VIII A CASE STUDY IN NORTHERN QUEBEC

A. Indians and the Quévillon Mill - Multiple Use of Resources

1. Introduction

Northern Quebec is in the early stages of economic exploitation by major industry. In 1966, Domtar Pulp and Kraft Paper Ltd., part of Domtar Ltd., opened a pulp mill and a chloralkali plant at Lebel sur Quévillon (see Fig. 4) on the Quévillon Lake (Poirier 1969). The mill is already profoundly affecting both the physical environment and the lives of the Cree Indians who live in the Waswanipi area.

This area is within the boreal coniferous forest zone which stretches across Canada from Labrador to the MacKenzie Delta. This forest goes through a natural cycle of growth, decay, and burning (Bloomberg 1950; Feit 1969). At the present time, in the area around Lebel sur Quévillon, large sections of the forest are in the early stages of development, after the wide-spread fires of the early twentieth century (Feit 1972). It is in this type of young forest that high population densities of moose and beaver are found. These two mammals are extremely important to the livelihood of the Waswanipi Cree Indians who live here, and who live in a "traditional" manner; that is, a great deal of their food still comes from hunting in the bush. The moose, which is hunted mainly during two periods - late January to early February, and late March to early April - is the mainstay of their diet at these times. In addition, beaver is hunted during much of the winter and both are frequently smoked for summer consumption.

Moose accounts for an average of 30% of the total food calories available to a family hunting group during the winter, and beaver accounts for an average of 34% (Feit 1972). Beaver pelts also provide a fairly important cash income (La Rusic

1968). A third important food and income source for the Indians is fish - mainly pike, pickerel, white fish, and to a lesser extent, sturgeon and burbot. The consumption of fish in winter is not as high as that of beaver or moose averaging 6.5% of the food calories available for winter consumption (Feit 1972). In summer, however, fish is the main bush food of the Indians; and, although strictly comparable figures are not available, it is estimated that weekly summer fish consumption in some families averages three to four times winter consumption. Fish has also been an important source of cash income.

To increase the income of the Indians in the area, the Indian Affairs Branch established and financed a fish processing plant in Matagami (Chance 1968). All but the advisory staff were Indians; working schedules were arranged to avoid disruption of the Indian way of life (LaRusic 1968). The plant operated only during the summer, when the Indians were not hunting, and had flexible hours, depending on the fish catch. Indians were also employed to catch the fish. The plant was creating a seasonal income of about $900 to $2,000 per participating fisherman (Feit, personal communication). However, in the summer of 1970, analyses revealed that mercury levels in fish in all of the commercially fished lakes (Matagami, Waswanipi and Gull) were above permissible concentrations, hence fishing was banned and the fish plant closed down as of September 1970. This had severe consequences for the Cree as fishing provided the major cash income for a significant percentage of the population.

The chloralkali plant of the pulp mill discharges mercury into this lake system and into the air. It appears that levels of mercury are extremely high throughout this area; whether the pulp mill is responsible for the ban on fishing is not clear at this time, but the mercury loss from the chloralkali plant does pose a potential health hazard. This aspect of the problem is dealt with in Section VIII B.

2. Forestry and Animal Resources

The impact of the pulp and paper industry is not limited to health matters. The cutting of the forests has major consequences for the population of animals, and therefore for the Indians who hunt and trap them. Moose, one of the most easily affected animals, require access to open spaces in the forest where the animals may browse on shrubs, bushes and saplings. But an accesible mature forest environment is also essential for their shelter and winter survival (Peterson 1955). In regions of heavy snowfall, where snow accumulates to a depth of approximately thirty inches or more, moose concentrate in areas in the forest where the snow cover is least deep (Des Meules 1964, Kelsall and Prescott 1971). In the Waswanipi region moose concentrate primarily in mixed-wood stands on hills or shorelines, exposed to the wind, where the snow is less deep (reports of Waswanipi Indians, cited in Feit 1972). In areas within the region of deep snow where large populations of moose are maintained, it is also necessary that the foraging areas are not too large, for moose will not utilize areas far from cover vegetation (Peterson 1955). Telfer has summarized the preferred habitat of moose in eastern Canada as a mosaic of small stands of varied cover types (Telfer 1970). Forest cutting in the 11,500 square miles of land used by Waswanipi hunters was begun in 1955, on a limited and piecemeal basis, by a variety of local sawmills and pulp cutting sub-contractors; by 1970 less than 100 square miles of forest had been cut on these lands. Domtar has recently been given extensive forest concessions in the region for its Quevillion mill (approximately 7,000 square miles) of which 4,200 square miles of the northern portion of this concession is on lands utilized by Waswanipi Indians. Other companies hold smaller concessions on lands used by the Waswanipi. Cutting for the Domtar mill has not yet had an impact on the welfare of the Indian people. While the mill was being brought into production, total cutting was limited, and it was carried out mainly outside the areas hunted by the Waswanipi. Prior to 1970, twenty-two square miles of forest were being cut per year of which approximately one-quarter was being cut from lands used by the Waswanipi.

This heavy use of the region south of the Waswanipi area appears to be a function of (a) the location of the mill at Quevillion in the southern area of the Domtar concessions, (b) the more extensive road and railway network in the south, and (c) the especially good quality of some of the standsin that area. It has been suggested that the government has allowed the forests in the area to be excessively cropped because parts of this region will be flooded by the James Bay hydroelectric development. "It's no secret there just won't be a continuing supply there after 45 years," a Domtar forestry official is quoted as saying, "the forest is overused" (Financial Post, October 30, 1971).

As the mill reaches full production, requiring over 40 square miles of forest cutting per year, as the road networks are extended, and as the mature forests on the southern sectors of the concession are reduced, cutting of the forests on lands hunted by the Waswanipi will increase and will become a major factor affecting the animal populations of the region, and thus the livelihood of the Indians. The eventual impact of this cutting program will depend on the forestry practices in use. When the mill first went into operation, hardwoods could not be used and cutting was by chain saw and selective for softwoods. Now the mill can utilize limited amounts of hardwoods, enough to make it economically feasible to clear-cut most areas. The heavy machinery in use is expensive to operate and works most efficiently when large areas are clear-cut (Feit, field notes). If this kind of cutting becomes extensive in the areas Waswanipi hunt, it will probably result in a significant decline in moose populations of the areas, as a mosaic of stands of varied cover will eventually be replaced by extensive stands of uniform age.

The economic viability of the Indian population has already been endangered by loss of a source of cash income (the fishery) and may be further threatened by the reduction in hunting potential. Under these circumstances, it will not be possible for the hunting culture of the Indians to co-exist with the mill.

Solutions to these problems do exist. First, the problems must be recognized as such, rather than be misrepresented or ignored. The Indians wish to retain their current economic basis; many of them want to continue their traditional way of life (Feit 1972), a goal which is being discouraged by the various government agencies (Hawthorne 1966), particularly the Indian Affairs Branch (Canada, Department of Indian Affairs and Northern Development 1969). The forest could well be used by both groups - the Indians and Domtar - without any significant loss in productiveness, i.e. the multiple use philosophy.

The basis for this proposition is that a young forest is preferred by both groups. The old trees decay if allowed to remain and continuous cropping of the forest will ensure that the best forestry use is made of the timber. Forest cutting also creates some of the conditions ideally suited for high moose population densities. In New Brunswick, Telfer found that four acres of uncut stands would hypothetically support a moose for one day, if all available balsam fir and deciduous browse were used. In contrast five to seven year old cutovers permitted a fifty-fold increase (Telfer 1970). The critical factor, however, after cutting is not food, but cover, and especially the cover required in the areas of winter concentration of moose populations. The management of a forest in order to maintain high moose population densities requires the careful maintenance of mature stands in the winter concentration areas. These zones cover only a limited percentage of the total area. For example, in the Acadia Forest Experiment Station in New Brunswick, Telfer found the moose late-winter concentration area to cover 22% of the station. It is necessary to locate moose concentration areas, and to treat each as a separate working circle, within which mature stands are maintained at all times by cutting these areas in "patches" (Telfer 1970). Thus, clear-cutting of large areas is not compatible with a multiple use approach.

Beaver populations which depend on vegetation along stream and lake shores should also be protected by maintaining "green strips" on shorelines, as required by the Quebec Wildlife Con-

servation Act. This practice is not being followed at present in the Waswanipi area (Feit, field notes). Ecologically sound forestry practices would also prevent erosion, and destruction of the aquatic envoronment by silting (e.g. Eschner 1963; Haupt and Kidd 1965; see also Section VI. G.)

A careful program of multiple-use forest management would require the cooperation and help of the Waswanipi Indians. They have an intimate knowledge of the region and could indicate moose winter concentration areas, and monitor the impact of pulp cutting activities on the animals. A prerequisite for such a program is a change in the relationship between the Indians and Domtar, and particularly a change in the attitude of the company. The land in question is Crown land, on which Domtar merely holds timber licenses (Poirier 1969); therefore the industry not only has a responsibility to maintain the land in a healthy condition, but also to respect the rights of others to the use of that land. The Indians hunt the region as part of their aboriginal rights which have never been extinguished or abandoned by them; no treaties have been signed in northern Quebec between Indians and the government. Their claims to the land and for use of its resources need to be formally recognized and protected by the appropriate government departments.

3. James Bay Project and Resource Use

The plan announced recently by the Quebec government for hydroelectric development in the James Bay area emphasized the need for multiple resource use planning. The project will open an additional 50,000 square miles of land to industrial development, and probably to the utilization of the forests by the pulp and paper industry.

At present the region is utilized almost exclusively by Indians. Currently they have no voice on the decision making bodies which are planning new resource exploitation, despite their aboriginal claims to the land and its produce. Developing a suitable program of resource management that coordinates the needs of the Indian people, crown corporations, and private industry

requires that Indians are meaningfully engaged in the planning for the use of the resources. Development of the region must begin by respecting the people and the environment of the region. Given the obvious need for extensive research on the long-term ecological and socio-economic consequences of developing the region the aid and assistance of the Indians of the region should be sought by the James Bay Development Corporation as a first step. Throughout recent anthropological study of the human ecology of the Waswanipi region, the Indians have repeatedly provided information and analyses that were not available from scientific studies (Feit 1972). It is clear that the Indian people are experts on the ecology of the region. Their knowledge and expertise cannot easily be duplicated by scientific researchers who see a portion of the region for a brief period of time.

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