

Introduction

We would like to congratulate the COMEV for the preliminary directives; they are among the most complete directives ever produced for a similar project.

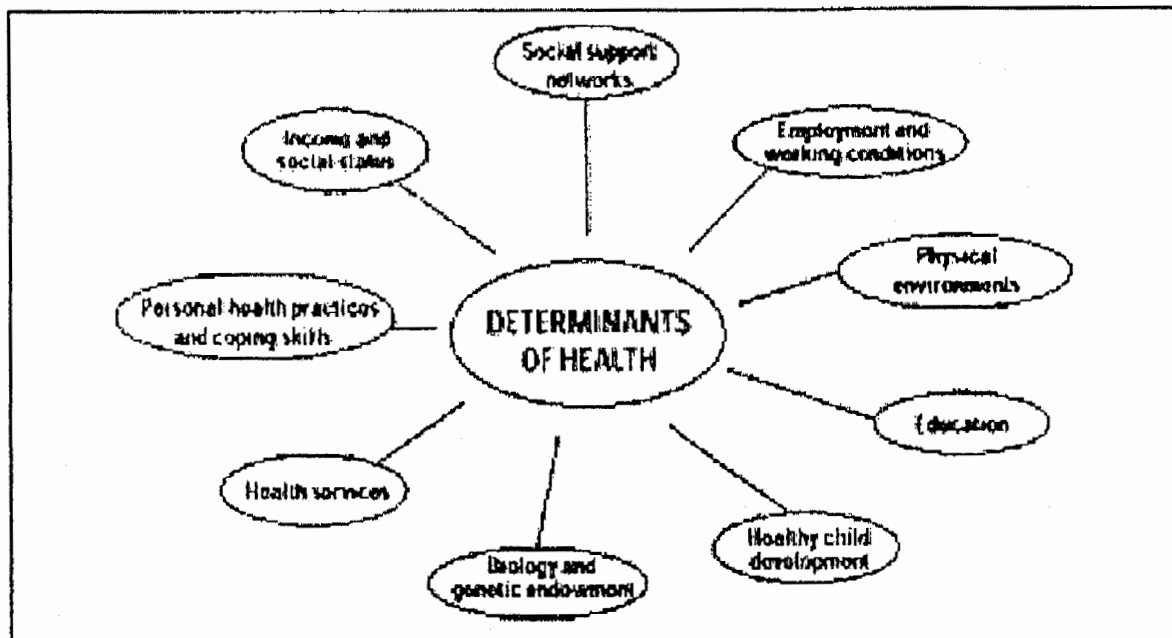
From our point of view, it is important that none of the points in the directive be removed.

The purpose of this document is to raise a few points not included in the directive and underline some issues which we find especially important.

The Crees are culturally distinct from other nations and ethnic groups in Canada. Their vision of health is holistic and includes physical, mental, emotional, social and spiritual health. Each of these elements is important.

Beyond the classic portrait based on the incidence and prevalence of diseases, the project promoter should consider the impact of the development projects on the spiritual, mental, emotional and social health of the population.

Factors contributing to health and social well-being are shown below:¹



Development project impacts on these determinants will also affect health and social well-being, for better or for worse. The proponent should consider the project's impacts on these health determinants.

¹ Health Canada,

Very little information is available about the health of the Cree population before the Hydro-Québec projects began in the region. It is difficult to determine the real impact of those projects. It is important to make an accurate portrait the present state of health in order to evaluate the impact of the any future projects in the region. The impact of development projects on health and social issues have been studied in other parts of Canada and Alaska. A review of the existing documentation on the subject should be part of the impact study.

Below are outlined some of the project impacts which concern us most.

Mercury

Mercury is often one of the first public health concern when we think about hydroelectric reservoirs.

Methyl mercury can cause toxic effects principally on the nervous system. Methyl mercury is found mainly in fish. But fish are good for health because they contain omega-3 fatty acids, protein, little of the bad kind of fat, and numerous vitamins and minerals.

Methyl mercury rises to higher levels in fish in reservoirs, but it is also present in ocean fish and fish of northern waterways, due to both global pollution and local factors such as clearcutting and pulp and paper plants.

The proponent should present a portrait of changes in fish and human populations in the region over the past 30 years up to the present time and anticipate future changes. A special attention should be given to the mercury level in species of fish in lakes and waterways popular with the Cree and not affected by the project, so that alternate fishing sites may be suggested.

According to the directive, the Proponent should ensure that an assessment of the health risk associated with mercury exposure is done.

We suggest that the evaluation of the exposure should be done according to the approach and methodology proposed in the *Guidelines for carrying out assessments of the toxicological risk for human health within the context of the environmental impact assessment procedure* of the Ministère de la Santé et des Services Sociaux du Québec.

The exposure estimate must take into account of the background noise of mercury and scenario of exposure (fish consumption) realistic fish for the Cree population. The calculation of mercury exposure should also consider the contribution that may come from other sources, in particular traditional food (ex.: predators of contaminated fish).

The most relevant information would be on fish consumption rates, changes over the years, and variations within the population (elders vs youth), between communities, and in the species consumed.

The fish consumption is also a part of the cultural identity of the population, the diminution of consumption associated with mercury can contribute to the loss of the culture.

In addition to the above considerations, a further impact of the project will be that the Public Health Department will be obliged to devote extra resources to the problem of mercury.

Risk perception

In light of the experience obtained for the La Grande Complex, the proponent will have to discuss the perception of the Crees regarding the mercury problem and its influence on the changes observed in their diet and consequently on their health in general. The assessment of the risk perception should not be limited to mercury but any other risks or environmental and health issues associated with to project.

Impacts on diet and physical activity

Potential impacts on health caused by eating less fish and less traditional food in general have been mentioned in the directive. Diabetes in particular has become epidemic among the Cree. However, physical activity is no less important in preventing diabetes and sedentarity has increased in the Cree communities due to the construction of roads, increased income and use of vehicles, flooding of traditional hunting territories and adoption of wage labour leading to less time in the very active bush life.

The proponent should present a portrait of the actual diet and evaluate the impacts on dietary changes that could be attributed to changes in the biophysical environment or eating habits.

Present and future levels of physical activity should also be described.

Drugs, gambling and alcohol-related problems

Construction projects in remote areas require setting up camps for large numbers of workers. These camps include stores where alcohol is available. The increased availability of alcohol has numerous consequences on the Crees and their communities. Cree communities have always been dry communities in that no alcohol is officially for sale. Although people of European origin have had thousands of years to learn to use alcohol, First Nations have not.

Increased availability of drugs and alcohol can lead to serious damage in Cree communities. The damage includes motor vehicle injuries, vandalism, fights, assaults, injuries to women and elders, children coming to school inebriated, neglect of children, prostitution, etc.

Part of the reason why Cree turn to alcohol, drugs and gambling may be that they are grieving the loss of their land and of a way of life – their traditional hunting and trapping life. Those losses will accelerate, if the EM1A and Rupert River diversion projects are accepted.

Alcohol-related problems were seen, starting in the early 1980's, in the Cree community of Chisasibi which is about an hour's drive from the village of Radisson where alcohol is available. These impacts have continued up to the present time; in addition, we have been informed that video lottery terminals in Radisson are very popular with some Chisasibi residents.

Numerous impacts of increased alcohol and drug availability are being seen right now in the Cree community of Nemaska which is 20 Km from camp Nemiscau where several hundred workers have been housed since July 2002. Another camp, EM1, at 70 km from Nemaska, presently has 700 workers and will increase to 2500 if the EM1A-Rupert diversion goes ahead.

The above-mentioned effects of alcohol and cocaine in Nemaska have been confirmed by recent conversations between members of our department and Nemaska nurses, doctors, community workers, teachers and other informants. The burden of these problems is so high that some health and social workers get discouraged and tired.

The impact assessment should include a literature review of studies of previous development projects in Cree and other remote areas and what is known about their impacts on drug, gambling and alcohol-related problems and social consequences such as violence and child neglect in nearby communities. A review of what is known to be effective in remedying these problems should also be included.

Injuries

During the 1980's and 1990's, some drownings due to snowmobiles going through the ice were reported as being due to changes in river flows and ice thickness related to dams and river diversions. More use of motor vehicles has also increased the injury rate from motor vehicle crashes. Both of these types of injuries are likely to increase with the EM-1A Rupert River diversion project.

Emergencies

The failure of certain infrastructure caused by human error, intentional damage (terrorism) or exceptional natural events (flooding, earthquake, etc.), in particular dams and dikes, could cause major impacts. The Proponent should present a preliminary emergency measures plan making it possible to react adequately in the event of an accident

Mitigative and remedial measures

1. General comments

From what has been said above, it is evident that the project will have a major impact on health and social problems in the Cree communities, both negative and positive. This will lead to an impact on the services of the Cree Board of Health and Social Services – physical health services, mental health services, social services and public health services.

2. Social, spiritual and mental health impacts

We would like to underline the following part of section 9.4 of the directives : “the promoters must present the measures they intend to implement in order to facilitate, for the Cree...their taking charge of challenges generated the Project, taking into account the experience of the past.” It is clear from the previous part of the section that the challenges refer to social problems such as drug and alcohol use, delinquency, vandalism and cultural changes such as value changes and the transmission of knowledge between generations; and social changes such as people becoming wage labourers instead of trappers. As well, the future is uncertain because after the construction and the environmental changes what is the socio-economic prospective?

Services which might help to mitigate impacts could include, but are not limited to:

- Better policing of roads between construction camps and communities, including enforcement of drinking and driving laws and speed limits.

- Budgets to boost social services within the Cree Board of Health and Social Services, to prevent and treat drug and alcohol related problems.
- Budgets for band councils to provide services for families with one parent working out of the community in the construction camps, including courses on budgeting, workshops where people discuss how to maintain Cree identity while working on development projects etc.
- Spiritual resources for Cree workers in camps, including Christian church services and traditional activities such as sweat lodges.

We find that sections 11.3 (human environment) and 11.4 (compensation measures) need to be developed more

Physical health impacts

In order to reduce the impact of the increase in sedentarity, the promoter could contribute to opportunities for increasing physical activity, such as making facilities like swimming pools, sidewalks, and walking and bike paths available in the Cree communities.

Follow-up and monitoring

Follow-up should include monitoring the impacts on health and social well-being, including social problems. We recommend that the proponent collaborate with the regional public health department of CBHSSJB on this process.