

# **SOCIAL PROBLEMS, COMMUNITY TRAUMA AND HYDRO PROJECT IMPACTS**

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## **Abstract / Resume**

The cumulative effects of hydro regulation on Aboriginal communities suggests that the concept of community trauma may provide additional insights. Evidence from a number of hydro developments is considered, particularly in northern Manitoba. It is concluded that impacted communities appear to exhibit significant and measurable increases in social pathology, consistent with the concept of community trauma.

Les effets cumulatifs du règlement hydro-électrique sur les communautés autochtones suggèrent que le concept de trauma communautaire puisse permettre de mieux comprendre la situation. On a examiné le cas d'un nombre de développements hydro-électriques, en particulier au nord du Manitoba. On conclut que les communautés concernées semblent présenter des signes d'une augmentation importante et mesurable de pathologies sociales compatibles avec le concept de trauma communautaire.

## Introduction

The development and application of the concept of community trauma is largely associated with the work of Kai T. Erikson. In his award winning study of the effects of a devastating and deadly flood on the mining community of Buffalo Creek, Erikson wrote:

By *collective trauma*...I mean a blow to the basic tissues of social life that damages the bonds attaching people together and impairs the prevailing sense of communality. The collective trauma works its way slowly and even insidiously into the awareness of those who suffer from it, so it does not have the quality of suddenness normally associated with "trauma" (Erikson 1976:154)

Evidence regarding the impact of hydro regulation on Native communities, in northern Manitoba and elsewhere, suggests the concept may have some relevance in understanding the magnitude of the cumulative effects.<sup>1</sup>

## Background

In the early 1960s Manitoba Hydro began the damming of the Saskatchewan River to develop the Grand Rapids generating station. The dam transformed Cedar Lake into a giant reservoir, compelling the relocation of the Chemawawin Cree to a new purpose-built site at Easterville. The hydro project damaged trapping, destroyed moose habitat and created problems for commercial and domestic fishing. In 1971 mercury contamination, caused by the inundation, was found to have created elevated levels in the white fish and the commercial fishery was closed (Loney, 1987; Landa, 1969; Waldram, 1980a, 1980b, 1987a, 1988a, 1988b).

In the early 1970s, Manitoba Hydro pushed ahead with plans to divert the Churchill River via the Rat and Burntwood Rivers into the lower Nelson River and to regulate Lake Winnipeg.

The experience of the Grand Rapids project helped to galvanize Aboriginal opposition to the development and lead to the formation of the Northern Flood Committee, representing Nelson House, Cross Lake, Split Lake, York Landing and Norway House First Nations. The Cree were, however, unable to block the proposed development.

In negotiations with the Indian First Nations whose lands and waterways were to be affected, Manitoba Hydro adopted the dual strategy of claiming that damages would be limited and that the Cree would receive significant benefits through a proposed Northern Flood Agreement (NFA).

The Agreement, between Canada, Manitoba Hydro and the Province

of Manitoba on the one hand, and the First Nations of Norway House, Cross Lake, Nelson House, York Factory and Split Lake, was signed in 1977, promising both compensation and developmental benefits. Schedule "E" of the Agreement spoke of a "joint action program for the eradication of mass poverty and unemployment".

## **Modernisation and Project Impacts: The Corporate View**

The impact of hydro regulation on Aboriginal communities has been the subject of continuing disagreement. In the case of the NFA discussions, negotiations and arbitration hearings have been proceeding for 17 years. A recurring theme, used in justification for refusing compensatory or developmental benefits, has been the argument that while the impacted First Nations face many problems, these are not, in substantive measure, any different from those facing other Aboriginal communities. Declines in consumption of wild food, for example, are primarily attributed not to project induced damage to harvesting but to increasing Aboriginal preference for and access to store bought food (Intergroup, 1989:29 and passim, Grand Rapids Study Team, 1990a:44-57).

The empirical evidence, in contrast, points directly to the increased difficulty in harvesting, the reduced availability of wild food and increasing community concerns over the taste and safety of post project harvested food (Landa, 1969; Waldram, 1980a, 1983, 1985; Loney, 1987; Campbell *et al.*, 1992; Dansys and Loney, 1994; Loney and Dansys, 1994; Loney and Symbion, 1994).

Increased consumption of store bought food may be widespread in northern Aboriginal communities but Usher and Weinstein, specifically reviewing the impacts of the Lake Winnipeg Regulation and Churchill River Diversion (LWRCRD) challenge the suggestion that there has been any generalised tendency for fish harvesting to decline:

...neither the Pukatawagan data, nor Berkes' (1990) analysis of Canadian trends generally, lend support to the hypothesis that domestic fish consumption declines are a general phenomenon in Subarctic communities, or that they are a consequence of "modernization" independent of direct industrial impact on fisheries themselves (Usher and Weinstein, 1991:16).

The minimisation of the impacts of hydro regulation was evident in a study commissioned by Manitoba Hydro on the effects of the Grand Rapids project. Hydro's advisers claimed that the commitment of the provincial government to maintain post-project income levels had been met (Grand

Rapids Study Team, 1990a:57). This claim was based on the analysis of a range of data compiled by the Study Team. The standard used by the Team was simply that the commitment of then provincial premier, Duff Roblin, that the people would continue to “earn as good a living” was no more than a promise that absolute incomes would not decline. In fact further analysis of the same data indicated that in 1962 the Chemawawin had 42% of the average Canadian per capita income, in 1989 this had fallen to 21% (Tristat, 1990).

The study compared the situation at Easterville, where the community had been completely relocated due to hydro inundation, with that at Moose Lake, where significant flooding also occurred but only a few houses had to be relocated:

...many of the same serious social and cultural life-style adjustment problems that existed in Chemawawin/Easterville after the Project have also been identified in similar levels of intensity for Band members resident at Moose Lake; on this basis, it is reasonable to conclude that factors other than the project are playing a major role with respect to social impacts in these communities (Grand Rapids Study Team, 1990a:59).

Moose Lake was an unusual choice for the role of “control” community. The community was seriously impacted by the project, which not only damaged harvesting but forced the closure of the most successful cattle ranch in northern Manitoba, on which many of the Cree worked (Stowe, 1983).

The report concluded that, at most, the project's effects, in creating health and social problems, were merely consequences of the way in which broader “modernization” pressures had been accelerated. Declining health status, for example, was attributed to:

...aspects of modernization (easier access to liquor, increased availability of junk food, more sedentary lifestyle) which the project presumably accelerated (Grand Rapids Study Team, 1990b:9/16).

## **Resituating Project Impacts**

...it is important to appreciate that the impact of a disruption can only be judged properly by looking at two matters. The first, clearly, is the destructive force of the event itself. The second is the vulnerability of the people who are exposed to it, for a weakened and fragile community, or one that is ill-prepared for the disruption culturally and socially, can suffer great impacts that might cause less harm elsewhere (Erikson and Vecsey, 1980:152).

The position of the proponents of hydro projects appears to start from the assumption that the very magnitude of the existing problems, faced by Aboriginal communities, provides some mitigation, when the adverse impact of hydro regulation is assessed. A more realistic appraisal would conclude that it is precisely the magnitude of the problems, already facing such communities, which exacerbates these impacts.

Canadian Aboriginal communities have been increasingly affected by the pressures of settler society. On many measures, whether of income, employment or health status they exhibit considerable disadvantage, relative to other Canadians (Statistics Canada, 1993). In examining the impacts of a particular development, the task of distinguishing the effects of some external event, such as hydro regulation, from other factors affecting communities and individuals, would be challenging, even with comprehensive baseline data and ongoing impact assessment. In the absence of such data we must depend on a more general review of the nature and magnitude of megaproject impacts.

In some cases it may be possible to argue that a new development has had an almost immediate traumatic effect, sending a community into a spiral of decline from which there seems no prospect of recovery. Hydro impacts on the Chemawawin, relocated to Easterville to make way for the Grand Rapids hydro development, and the impact of the Churchill River Diversion on the Cree community of South Indian Lake were of such a magnitude (Landa, 1969; Waldram, 1980a, 1983, 1988a). In other cases project impacts may be better understood as contributing to a more gradual, cumulative process of deterioration, in which the very fragility of the community's economic, cultural and social cohesion magnifies the force of the impact (Erikson and Vecsey, 1980:152).

Bowles highlights the consequences for local communities of differing kinds of resource development.

A resource extractive industry can be compatible with the maintenance of a viable local economy if it operates in such a way that the activities and resources necessary to the local economy are maintained, and the motivation for such activities is sustained. A resource industry will be destructive of a local economy if the activities required for participation in it conflict with the activities required of the local economy, or if the motivation to participate in the local economy does not persist, or if the industry itself destroys the local environment and the renewable resources upon which the traditional economy depends (Bowles, 1981:77).

Hydro megaprojects are, arguably, the most damaging category of impacts to Aboriginal communities. Effects are long term and strike at the strength

and even viability of the harvesting subsistence economy.

A recent survey of the Canadian literature on megaproject impacts concluded:

Thirty-one studies examined hydroelectric megaprojects. Most focus on the impacts on native people and conclude that hydroelectric megaprojects generate dramatic ecological changes that have significant negative impacts on the native people's economy and society. The impacts include the decimation of fisheries, flooding of hunting territories, declines in natural resources requiring increased harvesting efforts and higher out-of-pocket expenses, more individual and community stress, health impacts and other social and cultural effects (Knight *et al.*, 1994:19).

Waldram reviewed the impact of the employment of residents of South Indian Lake on the Lake Winnipeg Regulation and Churchill River Diversion Project. His account highlights the disparity between the minimal short term gains and the long term damage which hydro development generally offers Aboriginals:

...hydro employment characteristically offers short-term benefits with virtually no opportunity for employment when the labour-intensive construction phase is completed...hydro projects, more than many other types of mega-projects in the north, often damage the local environment and the resource base...When the hydro construction has been completed, the Native work force is left to return to this impaired resource base... (Waldram, 1987a:63).

The damage caused to the resource base is central to an understanding of the wider social and economic problems which follow from harvesting disruption. Harvesting is important economically, culturally and socially. It puts food on the table, reaffirms the continuing vitality of Aboriginal culture and strengthens the kinship links through which harvesting is organised and wild food distributed (Brody, 1981, 1987; Feit, 1982; Martin, 1980). Wild food is seen as having a purity lacking in store bought food (Mitchell, 1993).

Berger emphasises the centrality of harvesting to Aboriginal identity:

In the Arctic and sub-Arctic regions of North America, Native identity is essentially linked to subsistence, to the Native economy (Berger, 1985:184).

Tanner illustrates the complex meaning of harvesting in his account of the Cree hunters of Mistassini in northern Quebec:

...Mistassini hunters do not trap for money as such; they do so for more complex reasons...many of the trapped spe-

cies...provide high-quality edible meat...it is part of a lifestyle that is an end in itself...their motive is far more a specifically Cree notion of religious love, which surrounds their relationship with game animals—a relationship that includes within the single activity food harvesting, spiritualism and aesthetics (1990:263).

The consequence of megaproject impacts which damage the resource base and affect harvesting activities extends far beyond the continuing availability of a plentiful source of nutritious food. Socialisation patterns will be disrupted, self-esteem damaged and the wider sense of security undermined:

Where the native economy has been weakened, the family suffers as an institution. In these situations, there is an alarming degree of alcohol and drug abuse, violent deaths, petty crime, assaults, child neglect and family breakdown (Usher, 1981:8).

## **Social Impacts of Environmental Damage**

Environmental damage may be seen as threatening the viability of the traditional economy and disruptive of the integrity of the holistic relationship with “mother earth” on which long term health and security are believed to depend. Erikson and Vescey, reviewing the impact of mercury contamination on the Aboriginal community of Grassy Narrows, note its pervasive consequences, consequences which were the more severe because the community's cultural strength had already been eroded by successive outside interventions. These ranged from a devastating influenza epidemic in 1919, which undermined confidence in the community's traditional healers, whose skills were ineffective in dealing with this new disease, to the intrusion of missionaries and residential schools:

...the discovery of mercury in the local waters has presented a psychological and perhaps even a spiritual problem...it takes the form of a pervasive fear that the world of nature and the world of men are now contaminated and cannot be trusted in the old way. The fish are full of poison, the waters are polluted, the land is diseased, the game has retreated, and the social world, too, is becoming insecure and unreliable. When this happens, as sociologists have demonstrated in other settings, the community is quite likely to experience a striking rise in alcoholism, delinquency, vandalism, child neglect, drug abuse, theft, crimes of violence, and similar forms of deviation (Erikson and Vescey, 1980:159).

Most societies experience continuous social change, however where such change is both rapid and largely out of the control of those affected the effect will be to erode confidence in a community's ability to control its own destiny.

In northern Manitoba the discovery of elevated mercury levels, following impoundment, resulted in an extensive program of community based testing (Brandson and Hale, 1987). No comprehensive assessment of the social impacts was undertaken but there is evidence of pervasive health and social concerns. Impoundment at Southern Indian Lake resulted in elevated mercury levels in pickerel and whitefish. Even after mercury levels in whitefish had fallen to preimpoundment levels community concerns remained strong. In a study, in which this writer was involved, half of a sample of 54 respondents expressed the view that mercury had affected the way they lived and nearly two thirds the view that it had affected the community (Usher, 1990:48). A subsequent study on dietary changes at South Indian Lake and Nelson House found continuing concerns over the presence of mercury in the fish populations. Respondents were asked if they had changed the foods they eat since the flooding. Forty five per cent of Nelson House respondents and 62% of South Indian Lake respondents said they had changed. The most common reason provided was the reduced availability of wild food. Sixty one per cent of the "changers" in Nelson House and 83% in South Indian Lake indicated that less fish were available. Sixty eight percent of Nelson House "changers and 80% of South Indian Lake changers reported reduced availability of wild meat post project. Mercury was also a factor for some "changers":

Mercury in fish was specifically cited as the reason by 32% of the "changers" in Nelson House and 20% of those in South Indian Lake (Campbell *et al.*, 1992:85).

Waldram notes the confusion and fear generated by the testing at South Indian Lake:

After each test (usually done through a hair sample) the people received their results through the mail. It was not always clear what the results meant, and some people believed that the presence of any mercury was a cause for alarm (mercury is present in all hair samples). This fact, combined with periodic warnings to reduce fish consumption, has resulted in widespread fear. *Indeed, the anxiety caused by mercury is every bit as harmful as the effects of poisoning...* people feel that their whole environment has been upset, and that their wild bush foods are no longer reliable (Waldram, 1992:36-37, emphasis added).

The results of the mercury testing program indicated that Norway House was not significantly impacted. At South Indian Lake 35% of the sample of people tested fell outside the normal range of 0-20 parts per billion. In contrast only 6% of those sampled at Norway House fell outside the normal range (Brandson and Hale, 1987:55). Nonetheless a survey of 145 Norway House adults, undertaken in 1993, found continuing concerns over mercury contamination. Twenty percent of respondents reported concerns about the health effects of eating wild food, of these 28% cited concerns about mercury (Loney and Dansys, 1994:97).

The difficulty of understanding the nature of the threat posed by enhanced mercury levels, the widespread community testing and the general sense of environmental degradation, which followed the impacts of hydro regulation, appear to have created a community response, at Norway House, which is not simply a direct function of the degree of risk posed by mercury. The finding that one in five residents have concerns about the safety of wild food, provides striking testimony to the scale of hydro project effects on the community's basic sense of security and well-being.

Norway House is generally believed to be the least impacted of the five First Nations who are signatories to the Northern Flood Agreement. The 1993 survey indicated other concerns about the impacts of hydro regulation on the environment and the quality of wild food.<sup>2</sup> Respondents reported that both the quantity and quality of harvesting had declined.

Analysis of responses to a number of harvesting questions resulted in an aggregated measure of harvesting quality. Eighty five percent of male respondents, aged 19-51, rated harvesting as "good" in 1970, pre-project, only 14% rated it as "good" in 1993 (*Ibid.*:114). Hydro was not the only factor believed to have negatively impacted harvesting, though in the case of fishing and duck hunting it was clearly believed to be the most important.

Forty seven percent of respondents believed the taste of wild food had changed post project. Not surprisingly concerns were particularly focused on ducks and fish which are seen as most directly impacted by the changed water regime. Ninety percent of those who reported changes believed the taste of fish had changed, 75% reported changes in the taste of ducks (Loney and Dansys, 1994:91-94). Fish were said to be mushy or soggy, some respondents reported a "muddy" taste. Ducks were reported to be smaller and tougher and again some respondents reported a muddy taste.

In depth interviews, with a smaller number of Norway House residents, indicated that some community members believe there is a marked difference in the taste and quality of wild food harvested "off-system", in areas not impacted by hydro regulation, and that harvested "on-system". Some informants reported that they were no longer willing to eat fish and ducks

harvested in areas impacted by regulation. They relied on food harvested elsewhere, either through their own efforts or those of kin (Loney and Symbion, 1994). Fresh fish, caught off-system, are supplied to the neighbouring community of Cross Lake, under a program financed by Manitoba Hydro to compensate for damages to fish supplies in that community. The long standing links between Cross Lake and Norway House meant that some of these fish actually ended up on the tables of Norway House residents.

In view of the other findings it is not surprising that many residents report that they are able to readily distinguish between the taste and texture of fish caught on- and off-system. Such claims might be dismissed as egregious, insofar as they buttressed demands for compensation. The survey was not, however, specifically linked to the issue of compensation while the question was asked precisely because previous investigations in affected communities had revealed a pervasive concern over this issue. It is also notable that few respondents reported changes in the taste of wild food which would not have been directly affected by hydro regulation.

Respondents were asked whether hydro regulation had "affected people's sense of health and well-being". Seventy eight percent of respondents believed that it had. Those who believed health and well-being had been affected identified the reduced availability of wild food and deteriorated water quality as the predominant concerns (Loney and Dansys, 1994).

## **Assessing Project Impacts**

The measurement of a community's well-being or, conversely, its level of social problems could be assisted by a range of evidence including: school drop-out rates, teenage pregnancies, crime data, family break-up, references to child care agencies, drug and alcohol abuse, welfare dependency and health data. This might permit some empirical comparison of a community impacted by a mega-project and a similar un-impacted community. Comprehensive data is generally not available but a range of evidence exists which links Aboriginal community health and social problems to external megaproject impacts.

Grassy Narrows was impacted, in the early 1950s, by the construction of dams on the English-Wabigoon River system by Ontario Hydro. Subsequently the community was further affected by severe mercury pollution caused by the pulp and paper industry in Dryden. This resulted in the closure of the commercial fishery and severe restrictions on the domestic fishery. Research by Usher *et al.* indicated that more important than the significant economic losses, which resulted from the closure of the fishery,

were the social consequences.

The fishery had previously served to create and maintain social integration in the two communities. The research identified a range of indicators of increasing social pathology which affected White Dog and Grassy Narrows as a consequence of the loss of the fishery including alcoholism, increasing crime and violent death (Usher *et al.*, 1979).

Chester Draper, who worked at Grassy Narrows, reports that in 1980, in a community of 540 people, 60 children under the age of 16 were in the care of the Ontario Children's Aid Society. Fifty eight children were under the supervision of Probation Aftercare Services. Twenty five young adults were under the supervision of the Probation/Parole Service (Draper, 1990: 239). Shkilnyk, who places greater emphasis on the influence of the community's earlier relocation, provides a graphic description of escalating social problems (Shkilnyk, 1985).

The Fort Ware community in British Columbia, some 250 km. from the Yukon border, had its traditional hunting and fishing grounds flooded to make way for the W.A.C. Bennett dam, completed in 1968. The community's problems were recently highlighted in a B.C. court judgement by Provincial Court Judge, Cunliffe Barnett, who referred to the third world conditions in the community and the "quite incredible frequency" of violent deaths. Barnett noted of the dam:

That project has been described as a primary source of hydroelectric power in British Columbia and a primary source of sorrow for the Sekani people (*Globe and Mail*, February 27, 1993).

Elsewhere, in British Columbia, the building of a second hydroelectric project by Alcan Aluminum Ltd., to power its Kitimat smelters, reawakened controversy over the damage caused to the way of life of the Cheslatta Band, who were relocated in 1952, when the inundation of Cheslatta Lake flooded their homes. No consent was obtained before the flooding of Indian lands. The Cheslatta were advised that they would have to move whether they surrendered their lands or not. If they refused to cooperate they would be denied compensation. The relocation was so badly organised that some of the children contracted tuberculosis when the Cheslatta were put in tents over the winter. A number of the Band members are reported to have died (Richardson, 1993:174-177).

The harnessing of the Nechako River damaged salmon habitat and reduced Native harvesting. The Cheslatta Band report that the relocation and loss of traditional harvesting were responsible for growing welfare dependency, drug abuse and alcoholism (Wilson, 1991).

Landa (1969), Matthiasson (1972), Waldram (1980) and I.D. Systems

(1982) have described some of the social problems consequent upon the Grand Rapids Hydro development. The presence of two independent researchers at Easterville, at a ten year interval, has left a fuller account than is usually available. The relocation of the Chemawawin from their traditional site on Cedar Lake magnified the effects of the project on the community, though any understanding of the effects of relocation has to take account of the sharply diminished resource base of the new community and the subsequent temporary closure of the Cedar Lake commercial fishery, due to mercury contamination.

Landa reported increased alcohol abuse, increased family breakdown and child neglect. There was an absence of pre-project data however: "informants stated definitely that these problems have steadily increased since the relocation in 1964" (Landa, 1969:68). Landa noted the problems of petty crime, juvenile delinquency and the breakdown of parental control: "According to local informants such problems were non-existent at Chemawawin" (*Ibid.*:68).

Contemporary press coverage also drew attention to Easterville's growing social problems. The *Winnipeg Tribune* reported:

...an estimated 60% increase in drinking since the move to Easterville and a general breakdown of family life (November 12, 1968).

Waldram, who undertook his research some ten years later notes the key role of alcohol in precipitating and exacerbating many of the problems. His conclusions, in regard to the underlying problems, are clear:

I feel much more strongly (than Landa) that many of the problems experienced by the people of Easterville are related to the relocation...Alcohol abuse is a common response to stressful situations, and in Easterville many other social problems can be related to this one (Waldram, 1980:188).

More generally it has been argued that while alcohol may frequently be the "trigger" which sparks antisocial behaviour there are underlying problems which precipitate the often violent explosions. The Aboriginal Justice Inquiry put the relationship succinctly:

...we do not believe alcohol abuse should be viewed as a "cause" of Aboriginal crime. Rather, we believe that Aboriginal alcohol abuse arises from the same conditions which have created high Aboriginal crime rates (Report of the Aboriginal Justice Inquiry, 1991:88).

The Inquiry concluded, on the basis of their extensive examination:

...we believe that the relatively higher rates of crime among

Aboriginal people are a result of despair, dependency, anger, frustration and sense of injustice prevalent in aboriginal communities, stemming from the cultural and community breakdown that has occurred over the past century (*Ibid.*:91).

Clearly outside impacts which increase dependency, accentuate the sense of injustice and exacerbate community breakdown will, from this perspective, contribute to the malaise.

Elsewhere Waldram refers to the "severe social disintegration" of Easterville:

...this disintegration was caused by the declining economic potential of the region, the subsequent unemployment, and a general community-wide depression, all of which were the result of the hydro project and relocation (Waldram, 1988:109).

The community was further affected by the failure to secure recompense:

...their exasperation at a never-ending process of negotiation and confrontation (*Ibid.*:109)

The research of Landa and Waldram was undertaken in the course of scholarly inquiry. Further research, by I.D. Systems, was undertaken pursuant to continuing attempts by Easterville and Moose Lake, another community impacted by the Grand Rapids project, to secure compensation. In regard to Moose Lake, I.D. Systems reported increases in crime, vandalism and juvenile delinquency following the Grand Rapids project. Alcohol abuse increased, a consequence it was suggested of adverse economic impacts:

The flooding of the Tom Lamb ranch, the hayfields, and the resource harvesting areas that had served to support Moose Lake's people destroyed part of their traditional economy. We suspect that alcohol abuse was one of the ways of coping with the negative impacts suffered by some of the residents (1982(2):5.7.2).

Residents also reported more sickness in the post project period (*Ibid.*:5.6.7).

Cross Lake was one of the communities most visibly impacted by the LWRCRD. Prior to the recent construction of a weir the lake levels often fell by three feet in the summer, compared to pre-regulation, and rose by three feet in the winter. In some periods there were extreme fluctuations:

Measured fluctuations in excess of a total of nine feet...actually occurred during July and August of 1979 (Nelson River Group, 1986a:4-10).

Cross Lake is relatively shallow. Falls in water levels had a dramatic

effect on the lake's surface area reducing the lake's surface area by up to one third (Nelson River Group, 1986b:11-25).

A subsequent Community Health Status Assessment does not specifically focus on hydro impacts but acknowledges the potential magnitude:

To prove, measure and quantify the direct effects on health or specific diseases in the community is difficult: however it is clear that there are important consequences of a changed natural environment and the loss of traditional culture (fishing, trapping, natural beauty) on the health of a community—i.e. not only physical, but mental, social, and economic well-being. Clearly it is not possible to assess the health of a community without consideration of the serious negative consequences of this profound change in the natural environment (Kettner, 1990:8).

The Nelson River Group, in an environmental impact assessment undertaken for Manitoba Hydro, noted the community's perception that its degree of control over events had been significantly impaired:

The project has added to the community's feelings of helplessness and uncertainty, again reinforcing their view that their lives are outside their control. Native people of the two communities have many barriers to overcome. The changes resulting from the project are viewed as an additional barrier, increasing uncertainty in the community about their future well-being (Nelson River Group, 1986a:4-256-7).

Water regime changes caused by Jenpeg's operation have had, from the Band's and Community's perceptions, an overall negative impact upon their home. Previously familiar seasonal water level patterns on Cross Lake were reversed. The changes in natural rhythms created by Jenpeg introduced a new source of uncertainty about the future well-being of their communities and uneasiness about their ability to maintain a harmonious relationship with their environment or to successfully exert an influence over and gain more control of the factors influencing their lives (Nelson River Group, 1986b:11-34).

This sense of reduced control has also been identified as a characteristic response where communities have experienced a toxic disaster. There are other interesting commonalities. Edelstein, reviewing the effects of residential toxic exposure, identifies "five consistent lifescape changes" which are associated with such exposure:

1. A reassessment of the assumption of good health.
2. A shift to pessimistic expectations about the future, resulting from victim's perceived loss of control over forces which affect them.
3. A changed perspective on environment; it is now uncertain and potentially harmful.
4. An inversion of the sense of home involving a betrayal of place. What was formerly the bastion of family security is now a place of danger...
5. A loss of the naive sense of trust and goodwill accorded to others in general; specifically, a lost belief that government acts to protect those in danger (Edelstein, 1988:48-49).

Edelstein notes that health concerns are pervasive when toxic exposure is announced, not only unusual diseases but also conventional health problems may be reinterpreted in the light of the discovery. Activities intended to monitor health problems may increase anxiety:

...government programs aimed at ongoing health screening for toxic victims may serve as a continuing reminder of the potential for future disaster, maintaining the lifescape shift (*Ibid.*:53).

Edelstein notes the health implications which may be consequent upon such stress: "a mental health impact might be expected in anyone forced to address such all encompassing health concerns" (*Ibid.*:54).

Experience in northern Quebec provides support for the argument that greater Aboriginal control can serve to mitigate the impact of externally induced change and environmental contamination. Colin Scott has suggested that a significant factor in facilitating the adaptation of the Cree in northern Quebec, to the changes wrought by hydro development, was the creation of a set of Cree controlled social and political institutions which mediated the change. Empowerment was not just institutional, it was also personal. The income support program for hunters and trappers, for example, helped hunters to adapt to the need, in some cases, to access new territories at a greater distance where their traditional areas had been negatively impacted by inundation (personal communication, 10/12/92, see also Salisbury, 1986).

Cree control over the Mercury Program, through the Cree Council on Health and Social Services, played a role in increasing community awareness of the threat posed by mercury contamination and formulating a response.

In contrast, in northern Manitoba, there was no attempt to empower communities impacted by Manitoba Hydro. Easterville and Moose Lake had to wait thirty years to receive a settlement from Manitoba. A settlement based on research which, as we have noted, minimised Hydro's obligations (Grand Rapids Study Team, 1990).<sup>3</sup> The Northern Flood Committee was

consistently denied adequate funding and was divided, in 1990, when one community, Split Lake, withdrew to reach its own separate "global settlement" (Northern Flood Committee and Cobb, 1993).<sup>4</sup> The failure to provide a timely response or to create effective Cree controlled institutions exacerbated, as we have noted, the hydro project impacts.

Currie, Coopers and Lybrand, in a report to the Manitoba Government's Project Compensation Review Board, covering the impacts of hydro regulation on non-Status Aboriginal communities, noted:

Social disintegration in the communities affected by flooding is widespread. It was not within our terms of reference to collect and analyze data on alcoholism, family breakdown, suicide and other social ills, but these problems are highlighted by people in each of the nine communities. Many old trappers and fishermen explained to us how, after fifty years, or in some cases, one hundred years, where more than one generation was involved, their entire way of life had been obliterated within a very short period of time. Loss of self-respect, self-confidence and the ability to generate an income is widespread. Less evident are the damages amongst young people where drug and alcohol abuse, early pregnancy and even suicide are beginning to be accepted as "normal" (Currie, Coopers and Lybrand, 1984:4).

Accurate data on indices of social pathology in northern Aboriginal communities are notoriously difficult to access, problems arise with data quality, the lack of consistent definition and the effect of social intervention. Communities with well staffed professional services will uncover more pathology than communities with inadequate provision and poorly trained staff. The post-censal Aboriginal People's Survey provides some data which might be seen as offering a proxy indicator of a community's relative social health or pathology. This data was analyzed for Norway House. Statistics Canada asked respondents whether a number of issues were considered to be a problem. Among the issues probed were suicide, family violence, sexual abuse, drug abuse and alcohol abuse. On each of these measures more Norway House respondents indicated that they considered these issues to be problems than did respondents in a group of identified control communities, not directly impacted by hydro regulation: Island Lake, Poplar River and Oxford House. Norway House respondents were significantly more likely than "all Manitoba aboriginals" to view these issues as problems.

Forty nine percent of Norway House respondents considered suicide a problem compared to 20% at Oxford House and only 10% at Island Lake. Sixty seven per cent of Norway House respondents considered family

violence a problem, 29% of Oxford House respondents and 20% of Poplar River respondents. Seventy two percent considered drug abuse a problem, compared to 36.5% at Oxford House and only 8% at Poplar River (Dansys and Loney, 1994:B-4).

Norway House respondents were also significantly more likely to believe problems could be overcome with improved social services: 28% compared to only 9% for all Manitoba Aboriginals (*ibid.*). The findings in the Aboriginal People's Survey do not speak to the issue of causality, however, taken together with the evidence from the 1993 survey (Loney and Dansys, 1994), they merit further investigation.

## Conclusion

It is possible, in northern Manitoba, to identify two distinct, if inevitably connected, adverse impacts on the communities affected by hydro regulation. The first is the damage, sometimes swift, sometimes more gradual, caused by the project itself. The second is the corrosive effect of the apparent indifference of the project's proponents to the damage they have caused.

In the 18 years since the Northern Flood Agreement was signed there has been little progress toward implementation. Instead the other signatories have sought to endlessly dispute every community claim and to hide behind a barrage of legal procedures. Arbitration, intended as a felicitous mechanism for the resolution of disputes, is instead used as a turnstile through which any complainant is repeatedly required to pass, to secure even glacial movement. Not surprisingly the evidence shows that, by 1991, according to Statistics Canada data, no measurable benefits had yet flowed to the communities (Dansys and Loney, 1994).

At Norway House many respondents gave voice to their belief that Manitoba Hydro, having profoundly damaged the land and the waterways on which the people depended, engaged not in restitution but denial:

Hydro is damaging the land. Manitoba Hydro don't or won't change- he says "I'm not damaging anything" but he is. He is stubborn. He is also supported by "whiteman government". Generally white man likes to see us suffer. I really don't see why or what his philosophy is on this" (Loney and Dansys, 1994:111).

Erikson captures the sociological impact of such official contempt:

...the company draws into its own interior spaces and posts lawyers around its borders like a ring of pickets...Those who manage corporations...generally speak of them as if they were

things, bloodless and inorganic. But victims of accidents rarely forget, even when company officials manage to, that corporate policies reflect the views of human beings. And it can be profoundly painful when the people in charge of a company at the time of a severe mishap deny responsibility, offer no regrets, and crouch out of sight behind that wall of lawyers and legalisms...

To be treated thus bewilders people at first, but when time passes and nothing happens, it can infuriate them...It is rarely a healing anger, however because it leaves people feeling, demeaned, diminished, devalued. It is hard for people to resist the sense of worthlessness that often accompanies trauma when other human beings whose power they once respected and whose good will they once counted on treat them with such icy contempt (Erikson, 1991:464-465).

The evidence of pervasive and escalating social problems in communities impacted by hydro regulation gives resonance to the concept of community trauma. What has happened to many communities must be understood as more than simply the sum of a series of discrete impacts. The cumulative effects of hydro regulation strike at the very core of a community's sense of self-confidence and well-being.

Canada's historical treatment of its Aboriginal peoples rightly invites contemporary condemnation. Amidst a welter of Royal Commissions, land claim settlements and much discussed moves to self-government, it is salutary to remind ourselves that profound injustices to Canada's Aboriginal peoples are not all mired in history.

Addressing the damage caused by hydro regulation will require the commitment of Canada, the province of Manitoba and Manitoba Hydro and a willingness to empower the impacted communities to play the central role in reconstruction. The evidence of the last 19 years is not encouraging.

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### Notes

1. Shkilnyk suggested the concept has some relevance to an understanding of the situation at Grassy Narrows in the early 1980s, cumulatively impacted by relocation and industrial source mercury contamination (Shkilnyk, 1985, for a critical review of the role of relocation, see Usher, 1987).
2. Two questionnaires were administered, the first to 409 residents aged eight and over, the second to 145 residents aged 30-73. The sample size was determined with the intention of producing confidence levels of 95% with margins of error of .05 for the overall population.
3. However inadequate the \$21 million settlement was to the Cree it made their negotiator, Ernie Hobbs, extremely wealthy. Hobbs, a former director of economic development at Indian Affairs, billed more than one million dollars in fees, through his company, and claimed a further personal "contingency" payment of \$700,000 from the settlement.
4. Ernie Hobbs was also the negotiator for this settlement, together with Edmonton lawyer, Bob Roddick, a close friend of the then Deputy Prime Minister Don Mazankowski. Together, Hobbs and Roddick billed more than five million dollars in fees, which were paid by Canada, Manitoba and Manitoba Hydro. The federal negotiator, former Saskatchewan Cabinet Minister, Sid Dutchak, described the fees as "excessive, unreasonable and unnecessary to a large degree" (*Winnipeg Free Press*, 14/02/92). Hobbs had secured a 10 percent cut of the \$47 million settlement, in the agreement he reached with Split Lake, but this was blocked by Ottawa (*Winnipeg Free Press*, 16/05/92).

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