kilometres away from us, we thought for sure all the construction people would have work. But it turns out that because of labour mobility, people from Minganie are not given preference. We thought they would be given preference, but they're not" (HSP —12). Thus, even certain workers from Minganie specially trained for work on the job site (for example, forestry machinery operators) do not get the coveted jobs. Hydro-Québec is directly given the blame. Some think that the company is not doing everything necessary to give hiring preference to workers from Havre-Saint-Pierre.

Figures on the exact number of workers on the job site who come from Havre-Saint-Pierre are not available, but the people interviewed are all convinced that the community has not benefited from all the employment prospects offered by the site. It is estimated that about one hundred workers could have found work at the site, but were not recruited. On the other hand, in Havre-Saint-Pierre, several positions are vacant in other industries not connected to the Romaine project, and there are many employment prospects. The workers are in a situation where they can even set the terms of their own hiring. People who at one time had trouble finding work are hired with ease. Thus, even if the site has not directly created as many jobs as desired, the regional employment market has benefited from the site indirectly.

Additionally, the commitment to build the service centre, the Hydro-Québec headquarters for operation of the generating stations, will lead to the creation of 100 jobs in Havre-Saint-Pierre. These permanent positions will attract a different worker profile (technicians, professionals, etc.), and even if the people filling the jobs are not recruited locally, they will eventually move into the municipality. The most significant impacts on the number of direct jobs for the people of Havre may be yet to come.

### **3.2 DEMOGRAPHIC GROWTH**

Between 2006 and 2011, census data indicate that the population of Havre-Saint-Pierre grew from 3 150 to 3 514 inhabitants, an increase of nearly 9%, which demonstrates the major positive impact of the development of large projects in remote regions. The boom produced by the construction of the hydroelectric dam on the Romaine river has certainly been a decisive factor for many young families attracted by the economic prosperity of the region.

Whether because of the jobs created or the indirect economic repercussions for the population of the surrounding villages, the prospect of a growing economy draws new arrivals, as well as young people from the area who had gone away to study or find work and are attracted by the possibility of returning to their friends and family. The return of young people to Minganie has a significant positive impact considering the statistics of previous years, which showed a definite exodus of the active population for the large cities. The young people who come back to their family in the area also have the distinct advantage of a well-established network, so that it is much easier for them to reintegrate.

However, while the stakeholders in the region see this accelerated economic growth as the most important positive impact, it is also a source of concern in the long term. Many wonder whether it will be possible to retain these young people when the boom connected to the large projects drops off: will the young people stay in the area? Will there be jobs for them in the medium and long term? These questions are in line with the context of sustainable development for all northern regions, and are on the minds of citizens as well as local agencies and businesses.

### **3.3 INCREASED SALARIES AND LABOUR SHORTAGE**

The abundance of well-paid salaries directly or indirectly generated by the arrival of major projects has significant effects on other economic sectors that offer lower compensation. These lower-paid sectors no longer have the same appeal for workers. Businesses struggle to find and retain minimum-wage labour. Over time, then, a general rise in wages has brought the minimum wage to \$15/hour, well above the minimum wage fixed for all of Quebec at \$10.15/hour (Commission des normes du travail du Québec, May 1, 2013). With a wage offer below \$15/hour, it is quite simply impossible to fill a vacancy in Havre.

Confronted with this major payroll increase, many businesses experience a loss of profits. Moreover, employers find themselves competing with each other to recruit employees. Since they are looking for the same types of workers, that is, mainly unskilled workers, they must constantly escalate their efforts to find staff. Many feel that, in addition to competition between major players like Hydro-Québec and Rio Tinto, competition between small businesses and community agencies is unfair and creates a feeling of powerlessness and frustration.

In this situation, many businesses would have no other choice than to operate with a smaller staff. The same employee may thus be called on to do three jobs at once. In the medium and long term, the quality of the service provided is affected, and employees are exhausted. The stress and fatigue experienced by many overworked employees seem to be a concern in many organizations.

Staff turnover is also an issue. Because of the very low retention capacity of several positions (for example, at the food store or in community agencies), the labour is constantly changing. For employers, recruitment is a never-ending exercise. To take just one example: in two years, the Havre-Saint-Pierre youth centre had 28 different coordinators. It is extremely difficult to find replacements (due to maternity leave or other leave).

Employers who are in a position to do so may try to offer better working conditions to make up for the lower wages. For example, many of them will offer their employees more flexible hours, training, etc. This is a benefit from the worker's perspective. However, a survey conducted by the Conférence régionale des élus (CRÉ – a regional meeting of elected officials) of the North Shore shows that, for workers in this region, salary is the most important factor in choosing a job (Havre-Saint-Pierre local job centre, 2013).

To compound the problem, the recruitment of labour outside of Havre-Saint-Pierre is hindered by a glaring need for housing and child care services. Certain potential employees

from other regions of Quebec have been forced to refuse a position in Havre-Saint-Pierre because they were unable to find a place to live or to make child care arrangements. Solutions to the labour shortage are thus not so simple to find in the current circumstances, and are an ongoing headache for many employers.

### **3.4 GROWTH IN SOME INDUSTRIES, STRUGGLE IN OTHERS**

The construction industry is the one that has seen the most growth, due to the increase in demand connected to the work at the site and to residential and commercial needs. There has also been growth in the mining and energy industries, as well as in the many enterprises which do business, remotely or nearby, with the mining company or Hydro-Québec.

Increased customer traffic and sales in the municipality's stores, hotels and restaurants were observed before and during the construction of the first Hydro-Québec workers camp in 2009. At that time, there was a direct impact for area businesses. However, the boom caused by the influx of workers in the municipality subsided a bit when they settled in the camp. The once-overflowing hotels saw a drop in their business. The same is true for restaurants, where customer traffic has slowed. The long distances between the sites and the municipality are a large part of the reason. Workers don't go into the municipality except on Sundays, their day off.

Although the high customer traffic of the first few months is gone, some businesses are still managing to stay afloat, while others have been hard hit by the changes in the local economy, especially those which cannot adapt as easily as others to deal with the labour recruitment problem just discussed. Fishing is one of the industries severely affected. Currently, several boats are docked due to a labour shortage. Since the selling price off the boat is fixed, it is impossible for fishing boat owners to increase their payroll. The Centre local de développement de la Minganie (CLD – Local development centre) reports that in order to overcome this situation, certain businesses are trying to develop fishing of new species where less labour is required (Minganie CLD, 2012). This is an important shift which could have long-term consequences for the region's fishing industry by reducing the number of jobs it will be able to offer.

Tourist and retail businesses offering local services are also having trouble adjusting to the current economic situation. The increase in payroll to fill positions results in a loss of profits for the businesses in these industries. Due to market constraints, these losses cannot always be offset by the general rise in consumer prices.

Finally, community services and social economy enterprises are in crisis. According to the Mingaine CLD again (2012), this sector is the most affected by the rise in labour costs and the labour shortage because its ability to adapt to current conditions is almost nil. In addition to having to confront this problem, these organizations are seeing rising demand and falling budgets. Several organizations are not making it or are struggling to get by, existing in a delicate balance which leaves them in constant fear of closing down. The result is a gradual loss of local services, often essential ones such as the Coopérative d'aide à domicile de la

MRC de la Minganie (CADM – the home care cooperative for the RCM) or Espoir de Shelna.<sup>7</sup>

### **3.5 INVESTMENTS IN DEVELOPMENT OF INFRASTRUCTURE**

The boom created by the arrival of large projects like the Romaine site is not only linked to demographic growth, jobs and investments, but also to the funds that may be injected into the municipalities by the business that moves in. The sums committed by Hydro-Québec under the agreements entered into with each of the municipalities in Minganie are intended to ensure that these communities are financially healthy enough for the development of many projects. The amounts paid to the municipalities are divided into various funds which are invested according to the communities' needs.<sup>8</sup> In Havre-Saint-Pierre, the sums received since the start of work through the remedial measures fund have been used to enlarge the mobile home park (92 units since October 2012), develop new roads, make additional land available for residential homes (about 50) and connect new construction to the water system. About one hundred new houses have been built within the limits of the municipality in the last three years. This significant housing expansion enables the region to increase its living space, and also makes it more attractive.

There are still a few gaps in the status report after four years, however, including in terms of development of telecommunications and transport. While Havre-Saint-Pierre has cellphone coverage and high-speed internet, this is not the case for all communities in Minganie. At the regional level, this makes it difficult to coordinate efforts between the municipalities, and also limits economic diversification efforts. In addition, the people interviewed are worried about the poor condition of the highway infrastructure, especially because this infrastructure is not suitable for the new duties it needs to perform (traffic of heavy-duty vehicles).

Furthermore, the citizens will directly benefit from the construction of a multi-generational water park in Havre-Saint-Pierre which would be partly funded by the funds from the partnership agreement signed with Hydro-Québec. Several other projects to invest these funds in municipal infrastructure are on the table for the next few years (including a performance hall).

### **3.6 A LOCAL ECONOMY IN TRANSITION**

In sum, the economic results of the Romaine project are mixed. Some positive effects on the local economy can be seen, but they are accompanied by consequences of development which diminish or cancel out the anticipated economic impacts. Demographic growth has stemmed the exodus of young people and attracted newcomers. The construction industry is experiencing remarkable growth and the job market is flourishing. Additionally, investments in local infrastructure are bringing improvements at the municipal level. But these changes

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<sup>7</sup> Espoir de Shelna is the only respite care home that offers housing services for people with a physical or mental handicap in all of Minganie, from Shel Drake to Natashquan, hence the name Shelna. The agency also offers a crisis shelter bed if needed. For more details: <http://www.mamrot.gouv.qc.ca/developpement-regional-et-rural/ruralite/reussites-rurales/lespoir-de-shelna-une-maison-de-repit/>

<sup>8</sup> For a summary of the sums paid by Hydro-Québec to the RCM of Minganie in the context of the agreement between Hydro-Québec and the RCM of Minganie see: <http://www.bape.gouv.qc.ca/sections/mandats/La%20Romaine/documents/DA38.pdf>

are producing harmful effects in other sectors which are struggling. Labour recruitment and retention are problematic, especially for community organizations, the fishing industry and small businesses lacking the means to increase their payroll. The businesses most affected sometimes have to raise prices or cut back on services, directly affecting the consumer.



Previously vulnerable and relatively dependent on the government economically, Minganie has gradually transformed into a vibrant place with a host of opportunities, suggesting that there are prosperous years ahead, although they are not arriving as quickly as predicted. In certain cases, the expected impacts simply have not materialized. The construction of the large hotel complex in Havre in anticipation of a large influx of businesses and workers to the community is a good example. In spite of all this, there is still hope that things will improve over time. "There are people for whom it is profitable. There are people for whom, currently, it is not profitable. I think that when you weigh the two against each other, we're still in a situation where we can't claim total victory but there are some good things coming. [...] I think that over time, people are really going to see some positive results. And collectively, this will permit more sustained development, which will gain more credibility over time also" (HSP — 06).

## 4 IMPACTS ON THE LIVING ENVIRONMENT

*"Minganie has always been a fragile place living in a precarious balance" (HSP — 10).*

In general, the rapid population increase caused by the arrival of a major project and its new labour pool can affect the availability of housing, and when the accommodation capacity is low, it can lead to higher prices. The mass arrival of new workers may also increase pressure on local infrastructure and services.

In addition, the development of the transportation infrastructure also associated with large projects may help connect the communities to the outside, and thus potentially improve the population's quality of life and its access to goods and services or new territories. On the other hand, the increase in traffic volume may result in an increased risk of traffic injuries, respiratory problems due to dust and atmospheric emissions as well as more noise. Most of these impacts have been observed in Havre-Saint-Pierre.

### 4.1 PERSISTENT HOUSING SHORTAGE

The shortage of rental housing in Havre-Saint-Pierre and the impacts of this shortage on employers recruiting outside of Minganie had already been underscored before the start of the Romaine project (HQ, 2007). In this context, economic development has further aggravated pressure on the housing supply and resulted in higher prices, in spite of local residential development initiatives. When the Romaine project got under way in 2009, the low accommodation capacity<sup>9</sup> of the area compromised access to housing in Havre-Saint-Pierre. Families thus had to delay their decision to relocate there or set their plans aside. Although the scarcity has been tending to diminish over the last year, the prices have not fallen much.

In May 2013, according to the municipal office of Havre-Saint-Pierre, the monthly rent for a 2-bedroom housing unit in the municipality is \$900 to \$1,000, and the cost is \$1,200 for a 3-bedroom. The monthly cost to rent a house is \$1,500. Concerning social housing, a total of 50 subsidized housing units exist for all of the 3 514 inhabitants, including 24 places for families and 26 for seniors. These units are all occupied at the moment. About 15 people are on a waiting list for this type of housing. An *Accès Logis* project has been prepared and is still awaiting completion. This project plans to offer 20 new reasonably priced housing units for pre-retirees or single persons. The Corporation des aînés de la Minganie is the only retirement home in the area. There are 40 people on its wait list, similar to the situation in the past, but there is no improvement in sight, due to the generalized shortage of housing in the community.

In addition, in recent years the growth of the real estate market has been seen as much in new housing starts as in selling prices. The ratio of the selling price to the municipal assessment in Havre-Saint-Pierre is one of the highest on the North Shore; from 115% in 2005, it fluctuated to 191% in 2009, 139% in 2010 and 154% in 2013 (in comparison, this ratio is 134% in Sept-Îles and 121% in Baie-Comeau). The average price for real estate

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<sup>9</sup> On this subject, it is important to note that rental culture is almost absent in Minganie. A very large majority of residents are property owners.

transactions thus seems to have increased from \$91,500 in 2005, to \$145,700 in 2009 and to \$192,400 in 2011.<sup>10</sup> The average property assessment in Havre rose by 40% (Data from the RCM of Minganie, 2013).

## **4.2 INCREASE IN CONSUMER PRICES**

People interviewed in Havre-Saint-Pierre believe that the local rise in labour costs, caused by competition with highly paid jobs on the construction site or in the mines, has had a direct effect on consumer good prices. "The cost of living is rising a lot. But the fact that it's rising is not the worst part, since it's rising all over the planet, it's the speed at which it's rising" (HSP – 12). The RCM estimates a 30% rise in the price of a standardized nutritious food basket (Data from the RCM of Minganie, 2013). In the only food market, the prices are currently comparable to prices in the same type of market (IGA Tradition banner) elsewhere in Quebec.

In this context where consumer prices are rising in general, it is not possible to measure the impact or the share attributable to the local economic boom. Nevertheless, the higher cost of living seems to be hitting certain households hard. Many of the people interviewed mentioned the increase in the price of the food basket, just one item on a list of financial constraints facing lower-income families. These comments are corroborated by a comparative study performed by the MSSS in 2011 which showed that the cost of the nutritious food basket (NFB) is prohibitive for low-income households throughout the North Shore. For these households, the NFB represents more than 40% of after-tax income. In fact, less than 20% of these households' expenses will be devoted to food, because for a single-parent, low-income family, it is practically impossible to get the food in the NFB, its cost being beyond their ability to pay. It is difficult to measure the impact on eating habits, but it is highly likely that the healthiest choices are not accessible for these households.

In Havre-Saint-Pierre, many people said they were worried about the ability of retired or low-income people to eat properly under the current conditions. The Volunteer Bureau of Minganie also reports an increase in the number of beneficiaries of meals on wheels and food assistance (Volunteer Bureau of Minganie, 2012). At the home assistance service, meal preparation is the first service the beneficiaries give up to reduce their costs. This situation is disturbing to say the least, since this clientele often does not have the ability to prepare a meal, and then turns to "fast food." The most disadvantaged people confront health problems due to this situation.

## **4.3 LACK OF SPACES IN CHILD CARE**

A major, unanticipated impact of the project has to do with the capacity of child care services in Minganie. The Centre de la petite enfance (CPE – early childhood centre) Picassou in Havre-Saint-Pierre is the only daycare centre on the entire coast. Although it expanded in 2012 to be able to hold 31 more children, there is still a shortage of spaces. In May 2013, 189 people were still on the waiting list for a space. A request was made for a new

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<sup>10</sup> Information on the prices of residences is taken from local newspaper articles (Nord-Côtier and Nord-Est) and the sources are real estate assessors. Data on ratios from 2005 to 2010 are taken from HQ 2011.

establishment which could offer an additional 80 spaces, but even with this new facility, demand may outstrip supply. The situation is very difficult for families with children from 0 to 5 years old, because there are simply no alternatives to the daycare centre. Private or family child care services are almost non-existent, because those who operated this type of daycare at one time have left for less-demanding jobs with higher pay. In addition, the system is completely clogged due to the population increase and the recent baby boom.<sup>11</sup>

This situation is keeping several mothers from returning to the workplace. When labour is in short supply, the area would benefit from being able to help women re-enter the labour market at the end of their maternity leave. Forced to put their careers on hold indefinitely, or at least until their children can enter kindergarten, women often find themselves more isolated and, in the short and medium term, economically dependent on their spouses. For those who have no choice but to work (single mothers, for example), the problems pile up, and employers often have to make adjustments so that the work schedule lines up with the availability of family members or temporary caregivers. Moreover, these repercussions affect the children, who may find themselves constantly having to adapt, being bounced around from one place to another due to lack of access to a stable child care environment.

This situation is troubling for the health of the families in the region. Contrary to the lack of subsidized child care spaces affecting several other regions of Quebec, it's not a lack of subsidized spaces creating the urgency in Minganie, but rather the lack of any spaces at all. The 200 subsidized spaces announced through Québec's Northern Plan have proven to be quite insufficient and cannot easily be seen as a solution because of the following constraint: 25% of the costs (including operating costs over 10 years) would have to be financed by enterprises tied to the Northern Plan. But it is difficult to obtain this type of financial commitment from businesses whose longevity is not guaranteed, or who have already received government permits to move forward.

#### **4.4 PROBLEMS WITH ACCESS TO HEALTH SERVICES**

Access to services is also problematic in the health sector. The Minganie Health and Social Services Centre (Minganie HSSC), located in Havre-Saint-Pierre, is the public agency responsible for organizing health care and services and social services for all of Minganie. Between 2008 and 2012, the annual number of emergency room and HSSC walk-in clinic visits grew by 30%, climbing from 8 172 to 10 901 visits (HSSC, 2012). During the same period, the number of files opened grew from 595 per year to 937, for an increase of 57.5%. A growing number of these new files were opened for non-residents of Minganie, suggesting that workers at the Romaine site (employees of Hydro-Québec or of its subcontractors) are regularly using the services of the HSSC.

During the BAPE hearings, the Minganie HSSC had predicted the impact on health services of the arrival of workers in Minganie. The submission presented on this occasion raised several questions on this topic: "Considering the shortage of doctors and nurses, how much normal consultation traffic will there be? Have you anticipated financial compensation provisions as our customer traffic increases? How will we respond to serious accidents? How

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<sup>11</sup> Between January and October 2012, there were 35 births in Havre-Saint-Pierre alone.

will we have to adapt our outpatient service, and what will your service be? Will we have to adjust our emergency room schedules if your site operates 24 hours a day?" (HSSC, 2008). Hydro-Québec tried to reduce the impacts on health services, in particular through the presence of a nurse on the site, assisted by three doctors responding remotely. There is also a protocol agreement with the HSSC in order to meet demand for additional examinations (in 2012, 130 workers were sent for examinations, an equivalent of 2.5 workers per week).

However, broader concerns about the quality of care and the financial impact of a significant increase in customers due to the proximity of the construction site are being confirmed in the current crisis situation. Facing significant budget constraints just as its customer base is increasing, the health centre finds itself forced to eliminate essential services such as the kitchen in the seniors' shelter (Nord-Côtier, May 21, 2013). Another impact: in psychosocial services for youth and families, the team has been forced to put a priority on clinical interventions, at the expense of activities to prevent social problems. In five years, the annual number of interventions rose by 45% (HSSC, 2012). The degree of intensity of the interventions also increased, by 54% (HSSC, 2012). While it is difficult to directly link the increase in clientele served to visits by workers from outside the region at the Romaine site, staff members confirm that these workers use the services regularly. Additionally, this clientele could increase in the next three years (2013 to 2015) because the peak period for the construction site is approaching, and the site could have up to 2 400 workers by that point (Hydro-Québec interview, 2013). However, because certain construction sites will be located even further from Havre-Saint-Pierre, it is difficult to predict the actual impact of the arrival of this new cohort of workers.

The analysis report on the impacts of the Northern Plan on the services of the Minganie Health and Social Services Centre submitted in April 2012 indicates that the work schedules and the remoteness of the job sites are affecting the periods of customer traffic: "Users arrive outside of the regular hours of the walk-in clinic, to receive care. They consult more often during meal times, at night or during periods of operation at reduced staff levels, resulting in extended work hours and increased overtime hours" (HSSC, 2012). Furthermore, due to development projects and the presence of migrant workers (fly in/fly out), the HSSC team has had to repatriate workers to their region of origin after a hospitalization. Although the number of users is not necessarily high, the impacts on the health network staff of evacuations for psychosocial reasons were aggravated by the multitude of interventions necessary and the absence of designated service corridors.

For the citizens, the supply and nature of health services have undergone many changes since 2008, especially in access to the latter: the emergency room waiting time has lengthened (from 30 minutes to several hours), access to care such as physical therapy has become problematic (the waiting list is 2 years)<sup>12</sup> and problems with lack of ambulance coverage have been mentioned. The impact on psychosocial services seems just as significant. The increased demand for services in this case may be accompanied by increasingly complex problems and increasingly intense interventions.

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<sup>12</sup> There is a service agreement with the CSST which gives priority to its service providers, who must be treated within 5-10 business days. For the past 5 years, the number of CSST users has grown by 50%, the waiting time for clients not covered by the CSST may then go beyond 2 years. Moreover, there are no alternatives for this clientele because there are no private clinics offering these services.

#### **4.5 LOSS OF LOCAL SERVICES**

More generally, many services for citizens or businesses are also more difficult, or even impossible, to obtain. It is practically impossible to have certain services (maintenance, plumbing, electrical work) performed, or else the costs or wait times are prohibitive. The few contractors still in Havre-Saint-Pierre who do this type of work cannot meet the demands of the area. For example, at the community agency *Espoir de Shelna*, which houses handicapped persons, the two main water valves broke in December 2012 but were not repaired until five months later. The same thing is observed at the *CPE Picassou*, where work on the outside play structure, as well as electricity and maintenance work, has to wait several months. Because of the scarcity, contractors sometimes come from as far as *Sept-Îles* or *Baie-Comeau*, adding to the travel and housing costs and inflating the bill substantially.

On top of the shortage of minor repair services, services offered at lower costs for struggling people are also at risk of disappearing. The *Coopérative de services d'aide à domicile de la Minganie* is threatened with closure in the current situation. The labour shortage which has been particularly severe for this agency is having a direct effect on its capacity to provide quality services to beneficiaries, as well as on its very viability. As the region's only domestic help social economy business (*DHSEB*), its closing or privatization would create a vacuum which would be hard to fill.

The loss of the only mechanic stationed in Havre-Saint-Pierre was also mentioned by many people as one more factor adding to the daily headaches for local residents. The car is the main way to get around in a region where small communities are separated by long distances. That makes it difficult to imagine having to travel 300 km to *Sept-Îles* when mechanical problems crop up, and towing is very costly under these conditions. Consequently, prohibitive travel costs for automotive repair or maintenance can compromise individual autonomy and safety.

In addition to the loss of services and the rise in prices, a limited market offers less choice. For example, the shoe store has closed its doors. There are still two stores where shoes are sold, but the consumers have lost the advantage in terms of choice and the quality/price ratio afforded by the presence of a specialty store. The municipality also has only one food store left, operating under the *IGA Tradition* banner for several years. The residents of Havre-Saint-Pierre feel that they have lost many small businesses which offered them a greater range of choices and better prices. In this way, the economic flourishing has not necessarily given rise to the development people might have expected in terms of local services. In addition, the distance between Havre-Saint-Pierre and cities like *Sept-Îles* does not necessarily offset the positive impacts of increased purchasing power due to the higher payroll. Finally, the fact that the very large majority of workers on the Romaine project are only passing through Havre-Saint-Pierre suggests that they contribute little to the local economy. This last factor reflects what writers like Storey (2010) refer to as the fly-over effects connected to the mitigated impact of fly-in/fly-out work organizations on community sustainability.

#### 4.6 DIMINISHED FEELING OF SAFETY ON ROUTE 138

The tranquility of the small coastal village is also being disturbed by highway development. As the new transport infrastructure increases access to the outside, users of Route 138 feel less safe. The construction of the new permanent 150-km road to the north, connecting Route 138 to the four dams, is seen as one of the positive impacts of the arrival of the project, because it will open up a portion of the territory previously inaccessible by car. This highway development will give people in the region direct access to lakes for fishing, to hunting grounds and lodges, etc. Tourist development will certainly benefit from these new spaces, as well as the possible attraction of the dam itself. However, conflicts of land use and resource use must also be expected, and these issues have already come up in the BAPE hearings.



In addition, the increase in vehicle traffic to the construction site on the only route crossing the territory is producing a pronounced feeling of insecurity, especially among the elderly. Travel on Route 138 is a source of new concern for a population used to a lighter traffic flow. In addition, for people living along the road, there may be a more direct impact on the quality of life. Not only will the stress and feeling of insecurity be harder for them, but they will also deal with all the disturbances caused by traffic noise.

**Table 1 Road section from Mingan to Havre-Saint-Pierre: Average daily traffic (ADT) by vehicle, per time period, according to MTQ 2013**

	2008	2009	2010	2011	2012
<b>Summer (SADT)</b>	810	820	1210	1160	1240
<b>Winter (WADT)</b>	670	680	1000	960	1030
<b>Annual (AADT)</b>	750	760	1120	1070	1150
<b>Percentage of heavy-duty vehicles (HDV)</b>	7% (52 day)	7% (53 day)	12% (134 day)	14% (150 day)	17% (195 day)

Between 2008 and 2012, heavy-duty vehicle traffic on the segment of road from Mingan to Havre-Saint-Pierre grew by 10%. In order to assess how much of this increase is attributable to the Romaine project, Hydro-Québec counts the vehicles going through the gatehouse at the site. The company estimates its share of traffic at about 12% of all vehicles. This estimate is falling thanks to the daily air shuttles established. However, traffic of heavy-duty vehicles is growing in numbers and as a proportion, and Hydro-Québec attributes about one third of heavy-duty vehicle traffic to its operations (2012 environmental assessment of Hydro-Québec, not yet published).

Hand in hand with the increase in daily vehicle traffic on Route 138, accidents are on the rise. Because the numbers are small, statistical analyses do not provide illuminating results, but the significantly higher traffic, in combination with the rise in accidents, many of them involving heavy-duty vehicles, may contribute to an increasing feeling of insecurity.

**Table 2 Traffic accidents, road section from Rivière-au-Tonnerre to Havre-Saint-Pierre, according to MTQ 2013 (data from the SAAQ)**

	2008	2009	2010	2011	2012
<b>Slight injuries</b>	6	7	13	14	14
<b>Serious injuries</b>	0	0	1	1	1
<b>Fatal injuries</b>	1	0	0	0	1
<b>Notes on the injured</b>	1 HDV	1 P, 1 C	1 M, 1 HDV	2 M, 2 HDV	2 HDV

HDV: Heavy-duty vehicle      C: Cyclist      M: Motorcyclist      P: Pedestrian

Another factor is cited: Route 138 is not suitable to carry the heavy-duty vehicles used to transport materials to the construction site. In regard to the issues mentioned at public hearings, Hydro-Québec has committed to closely monitor highway impacts (measurement of noise, speeds, etc.) and to make changes to the infrastructures (widening, shoulders, etc.) when needed. According to the people interviewed, however, the changes, in particular the shoulders put in by the Ministère des Transports du Québec (MTQ – Québec’s Ministry of transport), are not an adequate response to the safety problem. There are not enough shoulders, and they are not wide enough to allow a vehicle to stop. In addition, the speed and quantity of vehicles using the same road every day are still a concern, and people also worry about the road’s deteriorating condition.

Except for some residences along the eastern side of the highway, the municipality of Havre-Saint-Pierre can use a bypass built before the arrival of the Romaine project, so the highway does not cross it directly. This is not the case for other communities in Minganie, however. Central to the life of the villages, the road often represents a paved space useful for biking or walking. Since 2009, the citizens of these communities have been increasingly worried about the safety of people walking on the side of the road in the villages, especially children. The feeling of insecurity on the road is even greater due to the lack of cellphone coverage on

almost the entire road. In emergencies, it would be impossible to quickly contact a friend or emergency services.

According to data from the Ministère de la Sécurité publique, traffic offences, in particular in the category "impaired driving, hit and run and other" are more common on the North Shore and in Havre-Saint-Pierre than in Quebec overall. The rate for Quebec increased during the period 2002-2011, but the increase was more pronounced in the North Shore and Havre-Saint-Pierre.

**Table 3** Change in the rate of traffic offences in the category "impaired driving, hit and run and other" for Quebec (QC), the North Shore (NS) and Havre-Saint-Pierre (HSP) (Rate per 100,000 inhabitants)

Traffic violations	Region	2002	2009	2011
Category "impaired driving, hit and run and other"	QC	381.6	522.2	515.0
	NS	523.6	934.5	1,089.7
	HSP	653.4	989.5	1,402.9

Source: Ministère de la Sécurité publique. Data from the Incident-based Uniform Crime Reporting (UCR2) Survey.

Data from the Sureté du Québec of the RCM of Minganie confirm the increase in traffic safety interventions for impaired driving, but also an increase in collisions (fatal accidents, with injuries or property damage).

#### 4.7 A FRAGILE ENVIRONMENT OUT OF BALANCE

In the indicators defined in the *Act to ensure the occupancy and vitality of territories*, access to nearby services such as retail stores, health services and child care services is a factor reflecting the quality of life in an area. At this moment, however, local services available to the citizens are in decline in Havre-Saint-Pierre and throughout Minganie, since labour has been difficult to obtain or retain, and the services in place cannot meet the demand as customer traffic grows. Many examples of actual loss point to the fragility of the environment: when a person leaves his or her job, the service often disappears as well. Thus although the hospital infrastructure is adequate to permit them, surgical, radiology and obstetric services are no longer available. Although these effects on services to the population cannot be directly attributed to the arrival of major projects, these projects contribute to the cumulative impact on services, some of which are connected, as discussed above. Furthermore, demographic growth, increasing the pressure on services and housing, places the municipality of Havre-Saint-Pierre and the rest of the RCM in a crisis situation.

This lack of balance in the environment has multiple impacts on the population, and their solutions will be complex. "When something is added or the balance is shifted, the impact is amplified. These are small towns and everything has multiple repercussions. In my workplace, for example: child care, staff shortage, trouble getting my tires changed because there's no longer a garage. Everything lands on the same person. The effect is multiplied in small towns. It's not a situation where the impact is just on one problem and the problem is managed. I can have four to five problems at the same time because everything is connected and these are very tight-knit areas. The impacts are much greater and people feel them more intensely" (HSP — 10).

## 5 SOCIAL IMPACTS

*"It's extremely frustrating. The most vulnerable get no benefit from the projects, and they're the ones who are the most inconvenienced" (HSP — 08).*

All the economic turmoil and its effects on the environment have social repercussions. Although social impacts are difficult to assess and stem from complex causes, especially in small, isolated communities, it may be possible to anticipate them based on those already observed in other large projects. These projects have had observable effects on social inequalities, the dropout rate and the prevalence of alcohol and drug use, as well as gambling. These profound effects are more pronounced and durable in certain more vulnerable groups, such as Aboriginal people and women.

It has been documented elsewhere that cohabitation with a job site in a fly in/fly out context, with the constant back-and-forth travel of male workers having a high disposable income and working in shifts, may lead to an increase in prostitution, STIs and unwanted pregnancies (Barron, Orenstein, and Tamburrini, 2010). The presence in the region of a high number of people from the outside contributes to reducing the feeling of safety and may cause tensions among social groups within the community. This accumulation of diverse problems may gradually weaken the social fabric. The population of Havre-Saint-Pierre is already experiencing some of these impacts in ways large and small.

### 5.1 INCREASED SOCIAL AND INCOME DISPARITIES

Economic indicators show increasing disparities in the population of Minganie. A stakeholder from the area says: "That's what happened with Romaine: some have access to the wealth of Romaine and some do not. A fracture developed." (HSP — 10) The gap between the rich - those who have been able to find highly paid jobs or work under lucrative contracts - and the disadvantaged - those whose income has not increased, for one reason or another - has widened considerably. Those who were unable to find additional income in connection with the project's arrival not only are left with no more in their pockets, but their expenses are rising. In the end, they lose on two fronts. Populations already disadvantaged are placed in a situation of even greater vulnerability. "There is poverty among people who cannot work, the non-active population, which has grown enormously. The non-active (the elderly, people who are losing their autonomy, people with physical or mental handicaps) have suffered greatly, because they have experienced all the disadvantages of inflation: increased costs and loss of services. These are the most disadvantaged" (HSP — 08).

The poor are getting poorer, and the community support network is crumbling. Many of the people interviewed said they were worried about the isolation and the precariousness of the situation of certain community members. Furthermore, in the current social climate, poverty is a source of shame and stigma. "We have poverty here. It's just that, for example, the people with very low incomes..... We have a second-hand clothes store in Havre-Saint-Pierre. People hesitate to go there. It's not like in the city, where people don't know you. In the city, you go to the Value Village, and nobody knows you. Nobody will ever know where you bought something. But here, people know each other. If you go to the second-hand clothes store and put on something you bought there, someone might recognize it. So it's

frowned upon to go to the second-hand clothes store" (HSP — 07). For the poorest, problems finding housing, food and other consumer goods amplify psychosocial problems.

The income gap is becoming especially great between the young and the old. Seniors see young people getting rich while their own purchasing power is falling, along with their quality of life. Young retirees also choose to return to the job market. But for older people or people unable to return to work for health reasons, the loss of services and their lower income put them in a tough spot.

## **5.2 INCREASING AND INCREASINGLY COMPLEX PSYCHOSOCIAL PROBLEMS**

Psychosocial services are facing a perilous situation: a glaring staff shortage (the team has been incomplete for over two years) and a constantly rising demand. Consultations are requested mainly for mental health, addiction and family crises (HSSC, 2012). In 2012, the HSSC noted the existence of problems connected to changes in the community: new families have trouble integrating and disadvantaged families have problems finding housing, food and consumer goods, which amplifies the social problems. There is also an increase in young clients. At the community agency Espoir de Shelna, the demand for crisis housing and temporary assistance<sup>13</sup> has risen significantly since the large projects got under way, especially for sexual assaults and spousal violence.

A few cases of homelessness have been reported in Minganie for the first time, including some new arrivals attracted by the economic boom: "People seem to think this is the Klondike, and they come here thinking they can find an inexpensive little house, a low rent, and work for \$35/hour at Romaine. But this is not how it is. It's not true. These people get here with a little money in their pockets and nowhere to live. After a week, they wind up forced to go into emergency housing because they have nothing. They don't even have the money to go back to where they came from. It wasn't like this before. Homelessness in Minganie - now we have it" (HSP — 09). At the peak of the housing crisis in Havre-Saint-Pierre, low-income people may have been displaced to accommodate workers able to pay more.

The Minganie HSSC reports that there has been a considerable increase in the demand for psychosocial services in the last few years, and the problems encountered are more complex. Comorbidities are increasingly seen (mental health and addiction). Also, cases of decompensation of highly intoxicated people are a safety problem within the walls of the HSSC, which was not the case in the past.

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<sup>13</sup> This is not the primary mission of this agency, which houses handicapped persons, but since there is no crisis shelter in Minganie, the agency takes on this role.



### **5.3 INCREASE IN CONSUMPTION (DRUGS, ALCOHOL, LUXURY ITEMS, GAMBLING)**

As mentioned in the introduction, the influx of non-permanent workers into a community has also been associated with a significant rise in drugs and alcohol use, as well as prostitution (Conseil du statut de la femme, 2012). The proximity of job sites with workers from elsewhere doing shift work may have a harmful effect on the community. Some sources claim that trade in sexual services and drugs has appeared in Havre-Saint-Pierre. Others maintain that drug use (especially cocaine) is common on the job site, without asserting that there is a well-organized drug trade.

While the opinion of the stakeholders in the community is mitigated, they recognize that there is an increase in drug use. The higher income and the disposability of income are exacerbating behaviours that were already in place, but the situation is no less disturbing. Opulent lifestyles characterized by the purchase of many luxury goods (boats, snowmobiles, recreational vehicles, etc.) are also a concern, especially in terms of repercussions on household debt. The popularity of gambling has also been mentioned as a problem related to rising individual income.

The financial situation of the region's workers is vulnerable in periods of economic downturn, either due to fluctuations in the prices of natural resources on the stock market or when construction work ends at the Romaine site. But in Havre-Saint-Pierre, the culture, marked by the fishing lifestyle, means that people think first about ensuring their survival for the coming season: "This is a fishing village, we don't think any further than the next season, we're not thinking five years out and we protect our grid square. There is a short-term culture hard-wired in people's minds" HSP — 10. Nevertheless, excess consumption due to rising salaries may affect the lives of many families in the short, medium and long term.

### **5.4 EARLY ENTRY INTO THE JOB MARKET**

Large development projects that allow many young people to enter the job market quickly are known to have an impact on the dropout rate. The rate of graduation or qualification before age 20 (indicator from MELs) in Havre-Saint-Pierre fell from 78.9% in 2008 to 65.2% in 2009. In subsequent years, the graduation rate stayed a few points above 70% (Commission scolaire de la Moyenne-Côte-Nord, Annual report 2011-2012). The year the construction site arrived was the year with the sharpest drop in the graduation rate. It is possible, however,

that graduation was delayed or that the young people who left high school went on to get professional training, because the dropout rate has remained roughly the same since 2009 (around ten young dropouts per year). The arrival of the construction site has also increased the supply and number of vocational training graduates.<sup>14</sup> Many young people without high school diplomas have received training at this level. The type of training provided reflects the needs of the construction site: sawing, heavy logging equipment operation, trucking, carpentry and joinery, secretarial work.

According to the Commission scolaire de la Moyenne-Côte-Nord, the concern in Havre-Saint-Pierre at the moment is the fact that young people are entering the job market very early. In this context, the issue is not the direct or indirect jobs offered because of the Romaine project, but rather the jobs that arose in the community due to positions left vacant by people who went to work at the site. Thus, as early as age 13, many young people have a part-time job in the stores while they continue their education. This may even be the case for the majority of high school students at École Monseigneur-Labrie in Havre-Saint-Pierre. Furthermore, since a high rate of the region's active population does not have a high school diploma (34.2% compared to 17.1% for the province overall), the value placed on a diploma suffers. Among young people as much as among their parents, the people in the community who were interviewed speak of a greater value placed on work or money rather than education.

Ultimately, the attraction of high salaries, in tandem with the lower value placed on getting a diploma, may lead young people to leave school and interrupt their education in haste. This danger is real, and it is proving to be difficult for community workers to counter the effects of an attractive job market in the current situation. There are few skilled workers in the region but they represent a labour category of interest to big enterprises that the youth of Minganie could occupy: "We need university graduates, but no one wants to study" (HSP — 18). At this point it is difficult to value education and get young people interested, because the emphasis is on the salary and in the end, on the buying power it affords.

## **5.5 DISCONTENT AND SOCIAL TENSION**

Changes in the crime rate throughout the North Shore show that crime is rising. While the number of acts of violence excluding sexual assaults remained roughly the same in Quebec from 2002 to 2011, the rate for this type of offence increased sharply throughout the North Shore. The region's rate was more than twice that of Quebec in 2009 and 2011, while it was comparable in 2002. The increase is also pronounced in Havre-Saint-Pierre, where the rate more than doubled between 2009 and 2011.

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<sup>14</sup> For the year 2010-2011, five courses were offered for a total of 57 graduates and the following year, seven courses were offered for a total of 83 graduates.

**Table 4 Change in the rate of some offences, Quebec (QC), North Shore (NS) and Havre-Saint-Pierre (HSP), 2002-2009 Rate per 100,000 inhabitants**

Type of offence	Region	2002	2009	2011
<b>Acts of violence (excluding sexual assaults)</b>	QC	541.5	576.4	546.3
	NS	599.0	1,292.6	1,175.3
	HSP	237.6	340.1	729.9
<b>Sexual assaults</b>	QC	54.4	53.2	47.0
	NS	85.6	77.7	65.8
	HSP	0.0	0.0	0.0
<b>Offences against the person (including the 2 above + others)</b>	QC	1,029.7	1,059.9	1,017.0
	NS	1,156.3	2,123.1	1,910.2
	HSP	504.9	804.0	1,189.4

Source: Ministère de la Sécurité publique. Data from the Incident-based Uniform Crime Reporting (UCR2) Survey.

The data published by the Sûreté du Québec of the RCM of Minganie in its Portrait 2011-2012 confirm the increase in acts of violence since 2009. There is a link between this data and the comments made by several people involved in the community about a rise in tension between certain groups (workers from elsewhere and local workers), causing more frequent brawls when bars close.

A climate of general discontent toward the Romaine project and toward Hydro-Québec has also set in. Fed by a feeling of injustice and a lack of understanding, a mistrust with regard to the project has been hanging over some of the population since the public hearings. This situation may be further exacerbated by the Government's refusal to respond to repeated requests about spaces in child care or the housing crisis. Several of the people interviewed share the impression that those in high places are turning a deaf ear and do not grasp the urgency of the problems experienced by the residents of Minganie. The prefect of the RCM had sounded the alarm as early as 2009, and a committee chaired by Nathalie Normandeau was established in order to explore possible solutions for the various problems involving housing, roads and child care services. However, none of the solutions envisioned has been implemented. Some claim that the committee was nothing but a roundabout way of silencing complaints.

Tension is also felt in connection with the fact, mentioned above, that workers from Minganie who are trained for work at the construction site are not working, while workers from all of Quebec are traveling to work at the site. The fact that the site operates in a vacuum also produces discontent. A palpable animosity about the project is felt clearly in relations within the community, between the community and Hydro-Québec, but also between the community and the regional and provincial government agencies.

## 5.6 GENDER EQUITY ISSUES

In its report entitled *Les femmes et le Plan Nord: pour un développement nordique égalitaire*, the Conseil du statut de la femme (CSF – Council on the status of women) discusses the risks that the development described in the Northern Plan may represent for the affected regions. It deals with the particular risks women incur in a majority-male workplace, including the harassment and solicitation they may suffer.

In Havre-Saint-Pierre, as mentioned previously, not having access to child care services has a major impact on women's autonomy. With a few rare exceptions, women are the ones who set aside their professional ambitions to stay at home: "It's not the dads, it's the moms who have to juggle all that: part-time work because you want to keep up your resume, we're talking about all social classes, whether you have a degree or not, if you don't have child care you just DON'T have child care. So it's a step back" (HSP — 05). The stress, isolation and economic dependence of women in such conditions put them in a vulnerable position.

These effects, on top of the potential impacts of projects like the Romaine site, are not equitably distributed between men and women. The disadvantages affect women more than their male counterparts.

## 5.7 CONSOLIDATION OF REGIONAL SOLIDARITY

Minganie is a large territory of several small communities, two of them Aboriginal communities. Many kilometres separate the villages from each other, which are each independent entities with their own cultural and social particularities. These small communities are very tight knit. The fact that people feel more disadvantaged facing the multinationals or the provincial authorities may help to gradually strengthen solidarity within Minganie.

Citizen engagement with regard to the governance issues tied to the region's autonomy is an example of this renewed sense of solidarity around various claims. In 2012, various groups made claims about the performance of work in the Romaine project, blockading Route 138 in the direction of the site. A first blockade initiated by the Innu community of Uashat-Maliotenam took place in March 2012 and was resumed in August 2012. The claims dealt primarily with the damage to an ancestral territory caused by the deforestation planned for the construction of the power line. Then, in November 2012, the Association des gens d'affaires de la Minganie (AGAM – Minganie's association of businesspeople) blocked the road in order to make known its claims about the construction of the Hydro-Québec service centre. This resulted in a firm commitment on the part of the Ministre des Ressources naturelles (Ministry of natural resources), Martine Ouellet, that the Centre would be based in Havre-Saint-Pierre. As for the Innu's safeguard order seeking to prevent Hydro-Québec from starting construction of the northern power line from the Romaine river, it was rejected by the Cour supérieure du Québec (Québec's superior court) in May 2013. Following these various actions, the president of the AGAM said the following: "We are especially proud of the way in which the regional populations, including the Innu communities, have united over the last six months toward the realization of a common goal" (Le Nord-Côtier, November 27, 2012).

Although there is still tension among the municipalities, dealing in particular with agreements entered into by each, more solid links are being forged between the Aboriginal communities and the residents of Havre-Saint-Pierre. Business people are meeting to make the impacts bear fruit for all. Feeling ignored or even deceived ("They sold us the Klondike - nothing more and nothing less" (HSP — 12)) has given people in the community a desire to be heard clearly, but especially to speak in one voice. This has created a strong protest movement which is felt more broadly over the entire North Shore.

## **5.8 STORMY SOCIAL CLIMATE**

The rising social inequality, the lack of gender equity, and the increasing and increasingly complex psychosocial problems in Havre-Saint-Pierre are contributing to a changed social profile in the region. The constant travel of the workers is affecting the climate: certain social problems are growing in scope, there is greater mistrust but also more discontent about the Romaine project and Hydro-Québec. Rising income brings significant buying power which has effects on consumption (drugs, alcohol, luxury goods, gambling) and on household debt. The potential effect of young people entering the job market at 13-14 years old raises concerns that they will delay or give up finishing their studies. However, the governance issues connected to the region's autonomy and to northern development are gradually producing a new solidarity around various claims, which demonstrate Minganie's potential resilience.



## 6 DISCUSSION

At the provincial level, the development of energy or mining resources in the northern territory may contribute to the collective wealth through economic stimulation and the resulting tax revenue. Monitoring of the impacts of the Romaine project on the Havre-Saint-Pierre population indicates that large development projects may also make a significant contribution to the well-being of the local population through improved economic conditions, infrastructure work or the opening of the territory. While they may not be enough to meet the needs of the population and the economic stakeholders in the region, the short-term and medium-term positive impacts of the Romaine project at the regional level remain undeniable, at least in terms of direct and indirect job creation, the payroll generated in the region, the purchase of goods and services from certain businesses, the funds that will go to communities that sign impact benefit agreements or partnership agreements, as well as the reversal of the demographic exodus.

This summary analysis of the impacts of the Romaine project also recalls that the conditions under which these development projects are implemented may also weaken the social fabric and harm the health of the affected communities. Thus, communities close to development projects can experience harmful effects, not just positive impacts, if the measures anticipated to mitigate the projects' negative effects are inadequate, if the conditions of integration into the environment are not specifically designed according to the communities' accommodation capacity or existing social dynamics, or if the benefits of development do not reach the entire population and instead create greater marginalization of disadvantaged groups.

### REMINDER OF CERTAIN LIMITS

Although the time and resources available to carry out the mandate did not permit this type of approach, a better understanding of the variety of impacts of development projects on the health of the population of Minganie, and the way these impacts may be distributed over the territory, would have required meeting with more stakeholders in different communities.

Moreover, while it is certainly still difficult to quantify some problems (for example, sexual violence, including prostitution, or drug, alcohol or gambling problems), it appears that other issues could actually be measured, but significant resources would be required. Examples include a detailed analysis of medical records, and surveys on changes in the cost of a nutritious food basket. It would also have been useful to approach or explore certain questions such as the evaluation of the citizen participation dynamic in activities and decisions at the municipal level.

## **SUPPORT FOR COMMUNITIES**

The analysis successfully demonstrates that in spite of various positive impacts, the new realities associated with northern development may disrupt community dynamics and create or aggravate disparities in health and well-being, in particular in a precariously balanced area like Minganie. Sometimes these impacts are immediate, as in the case of availability of housing, and some come out in the medium term, as with the loss of volunteer resources or community support. The effects may also be felt in the longer term, if there is no effort to strengthen community resilience in case resources are depleted or when the economic boom ends.

According to the stakeholders interviewed in Havre, Minganie was not prepared for such upheaval: "The worst part is really the lack of support for the communities in all areas - economic, social, child care, housing - no solutions were found, we weren't given any mechanism to deal with these things. They gave us a cheque and told us: figure it out for yourself with this cheque, you'll see it's enough" (HSP — 05). For the economic and social development which accompanies large development projects to help maintain and improve the living conditions and health of the populations most directly affected, it seems vital to support communities so that they are better equipped to manage the changes without compromising the health and well-being of the population. Such support would have to be modulated according to the geographic, social and cultural contexts that make each affected community unique. Since they are the first ones affected, the communities must be heard and they must help to identify solutions meeting their needs. The experience in Havre-Saint-Pierre demonstrates that research avenues must be developed and tools provided to support communities in the context of northern development.

Little time has passed since the start of the Romaine project, but there is still an urgent need to mobilize all the players to seek solutions appropriate to the community's challenges. The plan of mitigation measures must be updated in order to better respond to the current situation. The goal in all of this is to maximize benefits and minimize negative impacts.

## **IMPROVING THE ENVIRONMENTAL ASSESSMENT PROCESS**

In order to better assess the social and health impacts as well as the appropriate measures for mitigation, compensation or follow-up in this regard, an improved environmental impact assessment process would be desirable. For example, the question of social health inequalities or environmental justice issues is important, but it was not raised during the Quebec environmental assessment process for the Romaine project.

The anticipated impacts on the health system were not discussed during the analysis by the BAPE (Office of public hearings on the environment), nor in the environmental analysis by the MDDEP (Ministry of sustainable development and parks), although they were predicted by the Minganie HSSC. However, it should be noted that while these impacts, many of which now seem to be proven, were indeed raised by the Minganie HSSC during the BAPE hearings, few solutions were then proposed.

Impacts of development projects on public health and health determinants must be taken into account in the context of environmental assessments. The integration of a procedure for

health impact assessment in the context of a Quebec environmental assessment process could help to improve the situation by making it possible to paint a more complete picture of the preexisting social situation and changes to it over time. Greater consideration of the health issues starting at the planning stages would also make it possible to modify certain aspects of projects or to propose preventive measures to mitigate the risks and optimize benefits in relation to the principal health determinants.





## **7 CONCLUSION**

The summary analysis of the impacts of the Romaine project on the health of the population of Havre-Saint-Pierre brings out the importance of the efforts to implement assessment and follow-up structures which enable the communities directly affected by the arrival of large projects to take part in the development without compromising the health and well-being of their population. The identified economic and social impacts on the environment show how much the arrival of the Romaine project has disrupted life in this community at various levels. It can be concluded from the summary analysis of the situation in Havre-Saint-Pierre that for the north to play a role in northern development, it is essential to ensure not only maximum positive direct impacts for the communities living there, but also to mitigate as much as possible the potential negative impacts on these communities by involving them directly in searching for the solutions most appropriate for their various local contexts. In this way, northern development will be more sustainable and promote the health of the communities and their populations.



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**APPENDIX 1**  
**EVALUATION GRID**



ECONOMIC IMPACTS	IMPACTS ON THE LIVING ENVIRONMENT	IMPACTS ON SERVICES	SOCIAL IMPACTS
<p><b>INCOME AND EMPLOYMENT</b></p> <p><b>Job access</b>                      Employment availability                      Types of employment                      Unemployment rate                      Equity (jobs for women and Aboriginal people)</p> <p><b>Working conditions</b>                      Wages                      Wage increases                      High minimum wage                      Work schedules                      Number of hours worked                      Stress at work                      Work-life balance</p> <p><b>Labour migration</b>                      Labour shortage in other industries                      Employee burnout in affected industries                      Return of young people to the region                      Impact of fly in/fly out</p> <p><b>COST OF LIVING</b></p> <p><b>Consumer products</b>                      Prices                      Availability</p> <p><b>Food</b>                      Prices                      Availability                      Impact on eating habits                      Food insecurity</p> <p><b>Rising inequalities</b></p> <p><b>Poverty</b></p> <p><b>COMMERCE</b></p> <p><b>Impact on businesses (restaurants, garages, stores)</b>                      Sales                      Customer traffic                      Prices                      Commercial development</p> <p><b>Impacts on construction businesses</b>                      Availability of resources                      Cost of work and labour</p>	<p><b>HOUSING</b></p> <p><b>Housing shortage</b>                      Migrations                      Overcrowded housing                      Pressure on social housing</p> <p><b>Cost of housing</b>                      Difficulty finding housing for the poorest                      Difficulty finding housing for new employees (recruiting difficulty)                      Financial pressures                      Vulnerable populations: disadvantaged, elderly                      Property speculation</p> <p><b>Housing quality and safety</b>                      Renovation cost/availability</p> <p><b>ENVIRONMENT</b></p> <p><b>Perception of environmental risk</b>                      Traffic noise                      Air quality                      Mercury in fish</p> <p><b>Repercussions on the tourism industry</b>                      Hunting                      Fishing                      Recreation                      Natural heritage, landscape, holiday resorts                      Visits to the dam (new attraction)</p> <p><b>SAFETY</b></p> <p><b>Public safety</b>                      Crime rate                      Prostitution                      Spousal/sexual violence                      Delinquency                      Narcotic use/trafficking</p> <p><b>Road safety</b>                      Traffic accidents                      Impaired driving</p>	<p><b>EDUCATION</b></p> <p><b>Dropout rate</b>                      Dropping out: attractiveness of jobs                      Pursuit of post-secondary education</p> <p><b>Choice of fields of study (vocational diploma)</b></p> <p><b>Supply of training (new training)</b></p> <p><b>Availability of school resources</b></p> <p><b>CAPACITY OF PUBLIC SERVICES</b>                      Wastewater system                      Waste management                      Other public infrastructure                      Impact on funding</p> <p><b>CHILD CARE SERVICES</b></p> <p><b>Shortage of spaces</b>                      Birthrate                      Impoverishment of families who postpone going back to work                      Space problem (building renovation)                      Recruitment</p> <p><b>HEALTH SERVICES</b></p> <p><b>Pressure on services</b>                      Staffing shortage                      Reorganization (space, resources)                      Ambulance services                      Medical examinations and social services                      Service schedule                      New files                      Reason for visits                      Shortage of specialists</p> <p><b>Access to care at the construction site</b>                      Services offered at the construction site                      Accessible to subcontractors?                      Air evacuation?                      Reason for visits</p>	<p><b>COMMUNITY LIFE AND QUALITY OF LIFE</b></p> <p><b>Social cohesion</b>                      Social disturbances (climate)                      Integration of workers (strangers)                      Sex ratio imbalance                      Conflicts (e.g., sharing of costs/benefits)                      Feeling of belonging                      Autonomy                      Cultural heritage</p> <p><b>Social and psychological ailments</b>                      Suicide rate                      Stress                      Isolation                      Depression                      Addictions (alcohol, drugs)</p> <p><b>Volunteer and community groups</b>                      Shortage of employees and volunteers                      Supply/demand ratio                      Citizen engagement capacity</p> <p><b>Quality of life</b>                      Noise                      Road traffic                      Traffic calming</p> <p><b>EQUITY</b></p> <p><b>Perception of disparities</b>                      Sharing of benefits/costs                      Disadvantaged/advantaged                      Minganois/Aboriginal persons                      Men/women                      Occupational fields                      Increase in income disparity</p> <p><b>Poverty, vulnerability</b></p>





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