Income Security for Cree Hunters

Ecological, Social and Economic Effects

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Preface

and Acknowledgements

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The focus of the study remains on the initial two years of operation of the Income Security Program, but data are provided throughout, and in appendices, on the first dozen years of program operation. It is fortunate that developments in James Bay, and elsewhere in Canada, make this an opportune time to publish an extended study of the effects of the Cree Hunters and Trappers Income Security Program.

Brief Overview

Summary

This "Brief Overview" provides an introduction to the research and to the types of issues and results to be found in the chapters which follow. This is not a full synthesis of research results, which can be found by reading the summaries included in each of the chapters of this monograph.

Research Objectives

The Income Security Program for Cree Hunters and Trappers (ISP) established by Quebec in September 1976, is the first permanently established guaranteed income program in North America, and it has become the starting point for discussions and consideration of other specialized income support programs for Indigenous peoples throughout Canada, and in other countries. The present research examines the impacts of the program during its first two years of operation, it sets these effects within the context of the first dozen years of program operations, and it relates these findings to recent changes and future operation of the program, while keeping in mind the planning for the possible establishment of income support programs elsewhere.

The effects of the program are also assessed in the light of the broad issues facing the future of James Bay Cree society, including the: continuity of Cree culture and related economic practices; social integration or fragmentation of communities; individual initiative and the need for expanded opportunities in subsistence production and wage labor; adequacy of levels of transfer payments; local economic and social development; conservation and management of wildlife resource populations; and expansion of Cree self-governance.

Methodologies

Three types of data were gathered and used in the analysis: (i) Statistical data - e.g. information on number of beneficiaries, ages, family composition, time spent hunting, fishing and trapping, game harvests, seasonal activities and sources of cash income. These data came from unpublished documents of the Cree Hunters and Trappers Income Security Board (ISP Board) and those of the Cree Regional Authority, as well as from detailed data extracted from the beneficiary files of the ISP Board. (ii) ISP beneficiaries' and administrators' as well as Cree leaders' views as collected in conversations, interviews and meetings in all communities with Cree individuals involved and concerned with ISP. (iii) Direct observation - data accumulated by direct observation in two communities and in several hunting camps

in order to better understand, check and expand the interpretation of the previous two types of information. Data are thus presented from all levels, on region-wide characteristics of the ISP program and its impacts, on community-level responses and variations, and at the level of bush-camp practices and initiatives.

Outline of Topics Examined

The range of issues we address can for convenience be separated into two groups, the immediate and longer-term topics.

The immediate and short-term issues examined included:

1. Program's impact on maintenance of Cree attitudes toward traditional Cree culture and community-wide social relations;
2. Changes in social organization - in the composition and size of bush camps and settlements throughout annual cycle;
3. Ability of the program to recruit "former" hunters and "new" hunters to intensive hunting;
4. Commitment by beneficiaries' of additional time devoted to bush living in response to the incentive structure of per diem payments;
5. Implications of program for Cree participation in the local and regional wage economy;
6. Initial impact of ISP on patterns of consumerism;
7. Effect of ISP on recruitment and preparation of young Cree for the bush activities;
8. Reasons for dropping out of those who quit the program after the first year or two;
9. Changes in the intensity and composition of the wildlife harvests, possibly occasioned by - i) economic security of ISP, ii) presence of additional imported foodstuffs in camps, iii) changes in equipment used for harvesting, iv) decreased relative importance of cash income from furs; and,
10. Impact on wildlife populations of any changes in utilization patterns.

The longer-term and general issues, for which we present both baseline data and an analysis of the ISP's impacts and implications, included:

1. Possible implications for social, cultural fragmentation based on differential economic adaptation of different segments of the communities i.e. bush life vs. employment income from wage economy vs. welfare subsistence;
2. ISP's potential impact on wage economy participation by Cree in the long term;
3. ISP's potential impact on levels of transfer payment to Cree communities;
4. Longer-term trends in patterns of consumerism;
5. Possible effects of income security on productivity, initiative;
6. Responsiveness of ISP to people's perception of how the program should serve them;
7. Implications for the long-term viability of the natural resource base;
8. The potential of the resource base to support a growing Cree population.

Some Main Conclusions

In response to a series of hypotheses set out in Chapter 1, we found that in general:

1. The Income Security Program lead to a higher participation per year in intensive harvesting and longer average stays in the bush;
2. The Cree continued their participation in the hunting economy in "traditional" social forms, but the incorporation of more people and more technology caused certain adjustments in pre-existing social relations;
3. Substantial increases occurred in the amount of industrially manufactured items imported to the bush, with increased ability to pay for them; and the items purchased were primarily those required to increase the efficiency and security of subsistence production;
4. Increased access to purchased transport altered to some degree the distribution of people to resources, but distant and relatively productive hunting grounds were not systematically used with higher frequency than in recent years, in part because ISP did not equalize differentials in travel costs;
5. That hunters continue to produce bush food harvests at levels above their own families needs, and they continue to exchange a high percentage of their bush food through wide social networks throughout the Cree communities, and thereby reaffirm and recreate the extended social relations that tie families into functioning community life;
6. That access to hunting lands has not become more restricted, and that social responsibility and generosity continue to characterize social access to land, although under tighter constraints given the increased numbers of hunters and time in the bush camps;
7. Increased numbers of harvesters, increased time in the bush camps, and improved technology lead to immediate increases in the harvests of many species in the first year of ISP operation, but explicit concerns on the part of hunters for the sustainability of some of the new harvest levels led to a reduction of the harvest levels of all intensively harvested species to pre-ISP levels in the following two years; whereas harvests of under utilized species remained at higher levels;
8. Income Security benefits did not encourage reduced participation in the wage economy where jobs were available in communities, but beneficiaries were more selective in taking up opportunities for wage employment and responses varied in different communities;
9. Increased cash from Income Security benefits has become a major source of cash flow into Cree communities, but they directly stimulated only very specific and limited local economic development;
10. Confidence in the viability and future of harvesting as a way of life was enhanced locally, and this lead to higher number of young in particular entering harvesting as a primary occupation;
11. ISP serves a relatively stable and replenishing population of intensive hunters, who are a significant but decreasing percentage of the rapidly growing total Cree population;
12. The potential exists for some specific types of expanded income-supported hunting in the Cree communities, because ISP altered the number of people who could live off the land by enhancing the use of under utilized wildlife resources;

13. Strong commitment and close cooperation between both Cree and Quebec representatives involved in ISP led to a program that generally has responded well to the needs of its beneficiaries;
14. Many of the program modifications made over the years, and especially in the major revisions to the program made through the 1988 Complementary Agreement between Quebec and the Cree and its implementing legislation, have responded to the concerns expressed by beneficiaries as early as 1977 and 1978; but several of these concerns have still not been dealt with, and have met resistance with Quebec government arenas that gives the impression of being motivated by other than administrative or financial considerations;
15. The continuing development of other income security programs for the Cree needs to be considered for the longer-term, and ISP needs to be more fully included in socio-economic planning being done for the future of the Cree people.

Bref aperçu

Résumé

Ce "bref aperçu" permet de se faire une idée des recherches, des types de problèmes et des résultats que l'on trouvera dans les chapitres qui suivent. Il ne s'agit pas d'une synthèse complète des résultats de la recherche pour laquelle il faut lire les résumés qui figurent dans chacun des chapitres de cette monographie.

Objectifs de recherche

Le Programme de sécurité du revenu des chasseurs et piégeurs cris (PSR) instauré par le Québec en septembre 1976 est le premier programme de revenu garanti créé de façon permanente en Amérique du Nord et il est devenu un point de référence pour l'analyse et la planification d'autres programmes spécialisés de sécurité du revenu pour les peuples autochtones du Canada et d'autres pays. Le présent projet de recherche analyse les incidences que ce programme a eues au cours de ses deux premières années, il les situe dans le cadre des douze premières années de fonctionnement de ce type de programme et il établit une corrélation entre ces résultats et les récents changements intervenus et le fonctionnement futur du programme, tout en tenant compte de la planification et de la création éventuelle de programmes de sécurité du revenu ailleurs.

Les effets de ce programme sont également évalués à la lumière des grands problèmes qui se rattachent à l'avenir de la société crie de la Baie James, notamment : la survie de la culture crie et des pratiques économiques qui s'y rattachent; l'intégration ou le morcellement social des communautés; les initiatives individuelles et la nécessité de possibilités plus nombreuses d'une production de subsistance et d'une main-d'oeuvre salariée; la suffisance des niveaux de paiements de transfert; le développement économique et social local; la conservation et la gestion des ressources fauniques et l'élargissement de l'auto-détermination des Cris.

Méthodologies

Trois types de données ont été rassemblées et utilisées dans l'analyse : i) des données statistiques - par exemple nombre de bénéficiaires, âge, composition de la famille, temps passé à chasser, à pêcher et à piéger, récoltes de gibier, activités saisonnières et sources de revenu en espèces. Ces données sont extraites de documents non publiés de l'Office de la sécurité du revenu des chasseurs et piégeurs cris ainsi que de l'administration régionale crie, sans compter d'autres données détaillées extraites des fichiers des

bénéficiaires de l'Office de sécurité du revenu. ii) les points de vue des bénéficiaires et des administrateurs du Programme de sécurité du revenu ainsi que des dirigeants cris recueillis dans le cadre de conversations, d'entrevues et de réunions dans toutes les communautés avec des Cris participant au PSR et préoccupés par lui. iii) des observations directes - données recueillies par observations directes dans deux communautés et dans plusieurs camps de chasse afin de mieux comprendre, vérifier et élargir l'interprétation des deux types de données précédentes. Les données présentées viennent donc de tous les paliers, portent sur les caractéristiques régionales du Programme de sécurité du revenu et ses effets, sur les réponses et les écarts communautaires, sans compter les pratiques et les initiatives des camps de brousse.

Aperçu des sujets étudiés

L'éventail des problèmes que nous étudions peut être divisé en deux groupes, les sujets immédiats et les sujets à plus long terme.

Les problèmes immédiats et à court terme analysés englobent notamment :

1. l'impact du programme sur le maintien des attitudes des Cris à l'égard de la culture traditionnelle crie et des relations sociales au sein de la communauté;
2. les changements d'organisation sociale - dans la composition et la taille des camps de brousse et des lieux de peuplement tout au long du cycle annuel;
3. l'aptitude du programme à recruter d'"anciens" chasseurs et de "nouveaux" chasseurs pour la chasse intensive;
4. l'engagement pris par les bénéficiaires de passer plus de temps à vivre dans la brousse pour répondre à la structure incitative des paiements quotidiens;
5. les répercussions du programme sur la participation des Cris à l'économie salariale locale et régionale;
6. l'impact initial du PSR sur les modes de consommation;
7. l'effet du PSR sur le recrutement et la préparation des jeunes cris aux activités dans la brousse;
8. les motifs d'abandon de ceux qui délaissent le programme après un an ou deux;
9. les changements d'intensité et de composition dans les récoltes, causés sans doute par i) la sécurité économique du PSR; ii) la présence d'autres aliments importés dans les camps; iii) les changements d'équipements utilisés pour la récolte; iv) la baisse de l'importance relative des revenus provenant des fourrures; et
10. l'impact sur la faune du moindre changement dans les modes d'utilisation.

Les problèmes à plus long terme et d'ordre général au sujet desquels nous présentons des données de base et une analyse des incidences et des répercussions du PSR englobent :

1. les répercussions possibles d'un morcellement social et culturel basé sur l'adaptation économique différentielle de différents segments des communautés, c'est-à-dire vie en brousse contre revenu d'emploi provenant de l'économie salariale contre subsistance de l'aide sociale;
2. l'impact potentiel du PSR sur la participation des Cris à l'économie salariale à long terme;
3. l'impact potentiel du PSR sur le niveau des paiements de transfert aux communautés cris;
4. l'évolution à plus long terme des modes de consommation;
5. les effets possibles de la sécurité du revenu sur la productivité, l'initiative;6. la flexibilité du PSR face à la perception qu'ont les gens de la façon dont le programme doit les servir;
7. les répercussions pour la viabilité à long terme de la base de ressources naturelles;
8. la capacité de la base de ressources à subvenir à une population crie de plus en plus nombreuse.

Quelques grandes conclusions

Compte tenu de la série d'hypothèses que nous avons formulées au chapitre 1, nous avons constaté qu'en général :

1. le Programme de sécurité du revenu entraînait une plus forte participation annuelle à la récolte intensive et à des séjours moyens plus longs dans la brousse;
2. les Cris continuent de participer à l'économie de chasse sous ses formes sociales traditionnelles, même si l'incorporation d'un plus grand nombre de gens et de nouvelles technologies a entraîné certains ajustements dans les relations sociales préexistantes;
3. il y a une augmentation appréciable de la quantité de biens manufacturés importés dans la brousse, compte tenu de la plus grande facilité de les payer; quant aux biens acquis, ils servent essentiellement à accroître l'efficacité et la sécurité de la production de subsistance;
4. la plus grande facilité d'accès à des moyens de transport payants a modifié dans une certaine mesure la distribution des gens par rapport aux ressources, mais les terrains de chasse éloignés et relativement productifs n'ont pas été systématiquement exploités avec plus de fréquence que ces dernières années, en partie parce que le PSR ne permet pas d'égaliser les coûts de déplacement différentiels;
5. les chasseurs ont continué de produire des récoltes alimentaires de brousse bien supérieures aux besoins de leurs familles et ils continuent d'échanger un fort pourcentage de ses récoltes par le truchement d'importants réseaux sociaux dans les communautés cries, réaffirmant par là et recréant des relations sociales élargies qui lient les familles à une vie communautaire fonctionnelle;

6. l'accès aux terrains de chasse n'a pas été restreint et la responsabilité sociale et la générosité continuent de caractériser l'accès social à la terre, en dépit de certaines contraintes dues à l'augmentation du nombre de chasseurs et du temps passé dans les camps de brousse;
7. l'augmentation du nombre de chasseurs, du temps passé dans les camps de brousse et l'amélioration des techniques ont entraîné une hausse immédiate des récoltes de quantités d'espèces durant la première année de fonctionnement du PSR, même si les chasseurs s'inquiètent explicitement de la durabilité de certains des nouveaux niveaux de chasse qui risquent de les ramener aux niveaux pré-PSR au cours des deux années suivantes alors que les récoltes d'espèces sous-utilisées sont demeurées à des niveaux plus élevés;
8. les prestations de sécurité du revenu n'incitent pas à moins participer à l'économie salariale lorsqu'il existe des emplois dans les communautés, mais les bénéficiaires sont plus sélectifs pour ce qui est de choisir un emploi salarié et les réponses varient selon la communauté;
9. l'augmentation des prestations de sécurité du revenu a injecté de l'argent nouveau dans les communautés cries, mais cela n'a stimulé directement le développement économique que dans certains secteurs très spécifiques et limités;
10. la confiance dans la rentabilité et l'avenir de la récolte comme mode de vie a été renforcée localement, ce qui a incité un plus grand nombre de jeunes en particulier à se lancer dans la récolte comme profession principale;
11. le PSR vient en aide à une population relativement stable de chasseurs intensifs, qui représentent un pourcentage important mais en baisse de la population crie, laquelle connaît un essor rapide;
12. il existe des possibilités de chasse avec sécurité du revenu dans les communautés cries, car le PSR a entraîné une modification dans le nombre de gens qui peuvent vivre de la terre en augmentant l'exploitation des ressources fauniques sous-utilisées;
13. le profond engagement et la coopération étroite entre les Cris et les représentants du Québec participant au PSR ont conduit à un programme qui en général répond bien aux besoins de ses bénéficiaires;
14. bon nombre des modifications apportées au programme au fil des ans, surtout par l'Accord complémentaire de 1988 conclu entre le Québec et les Cris et sa législation de mise en oeuvre, ont calmé les préoccupations exprimées par les bénéficiaires dès 1977 et 1978; mais certaines de ces préoccupations demeurent et se heurtent à la résistance du gouvernement du Québec qui donne l'impression d'être motivé par d'autres paramètres administratifs ou financiers;
15. le développement suivi d'autres programmes de sécurité du revenu pour les Cris doit être envisagé à plus long terme, et il faut davantage intégrer le PSR dans la planification socio-économique de l'avenir des Cris.

Chapter 1

Introduction

I. Preliminaries to the Introduction

The Income Security Program for Cree Hunters and Trappers is one of a very few guaranteed income projects to be implemented in North America, and the first to be established on a permanent basis. It is not a "guaranteed" income program in the usual sense of the term, however. First, it provides income security only for families who are engaged intensively in subsistence production, and within certain limits provides more benefits in proportion to increased engagement in subsistence production. Second, it is one benefit established through legal and political process in the course of negotiations between a native ethnic minority and an industrial nation-state, over aboriginal claims and rights. The viability of the Program depends on continued access by Cree hunters to the land and the wildlife resources of the James Bay region, recognized as a right by the James Bay and Northern Quebec Agreement, and subsequent legislation.

The Income Security Program is, therefore, of particular interest as an example of how an income support program can be used to fortify the economic base of rural communities where subsistence production is an important component of the economy. The Cree case will be of special concern to other native communities in Quebec, Canada, or elsewhere, for whom hunting is key to the local economy, and for whom maintenance of the subsistence sector is of particular importance in political, social and cultural terms.

It is especially hoped that the present study will be useful to the James Bay Cree, their representatives, and to the Government of Quebec, in ensuring that the Program achieves its stated objective, which in general terms is spelled out in the James Bay and Northern Quebec Agreement (Section 30.1.8):

> The program shall ensure that hunting, fishing and trapping shall constitute a viable way of life for the Cree people, and that individual Crees who elect to pursue such a way of life shall be guaranteed a measure of economic security consistent with conditions prevailing from time to time. (Anon., 1975)

II. Study Objectives

The present study assesses implications to date of the Income Security Program for a range of variables related to the economic, social, cultural and ecological

viability of Cree subsistence life, and the Program's impact on participation in the cash economy.

Subsistence among Cree hunters in northern Quebec involves production by nuclear or extended family households (or collectivities of households, depending on the task at hand) for consumption by the household as well as for distribution to more extended networks of kin and friends. The division of labor occurs predominantly along lines of age and sex; in addition, for certain key productive activities the distinction between hunting group leader and other hunters comes into play. Cree do not consider land or subsistence resources to be private property. However, certain senior hunters, for whom the English term is "tallymen", are custodians of recognized local populations of beaver and territorially associated species, and these men are generally the leaders of hunting groups which exploit local animal populations. Cree ideology reaffirms the value of co-operation in various productive tasks, the authority of hunting group leaders, and the egalitarian sharing and reciprocal exchange of products.

Subsistence production is articulated with, and in some respects heavily dependent upon, institutions of economy and state in wider North American society. The points of articulation include:

1. Employment of Cree in industrial and commercial sectors of the capitalist economy, both seasonally and permanently. More recently, some Crees' participation in the labor market has extended into social service delivery and public administration at local, regional and national levels.
2. The role of Cree trappers as commodity producers of furs for an international market, an activity supplementary to hunting for subsistence.
3. The consumption of goods and services produced in the industrial sphere - hunting, trapping and fishing equipment and some foodstuffs, air transport and in recent years certain "luxury" commodities not directly related to subsistence production.
4. The receipt of federal and provincial transfer payments in several forms - welfare payments, community improvement programs, Manpower training and upgrading courses funded by the state, etc. The Income Security Program is the most recent innovation in transfer payments which became major components of the cash flows in Cree communities in the 1940's.
5. Cree hunters, through local and regional political and administrative structures, have linkages to central legal and political institutions of the state which are fundamental to maintaining the economic and ecological conditions of the subsistence economy.

Our concern is to analyze what effect the Income Security Program has for subsistence production, with reference to its internal structure of social relations, its points of articulation with the external economy and state, and its reproduction. Specifically, the present study examines the Program's impacts on:

1. demographic variables of participation in subsistence production as a way of life;
2. social relations of subsistence production, and social relations in the settlement;
3. patterns of consumerism, technological change, and their impact on the subsistence sector;
4. patterns and levels of domestic productivity in the subsistence sector;
5. ecological consequences of changes in demography and productivity;

6. participation in the wage economy;
7. welfare recipiency;
8. local economic development;
9. health and education;
10. policy and administrative issues of ISP's operation.

The aim has been to provide a clear picture of the early impacts of the Program's implementation relative to conditions prior to implementation, as well as some reflection on the on-going effects of the Program as interpreted from annual data on program performance through its first decade. The present research provides a baseline of data and interpretation against which longer-term research needs may be identified and future research results assessed for the Quebec Cree Program in particular; and which will help to inform thinking about the potential of income support programs in fortifying the subsistence economies of rural communities in general.

III. Methodology

The central hypotheses tested for the first-year impacts of ISP were the following:

1. That the Income Security Program would lead to a higher participation per year in intensive harvesting and longer average stays in the bush.
2. That Cree would continue their participation in the hunting economy in "traditional" social forms, but that the incorporation of more people and more technology would cause certain adjustments in pre-existing social relations.
3. That substantial increases would occur in the amount of industrially manufactured items imported to the bush, with increased ability to pay for them; and that the items purchased would be primarily those required to increase the efficiency and security of subsistence production.
4. That increased access to purchased transport would alter to some degree the distribution of people to resources such that distant but relatively productive hunting grounds would be used with higher frequency than in recent years.
5. That either Cree wildlife management practices, the presence of under-utilized animal populations in certain areas, and an appropriate distribution of hunters to resources would prevent over-exploitation of animal resources from the standpoint of long-term ecological maintenance; or, alternatively, increased population and technology would lead to over-exploitation from the standpoint of ecological maintenance.
6. That Income Security benefits would encourage reduced participation in the wage economy.
7. That increased cash flows from Income Security benefits would stimulate local economic development or, alternatively, stimulate only consumerism in the midst of regional underdevelopment.
8. That confidence in the viability and future of harvesting as a way of life would be enhanced locally, and that this would lead to higher proportions of the young in particular entering harvesting as a primary occupation.

Beneficiaries' perceptions of policy and administrative arrangements were also sought extensively.

With the present research we have attempted to achieve an optimum reconciliation of the need for analysis which is capable of generating statements valid at the regional level, with the need for the refinement and depth of interpretation possible through individual community case study.

We have, therefore, relied heavily in the first instance on the regional-level data available from four primary sources: the Income Security Board; The James Bay and Northern Quebec Native Harvesting Research Committee; various other administrative agencies of the Grand Council of the Crees (of Quebec), the Government of Quebec, the Government of Canada; and independent community studies. The first three provide regional statistical data both pre-dating and post-dating the implementation of ISP, while the last source involved ethnographic and social analysis which helped sensitize the study to local variations within the Cree region.

In the second instance, we have generated new community-specific data which correlate with economic and social processes. The processes were often discovered in the course of interviews and observations in the communities, or suggested by regional statistics. At the community level, therefore, we combined quantitative and qualitative techniques. Some interviews were held in each of the seven Cree settlements as to the general economic and social effects of the program. For economy's sake, however, it was essential to focus our inquiry on two cases in particular.

The researchers chose one coastal and one inland community for purposes of the case studies, since there are differences in adaptation in the two areas. Taken together, the two communities represent a fairly broad spectrum of the social, economic and ecological variation present in James Bay Cree territory.[1] In Wemindji, the coastal community, the senior researcher spent several months in both the settlement and in hunting, fishing and trapping camps, constructing a pre-ISP baseline of data with the aid of informants and local records, in addition to monitoring effects of the Program in its first year. In Waswanipi, the inland community, the principal investigator employed previous years of research he had already conducted in drawing comparisons with further data he obtained locally under the present research. Further comments on methodology and field methods employed locally accompany the case study material.

Whenever possible, we summarized the available statistical data for several pre-ISP years, in order to arrive at a baseline which takes into account the idiosyncrasies of any one year. For post-implementation years, our data are most detailed for the first year to three years, but the standardized data in Income Security Board reports allow us to view some dimensions of program performance over a longer period. For both regional and community-level statistical data, we have sought full coverage of the population with respect to critical variables, in order to eliminate the difficulties of projecting from small samples. The Income Security Board regional data on person-days in harvesting, employment periods and incomes, and capital purchases, as well as most of the additional Wemindji data and some of the additional Waswanipi and Mistassini data represent full coverage. The James Bay and Northern Quebec Native Harvesting Research Committee (NHR) data involve

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1. Some additional comparative material was also gathered in the field for Mistassini, a large inland community, to complement certain aspects of the regional-level discussions.

realized random samples of from 20 to 60 percent of potential adult hunters by community, for a total sample of 30 percent for the region for 1972-3 to 1974-5. For 1975-6 to 1978-9, NHR attempted complete coverage in each community, and achieved from 49 to 96 percent coverage, varying by community and year, with achieved regional coverage that varied from 74 to 78 percent for the four years. While there are difficulties with one community, Wemindji, due to a low realized NHR sample for years prior to 1975-6, our case study research has provided comparative statistics. At the regional level, however, NHR results provide a reliable statistical basis at a depth of several years for both person-days in key harvesting activities and total harvests.[2]

The Income Security Board kindly gave us access to their files to assemble comparable data for 1975-6 (the last year of hunting before ISP was implemented) and 1976-77 (the first year of implementation). ISP benefits were paid retroactive to November 11, 1975 (the date of signing of the JBNQA), which meant that the Board had assembled data for that portion of 1975-6, as well as for the first year of the Program's operation. Patterns of participation in hunting, wage participation, etc., would only have been impacted by the Program beginning in 1976-7, however, which allowed us to present "before" and "after" snapshots of the pivotal transition from hunting without ISP to hunting with ISP. Statistics were manually compiled so that similar periods of 1975-6 and 1976-7 could be compared directly. Because the Board later adopted its own definitions and guidelines for purposes of statistical reporting in its annual reports, the reader may note some discrepancies between tables generated from our manual compilations, and tables drawn from the annual reports of the Board. The latter provide consistent data for assessing longer-term trends from 1976-7 onward. Data from the ISP Board annual reports covering a dozen years of data on program operations, through 1986-7, are presented in the tables in Appendix 1, and they are referred to where appropriate throughout this report.

Quantitative data plus the observations of community members obtained through open-ended interviews were employed in testing the hypotheses listed earlier. Participation in harvesting was measured in terms of person-weeks in harvesting and demographic characteristics of the harvesting population. Impacts on social relations were identified through interviews and direct observations in settlements and in hunting camps, which allowed us to elaborate on the significance of harvest participation statistics. Technological changes and consumerism were addressed through data from interviews with hunters at each settlement and, for Wemindji, data on purchases at local retail outlets. Data on seasonal wildlife harvests as well as observations locally were used in assessing impacts on domestic productivity, while person-weeks in employment and employment incomes were measures for checking effects on wage economy participation. Combined demographic, harvesting, and resource capability data were employed in measuring ecological effects on key resources, with particular attention to the comments of experienced hunters and community leaders. Increased cash flows and expenditures, and increased domestic product, provide some indication of how ISP contributes to local economic development.

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2. Descriptions of NHR data collection and processing, projection methods and consistency checks are available in James Bay and Northern Quebec Native Harvesting Research Committee publications, often referred to in this report as JBNQNHRC; see especially JBNQNHRC, 1982.

IV. The Income Security Program for Cree Hunters and Trappers - A General Description

(1) The Income Security Program and the James Bay Agreement

In negotiations leading up to the signing of the James Bay and Northern Quebec Agreement (JBNQA), the Income Security Program was one component in a strategy to maintain harvesting as a permanent and viable sector of the Cree economy. It was recognized that balanced development for the Cree region would involve simultaneous attempts to fortify the subsistence as well as wage sectors of the economy. Guarantees were sought which would offset pressures which were already contributing, or which could contribute in the future, to attrition of subsistence activity.

On the one hand, the Cree sought to provide strengthened conditions for those middle-aged and older hunters for whom hunting was the only available or acceptable economic alternative. On the other hand, it was necessary to provide economic assistance which would attract some portion of younger Cree into sustained and intensive involvement in subsistence production.

The Income Security Program directs cash benefits to those among the Cree population whose interests in and dependence on local resources mean that they will be most seriously affected by the "development" initiatives of non-Natives. Hunters' land and subsistence resources have already begun to incur the negative impacts of hydro-electric and associated development, and will undergo continuing impacts of expanded activity in mining, forestry and tourism.

The Program is a concrete demonstration, particularly for hunting Cree, that the JBNQA represents tangible benefits upheld in good faith. Sections of the Agreement which provide guarantees of a resource base adequate to the continuing needs of a harvesting population are more meaningful if parallel measures address the cash economic needs of the harvesting population.

In important respects, the Income Security Program differs from conventional transfer payments, or guaranteed income plans that might be designed and implemented by central governments in the future. First, the form and level of payments are established in law and are not legally subject to unilateral changes by the Quebec government. All Cree individuals who meet the eligibility criteria have permanent right of access to benefits of the program as defined in the Agreement. Second, program policy and administration functions are conducted by a joint Cree and Quebec Board, with equal representation from both parties; though certain powers reside with Quebec with respect to modifications which fall beyond the terms of the Agreement.

(2) Eligibility for the Program and Program Participation

Heads of families and single adult individuals eighteen years of age and older were eligible to be enrolled for program benefits for the year 1976-7 provided that they:

a) exercised harvesting activities as a way of life, or
b) intended to exercise such activities as a way of life (Anon., 1975, paragraph 30.6.6).

The second provision allowed individuals who wish to commence, or to return to harvesting as a way of life, to benefit from the program immediately.

In fact, 708 "beneficiary unit heads" joined ISP for 1976-7 who were eligible because they already were practicing harvesting as a primary way of life.[3] An additional 304 joined the program on the strength of their intention to practice harvesting as a primary way of life (MAS, 1977:7). As expected, however, the beneficiary population underwent a "shake-down" period. Of the 1,012 beneficiary units initially on the program, 3% dropped out of intensive harvesting before the end of 1976-7. Enrollment for the year 1977-8 dropped an additional 9%, with 890 beneficiary units on ISP.[4]

In 1976-7 and subsequent years, continued eligibility for the program was generally contingent on the head of the beneficiary unit each year spending at least 120 days in harvesting and related activities, at least 90 of which must be away from the settlement.[5] To join the program in any year since the first year of implementation, a declaration of intention to practice harvesting as a way of life is not sufficient to establish eligibility; the prospective head of a beneficiary unit who has not meet eligibility requirements in the year previous must normally establish or re-establish eligibility by spending the 120 days in harvesting and related activities during one year without receiving ISP benefits.

In fact, ISP beneficiaries generally spend considerably in excess of the minimum eligibility period in harvesting and related activities, and ISP had an immediate effect of increasing harvesting periods. About 80% of all beneficiary unit heads had more than 150 days in the bush in 1976-7, and over 50% had more than 200 days in the bush in 1976-7 (Income Security Board). Program drop-out rates and shifts in person-days in harvesting are discussed in detail in later sections of the present report.

(3) The Mode of Disbursement and Level of ISP Benefits

ISP beneficiaries in 1976-7 received approximately $5,000,000 in benefits, for a fiscal year running from July 1 to June 30.[6] By 1986-7, ISP benefits payments totaled about $12,000,000 per year (Appendix 1, Table A1-20). The benefits are paid in four installments by local administrators to each head of a beneficiary unit. Installments are received by the hunters on our about September 1, January 2, April 1, and following a July interview which allows for any final adjustment in the calculation of annual benefits. These times of the year were calculated to coincide with presence in the settlement and periods of cash demand of hunters.

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3. The "beneficiary unit" is an administrative unit which includes a family head, spouse and dependent children in the household, as consistent with Cree custom; or single adults with and without children.

4. Income Security Board. A comparison with James Bay and Northern Quebec Agreement Enrollment Commission lists indicates that 56% (3,690 out of 7,046) of the Cree eligible for the benefits of the Agreement were in ISP beneficiary units in 1976-7. This represents 43% of eligible family heads or single adults, since the harvesting families on average are larger.

5. A detailed description of eligibility requirements is included in Section 30.2 of the James Bay and Northern Quebec Agreement (see Appendix 2).

6. About $2,000,000 were also paid out in benefits retroactive to the November 11, 1975 signing of the Agreement, to hunters who had spent over 120 days in harvesting in 1975-6.

The calculation of benefits includes "per diem" and "basic" amounts. A beneficiary unit received benefits in 1976-7 which included (a) a per diem payment of $13.12 for each day spent in harvesting activities by the head of the beneficiary unit plus $13.12 for each day spent in harvesting activities by the consort; and (b) a "basic" amount which was equivalent to:

for the b.u. head	$1,112
for the consort	1,112
for the family unit	445
for each child	445

The basic amount is reduced by an amount equivalent to 40% of the ISP per diem payments, wage or self-employment income, unemployment insurance benefits, workmen's compensation, manpower training allowances, and fur income in excess of (in 1976-7) $278 each for head and consort, if any.[7] A deduction equal to 100% of Old Age Pension benefits is made against the basic. Per diem benefits are not subject to the reduction rates, with the exception of *welfare payments*, which are deducted at a rate of 100% from ISP *total* benefits, since the two forms of transfer payment are mutually exclusive.

In practice, per diem benefits account for approximately three-fourths of all benefits paid under ISP. The basic amount supplement is an important portion of total benefits only for larger families and beneficiary units closer to the minimum 90 days in the bush, or with relatively little employment income.

Benefits, then, are scaled both to family size and to intensity of involvement in harvesting activities, and are reduced in relation to most forms of income from other sources. In 1976-7, average payments for the year ranged from over $2,000 for single adults without children to about $7,500 for couples with seven children or more, for an average overall of $4,460 per beneficiary unit (Income Security Board).[8]

Detailed description and analysis of the structure of the beneficiary population and its engagement in harvesting and non-harvesting activities, in relation to ISP benefits levels, are undertaken in the regional analysis of the report which follows.

V. An Introduction to Harvesting Patterns in the James Bay Cree Economy

Differences in geographic location, key harvested species, employment availability and social traditions have produced some variations in the harvesting patterns of Cree in different James Bay communities. For almost all intensively-harvesting Cree, winter hunting-trapping is the activity which involves the most extended period of intensive harvesting, and generally makes the greatest contribution to the annual harvest. For the coastal communities, however, the contribution of fall and

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7. Amounts indicated for per diem, basic and deduction calculations are indexed annually to the cost of living. By 1986-7 the per diem amount was $29.44, and the guaranteed amounts per adult, per family, and per child were $2,492, $999 and $999 respectively. The fur deduction exclusion was $625.

8. La Rusic (1978) provides a detailed comparison of the ISP benefits structure with those of guaranteed income and income support experiments in the U.S. and Manitoba, as well as with existing welfare programs in Quebec. The effect of ISP on the latter in the Cree region is also treated.

spring waterfowl migrations along the margin of James Bay approaches winter harvesting in economic importance, although waterfowl hunting involves shorter periods of intensive harvesting. For a portion of the coastal settlement population, the "coasters", fishing also assumes a central role in the subsistence economy, and is frequently associated with a more settlement-based form of harvesting.[9]

In the contemporary hunting economy, hunting families from inland settlements leave for their traplines between August and October. Depending largely on the distance to their grounds and on local custom, they may or may not make a trip to their settlement for a short period at Christmas. Families may finish work on their grounds any time between March and June, when they return to the settlement. Several then establish summer fishing camps on lakes nearer the settlement, or set nets from the settlement during the summer. Many family heads obtain casual employment for anywhere from a few days to a few months in summer, before returning to traplines in the fall.

At coastal settlements, most hunters do some fall goose hunting before going to winter hunting locations. People with inland traplines, however, often leave for inland camps before the goose immigration is completed, and their participation in the fall goose hunt is frequently more limited than that of hunters on coastal traplines. Winter hunting and trapping follows almost immediately on completion of the fall hunt, sometimes with a break at Christmas. Most hunters, both from inland and coastal traplines, return in March or early April to the settlement, and from there disperse along the coast to spring goose-hunting camps. Inland hunters occasionally come down to the coast only in late May or June, after break-up. Prior to the use of chartered aircraft, however, relatively few inlanders returned to the coast for the spring goose hunt. In summer, families based both in summer fishing camps and in the settlements set nets along the coast of James Bay, and often obtain seasonal employment.

Geese and other waterfowl from the fall and spring hunts are usually the single largest contributors of foodweight to the annual harvest in coastal communities; while moose, primarily from the winter hunt, occupy this position for the inland communities, and also contribute heavily at the southernmost coastal settlement, Waskaganish. For the northernmost coastal settlement, Whapmagoostui, and some northern Mistassini traplines, winter-killed caribou is a key resource. Beaver harvested in winter are second to moose in their contribution to global harvested foodweights at the inland communities, Waswanipi and Mistassini; while for two of the communities at intermediary latitudes on the coast, Eastmain and Wemindji, they are next to geese. Beaver population density declines for the two northernmost communities, Chisasibi and Whapmagoostui, where fish foodweights are high, exceeded only by waterfowl (as well as caribou at Whapmagoostui). Fish also account for about a fifth of the overall harvests at Wemindji and Eastmain, but dropped sharply from similar levels to about 5% or less of total foodweight for Waskaganish and the inland settlements in 1975-6.[10] Fish are caught at most times of the year both in coastal waters and inland lakes. Winter-killed small game such as hare, grouse, ptarmigan and porcupine account for under ten percent of total

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9. Inland communities include Mistassini, Waswanipi, and Nemaska. Coastal communities include Waskaganish, Eastmain, Wemindji, Chisasibi and Whapmagoostui.

10. This drop is associated with the problem of mercury levels in fish.

foodweight, and black bear for five percent or less, depending on community and year. Seals taken mainly in the fall and spring at more northerly coastal communities generally account for lower percentages of the harvest than small game. Fine furs in all communities, and polar bears in the more northern coastal communities each account for less than two percent of total community harvested foodweights (JBNQNHRC, 1982).

The availability of permanent employment in some settlements is greater than at others, and is associated with a distinctive pattern with respect to the frequency and location of harvesting of the employed. Waterfowl hunting and fishing, which can be engaged in for shorter periods, are more central in harvesting activities of an employed coastal resident than is winter hunting. Employed hunters at inland settlements similarly tend to hunt areas within close range of the settlement. Where employment is relatively more available, hunters often intersperse years of intensive hunting with years of more or less full-time employment.

VI. The Contribution of Harvesting to James Bay Cree Society

Hunting, trapping and fishing are central to Cree society socially, culturally and economically. Cree social relations, values, knowledge and spiritual beliefs are intimately related to subsistence production. In material returns alone, the subsistence economy makes a tremendous contribution to the maintenance of the community.

Non-natives have commonly ignored or underestimated the importance of this contribution. Few quantitative assessments of domestic productivity were even attempted for northern peoples before the Salisbury *et al* (1972a) report which estimated that, in terms of food alone, harvesting activities produced 50-55% of Cree community diets by weight; food which is considerably cheaper to obtain than purchased foods, and superior in dietary terms. For years immediately prior to and following the implementation of the Income Security Program, research put the annual poundage of "bush food" harvested by the Cree at between one and three-quarters and two million pounds for the approximately 6,500 Cree (NHR, 1976:359; 1978:210).

The Cree have had a history of two to three centuries' involvement in casual wage labor. Until recent decades, the fur companies were practically the sole employers. Casual employment came to supplement the cash income from fur, both required to outfit a hunting family with purchased equipment and supplies. In the past three decades, transfer payments have provided a third source of income. Since the late 1960s, as service, mining, and forestry sectors have expanded, a significant proportion of the Cree have come to depend principally on permanent employment, or sporadic employment interspersed with transfer payments.

Nonetheless, about half of the Quebec Cree population in the mid-1970s continued to derive their livelihood primarily from intensive harvesting, while the remainder were involved on a less intensive basis in harvesting. For intensive harvesters in the mid-1970s, it was calculated that the average hunter produced a minimum annual value of $6,620 in subsistence food, furs, housing, fuel and home manufactures, compared with an average annual employment income of about $1,670 (Grand Council of the Crees [of Quebec], 1977:43).

Hunting is an occupation for both men and women, and for other family members able to contribute. Without their endeavors, a critical community resource

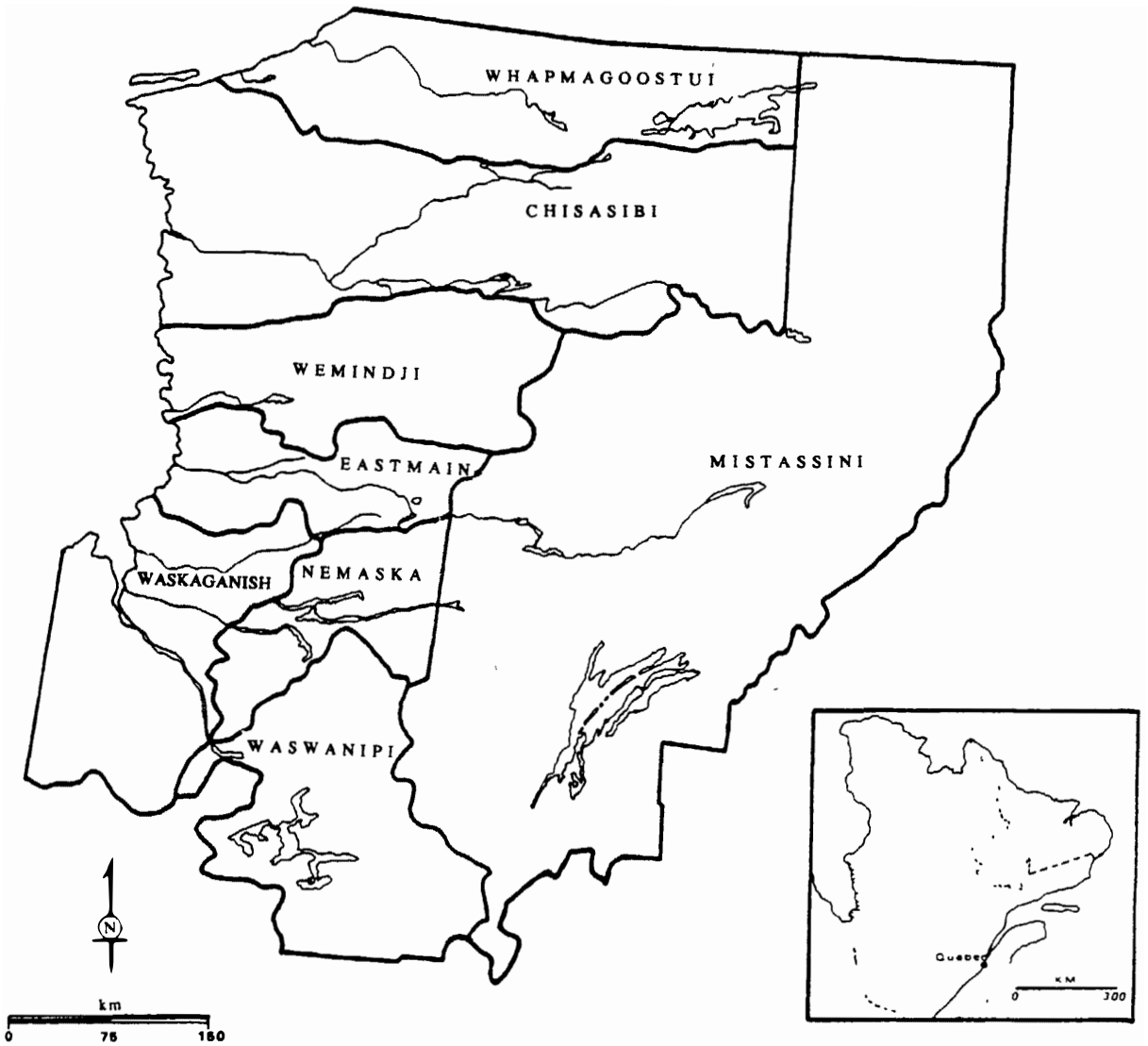
would be lacking - one which could only be replaced by high-cost imported foods of poorer quality. Given limited employment income and insufficient cash from other sources, that could only mean a deterioration in diet, less cash for other expenditures, and an overall reduction in the standard of living.

Higher unemployment and welfare dependency would be other inevitable results of any substantial decline in participation in the subsistence sector, under present economic circumstances. Worsening social conditions locally, and increased out-migration to urban centers, where native unemployment and poverty are grave problems, could be expected.

The higher costs of purchased transport, equipment and supplies, coupled with limited access to sources of cash income, appear to have been major factors in declines in harvesting intensity in at least some parts of the James Bay area. Several traplines more distant from the settlements had, in the late 1960's and early 1970's, fallen into disuse; or were visited only occasionally when the certainty of high fur income or income from other sources allowed a trapper to assume the heavy costs of hunting a distant territory. Disproportionate hunting pressure on lands more closely adjoining settlements could result (Cree Trappers Association, 1977; Coon *et al*, 1975; Grand Council of the Crees [of Quebec], 1977, LaRusic, 1978; Salisbury, 1972a).

As a specialized form of transfer payment, the Income Security Program helped make up the difference between cash costs and cash incomes of intensive harvesting families beginning in 1976-7, and in practice provided cash incentives for increased participation in harvesting, with consequences which are the subject of this report.

Map 1: James Bay Cree Community Hunting Areas



Chapter 2

The Wemindji Case Study

I. Research Questions

In this case study we sought to gauge how the presence of ISP affects the allocation of labor power to both subsistence and non-subsistence activities, how it affects the allocation of technology to subsistence activities, and how existing social relations both structured and were reciprocally affected by allocations of labor and technology.

It was a working premise that Income Security did not imply any immediate structural transformation in the relations of subsistence production or in Cree values and beliefs concerning such relations. The program was designed to be consistent with the modalities of economic and social relations as previously manifest in the contemporary hunting economy. It was our premise rather that structural changes, and potentially transformations in the longer-term, would more likely be the outcome of unforeseen consequences of the incorporation of more labor potential and more technology into domestic production.

Two essential facts are central to understanding precisely why more labor potential and more technology were brought to bear in the sphere of subsistence production. First, while ISP functionally replaces welfare for those Cree who choose to hunt intensively and to benefit from the program, it requires that beneficiary family heads and spouses spend at least four months of the year in intensive harvesting and related activities, and offers higher cash benefits as harvesting time is increased. Second, ISP is a more lucrative program than welfare, allowing the purchase of more industrial goods and services. As many Cree place a high value on hunting relative to available alternatives, and also value the use of industrial goods and services such as snowmobiles and charter air transport in their conduct of hunting activities, the two aforementioned conditions could in fact be expected to result in the presence of more labor potential and technology in subsistence production.

We considered various consequences which altered technology and labor inputs could have for both subsistence and non-subsistence economies, and for social relations within Cree society. We wanted to know whether in fact the Income Security Program was encouraging more people to spend longer periods of time in harvesting activities. If so, was there a corresponding decline in participation in the wage economy, or was there room for expanded participation in both sectors simultaneously? Would the incorporation of additional hunting families and consumer tech-

nology into domestic production result in changes in the demographic composition, organization, and strategies of productive units? Would any of these changes imply longer term consequences for the reproduction of Cree social and cultural structures, and of ecological relations on which subsistence production depends?

II. Research Methods

We adopted three sorts of quantitative measures to begin to analyze these problems: person-weeks engaged in subsistence activities as well as in wage employment; material returns on labor, measured in terms of the wildlife harvest of major species in the case of subsistence activity, and in terms of net income in the case of wage employment; and a description along parameters of age and sex of the population involved in key harvesting activities.

To identify changes in the local economy brought about by ISP in its first year, we attempted to obtain a baseline of data for pre-ISP years which would act as a control. Achieving this control for wage and subsistence sectors and for consumer activity posed quite different problems.

For hunting activities, we considered two alternatives: one was to sample all adult hunters in the village as to their harvesting activities and those of their families in recent years. This alternative was rejected, for a number of reasons. Given the desirability of obtaining several years of data, the number of informants that would need to be contacted, and limits to research time in the field, it was judged impractical to conduct such a survey. To conduct a sample in a community with some 150 male hunters, on the other hand, could introduce a problem of skewing as difficult to guard against as to conduct a 100% sample.

The second alternative, which was the method adopted, was to ask all trapline tallymen to report harvesting activities which had occurred on their trapline over the past three or four years. These men proved excellent sources of information for winter hunting and trapping activities, and for fall and spring camp-based goose hunting. Where individual person-weeks, harvests, or other details were not remembered by tallymen or other hunting group leaders, we consulted directly with individual hunters to complete our information. Obtaining information in this fashion had the additional advantage of providing us with a direct reflection not only of individual hunters' activities, but of the location, composition and organization of hunting groups over time in various portions of the Wemindji territory.

Particular care was taken to obtain a solid baseline of pre-ISP data for fall and spring goose camps and winter hunting-trapping camps, since these are the major loci of domestic production. Informants were comfortable with the accuracy of data on winter camps for four years past and on goose camps for three years past. Beyond these limits, indications of uncertainty over figures began to occur with some frequency. Hence, we have a three year pre-ISP baseline of data on winter camps, and a two year baseline of data on goose camps, in addition to data for 1976-7 and 1977-8, the first two years of the Income Security Program. While a two or three year baseline of data against which to compare the current and future effects of ISP may not fully control for some extraneous factors (e.g. variations in weather, availability of game, charter transport, etc. from year to year), it was the maximum time depth obtainable under the circumstances. Hunters were able to provide us with some qualitative information about idiosyncrasies from one hunting season to another, which sensitized our interpretation of the data to non-ISP-related

variables.

Certain limitations were inherent in the way we gathered subsistence sector data. Full information on the harvests of species smaller than geese or beaver was not possible to obtain, since numbers harvested of smaller species are not remembered. Secondly, information about productivity and person-weeks engagement of settlement-based fall and spring goose hunters, who hunt on short excursions in *ad hoc* groups, was not obtainable by consulting hunting group leaders. In view of the importance of settlement-based goose hunting, we conducted a one-half sample of all males over 15, corrected for age groupings of hunters. This exercise resulted in only a one year pre-ISP baseline on harvests of geese, however, because hunters had difficulty piecing together the kills made on several different trips from the settlement more than one fall or spring hunt previous to the most recent one.

A third limitation pertained to the summer coastal fishery. We were unable to obtain comparative information for pre-ISP years or to obtain as complete information for summers 1977 and 1978 as we would have liked. Summer fishing camps are less centralized than winter or goose camps, may last much shorter periods of time, and details of their operation are not easily retrievable beyond the year of research from tallymen. Moreover, a number of families set nets and check them from the settlement for anywhere from a few days to several weeks in the summer. While our data for 1976-7 and 1977-8 camp-based fishing are fairly reliable, we do not have a pre-ISP comparison, and we do not have comprehensive settlement-based fishing data for any year. Comprehensive sampling would have been required to obtain these data.

These limitations are not grave, however. Winter hunting-trapping and fall and spring goose hunting, the activities best covered by our subsistence data, are the mainstays of domestic production and pivotal in assessing participation in the hunting economy. Quantitative data available from the Income Security Board give some indication of global person-weeks spent in harvesting activities, since the implementation of ISP, as well as for a portion of the last pre-ISP year. Native Harvesting Research Committee data provide a broader baseline of pre- and post-ISP harvesting data. Interpretations offered by local residents helped to fill gaps in the data.

For participation in the wage economy, local records and informants' memories provided complete data for the resident population at Wemindji for the first year of ISP and for the year immediately previous. Although we have only a one year pre-ISP baseline, information on person-weeks and income is sufficiently broken down by ISP beneficiaries and non-beneficiaries, by permanent and seasonal categories, and by type of employment activity, that we are able to identify with precision where shifts have occurred and to draw some definite conclusions about the initial effect, or lack of effect, on the local wage economy.

Finally, the examination of shifts in the use of consumer technology by hunters was approached in three ways: by a comparison of pre-ISP equipment inventories with purchases made by ISP beneficiaries in the first year, available through Income Security Board files; by a comparison of spending at Wemindji stores on selected hunting-related and other consumer items for two years prior to ISP as well as during the program's first year; and by interviews with several hunters as to their utilization of air transport and other imported technology.

Having documented quantitatively important shifts in the allocation of labor and technology and in productivity, the problem remained to relate these to possible modifications in the structure of social relations. Most of these modifications were

identifiable as more or less logical outcomes, given the existing cultural system, of changes in the demographic characteristics of hunting groups engaged in various subsistence activities. Informants were helpful in elaborating the particulars of this change. We became aware of other changes sometimes by design and often by chance, in the course of structured or unstructured interviews and conversations with informants.

Most important, however, in achieving an integrated view of the social significance of changes in inputs of labor and technology, was "participant observation" in hunting, trapping and fishing camps and in settlement life. Several important aspects of the analysis become evident only through first-hand observation and 'in situ' conversations with hunters and their families. Such aspects often had not become apparent in many previous hours of interviews simply because it occurred neither to the researcher nor the interviewee that a particular point may require elaboration--to the researcher it remained unimagined while to the interviewee it seemed so commonplace as to require no mention.

Following three months' fieldwork in the settlement in 1977, Scott monitored activities over a sustained harvesting period, with both fall goose hunting and winter hunting-trapping groups. Activities monitored included the division of labor and deployment of technology in work activities, daily records of harvests and harvest compositions, consumption and exchange of products, the importance of knowledge, values and beliefs in daily activities, and the socialization of younger members in hunting groups. A second period of research in the settlement for about a month in 1978 generated a second year's quantitative data for participation in the harvesting sector.

III. Annual Cycle, Wemindji

At Wemindji, the hunting year consists of four main periods in which particular productive activities are of foremost importance: fall goose hunting, winter hunting-trapping, spring goose hunting and summer fishing and seasonal wage labor.

A few smaller flocks of Canada geese begin to appear around the end of August, and by the second or third week in September the fall goose migration along the coast of James Bay is reaching its peak. Some geese may still be in the vicinity as late as the end of October. Mainly the coastal hunting families, whose traplines border on James Bay, establish fall goose camps along the coast in early to mid-September, camps which may last as little as two weeks but which often continue into mid or late October. A number of hunters also hunt fall geese on excursions from the settlement, especially inland hunters who will soon be leaving for their traplines and others who don't get weeks-off from permanent jobs. Duck hunting, fishing, and occasionally a bear complement the goose harvest. In coastal waters, transportation is by motorized freighter canoe.

After the main flocks of Canada geese have passed, hunters remaining in camps or at the settlement turn their attention more heavily to brant goose hunting (although in recent years this activity has been restricted in cooperation with efforts of North American governments' conservation policy). Late in the fall before the bay freezes, seal hunting is also conducted.

Inland families leave for the winter hunting-trapping camps between mid-September and mid-October by chartered float plane, before inland lakes freeze

over. Unlike coasters, they generally do not participate in fall goose camps, although they frequently do some goose hunting on excursions from the settlement before leaving for inland winter camps.

During the period between the end of the goose migration and freeze-up, "coasters" return to thee settlement for winter supplies before proceeding to winter locations on their traplines. Some coasters whose hunting areas are within canoe and skidoo distance of the settlement practice winter hunting and trapping from the settlement for part or all of the winter. In addition, a number of men with permanent jobs regularly snare rabbits and shoot ptarmigan on excursions from the settlement.

During the period before freeze-up, winter bush camp dwellings are constructed and hunting areas are scouted by paddling canoe and on foot for active beaver lodges. Some bear and moose may be taken in addition to rabbits, fish, waterfowl, porcupines and partridge. By the latter part of October beaver-harvesting commences and continues fairly intensively until rivers and lakes freeze over, anytime between late October and late November, preventing further use of canoes. When ice is sufficiently thick, beaver trapping continues on foot and by skidoo, until sometime during the month of March. Along with beaver trapping, hunters conduct fine fur trapping, rabbit snaring, grouse and ptarmigan shooting, porcupine tracking and fishing through the ice with nets and set lines. Lynx and fox are especially important species in some years, particularly on the coastal traplines where fluctuating rabbit populations seem to reach higher levels. Caribou begin to appear in groups on the surface of larger lakes after the ice forms. Moose are generally hunted after the snow gets deep in January and February, and are best hunted in March after the surface of the deep snow has thawed and refrozen to form a crust, which simultaneously impedes the moose and enhances the mobility of the hunters.

Several of both coasters and inlanders return to the settlement for Christmas festivities, and re-supply themselves for the remainder of the winter. In the recent past, there have been several bush camps established for only part of the winter, in which case the camp would usually be established in the fall and continue until late December or early January, or be established after Christmas and continue until March. In 1976-7, however, the first year of the Income Security Program, almost all winter camps, both coastal and inland, were established from autumn until early spring.

Nowadays, almost all inlanders as well as coasters are back to the settlement either by skidoo or ski plane sometime in March, in time to obtain supplies and go to spring goose hunting camps at locations along the bay. These locations are reached over the ice by skidoo and sled, usually between the first and last weeks of April, well before break-up. Before the geese really begin to fly, the camps stock up on firewood and boughs for the floors of their lodges. Geese can start to appear from the second to the last week of April and may last from a little under a month to over a month, depending on weather conditions. In the spring while there is still ice around their lodges, most muskrat are taken, fishing is good when the rivers break up, and other waterfowl also complement the goose harvest.

By contrast with the fall goose hunt, there are relatively few settlement-based spring goose hunters, the majority being in camps. In addition to full-time hunters, several permanent employees obtain vacations and participate in spring camps, and children at the local school are given three weeks holidays.

Spring camps usually disband between late May and mid June, after there is enough open water along the margins of the bay to allow a return to the settlement

by freighter canoe.

Only one winter hunting group stayed inland during the 1977 spring goose hunt, until early June, which was the pattern for most inlanders prior to the use of air transport by winter hunting groups. Another family returned inland between mid May and early June. During the spring period inland muskrat, waterfowl, fish, and in some locations sturgeon are caught.

While there is still ice in the main body of the bay along the coast in June, hunters shoot seals near the edge of the ice, and ducks are hunted using motorized freighter canoes. Waterfowl hunting by canoe continues throughout the summer, and appears to be particularly intensive during the molting period later in the summer.

Summer coastal fishing begins in June in the bays along the coast, and as the ice in the bay moves out and eventually breaks up around the first of July, fish work their way out toward the outlying points and islands along the coast where they stay during July. In mid-summer, fishing is relatively poor, but in early August fish start moving back toward the mainland and become more concentrated in the bays once again. By late August both whitefish and trout have concentrated below the rapids of rivers emptying into the bay.

Most men look for wage work in the settlement when spring goose hunting is more or less over with, and may set nets from the settlement if they succeed in finding a job.[1] Families the heads of which do not have wage employment, or have some weeks off, frequently spend from a few days to several weeks in summer fish camps. In addition, several men, both employed and unemployed, set and check nets from the settlement. Duck hunting and summer fishing can be complementary activities. Excursions to more outlying islands produce ducks and the occasional polar bear.

In 1976, and increasingly in 1977 and 1978, there was a move by a half dozen Wemindji hunters to resume the summer sturgeon fishery on certain inland lakes and rivers. These hunters work in teams usually of two men, with or without families. They reach their locations by float plane, fish intensively for one or two weeks, and return with their catch to the settlement. Sturgeon fishing had last been conducted about ten years previous on a commercial basis, but had rarely been pursued for purely local consumption since the days inlanders still traveled by canoe from their winter camp locations to the coast, some fifteen to twenty years ago.

Seasonal summer employment has been an important cash complement to the community's subsistence economy for many decades. Most Cree hunters try to find employment in the settlement, although in the 1970s a substantial proportion of summer wage employment was held by several families who went tree-planting together in Ontario. In addition, a small number of usually younger men were working on construction projects outside the community.

At the settlement, the bulk of casual employment had been traditionally with local retail outlets and transportation companies. Since the late 1960s, however, joint federal Indian Affairs and local band office construction projects accounted for substantial portions of summer employment, and by the mid-1970s government "seasonal works" programs were contributing to job availability. Several hunters

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1. About twenty families, however, were leaving for Ontario in the second week of May to plant trees for the Ministry of Natural Resources of the Ontario Government, a job which lasted from six weeks to two months in the summers of 1976 and 1977.

and their spouses have some income from guiding.

Some casual employment is held by hunters into the fall goose hunting season. Virtually all casual employment activity ceases, however, by the time the move to winter camps begins, with the exception of a very few hunters with particular skills or particularly well paying jobs who continue to work for part of the winter.

As we have mentioned, people with permanent employment frequently spend weekends and holidays in fish or goose camps, and go on short excursions from the settlement before and after working hours or on weekends to check fish nets, snares, and to hunt ptarmigan and ducks.

IV. The ISP Beneficiary Population at Wemindji

Income Security Program beneficiaries at Wemindji comprised well over one-half of the total resident population in the first years of program operation. Out of a total of 280 adults who were eighteen years of age and older in 1976-77, 160 or 57% were in ISP beneficiary units.[2] Of the population under eighteen, 172 of 268, or 66% of all pre-adult dependents resident at Wemindji are listed on DINA and James Bay and Northern Quebec Enrollment Commission lists as members of families the head of which are ISP beneficiaries. These figures remained little changed for 1977-8, with 56% of adults and 61% of pre-adults in ISP beneficiary units at Wemindji (see also Figure 1; Tables 2.1 and 2.2).[3]

Virtually all Wemindji families whose predominant economic orientation is harvesting and who consequently are ISP beneficiaries are involved in both winter hunting-trapping and spring goose hunting. Coastal families, as well as those inland families who are not already in the midst of preparing and leaving for inland winter camps, are normally also involved in fall goose hunting, although the total fall goose harvest tends to be smaller than the spring harvest. Summer fishing and waterfowl hunting are somewhat less evenly participated in.

As a comparison of Figures 1 and 2 will show, the ISP beneficiary population was closely congruent with those heads of family, their spouses and children, who were active in winter hunting-trapping in 1976-7 and 1977-8, with the exception of some school age children who did not accompany their parents to winter bush camps. The 1977 and 1978 spring goose hunting population, on the other hand, was considerably larger than the ISP beneficiary population at all age groups due to the fact that several working and welfare families were also involved in spring

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2. Statistics on ISP beneficiaries were developed primarily through local fieldwork and Income Security Board records. Our resident population and age-sex figures are taken from Indian and Northern Affairs, Program Statistics Division, "Registered Indian Population by Age, Sex and Residence for Bands". According to their statistics, there were 548 of 664 Old Factory Band members resident at Wemindji as of December 31, 1976. The James Bay and Northern Quebec Agreement Enrollment Commission lists 592 residents at Wemindji out of the 671 on the "Community List". My own check against the December 31, 1976 DINA figures, depending on local informants, identified 568 residents of the 664 band members listed, midway between the two official figures. Since Indian Affairs data was available for each of the years covered by our Wemindji study, and was broken down by age group, we have employed the DINA statistics in this calculation and in our figures.

3. Official statistics do not take into account those children who have been unofficially adopted from a beneficiary family to a non-beneficiary family, or vice versa. This is likely to make only a small difference to the global program participation percentage, however.

goose hunting. Indeed, it is locally recognized that practically everyone in the village is involved in some capacity in goose hunting in the spring, and the data presented in Figure 6 (a and b) reflects this observation. The fall goose hunting, as Figure 9 shows, includes many fewer families who live in camps than the spring hunt. These include both full-time ISP beneficiary coastal families and families whose heads have time off from permanent employment. The number of hunters who hunt fall geese on short excursions from the settlement, however, is much higher than in the spring, and includes full-time hunters with ISP benefits and welfare recipients.

Summer fishing is the activity which involves the smallest participation of ISP beneficiaries. In summer 1977, only about fifteen families harvested from summer fishing camps, half of whom were ISP beneficiaries and half of whom were wage-oriented families with time off, welfare recipients, or retired couples.[4] In summer 1978, about thirty families harvested from summer fishing camps, all but four of whom were headed by ISP beneficiaries. Several heads of family also check nets regularly from the settlement. Although we don't have systematic data on settlement-based summer fishing, we did obtain a preliminary list from local informants of an additional dozen people who had set nets from the settlements in summer 1977, which included ISP beneficiaries with and without seasonal employment, as well as individuals who were permanently employed, retired, or were normally welfare recipients. Several others may have set nets for short periods of time, and several men, both employed and unemployed, ISP beneficiaries and non-beneficiaries, were making single day excursions for waterfowl. In sum, it appears that summer wage employment, when it is available, is the preferred activity for most intensive hunters, at a time of year when harvesting returns per time expended tend to be relatively low. The ambivalent mood about the possible dangers of mercury poisoning from eating fish is an additional factor which may have depressed the utilization of fisheries resources.

Shifts into and out of Intensive Hunting Since ISP Implementation

Since winter hunting-trapping is perhaps the activity which best distinguishes families whose predominant economic commitment is harvesting from those who harvest more marginally, we can use it as a rough measure of how many families have become committed to hunting as a main occupation as a result of the Income Security Program.[5] A comparison of Figures 2 to 5 shows a substantial increase in engagement in winter camps in 1976-7, over the previous three years, while the small contingent of intensive settlement-based winter hunters has declined a little. Practically everyone in winter camps or harvesting intensively from the settlement was an ISP beneficiary, with the exception of some single adult women who did not

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4. 'Retired' in this context means retirement from intensive harvesting, and therefore ineligibility for ISP benefits. Predominantly wage-oriented families and welfare recipient families are not necessarily mutually exclusive categories.

5. It should be noted that people who do not hunt and trap full-time in the winter often nevertheless spend several man-weeks in short hunting excursions in all seasons, and enter intensive harvesting during spring and fall goose hunts. While in theory it is possible to meet the days-in-the-bush requirements of the Income Security Program without being full-time winter harvesters, virtually no one adopted that strategy in 1976-7.

apply for benefits in the summer of 1976, some young individuals who were establishing eligibility for the following year, and some elderly and inactive individuals.

The increase in the winter camp population in 1976-7, however, is not a fair gauge of how many people were new to full-time harvesting with the inception of the program. Each year, several people whose primary occupation was hunting had not hunted in a given winter, for reasons of casual employment opportunities, allowing beaver on their traplines to increase, insufficient cash or credit to cover the expense of transporting and outfitting themselves and family, sickness of a family member, etc. We would not expect, therefore, to find all families whose primary economic orientation is harvesting, involved in intensive winter hunting-trapping every year. The availability of Income Security benefits in 1977-7, on the other hand, could be expected to make winter employment or collecting welfare in the settlement less attractive or less necessary alternatives to harvesting, which is highly productive in winter. Moreover, ISP benefits made families less dependent on getting a high enough fur catch to cover costs of outfitting incurred on credit, and provided encouragement to harvest by scaling benefits to time spent in the bush. In 1976-7, therefore, a much higher proportion of individuals whose primary occupation had been harvesting in recent years, decided to go to the bush.

To get some impression of how many ISP beneficiaries were in fact 'new' to harvesting as a predominant occupation, we traced the history of all beneficiary unit heads in winter hunting-trapping over the three years immediately prior to the Income Security Program (see Table 2.3). Of the 101 Wemindji beneficiary unit heads, 38 had been involved in intensive winter hunting-trapping in Wemindji territory three years out of the three immediately preceding the Income Security Program's implementation in 1976-7. Thirty-five had been engaged in intensive winter hunting-trapping two years out of the three, and fourteen had been engaged in intensive winter harvesting one of the three years. Only fourteen beneficiary unit heads had no involvement in winter harvesting on Wemindji traplines during the three year pre-ISP period covered by our data, but of these at least three harvested regularly in northern Ontario.[6]

A maximum of eleven 1976-7 beneficiary unit heads, then, had no involvement in intensive winter harvesting in any of the three years immediately previous to the implementation of the Income Security Program. These included about equal numbers of new hunters in their late teens or early twenties who began learning winter harvesting in the first year of ISP and men in their late twenties who had held casual or permanent work or were drawing welfare while living in the settlement in previous winters, as well as some older individuals who had been intensive winter hunters in years previous to those covered by our data.

On the other hand, eighteen heads of family who had been intensive winter harvesters for one, two or three years of the pre-ISP period covered by our data, were not ISP beneficiaries in 1976-7 (see Table 2.4). This group included eight individuals who had found permanent employment in 1976-7, or who were elderly pensioners semi-retired from hunting, as well as several single adult women, some

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6. The figures represented here could marginally understate the previous engagement of Wemindji beneficiary unit heads in winter harvesting, since some men who trapped one or two of the three years at Wemindji might have been trapping in Ontario in other years. We have no individual data on Ontario trapping before 1975-6.

of whom harvested in 1976-7 without ISP benefits.[7]

In summary, it appears that only about eight percent of the ISP beneficiary unit heads at Wemindji were new to intensive winter harvesting in 1976-7[8] and they about equaled the number of family heads who had been predominantly harvesting-oriented in at least one of the three years immediately preceding ISP, but who did not become Program beneficiaries because of permanent employment or retirement in 1976-7.

After ISP started, there was a limited shift out of harvesting to local permanent employment. Four of the six hunters who collected ISP benefits during 1976-7 but did not continue with the program in 1977-8 obtained permanent employment. There were ten new beneficiary unit heads for the year 1977-8, however, so that the total number of beneficiary units at Wemindji increased marginally after the program commenced. New beneficiary unit heads included individuals who turned eighteen, single women who had not applied for benefits previously although they were eligible, and individuals who had previously been in school or permanent employment.

V. Demographic Changes and Social Impacts - The Harvesting Population

Winter Harvesting

Winter harvesting at Wemindji is normally conducted from bush camps composed of from one to four or five nuclear family households, which often also include unmarried or widowed adult relatives and their offspring. Certain portions of the coastal traplines are within easy distance of the settlement by skidoo, and these are often hunted on short excursions by men who bring the kill back to the settlement each day where it is processed mainly by the women. In areas further removed from the settlement, but still within commuting distance, all-men's camps have often been established where men hunt for several consecutive periods of a few days at a time, returning frequently to the settlement with the harvest, or longer-term family camps are established. But in all areas without easy commuting access to the settlement, on both coastal (especially the inland portions) and inland traplines, multi-family hunting groups and single-household nuclear or extended family groups have been the norm. A minority of inland camps in the three years prior to 1976-7 were all-men's camps, which were established for several weeks up to two or three months at a time. In these camps, much of the processing of harvested products usually performed by women was done by the men while in camp.

The Income Security Program had some notable effects both for the total population of bush camps and for the proportions of individuals in adult male, female, and pre-adult categories. While the total population in bush camps was higher by 87% in 1976-7 and by 66% in 1977-8 than the three year pre-ISP average given in our data, the increase has not been even across age and sex categories.

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7. A few adult single women were apparently not included on initial beneficiary lists and did not apply for ISP benefits for 1976-7, but did apply for 1977-8.

8. If we exclude three men who had previously been intensive winter harvesters, but had not for the three years previous to ISP.

The number of adult males in winter camps increased by only forty percent, while the adult female bush population almost doubled, and the pre-adult population more than doubled in 1976-7. In 1977-8, the increase over the pre-ISP years was moderately less for each of these categories, but the same pattern held (see Table 2.6).

This situation corresponds to significant shifts in the chosen forms of winter hunting groups. All-men's camps disappeared in 1976-7 and 1977-8, and multi-family camps and single-household nuclear or extended family groups, which had always been the norm, became virtually the exclusive modes of organization in the bush. Settlement-based hunting also declined (Table 2.6). On only two coastal traplines, one on which the settlement is located and another of which the entire area is accessible on single-day trips from the settlement, was the main hunting conducted by settlement-based hunters. Two other coastal traplines had limited hunting by hunters who were settlement-based part of the winter, but who also joined the multi-family hunting groups which did most of the harvesting of those traplines.[9] The three other coastal traplines, which in past winters normally had some winter harvesting by settlement-based hunters or by all-men groups who made frequent trips to the settlement, were in 1976-7 and 1977-8 harvested exclusively by multi-family groups. Inland traplines were hunted exclusively by either multi-family hunting groups or single-household groups (see Table 2.7).

It is interesting to notice that several demographic features of the family camps were not altered by the sharper increase of women and children than of active male hunters, or by increased numbers of male hunters since ISP began. The ratio of total family camp population to family-camp active male hunters, the average number of active male hunters per camp, and the average size of family camps increased only very marginally over the three year pre-ISP baseline (see Table 2.8). The disappearance of all-men's groups and their replacement by family groups accounts almost entirely for the sharper increases of women and children going to the bush than of men, while the general increase in the winter bush population, including men, is accommodated through the establishment of more camps. The program in its first year, then, did not result in a new form of winter hunting organization; rather, it facilitated and encouraged utilization of one pre-existing form rather than others (i.e. family groups rather than all-men's camps and the longer-range settlement-based hunting).

The program had this effect for two reasons. In recent years, limitations in access to sufficient cash or credit prevented hunters on some traplines from flying their families, together with the required supplies, to the bush. Particularly where beaver quotas were low, cash to cover the cost of air transport was more limited, and the food supply while in the bush was less secure for the larger family groups. In such cases, all-men's camps were often the response. The Income Security Program facilitated taking families to the bush by providing a cash income which is independent of variability in the harvests and prices of furs, in the seasonal employment incomes of hunters, or in prices of required goods and services. In fact, some inland hunters who have greater distances to fly from the settlement commented that, given the level of air charter rates, they would not have been able to take their families to the winter camps had it not been for ISP benefits.

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9. For the present discussion, we are referring only to hunters who had beaver quotas and used them, either from the settlement or from bush camps. In general, it is these hunters who are largely full-time and who, since the program started, have become Income Security Program beneficiaries.

Secondly, the Income Security Program does not make per diem payments to wives who don't accompany their spouses to the bush. Even where in the past the splitting of the family productive unit was not too serious (as in settlement based hunting or coastal all-men's camps from which frequent trips to the settlement were possible), ISP has encouraged a shift into family camps.

The continuity of family camps has important consequences for the reproduction of Cree culture. The sharp increase in the number of pre-school and school-age children in the bush in 1976-7 appears to be closely related to the increase in the number of adult women going to the bush. Larger numbers of children of all ages will be enculturated more thoroughly to the knowledge, skills and values of the hunting life, so long as that trend continues. The 1977-8 participation of school children aged ten to fourteen years declined from the previous year, but remained significantly higher than for pre-ISP years.

It is also significant to note, from the perspective of reproduction of the harvesting life, that young adults were particularly active in winter harvesting in 1976-7, compared with previous years. A higher percentage of resident men aged 20-24, for example, were active in winter harvesting in 1976-7 than of any other age-sex groups, with the exception of men aged 45-64. Their participation in 1977-8 dropped to a level comparable with that of other adult groups under age 45, but remained considerably above pre-ISP years. In years previous to ISP implementation, the involvement of young men had been low. Young women aged 20-24, although still participating at a lower rate in winter camps than other adult women in 1976-7, nevertheless doubled their participation in winter camps. Girls aged 15-19, however, participated at a rate comparable with other women in 1976-7 and 1977-8. Males of the 15-19 age group increased their participation less than other young people in 1976-7, and were marginally more active in 1977-8 than they had been in pre-ISP years (Table 2.9).

Even young people who had been several years in southern schools and away from the bush life fairly rapidly recognized the value and utility of Cree views of social and human-nature relations upon reintroduction to the bush life. Their contact with older people enables young adults to resume their learning of a system of knowledge, values and language whose full complexity is realized only in the context of living in the bush. In other societies, where this sort of continuity between older and younger generations has been broken, the content and vitality of hunting cultures have diminished.

Middle-aged and older women's participation in bush camps was high in 1976-7, more than doubled from previous years. While women aged 65 years and older reduced their participation again in 1977-8, the participation of women aged 45-64 was even higher in 1977-8 than it had been in 1976-7. These individuals, in addition to their role in processing harvested products, cooking, manufacture of clothing and equipment, and child-rearing, often have important specialized skills that younger women have not yet acquired. These include a knowledge of the preparation of medicines and the treatment of a range of infirmities which may occur in the bush, and an ability to pass to hunters information important to the planning of future hunts, which they interpret from the internal organs, bones, etc., of animals they skin and dress.

In general, the simultaneous presence of both older and younger people in bush camps exerts a positive influence on the transfer of the whole range of Cree knowledge, skills and attitudes central to bush living, through observation, guidance, practice of skills, conversations about daily experiences, storytelling, etc. In the

bush, older men frequently entertain the camp with stories and legends, while in the settlement television has occupied much of the time that used to be spent in oral exchanges. While radios, tape recorders and recorded music have become prominent in bush camps, tape recorders are also employed in recording legends, stories, news, etc., and in carrying these from camp to camp or back to the settlement to be enjoyed several times over.

On the basis of our data and observations on the operation of the Income Security Program to date, we would not predict significant changes in men's and women's roles to result from a higher proportion of women in the bush. As mentioned earlier, the modal family camp in post-ISP years does not differ significantly from the modal family camps of other recent years, in demographic terms. What has occurred is simply that the responsibilities of looking after a family have been shifted from the settlement into the bush for those women whose menfolk previously hunted in all-men's groups, and the women's role in harvesting and related activities has become a more day-to-day and intensive one, after the typical pattern of the family camps. A marginally higher proportion of children were involved in the family camps of 1976-7 and 1977-8, but more girls and elderly women in bush camps often helped to reduce the work load for mothers, through a distribution of child-related and other work similar to that which is possible in the settlement. For men, the presence of women in camps has reduced their role in skinning and dressing carcasses, preparing meals, repairing clothing, etc. The presence of family groups in camps creates a more efficient division of labor and, in the view of most Cree, enhances the quality of social life.

The quality of family life as compared to life in all-men's camps probably has a good deal to do with the more extended periods hunters did spend in the bush in 1976-7 and 1977-8, although it is clear that ISP also provides a strong economic incentive for longer stays in the bush. As Table 2.10 shows, total man-weeks in the bush almost doubled for hunters on inland traplines in 1976-7 and 1977-8, compared with the previous three years.[10] For coastal traplines, although our data are incomplete for man-weeks in settlement-based hunting, it appears that total man-weeks in hunting may have less than doubled, and that the increase has occurred in camp-based hunting, with diminished settlement-based hunting.

In summary, it appears that ISP rather heavily favors family camps as forms of hunting group organization, but that within that traditional form of organization, ISP has not induced new structural arrangements. Some minor adjustments may have been made in the organization of the hunting process *per se* in the case of some camps, which entail the tallyman's taking a more direct role in the allotment of animal resources. In one particularly large camp, for example, beaver houses were allotted by the tallyman to different families on the basis of size and need and in relation to the family head's quotas, regardless of which hunter found the lodge. The more standard practice seems to be that different hunters will be given sectors in different directions from camp in which to work, and the person who sees a new beaver lodge is the one to trap at it, unless he wishes to give it to another. The former measure was unique so far as we know, but was adopted because there was an abnormally large number of hunters with their families in that particular camp. That circumstance appears to have been associated with the Income Security Pro-

10. When "man-weeks" or "hunter-weeks" are used in this chapter, they refer specifically to male hunters' time. When both men and women are referred to, "person-weeks" is used.

gram. Several "coasters" who had poor beaver quotas on their home trapline had joined their in-laws on a richer inland trapline. Economic factors seemed to have prevented that kind of redistribution of trappers to areas richer in beaver prior to ISP, a point which will be discussed at more length when we deal with ecological impacts of the program.

Goose Hunting

Goose hunting is conducted from camps distributed along the coast on Wemindji coastal traplines. The camps are composed of several family households and, on average, are about twice as large as winter hunting camps, for both spring and fall goose hunts. The number of goose camps, and the total goose camp population in the spring is substantially larger than in the fall, both because several inlanders are making preparations for the winter bush camps during the fall migration and because in the fall goose hunting locations are more accessible by canoe from the settlement.

For our goose camp data, the two pre-ISP years are 1974-5 (fall 1974 and spring 1975) and 1975-6 (fall 1975 and spring 1976). Our post-ISP data cover 1976-7 (fall 1976 and spring 1977) and 1977-8 (fall 1977 and spring 1978).

Again, a clear increase is apparent in the total camp population both in spring and fall. In spring, however, where involvement in the spring hunt was already very heavy, the increase in 1976-7 over pre-ISP years was smaller than for the fall hunt (see Table 2.11). In 1977-8, an even larger spring camp population in relation to the pre-ISP years occurred; while the fall camp population was smaller than in 1976-7, but still larger than in pre-ISP years. Settlement-based goose hunters, meanwhile, appear to have remained about constant in numbers for both fall and spring, though we only have one pre-ISP year in our data for settlement-based hunters (Table 2.12).

Since goose camps have always involved only multi-family groups, and continue to do so, the increase across adult and pre-adult male and female categories was more even than was the case for winter camps (Table 2.11). There were differential increases in participation according to people's ages, however. In fall camps, for men and women aged 25 to 65, the increase was more moderate, as these were the people already having the heavier participation in pre-ISP years. Young adults under age 25 show higher increases in participation. The participation of young children appears to be closely associated with that of their parents in all years except in the fall 1977 hunt, when participation of school-aged children, except boys 10-14 years, dropped sharply. For the spring hunt, participation in goose camps was quite even across all ages and both sexes prior to ISP, as increased participation was after the program was instituted (see Table 2.13).

Demographically, the "modal" goose camp did not changed markedly in either spring or fall. In the case of spring camps, it appears that the number of camps was limited by the geography of the coast and perhaps by the number of men with the authority to be goose camp "shooting bosses". Hence, increases in the goose camp population in post-ISP over pre-ISP years (and also in 1975-6 over 1974-5) did not result in proportionate increases in the number of camps. Rather, the number of hunters and the average total population of the camps marginally increased. In the fall, on the other hand, when many fewer people hunt from camps and limited sites do not seem to have been a problem, the number of camps increased roughly in proportion to the increase in the camp population (Table 2.12).

By contrast with winter harvesting, where hunter-weeks have increased considerably more sharply than the number of hunters, increases in the total hunter-weeks in spring goose hunting are about proportional to increases in the number of hunters out, and average weeks per hunter show no significant trend in years 1977 and 1978 to distinguish them from previous years. This is no doubt because hunters have normally established a camp for the full spring season in the past, so that the opportunity for increasing weeks in goose hunting did not exist, as it did for winter hunting where several hunters previous to 1976-7 intensively hunted their traplines only half the winter. Variations from year to year in average weeks in spring camp per hunter are primarily the result of variations in weather and the annual goose migration (Table 2.14).

Stays in the fall camps appear to be normally shorter than in the spring, and average stays vary more radically from year to year. Here again, ISP did not appear to have produced any clear trend in the number of person-weeks in goose camps, except in rough relation to additional hunters in camps.

Travel to and from spring camps is restricted during the bulk of the goose hunt due to spring break-up along the coast. Women are critical to the goose harvest since plucking, cleaning and preserving goose is a full-time job during the peak portions of the hunt. Hence, practically everyone goes to spring camps in family units, and limited settlement-based hunting takes place. In the fall, however, the bay is open and settlement-based hunters can get to most goose hunting locations by motorized freighter canoe and return to the settlement with their kill on a daily basis, or stay slightly longer at the more distant sites. It appears that the Income Security Program encouraged more families to stay in camps, which has the advantage of providing wives as well as their husbands with per diem payments. Hence, we might conclude, there has been a fairly dramatic increase in participation in fall goose camps.

A second, perhaps more important reason for the change, however, is that increased numbers of hunters traveling out from the settlement by motorized canoe have rendered the coordination of the fall goose hunt more difficult since the early- to mid-1970's. This is particularly so as a high proportion of hunters are young men with limited goose knowledge who have come of age and who have entered the hunt. Geese should be hunted in certain places, at certain times, and with a variety of corresponding techniques in order to maximize the harvest, and this requires coordination and supervision by an experienced hunter.

ISP tended to bring more hunters into regular harvesting in 1976, and a high proportion of these new hunters were young men. In fall of 1976, the Wemindji band council and the coastal tallymen attempted to bring the hunt in each portion of Wemindji territory more directly under the supervision of "shooting bosses" who in most cases are the tallymen of the trapline on which a given camp is located, but in some cases may also be other experienced hunters.

Shooting bosses were encouraged to establish camps at each of the major hunting bays of the coastal traplines. These were to serve several functions. Both camp-based hunters and hunters who come out from the settlement are supposed to check with the camp boss in the area they are hunting any given day. The boss advises them when it is an appropriate time to hunt (for example, geese should be shot at only on windy days, so major flocks in the area will not hear the shots and be disturbed). Different groups of hunters are also advised where to post themselves to hunt. Goose bosses arrange for well hidden camps which will disturb the geese in the area as little as possible, and act as a check on night hunting, which is

also said to scare the geese. These precautions are especially critical in the fall, according to experienced hunters, because the geese have a wide area over which they can feed, and can easily leave a bay if unnecessarily frightened. In the spring, on the other hand, many of the feeding places are still under the snow.

Having camps at regular intervals along the coast has other advantages. Hunters out from the settlement in the past could get into trouble with difficult weather and have no camp nearby to stay in. In addition, for those people who now stay in camps, there have been savings in gasoline expenditures for outboard motors for running back and forth from the settlement.

Local opinions as to the extent of success of the measures attempted in the fall of 1976 differed, but they did appear to have had some impact on the organization of the hunt. The measures were adopted to deal with a problem that pre-dates ISP, but that stood to be aggravated by the effect of the program in encouraging more hunters to participate in the fall hunt. One or two other communities on James Bay were pointed to locally as instances where poor organization of the hunt had led to declining returns to hunters in recent years; others were cited where good organization had maintained harvests.

In summary, ISP did not lead to organizationally different spring goose hunting, which is predominantly camp-based, although it was probably the major factor in camp population increases of about 30% and 50% in 1977 and 1978, respectively, over pre-ISP levels.[11] ISP contributed to a sharper increase in participation in the 1976 fall goose camps, especially by coastal hunters, and to a more moderate one in 1977 by comparison with pre-ISP years. Attempts to bring the fall hunt at large under the traditional form of supervision and coordination that exists in camps, as opposed to a more individual and settlement-based hunt, appear to have been stimulated by this more intensive hunting. Participation in settlement-based hunting appears not to have changed from 1975-6 to 1976-7 and 1977-8, but we make that comment with the reservation that our information covers only those three years, and does not include data on person-weeks in settlement-based hunting comparable to those for camp-based hunting.

Summer Coastal Fishing and Hunting

In the case of summer fishing and hunting, we were unable to obtain comparative information for pre-ISP years, or to obtain as complete data for summers 1977 and 1978. It is not possible, therefore, to put any quantitative measure on the influence that ISP has had on fishing.

It is our impression from local informants, however, that engagement in camp-based summer fishing and hunting is affected more by the availability of summer casual employment than is engagement in other harvesting activities. Employment availability for hunters in the summer of 1977 seems to have been relatively high, and most family heads on ISP had jobs. Two hunters who didn't have jobs, however, said they were saving money by being in fishing camps with their families and not having to buy as much store food. One hunter thought that if he had to work in the summer now, as in the past, most of his money would go to the store for credit to feed himself and his family. Now, with ISP, he preferred to live from

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11. In spite of the fact that 1977 and 1978 were poor springs by comparison with 1976, where camp population was lower, and settlement-based hunters were about the same in number.

fishing more in the summer, and spend less money on groceries.

Of the population that was in summer fishing camps in 1977, nineteen heads of family and single adults were in twelve summer fishing camps which lasted from ten days to seven weeks. Of those, twelve heads of families in eight camps were in ISP beneficiary units. All married men were accompanied by their spouses, but unlike winter camps and goose camps, the number of adult women exceeded the number of adult men (Table 2.15).

There were several more heads of beneficiary units, their consorts and other family members in summer 1978 camps, but our data on wage employment are too limited to know whether this correlates with fewer employment opportunities than the previous year. Thirty-eight heads of families and single adults were in twelve summer coastal fishing camps. Of those, 32 heads of family were ISP beneficiaries, represented in all camps. Average durations of the camps were shorter than the previous summer, however, so that total man-weeks and woman-weeks in camps did not increase as much as population did (Table 2.15).

As we mentioned earlier, several people also check nets and hunt waterfowl occasionally from the settlement in the summer. But in general, coastal fishing and hunting seem to be secondary to summer wage labor when available, for most people who are predominantly harvesting-oriented at other times of the year.

Inland Sturgeon Camps

In the summer of 1976, according to local people, summer inland trips for sturgeon fishing for domestic consumption recommenced after about a decade of disuse of the sturgeon resource.[12] One inland trip was made in 1976 by a team of two fishermen. In the summer of 1977, however, there were two such teams of two hunters in separate locations, as well as two family camps involving three hunters, three wives and three children. Three family camps involving eight hunters, five wives, another adult woman and seventeen children operated in 1978 (Table 2.16). Local informants connected the renewed interest in sturgeon fishing for domestic consumption with the presence of the Income Security Program, which simultaneously provided more free cash for charter airfare and paid harvesters for days spent in what is an extremely productive but short-term subsistence activity. Upon return to the settlement, cash contributions to the fishermen from numerous people in the settlement to whom the fish are distributed help to rationalize the high cost of airfare relative to a short period in the bush.[13] This potential of course existed prior to ISP, but ISP enhanced the benefits of expanded participation in sturgeon fishing in the summer of 1977. All of the sturgeon harvesters in 1977 and 1978 were ISP beneficiaries.

The new inland sturgeon camps appeared to be composed increasingly of two or more households in family groups, judging from our data for 1977 and 1978. In earlier years prior to the use of aircraft, inlanders congregated at sturgeon-spawning

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12. Although a few sturgeon are caught at other times of the year as well.

13. A similar system functions in the case of short air trips out of the settlement for moose or caribou. Although cash contributions may or may not cover the cost of aircraft incurred by particular hunters, there are often other material and social benefits to the distributor. The meat received by the community easily compensates for the cost of the aircraft in economic terms alone, from the perspective of the broader community.

places in the early summer on their way down to the coast, in groups of several families.

Summary

The Income Security Program evidently led to increased participation of the beneficiary population in winter hunting, fall and spring hunting, and summer sturgeon fishing. Our data do not allow us to be conclusive about participation in summer coastal fishing, but for reasons already stated, we think ISP does not encourage large increases as long as summer employment is available. In the case of winter hunting, ISP has had the additional effect of encouraging more average weeks in the bush for hunters and family members, so that total person-weeks in the bush have increased somewhat more steeply than persons in the bush.

It is of course conceivable that other variables also contributed to increases in participation in harvesting in 1976-7 and 1977-8. In fact, our data seem to suggest other factors, in that marginal pre-ISP increases occurred in 1975-6 participation in intensive winter harvesting and spring goose hunting, compared with the previous year or two. But this increase occurred only in terms of total persons involved; not in terms of average weeks of participation per person nor, in the case of goose hunting, in terms of total person-weeks. It would require more years of pre-ISP data to determine whether 1975-6 was part of a trend to increased participation in harvesting, or whether it was simply a high point in normal year-to-year fluctuations due to weather, employment availability, etc. Local informants say that the construction of the road from LG-2 to Matagami stimulated to some extent harvesting on three or four inland traplines at intermediate distance from the settlement, and other researchers in Cree communities have commented that some increase in intensive harvesting occurred as a sort of assertion-of-rights in response to the threat posed by hydro-electric development initiated by the James Bay Energy Corporation. Also, in the first two or three years of the 'seventies, Wemindji hunters were fairly heavily involved in housing projects, and this, according to some informants, had the effect of temporarily reducing commitment to harvesting. These factors, however, would mainly pre-date our pre-ISP baseline, which commences in 1973-4 for winter camps and 1975-6 for goose camps.

Several hunters and other residents at Wemindji commented on the increase in participation of male hunters and of the even greater increase of women in harvesting, nevertheless, and the Income Security Program is locally recognized as the main and general factor responsible.

The primary social impact of the program with respect to increased participation in intensive harvesting was to favor the expansion of camp-based families and multi-family groups as the productive and social units of domestic production. The effect was most notable in winter camps, where all-men's groups had displaced family groups in a minority of traplines each year. In the case of goose camps, family groups continued to be the exclusive form of camp organization, but the expansion in 1976-7 and 1977-8 was into camp-based multi-family groups and not into settlement-based hunting. The heavy participation of women and children in what summer coastal fishing occurred, and the increased presence of family groups in sturgeon fishing seem to be further indications that ISP favored family and multi-family productive units.

VI. Settlement-Level Demographic and Social Impacts

The demographic effect of the program at the settlement is the inverse of the effects on the camp populations. The settlement population is smaller for longer periods of time as somewhat over half the resident population leaves for extended stays in the bush. A comparison of the darkened portions of Figures 2 through 11 will show the effect of changes in camp-based fall, winter and spring harvesting on the settlement population in 1976-7 and 1977-8 as compared to previous years.

Both married and single adult women are participating much more heavily in winter hunting, and for extended periods of time. This contributes to a decline in the number of children who stay in the settlement, and a corresponding drop in school attendance (see Table 2.17). Hunting families have to find a friend or relative to look after the children in the settlement or leave an adult from the household behind in the settlement if they want their children to attend school. In 1976-7 and 1977-8, however, more adult women of hunting households went to camps, and this reduced the number of people in the settlement able to care for children.

It is interesting to note that the increase in children aged 5-14 in the bush was more marked than the increase in adult women (Table 2.9). Perhaps fewer families, going as they were to the bush for longer periods of the winter, were prepared to separate. Some families left some of their children in the settlement for part of the winter, and at Christmas took them into the bush, leaving those who had been in the bush the first half of the winter behind in the settlement for the second half. Most children, however, appear to have stayed in the bush with their parents for the full duration of the winter camp.[14]

Not only children of ISP beneficiaries, but children of employed adults were getting increased exposure to bush living. Parents who live in the settlement sometimes arrange to have a child go to a hunting camp with a hunting family. In turn the settlement family may keep school-attending children for hunting families.

Training in bush skills is an asset most Cree parents wish to give their children, and it is likely that with harvesting viewed as a more secure occupation under ISP, additional concern developed to ensure that children have at least some bush training. Perhaps this helps to explain the fact that the increase in children aged 10-14 in the bush in 1976-7 was higher than for those aged 5-9 (Table 2.9), since the older school-aged children already had some basic academic education and were at an age to acquire several bush skills. In 1977-8, however, this difference in increase was less marked, and relative to 1976-7, a reduced proportion of school-aged children went to the bush, though still nearly double pre-ISP levels; and still greater than the increase in adult women in camps, over pre-ISP levels.

A second area of impact of the program is community health. The nurse in charge of the Wemindji nursing station in 1977 observed that the general level of people's health was higher because so many of them had been in bush camps, and it was the impression also of the school principal that children who had been in the bush were generally healthier than those who stayed in the settlement. Among the

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14. Teachers at Wemindji, however, noted that children who attend for only half the winter have considerable difficulties with their studies, and tended to feel it was better for a child to take either the full year in school or the full year in the bush.

bush population there were, according to the nurse in charge at the local nursing station, significantly fewer dermatological, gastro-intestinal, ear, nose and throat problems, or accidental ingestion of toxins by children. Alcohol consumption is very limited while people are in camps.

Balanced against the health advantages of bush life are certain risks. People in the bush camps sometimes have difficulty in recognizing a serious health problem, and delays in transporting a sick person out of the bush could lead to complications or death. Hunters, through the Cree Trappers' Association, have arranged for two-way radios in camps which allow them to communicate symptoms directly to the nursing station in case of any doubt as to the seriousness of an illness, and to obtain an aircraft quickly if need be. The local nursing station also took the initiative to provide families with "health-paks" for the treatment of a variety of minor ailments in the bush, and written information on the recognition of serious symptoms.

A third feature of the Income Security Program at the settlement level was the involvement of local band council and administrative personnel in attempting to resolve a series of logistical and other problems arising from the requirements of contemporary hunters. We have already noted the involvement of the band council in attempts to better manage the fall goose hunt. The band office was also closely involved with the gathering, sealing and shipping to market of the hunters' product, and had close links to the Cree Trappers' Association, which was attempting to come to terms with a series of transportation and communications-related problems.

A fourth effect can be mentioned. Certain community efforts at the settlement, particularly those at the more critical harvesting times of the year, were perhaps less successful as a result of a reduced settlement population. In the winter of 1977-8, for example, the Band Office obtained a community improvement grant but encountered difficulty in obtaining enough employees, since those who remained in the settlement tended to be already permanently employed or retired.

Our data offer some preliminary insights into the effect of community level integration of the harvesting and non-harvesting populations.[15] Several relations of kinship, exchange, participation in certain productive activities, political responses to the non-Cree world, and shared symbolic realities link the full-time hunter and the wage-earning Cree who hunts less intensively. Changes in networks of social relations, and in the symbolic emphases of settlement and bush populations warrant monitoring and analysis over the longer term.

VII. Technological Changes and Social Impacts - The Harvesting Population

An important effect of the Income Security Program has been to allow expanded access of hunters to goods and services of industrial origin. Increased cash incomes through the introduction of transfer payments and from employment locally and regionally have encouraged higher expectancies for consumer items over the past two to three decades. The specific range of goods and services selected has generally been that which is relevant to making life in the bush and in the settlement more secure and comfortable. The training of many school-aged Cree at southern urban schools has perhaps contributed to a stronger "consumer complex" among

15. See Scott, 1984.

younger people. Older people remark about the reluctance of many younger Cree to be without the commodities, services and entertainment available at the settlement for extended periods, and these were noted as factors that had in some ways limited commitment to intensive harvesting.

Charter air service is a convenience that had been central to all inland hunting, including hunting on the more distant inland portions of the coastal traplines for fifteen to twenty years prior to ISP implementation. It is probable that several inland families, especially on the more distant traplines, would no longer have harvested intensively if they could not afford access to charter aircraft and other items regarded as essential to secure life in the bush. In fact, several inland hunters in recent years, finding the costs of airfare too high, had shifted to nearer coastal traplines, or had gone trapping in Ontario where their transportation was subsidized. There are limits to the number of families that can be accommodated on the traplines closer to the settlement, however, and more restricted access to air transport would have meant a smaller percentage of the population engaged in harvesting.

Hunters at Wemindji remarked on a discrepancy between recent increases in costs of air transport and their ability to pay for it. The construction of the road between Matagami and LG-2 assisted some hunters in reaching hunting locations at intermediate distance from the settlement more cheaply, but has been of little benefit to those hunters on more distant traplines for whom air costs were most serious. Several hunters on the most distant traplines said that were it not for ISP benefits in 1976-7, they would have been unable to take their families to hunt with them that winter.

It seems that increased access to air transport was instrumental in the shift away from all-men's camps in 1976-7. Inland all-men's camps previously had tended to be established on traplines on which beaver quotas were relatively low. Income from other sources being equal, hunters with low fur income were those least able to afford the cost of air transport for themselves and family, and consequently hunters-only groups, which minimized the quantity of people and supplies to be transported, were perhaps favored in times of limited cash and credit.

The affordability of air transport in 1976-7 encouraged family hunting groups in a second way. Hunters commented to us that parents were often reluctant to be in the bush with families for extended period without access to medical services, or to additional supplies should the need arise. The ability to purchase more charter aircraft service made it possible for many families to return to the settlement at Christmas who would not otherwise have done so, reducing the length of periods without contact with the settlement. Also, the economic obstacle to obtaining a charter aircraft on relatively short notice, should the need arise, was reduced; and radios made communication for this purpose quite reliable.

In general terms, more money for air charter also allows families to supply and equip themselves more heavily in the bush. Motorized equipment such as skidoos and chainsaws and the fuel required to run them make life in the bush easier, but contribute significantly to transportation costs. Even in 1976-7, there were inland trappers who did not take skidoos and gasoline to the bush because of cost factors. Beyond the heavier new hunting technology, items such as chainsaws, naphtha lanterns and fuel for these items are conveniences which also add marginally to transportation needs. The essential traps, guns, ammunition, clothing, hand tools and tenting have not changed substantially in kind or quantity, with the possible exception that hunters are able to afford more specialized, ready-manufactured

clothing for themselves and their families. Entertainment items such as tape recorders, cameras and AM radios contribute marginally to transportation needs, as do foods such as jams, ketchup, powdered milk, potatoes and cookies which have more commonly found their way into the bush camps. In our experience, however, such food "extras" were special treats when someone made a trip from the settlement, and were never calculated to last more than a few days or for occasional use over a longer period.

The most significant expenditures of ISP dollars in 1976-7 at Wemindji were on air transport and major hunting-related equipment. Conversations with Hudson's Bay Co. and local Co-op managers indicated that people had not significantly altered their purchases of basic equipment or food supplies for the bush. Tables 2.20 and 2.21 suggest that expenditures on basic items such as traps, guns, and chainsaws held about constant or increased more marginally than on the heavier capital items. Local store managers had noticed some increases in tape recorders, AM radios, and cameras being bought by hunting families, but these expenditures were minor in relation to transport, hunting equipment and basic supplies.

There was a substantial increase in utilization of air charter service in 1976-7 by Wemindji hunters, both in total terms and in average utilization per hunter. That was the observation of generally knowledgeable local informants, although our quantitative data on this point is not adequate to eliminate guesswork in specifying the magnitude of the increase.

In the fall of 1976, Wemindji hunters spent about $40,000 on air transport to traplines (Scott, 1977). We followed the expenditures of a dozen Wemindji hunters in 1976-7 and found that fall costs were about 45% of costs for the year. If this pattern of charter usage was projected to the ninety-four Wemindji hunters that year, air transport costs for the year would be about $90,000, or about $950 per hunter for air transport alone. We can compare this figure with the Cree Trappers' Association Project Team (1977) results in Table 2.18, but this must be done with caution since both samples, which are small, may be skewed. Average expenditures per hunter would seem to have been between doubling and tripling from 1975-6 and 1976-7 on the basis of this comparison. In 1975-6 however, several Wemindji hunters moved into the bush only for the last half of the winter, which may have held average expenditures on air charter below normal pre-ISP levels in that year.

In Table 2.19 we have presented data on two families of inland hunters whose distance to camps from the settlement was somewhat greater than the Wemindji average. Between 1974-5 and 1976-7, their air charter expenditures per hunter about doubled from $500 to just under $1000. These were hunters whose families were with them both years. The increase could be larger for hunters who were in all-men's groups in 1975-6.

Our estimate is that average utilization per hunter of air transport probably did not more than double, since coastal hunters and some near inland hunters were minimizing air charter costs by canoe, skidoo, or truck travel from Chisasibi. Since the number of hunters increased by about 50% in 1976-7 over our pre-ISP average, however, the total community expenditure on charter fare probably about tripled.

A quite comprehensive breakdown of hunters' expenditures on capital equipment is possible. Table 2.20 presents the values of additions in hunters' equipment in 1976-7 as compared to the reported value of their equipment inventories prior to

the implementation of the program. Skidoos accounted for over half the money spent on additions to equipment in 1976-7 and canoes and outboard motors for a third. The increase in value of both skidoos and canoes and outboard motors over the previous year is in excess of what one would expect would be required to cover depreciation, indicating that hunters were more heavily equipped with these items in 1976-7 than in recent years. Table 2.21, however, shows that purchases of canoes and outboard motors at Wemindji were at the same level in 1975-6 and 1976-7, though in both years higher than 1974-5. A heavier capitalization in canoes and outboards, then, was possibly underway before ISP was introduced. Purchases of skidoos in 1976-7, however, definitely rose over the previous year in those smaller models preferred by trappers as working skidoos. Here it is worthy of note that trappers say 1976-7 was only the third year that the small 12 and 14 h.p. skidoos were available locally and that 1976-7 was the first year there were enough in stock to come near to meeting demand. The Income Security Program, then, was not fully responsible for the increase in purchases of skidoos in 1976-7, and probably only facilitated a trend into purchases of heavier capital equipment already made accessible through wage labor income and other transfer payments.[16]

The same may be said about major household items for settlement use, which several hunters with money left over from hunting needs also purchased. There had been a general increase in sales of freezers, fridges, stoves, washers and dryers at Wemindji since electricity was introduced early in the 'seventies (see Table 2.22). Unfortunately, it was not possible to separate the figures by hunters and full-time wage earners, to tell whether the purchases of these items by full-time hunters were more restricted than for other residents.

Several changes in demography and the organization of hunting groups may be related to increased access to consumer technology. We have already argued that increased access to air charter encouraged the presence of more families in the winter camps. A second effect that we predicted, based mainly on conversations with hunters in some other settlements, was that the distribution of families over the land might be altered such that more hunters would occupy distant traplines that had previously been under-utilized due to prohibitive transportation costs. At Wemindji, in the first two years of ISP, however, this effect was limited. Increases in the number of hunters on coastal, near inland, and far inland traplines have been roughly equal in percentage terms (Table 2.23). The average distance traveled by hunters to far inland camps did increase, however, and these are the hunters more seriously affected by high air charter costs.

Our data indicate that the particular associations of hunting families on traplines did not change significantly in 1976-7, with the exception of one far inland camp to which a number of coastal families went. In 1977-8, four more customarily coastal hunters went to far inland camps. One factor preventing this move previously had been the high costs of air transport, which seemed not to be adequately compensat-

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16. Skidoos are used both for winter transportation on traplines inland and for transportation in the settlement and along the coast during the winter and pre-breakup spring goose hunt. Larger skidoos are suited for travel along the open coastal areas over the bay ice, but small skidoos are better for bush work. Paddling canoes are used on lakes by pre-freeze-up winter hunting groups, as well as around coastal camps to check fish nets, etc. The larger square-sterned freighter canoes equipped with outboard motors are used for transportation and hunting along the coast, for fall and late spring goose hunting, summer coastal fishing and waterfowl hunting, and pre-freeze-up transportation to coastal trapping areas.

ed by the higher beaver catches which are possible on the inland traplines. These shifts of hunting families seem to have occurred within the pre-existing system of social relations whereby hunters may be invited to one or more traplines in different years.

The presence of more skidoos and gasoline in the bush has altered somewhat the organizational strategy of the winter hunt. Table 2.24 shows the increase in utilization of skidoos on six inland traplines over four years. None of the hunters in our sample had skidoos in 1973-4, but by 1976-7 well over half were equipped with skidoos. Hunters vary in their opinions about the advantages of skidoos in the bush; most state that it depends on the kind of land hunted and the weather one gets.[17] Nevertheless, significant numbers of hunters have found that skidoos speed up their work. Beaver lodges that could be reached on foot only by rising before dawn and returning after dark can now often be visited in the daylight hours with the use of a skidoo. A larger territory has become accessible from a single location, and several hunters who used to move their main camp halfway through the winter to trap a new area can do their hunting from a single main camp all winter. In addition, the use of secondary camps, to which a hunter goes for a few nights before returning to the main camp with his catch, has declined, although it is still common at certain times of the season.

Skidoos, as well as gasoline-driven chainsaws, make the formidable task of keeping the household supplied with dry firewood much easier. Gathering wood appears to be a role which can be performed by either men or women, but it is our impression that in winter camps women were more responsible for it in the past. With the additional hours saved in travel to check traps and hunt, and with fewer periods away from the main camp, men appear to be removing some of the load from the women in this respect. Women are also assisted in bringing boughs for floors into camp with skidoos. As the winter wears on, the supply of both dead firewood and suitable boughs for floors become exhausted in the immediate area of the camp, and a skidoo saves considerable time and effort in transporting them from more distant spots. Skidoos are useful for similar functions in pre-break-up periods of the spring goose hunt.

A third effect of skidoos for trapping has been to extend the working career of older trappers with health problems which inhibit long distance walking and carrying.

The first skidoos began to be used in the coastal areas in the mid-sixties, and had generally replaced dogs for coastal travel by the first couple of years of the seventies. The appearance of lighter skidoos in 1975 probably increased their use in the bush for coastal trappers, as it did for inland trappers.

Large freighter canoes and outboard motors had been standard equipment for all kinds of hunting along the coast for several years prior to the mid-1970s. More hunters have been able to afford them, and the gas to run them, as local employment has increased. This may have been associated with more running back and forth from the settlement and less camp-based summer and fall hunting, but as we

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17. Hunters who have large or long lakes or chains of lakes that make for easy long distance travel with a skidoo can effectively trap a larger territory than by hunting on foot. Hunters on land with a lot of contour and heavy bush between lakes and waterways are less convinced that skidoos are an advantage for hunting. A hard crust on the snow later in winter facilitates the use of a skidoo. Slush on lake ice impedes skidoo travel.

have mentioned, there is nevertheless a tendency to more camp-based fall goose hunting since ISP was introduced.

Deep freezers are a commodity of particular relevance to hunting families. In periods when production exceeds consumption, meat can now be frozen regardless of weather. The goose hunts are periods when this is particularly so; geese can be shipped back to the settlement and frozen, which has the effect of streamlining the women's role in processing, since the majority of meat no longer has to be smoked and dried. Deep freezers have possibly been related to changes in community consumption and exchange patterns, but our data are too limited to comment in this regard.

To summarize our observations on the effect of increased purchasing power, Cree hunters have tended to buy more heavily into major harvesting-related goods and services--air transport, skidoos, canoes and motors, and freezers. All of these items had previously entered the hunting economy, but purchase of the more costly ones increased with ISP. Inventories of items such as guns, traps, tenting and tools, have been improved but the typical outfit of these basic items did not change much in quantity or kind. Traditionally purchased food staples such as flour, sugar, tea and lard remain the principal imported foods in bush camps. Entertainment items such as radios and tape recorders were purchased more frequently after ISP was instituted than previously.

In social terms, there is little doubt that the ability to purchase and transport more industrially produced conveniences to bush camps has made engagement in full-time harvesting a more attractive alternative, especially for younger adults. This level of consumer purchasing already was, or soon became, a condition for continuity in full-time harvesting for many young Cree. Some middle-aged and older hunters have been explicit that they themselves are permanent hunters, Income Security Program or no Income Security Program.

Changes in technology have had certain effects on participation in and organization of particular hunting processes that receive attention elsewhere (Scott, 1983).

VIII. Domestic Productivity and the Harvesting Population

We have already described in some detail the consequences of the Income Security Program for inputs of labor and technology to domestic production. Larger numbers of hunters, more equipped with industrial goods and services, are spending generally more extended periods of time in intensive harvesting.

In the present section the effects of these changes for productivity in different phases of harvesting at Wemindji are analyzed. Some limitations apply to this task, however, which were mentioned in our remarks on methodology. It has been possible to gauge change only for productivity of the major food animals of the main periods of harvesting - beaver, moose, caribou and black bear in the winter and Canada geese and "wavies" (snow geese) for the fall and spring hunts. Analysis of changes in composition of smaller harvested species are to some extent possible using the James Bay and Northern Quebec Native Harvesting Research Committee published results, although their seasonal and locational categories do not correspond to those of this case study.

Winter Hunting-Trapping Productivity Data

On the basis of the recollections of hunters as to their winter harvests from 1973-4 to 1977-8, we arrived at the figures in Table 2.25. They show significant increases in the harvests of beaver and moose for both 1976-7 and 1977-8 winters, and in harvests of caribou and bear for 1976-7 only.

Other data exist against which our results for earlier years for the Wemindji harvest may be checked. Our figures are considerably lower than the James Bay and Northern Quebec Native Harvesting Research Committee (1976) results for beaver, moose and bear in 1973-4 and 1974-5, but closer to the figures for 1975-6 through 1977-8. However, Native Harvesting Research (NHR) projected totals were working from a very limited sample from Wemindji until 1975-6, when a 74% sample was achieved. In addition, it appears that NHR figures for beaver in 1973-4 and 1974-5 were inflated by inclusion of beaver caught by Wemindji trappers in Ontario (JBNQNHRC, 1974:174). NHR figures for 1975-6 onward for Wemindji would seem to be more confident projections than those for previous years, and are in fairly close agreement with our data, although there are some discrepancies with respect to large game (Table 2.26).

Where NHR figures are larger than our own, some of the discrepancy may result from the fact that large animal kills from winter camp sites and winter settlement-based hunting, to which our data refer, are not necessarily all the individuals killed in a given year. Some black bear kills that occurred during the summer or early fall do not appear in our data. Moose and caribou may have been killed on short air trips inland from the settlement by hunters not routinely using a given trapline, and so were not reported by tallymen to us in our trapline-by-trapline data gathering. Notwithstanding, tallymen were confident in the accuracy of the data provided for large animals killed by hunters in their groups, which are easy to recall; and we are confident that figures for moose, caribou and black bear were remembered and reported accurately for the groups and periods covered by our data. Since total community numbers for big game are small at Wemindji, projections from even a large sample of hunters have the potential for greater distortion than is the case for species harvested much more regularly and frequently. This may help account for cases in which NHR's projected totals are smaller than our reported totals for a species in a given year.

There is reason to suspect that our figures for beaver kills are consistently on the conservative side. Virtually all Wemindji beaver would be killed during the winter trapping period included in our tables, and certainly all beaver from which pelts were sold. Our figures are marginally more conservative than NHR's, even from 1975-6 onward. Our figure for one of the years, 1974-5, is lower than the Québec Ministère du Tourisme de la Chasse et de la Pêche (MTCP) figure for sales of beaver pelts by Wemindji trappers (Table 2.27). This is disturbing since MTCP figures do not include beaver that have been too small to sell, whose pelts were too damaged to market, that have been kept for domestic use, or that may have been sold informally. MTCP figures therefore represent something below an absolute minimum figure for total annual kills.

We were able to run a limited internal check on the accuracy of our figures for beaver catches, however. For three traplines in 1974-5 and four traplines in 1976-7, we had complete data on beaver lodges visited by hunters, which they indicated on a map to us and for which they reported catches per lodge. This was an aid to memory which virtually eliminated error, but which was too time-consuming to

employ for all hunters. The actual figures for beaver kills determined in this way were 12% higher for the traplines surveyed for 1976-7 and 14% higher for the traplines surveyed in 1974-5 (Table 2.28) than for the method by which Table 2.25 was derived. Elsewhere (JBNQNHRC, 1976:120), the tendency has been noted for hunters to recall fewer goose kills with increasing time since the hunt, and this may have occurred to a limited extent with beaver harvests.[18] By making adjustments of 12%, 13%, 14% and 15% for 1976-7, 1975-6, and 1973-4 respectively, we would arrive at the adjusted beaver catches presented in Table 2.29. These figures are higher than MTCP results, but lower than NHR results, except for 1975-6 when they are marginally higher. We must caution, however, that our check applied to only 16% of the total beaver reported for all trappers in 1974-5, and for 22% in 1976-7.

While bearing in mind that they are conservative figures, we decided to use the unadjusted beaver figures in Table 2.25, in our measure of ISP impacts, since the figures appear to be conservative by a fairly consistent margin over the years indicated.

Our data on person-weeks in winter harvesting are determined from actual periods spent in the bush. In most cases, people had marked down or could remember the dates they had left for and returned from the bush, although for earlier years people were sometimes precise only as to whether it was early, midway, or late in a given month that they had departed for or returned from a camp. This was quite adequate for present purposes, however, and individual errors would tend to neutralize each other in totals.

ISP Impacts on Winter Harvesting Productivity

At Wemindji on all traplines the winter hunt is primarily organized around the beaver harvest, as hunters themselves told us. Table 2.30 shows that the beaver harvest is three-quarters or more of the harvest of larger food animals in winter, and it is second in importance only to the goose harvest from the point of view of the annual hunting economy. The estimates provided by Salisbury *et al* (1972b) and Feit and Penn (1975), presented in Table 2.31, suggest that in those years beaver were perhaps less important, though still the major component of the winter hunt with the possible exception of fish. The NHR figures (see also Table 2.31) establish proportions of total moose, caribou and bear foodweight to beaver foodweight somewhat nearer our own, and suggest that smaller animals combined provide a proportion of food about equivalent to moose, caribou and black bear. NHR's figures for fish caught by "away" winter hunters (Table 2.32) suggest that fish may account for a foodweight not far below big game (excluding beaver) and small food animals in most years.

We hypothesized that in post-ISP years more hunters on the land for longer periods of time, generally better equipped with skidoos and gasoline, might result in a larger beaver harvest, assuming hunters felt they had adequate reserves of beaver to hunt more intensively. As Table 2.33 shows, the total number of beaver taken on inland traplines in 1976-7 and 1977-8 did increase, in close proportion to the number of hunters on the land, but not quite in proportion to increased weeks per

18. Nevertheless, hunters showed no marked tendency to round off their totals for the earlier years, indicating that they were reporting with some exactness in most cases.

hunter in winter harvesting. The average return of beaver per week hunting appears to have declined marginally in post-ISP years, but on average more beaver were caught per hunter, taking the winter season as a whole. On coastal traplines, the **total** number of beaver taken declined marginally in 1976-7 by comparison with the two previous years, but increased marginally in 1977-8. Since the average weeks/hunter, the total number of hunts, and the total hunter-weeks on coastal traplines increased almost as much as on the inland traplines, the beaver per hunter-week dropped sharply on coastal traplines by comparison with inland traplines, and beaver per hunter dropped somewhat, especially in 1976-7.

If hunters obtained less beaver meat per man-week in hunting, and bearing in mind that woman- and child-weeks in the bush increased considerably more sharply than for men, then one or more of the following strategies must have been operative:

1) hunters were catching more big game animals or small animals, birds and fish;
2) assuming a surplus of household production in relation to consumption, hunters and their families were consuming more of what they caught within the household unit and distributing less of it to families who were not intensive hunters;
3) hunters were depending more on store bought food while in the bush.

Table 2.35 indicates that on inland traplines the increase in the average large animal foodweight harvested per hunter-week almost compensated for the drop in beaver/hunter-week in 1976-7 from previous years. In 1977-8, large animal foodweight per hunter-week dropped back to close to pre-ISP levels, but beaver foodweight simultaneously increased to near pre-ISP levels. Combined beaver and large animal foodweight per hunter-week were within the range of variation, and close to the average, of pre-ISP levels.

We should also bear in mind, however, that the average number of dependents in the bush per hunter marginally increased, since all-men's camps disappeared. Hunters may therefore have been harvesting more fish and small game in their camps, and/or eating more of their catch in the bush and taking less back to the settlement for family members left there or for other households. We do not think, based on our conversations with hunters and Hudson's Bay Company managers, that the amount of food supplies per average household-week in the bush increased, although in absolute terms intensive hunting families consumed more supplies in the bush.

On coastal traplines, however, the increase in large animal foodweight per hunter-week seems insufficient to have compensated for decreases in beaver taken per hunter-week in 1976-7. In 1977-8 the beaver foodweight per hunter-week had improved to close to the 1975-6 level, but the large animal figure had declined to below the 1975-6 figure, so that combined beaver and large animal foodweight on coastal traplines was still somewhat below the 1975-6 figure in 1977-8; and in all years was lower for coastal than for inland traplines. Here we might predict that harvests of small animals or stocks of geese from the fall hunt were more critical in maintaining household consumption levels. Also coastal families on some traplines may have been consuming more groceries in the bush. Families who previously stayed in the settlement while the head hunted out, with frequent returns, may have consumed in bush camps some of the groceries they would have been eating in the settlement, without producing obvious shifts in buying patterns.

We have data which do suggest that winter hunters in the coastal areas were in

fact relying more heavily on small game than those on more beaver-rich inland traplines. Table 2.36 summarizes data for seven hunters, three coastal and four inland, for whom comprehensive data were obtainable on winter harvesting activities and total harvests. Neither group was necessarily representative of coastal or inland hunters at large.[19] The comparison does serve to illustrate, however, that coastal hunters rely more heavily on smaller game than on beaver, though beaver are nevertheless a significant component of the harvest for coastal hunters. The data also suggest that some coastal winter hunting families may rely more heavily on purchased food or bush food caught at other times of the year, since actual pounds of food available per consumption unit week for the sample of coastal households were lower than those actually consumed per consumption unit week by the inland households. NHR data give us some indication of what occurred with respect to winter small game harvests, which, combined with our results for beaver and larger game harvests, provide a view of what occurred with overall harvests in pre- and post-ISP years. Unfortunately, NHR data are not in a format which allows us to make the same coastal/inland distinction which is calculated in our tables, nor quite the same seasonal distinction as the period we have designated as the "winter camp" period.

NHR annual small game foodweights in Table 2.31 would derive almost entirely from the winter period, as we have defined it. And in all years for which NHR makes the distinction between "intensive" and "active" hunters, intensive hunters account for 80-85% of the small game harvest. The intensive hunters' small game harvest in each year would correspond roughly to the period included in our hunter-weeks totals for winter camps in each year. Small game foodweights increased from about 13,700 lbs. in 1974-5 and 6,700 lbs. in 1975-6 (all hunters), to 16,900 lbs. in 1976-7 and 27,600 lbs. in 1977-8. Hare populations on the upswing in their cycle in each successive year accounted for the rise, and declining porcupine and ptarmigan harvests accounted for the drop from 1974-5 to 1975-6 (Table 2.31). Since total man-weeks in winter camps about doubled in 1976-7 and 1977-8, after the Income Security Program was introduced, it appears that small game productivity per man-week may have been lower in 1976-7, but higher in 1977-8, relative to 1974-5.[20] Small game productivity per hunter-week was considerably higher in both 1976-7 and 1977-8, relative to 1975-6, however.

NHR fish harvest data summarized in Table 2.32 for "away" locations would correspond roughly to that for our winter camp period intensive hunters, excluding those hunters whose winter camps were on the coast end of the coastal traplines. An examination of these data suggests that relative to 1974-5, winter camp fish harvests were sufficiently increased in the post-ISP years to give improved fish productivity per hunter-week. But this is not the case relative to 1975-6, where despite only half the total man-weeks in winter harvesting that year, the fish harvest

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19. The coastal hunters had marginally more consumption units to feed, in this sample, than the inland hunters. Coastal hunters included one hunter who was settlement-based all winter, and two who were settlement-based part of the winter, so that produce per hunter-week may under-represent camp-based coastal hunters. In addition, several of the inland traplines are not as beaver-rich as the one on which hunters in our sample worked. The comparison, therefore, probably represents two extremes in harvested species composition and total productivity.

20. NHR projections for 1974-5 must be interpreted with some caution, however, since they were based on a sample of only 19% of potential hunters at Wemindji.

is almost as high as for 1976-7, and higher than for 1977-8.

There is in the data the suggestion that fish and small game, as well as large game and beaver, are emphasized and de-emphasized somewhat interdependently from one year to the next. Fish harvests are low in 1974-5 when small game harvests are higher, compared to 1975-6, when small game harvests are low and fish harvests are higher. In 1976-7, both fish and small game harvests exceed the previous years, but increased total man-weeks increased marginally more, so that combined small game and fish harvests per hunter-week declined marginally. This suggests that while big game productivity compensated for drops in beaver productivity per man-week, there may have been a marginal overall decline in harvested food per man-week, on the order of 10% by our calculations. This decline may have been less marked on the inland traplines, where big game harvests compensated more fully for declines in beaver productivity per man-week, and more marked on coastal traplines.

In 1977-8, on the other hand, the combined winter camp fish and small game harvest per hunter-week clearly exceeded both pre-ISP years. At the same time, there was less difference in combined beaver and larger game foodweight per hunter-week, so that overall winter camp productivity per hunter-week for 1977-8 exceeded pre-ISP levels by about 5%, by our calculations.

The differences between coastal and inland traplines in overall productivity per hunter-week with respect to beaver and big game are no doubt offset to a large extent by higher hare, fish and ptarmigan harvest productivity in the coastal zone. About a third of the annual hare harvest, and from over a third to over half of the winter fish and ptarmigan harvests, are taken in the NHR "near" zone alone, which contains the activities of only some of the approximately one-third of Wemindji intensive hunters who winter-harvest on coastal traplines.

In summary, the absolute winter harvests of post-ISP years increased very substantially compared with pre-ISP years. The harvests per man-week in winter camps have remained fairly steady, with increases in some species making up for declines in others from year to year.

Meat harvested by hunting groups in excess of their needs in the bush may partly be distributed to neighboring camps, and mostly is flown back to the settlement. There it is distributed directly to other households, or is frozen for use during the summer months. Some is consumed by the producing household at a later time, some is contributed to community feasts, and some is distributed to other households at various points in the year.

Several winter hunting groups in 1977-8 harvested beaver and large game in excess of the levels of consumption of those species by the hunting group that we lived with during the same winter.[21] Assuming that other groups consumed these larger species at similar rates, twelve hunting groups in 1977-8 would have had about 12,000 lbs. of beaver, moose, caribou and bear meat in excess of their consumption in camps. Other groups which harvested and consumed smaller species more intensively, or which relied more heavily on purchased food than the group we monitored, could also have had surpluses of harvested food for later

21. The camp we lived in utilized very little imported food, with the exception of staple sugar, flour, lard and tea, but nevertheless had a "surplus" of the magnitude indicated in Table 2.36 which was almost exclusively beaver and moose meat. Utilization of fish and small game was probably relatively light, although rabbits were higher than in the year previous.

personal use and for distribution within the wider community. Since we do not have small game harvest data by individual hunting group, or information on the level of purchased food used, it is difficult to quantify; but particularly large hare harvests in 1976-7 and 1977-8 would possibly have contributed to additional surpluses in these cases (Table 2.31). It is clear that the majority of intensively harvesting households were harvesting enough food in the winter to have a surplus for later personal use and for wider distribution, so that the community at large was benefiting from increased activity in the harvesting sector.

Goose Hunting Productivity Data

Our goose harvest data in Table 2.37 were compiled through hunters' reports of their seasonal kills. It represents full coverage of all hunters who hunted from goose camps, and projections from 36-46% random samples of all resident males over fifteen years of age at Wemindji as to seasonal goose kills on excursions from the settlement.[22] NHR's total community projections (Table 2.38) are low in relation to our data for both Canada geese and wavies in the springs of 1975 and 1976, when our camp-based kills alone are about equivalent to NHR's totals. Our total figures are in close agreement with NHR's for springs 1977 and 1978. The NHR summer/fall 1975 figures seem low in relation to our data, our 1976 figures are in close agreement, and our 1977 fall figures are about 15% lower than NHR's.

Man-weeks data in hunting are calculated according to periods spent in camps between beginning and ending dates. Unfortunately, it was not feasible to obtain man-weeks data on settlement-based goose hunters during our research period.

ISP Impacts on Goose Harvesting Productivity

Our data indicate only a marginally increased harvest in fall of 1976, and lower harvests in fall of 1977, and springs 1977 and 1978 than in the last pre-ISP year (Table 2.37), in spite of the fact that more hunters participated in the 1976-7 and 1977-8 hunts than in 1975-6. From our partial data for 1974-5, it appears that in both fall and spring it may have been a poorer year than 1976-7 with respect to total goose harvest. Total harvests, hunter-weeks, and harvests per hunter-week seem to have varied with weather and characteristics of the seasonal migration. Hunters told us that the spring of 1977 had been a poor spring compared with the previous one, due to too much calm weather, and warm weather which encouraged the geese to continue north. The previous fall was better than the fall of 1977, but not an outstanding one. In the case of the fall hunt particularly, it was suggested that too much uncoordinated hunting could contribute to reduced average returns per hunter--a problem which pre-dated ISP but which was perhaps aggravated by increased numbers of hunters in fall 1976 and 1977. There is also widespread concern among hunters that frequent commercial air traffic, which flies at low altitudes along the coast on a north-south path, is disturbing the flocks in their bays. This can spoil hunters' plans on some days, and in the longer term there is the fear that many geese may be re-routing their migration inland. Some Cree said that these problems have been reported to the major commercial air company that flies this

22. The attempted 50% samples on which these realized samples are based were designed to include proportionate numbers of males of each age, and projections are from ten year age sets.

route, with a request that the pilots fly a course inland from the coast a couple of miles, so disturbance to geese would be minimized. But the situation had not changed at the time of our research.

Productivity per man-week in spring camps was consistently lower than in fall camps for all years covered by our data (Table 2.39). This is partly due to the fact that hunters spend more time in spring camps before and after the migrations peak. Average harvests per man, however, are similar for the two seasons, though the total spring harvest involves more hunters and is correspondingly larger.[23]

Average goose kills per camp-based hunter are consistently from twenty to fifty percent higher than those of settlement-based hunters for both fall and spring hunts (Tables 2.39 and 2.40). This suggests that a higher proportion of hunters in camp-based hunting should increase the total harvest, factors of weather and the migration being equal, and assuming that camp-based hunter density is not so high that more hunters would lead to diminishing returns for those already there.

By comparison with winter camps, combined goose foodweight[24] per hunter-week in camp is higher in spring camps by almost 30% than combined beaver and large game per hunter-week in inland winter camps, while combined goose-foodweight per hunter-week in fall camps is almost 130% higher than combined beaver and large game foodweight per hunter-week in winter camps (with the exception of 1977-8, when both spring and fall hunts were exceptionally poor). This suggests that most households in the spring, but particularly in the fall, have goose meat in excess of consumption needs while in camp, and that hunters on the more beaver-poor coastal traplines can help offset relatively lower winter production by working the fall hunt more fully. This relation is recognized explicitly by local people as the basis of a certain equality between inland and coastal hunters--the inland hunters catch more beaver, while the coastal hunters take more geese.

We have fuller data on harvests of other species for two fall goose camps attended for periods of five days and a week-and-a-half, for which periods foodweight data are provided in Table 2.42. In spite of the fact that camp 'A' was having particularly poor goose hunting during the period monitored, high fish catches contributed to a high overall productivity. Camp 'B' was having better, but still not good goose hunting in the hunters' view, though it appears about average in relation to data for the four years presented in Table 2.39. Many fewer fish were being caught, and total productivity per man-week was actually lower than for Camp 'A'. In both cases, the total pounds of food available per consumption unit-week were well in excess of actual use and immediate consumption needs.[25]

Given the number of geese per hunter-week harvested by Camp 'B', the period

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23. NHR's figures (Table 2.41) indicate a similar relation between the spring and fall hunt with respect to productivity per man-week for 1974-5, but the summer-fall 1975 figure is only a third of our own for geese per hunter-week, which sets up the inverse relation between fall and spring hunts to that indicated by our data. NHR is based on all responding hunters, both settlement-based and camp-based, however. In addition, their man-day figures refer to actual days in Canada goose hunting, as opposed to all days in camp, so that the contrast between spring and fall portrayed by our data would be less marked in NHR's figures.

24. Excluding brant.

25. Pounds of harvested food available per consumption unit-week were between eighty and ninety percent higher than bush food actually consumed in the winter camp we monitored.

monitored would resemble most closely the fall of 1976 overall harvest. Were we to project the approximately 42 lbs. per hunter-week surplus in camp 'B' to the entire camp-based fall hunt in 1976, approximately 6400 lbs. of food would have been available in excess of fall camp consumption needs. An estimate for a spring hunt is not possible, since we did not monitor overall harvest composition in a spring camp. Goose foodweight per hunter-week is generally lower in spring than in fall, but time spent in spring camps is longer, and fishing may be more intensive.

Summer Sturgeon Fishing Productivity

From the economic point of view, sturgeon fishing was an extremely productive activity for the short periods of time that Wemindji families had again been conducting it. In terms of productivity per hunter-week, it exceeded winter hunting-trapping and goose hunting from two to ten-fold. Foodweight available per consumption unit week was obviously well in excess of requirements for the period in the bush in all years (Table 2.43). Even had people in camps caught no other game and eaten sturgeon up to the level of consumption of bush food in the winter camp monitored, 504 pounds (or 315 pounds per hunter-week) in 1976, 2460 pounds (or 206.7 pounds per hunter-week) in 1977, and 2354 lbs (196.2 pounds per hunter-week) in 1978, would have been taken back to the settlement for distribution.[26]

ISP and Fur Production at Wemindji

The effect of more hunters on the land for longer periods of time for harvests of beaver, the principal source of fur income, has already been discussed. Total income for fine fur and beaver pelts combined was $29,380 higher in 1976-7 than in 1975-6, an increase of about 65%. More trappers sold fur in 1976-7, as was to be expected on the basis of ISP effects on participation in harvesting, and the average annual fur income per trapper increased from $527 to $768 (Table 2.44). Given the predominance of beaver pelt income as a factor in total fur income (Table 2.45), it seems that the increase of average fur income is largely accounted for by an almost equivalent (in percentage terms) increase in average beaver per trapper between the two years (Table 2.33). 1976-7 was also a higher than average year in the lynx cycle, which contributed substantially to increased average fur income.

While we had hypothesized that increased ISP income and the deduction on ISP benefits (equivalent to 40% of all fur income in excess of $250 each for a trapper and consort) might tend to discourage fur trapping, this seems not to have occurred at Wemindji.[27] This is due partly, perhaps, to the fact that beaver is particularly important as a food species, and generally cannot be replaced during the winter period without moving to less hunter-efficient small game harvesting and fishing.

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26. Sturgeon foodweight per hunter-week in camp was lower in 1977, possibly due to the fact that one family stayed for an extended period from spring into summer during which time muskrat were also harvested fairly intensively for a period. Seasonal differences may also be involved.

27. Although at other communities that phenomenon has been observed.

ISP Effects on Other Aspects of Productivity

Cree living in the bush produce much more than their food. Dwellings are constructed using a combination of bush items and purchased goods. Heating and cooking fuel is almost exclusively derived from the bush. A whole range of tools, equipment and clothing, often for which there are no satisfactory commercial equivalents, are manufactured domestically from both indigenous and commercial materials.

It is difficult to gauge in quantitative terms to what extent increased household-weeks in the bush and in harvesting activities have affected these aspects of productivity. Certainly, Wemindji families are filling their own heating and cooking energy needs, and are providing their own housing, at an increased level in direct proportion to the time spent in camp-based harvesting.[28] From our own observations, increased engagement in intensive harvesting exerts a parallel influence on manufacture of tools, clothing, and equipment. A list of items commonly manufactured by households is included in Table 2.46. With the exception of several items of clothing, these items are almost always manufactured domestically. Households are also adept at servicing and repairing equipment purchased commercially, such as canoes, motors and skidoos.

If we accept the Grand Council of the Crees (of Quebec) (1977: Table 9B) estimate of $2120 for the cost of heating and otherwise servicing oil-heated settlement housing which is electrified, and has sanitation service, then the replacement value of energy and services provided domestically by the families who lived part of the year in the bush were $32,000 higher in 1976-7 than in the previous year.[29] If we also accept the Grand Council of the Crees' (GCCQ, 1977: Table 9F) figures of $905 for the value of clothing and equipment manufactured, $300 for the value of miscellaneous vegetable products harvested per intensively-harvesting family in 1976-7, then the additional value produced in harvesting by families at Wemindji in 1976-7 by comparison with the previous year was $57,000 in clothing and equipment and $18,000 in miscellaneous vegetable products (Table 2.47).[30]

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28. Households which are not involved in intensive harvesting also manufacture several of these items, or obtain them from others who do. Their replacement needs, however, would tend to be lower.

29. This figure is arrived at by multiplying camp-based man-years (total man-weeks/52) spent in family hunting camps by the annual cost of settlement habitation cited above, and taking 61% of the result in each case. 61% represents the proportion of intensive hunters who were married men at Wemindji in 1976-7. Single men would not normally have their own housing at the settlement. Not all married hunters at Wemindji have oil-heated homes, and full monthly payments on housing and services awaited completion of several new homes, so part of the value cited above and in Table 2.47 for energy and habitation in the bush is still a hypothetical replacement value for bush-produced energy and utilities.

30. These figures are obtained by taking the annual number of respondents in the NHR (1978 and 1979) studies, multiplying by the annual totals of average days spent in summer fishing, fall goose hunting, winter trapping, and spring goose hunting; dividing by 180 days per intensive 1976-7 harvester to obtain intensive harvester-years; and multiplying the result by the values per intensive harvester-year of domestic manufactures and miscellaneous vegetable produce cited above. The average per Wemindji intensive hunter in 1976-7 was 183 days in harvesting (Income Security Board).

Summary: ISP Effects on Domestic Productivity

Overall, foodweight productivity per hunter-week among intensive harvesters showed no marked trend to increase or decrease with respect to key species of the major harvesting activities reviewed: winter hunting-trapping, fall and spring goose hunting, and summer sturgeon fishing. In the case of winter hunting a temporary decline in beaver productivity per man-week was effectively offset by an increase in large game animals harvested in community total figures. Changes in productivity per man-week in goose harvesting seem largely accounted for by factors of weather and characteristics of the migration from one year to the next, though this will require longer-term monitoring. Fall 1976 was about average, and spring 1977 below average in relation to the pre-ISP data. Both fall and spring hunts in 1977-8 were poorer than average hunts.

Data on households we lived with during fall and winter hunts, as well as some winter coastal hunters, confirm that in those cases where goose or beaver and big game productivity was low for one reason or another, small game and/or fish assumed a more important role in both proportionate and absolute terms. Smaller species may have been tapped more heavily by hunters whose average beaver per man-week was lower in 1976-7, but who were not able to offset this by killing more large game, and fishing may have been more heavily emphasized when goose hunting was relatively poor.

In total terms, it appears that ISP has resulted in more domestic food production in terms of major hunted species combined. In proportional terms, more of the harvest is probably being eaten in the bush, but substantial and perhaps increased quantities of the major harvested species are also being distributed per capita to a reduced settlement population. On the basis of rough estimates made for each hunting activity, the harvests of the camp-based population in excess of consumption while in camps would have been, conservatively, over 20,000 lbs. for fall goose hunting, winter hunting-trapping, and summer sturgeon fishing alone, based on data from years since ISP was implemented. Additional amounts might have been available from spring goose hunting and summer coastal fishing.

NHR statistics for total harvests at Wemindji indicate that 24-25,000 lbs. more bush foodweight was produced at Wemindji in 1976-7 and 1977-8, after ISP was implemented, than in 1975-6, the last pre-ISP year. Several hunters who hunted less often and had lower average harvests per hunter in 1975-6 became intensive hunters with higher average harvests in 1976-7 and 1977-8, due to the Income Security Program. While harvests of hunters in NHR's "active" category therefore declined, as more community males became intensive hunters under ISP, the harvests of the "intensive" category greatly increased, with more intensive hunters and increased time in harvesting per hunter; and the net result was a substantially increased overall community harvest (Table 2.48). To the total foodweights summarized in Table 2.48, we could impute replacement values of $2.50 per lb., so that the increased value of the harvest in ISP years would be from $60-64,000.[31]

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31. An average price for a mix of frozen beef, pork and chicken at Wemindji retail outlets, which would most closely approximate the nutritional value and palatability of bush meat, would have been between $2.25 and $3.00 per pound, based on our own experience in summer of 1977 at Wemindji. We have adopted a constant dollar value of $2.50 per pound for bush meat for our calculation, although there would be an inflation factor of probably at least 10% from one year to the next in the price of store-bought meat during that period.

Increased participation in winter trapping for longer periods of the winter at Wemindji contributed to higher average fur income for the community, although it is evident that at an average of $750 per hunter fur income continued to be much less important than ISP benefits and seasonal wage employment.

The self-provision of housing and fuel, as well as the frequency of home-manufacturing, have undoubtedly increased in proportion with increased members for increased time in the bush. We estimated a replacement value for energy and other dwelling services provided by families in bush camps $32,000 higher in 1976-7 than in the previous year; an increased value of domestic manufactures of $57,000, and an increased value of miscellaneous vegetable products harvested of $18,000 (Table 2.47). With the possible exception of certain items of clothing, ISP benefits tended not to be spent on items which potentially replace those still made within the household, the latter being generally considered superior to available commercial substitutes. Rather ISP benefits go toward the "traditionally" purchased tools, equipment and supplies, to more mechanized hunting technology, and to certain luxury items.

To conclude, ISP has evidently been an effective tool in stimulating domestic productivity; through expanding hunters' access to the goods and services available in the cash economy via a specialized form of transfer payment.

IX. Labor, Technology, and the Ecological Conditions of Domestic Production

The key question in an assessment of the ecological implications of ISP is whether the configuration and level of technology and labor inputs and the productivity they encourages are compatible with the long term ecological maintenance of domestic production.

A critical variable is the distribution of production inputs in relation to available subsistence resources. As mentioned in a previous section, the average distance to winter hunting locations from the settlement is a feature which may be affected by increased access to air transport. In fact, the average 1976-7 and 1977-8 distances per hunter very marginally increased for Wemindji hunters in relation to our three year pre-ISP average, although the post-ISP figures were within pre-ISP variation. The increased average distance was more marked in the case of hunters on the far inland traplines, probably since that was the group most affected by burdensome air transport costs prior to ISP. Hunters on the near inland and coastal traplines make some use of air transport, but can usually minimize costs by traveling to several locations by skidoo, or by going to Chisasibi, outfitting themselves there, and taking a road vehicle down the LG-2 - Matagami road. The fluctuations from year to year in average distance traveled by hunters to coastal hunting sites we would interpret as reflecting primarily changing percentages in a given year of hunters on the coastal end as opposed to the inland end of their traplines; a decision which would be more substantially influenced by factors of beaver management than transport costs.[32] In fact, the coastal hunters' average distance to hunting locations was lower in 1976-7 than the three year pre-ISP average (Table 2.23).

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32. However, the convenience of the road and cheap supplies near several coastal and 'near' inland traplines evidently influenced the specific location of several camps on these traplines.

Although Wemindji 'far' inland traplines extend up to about two hundred miles inland from the coast on official maps, the nearer portions of some of them commence at about ninety miles, and as Table 2.49 shows, most 'far' inland hunters during the period covered by our research operated between 90 and 150 miles from Wemindji. There was a noticeable shift in numbers and percentages of hunters using sites 120 to 149 miles as opposed to sites 90 to 119 miles away in 1976-7. Figures for the latter category had been about double the former in pre-ISP years, while exactly the opposite occurred in 1976-7. This could indicate a move by hunters to see more distant parts of their grounds as soon as higher cash income became available. Nevertheless, hunters still maintain that they feel the pinch of air costs, and there seems to be little move to hunt most lands beyond 150 miles of the settlement. In 1977-8, there was a return to the nearer ends of the far inland traplines, consistent with rotational harvesting strategies, so that the pre-ISP pattern of about double the number of hunters on the 90-119 mile as compared with the 120-149 mile range re-occurred.

Hunters told us that there were adult beaver dying of old age in some of the most distant zones, which to them indicated an unused margin of beaver reproductivity. Nevertheless, there seemed little real pressure to see the most distant regions so long as far inland hunters were able to maintain relatively high annual beaver catches, which they seemed currently to be doing. We were also informed that much of the beaver productivity on the far eastern portions of the trapline could be tapped on the closer portions, since the waters tend to run westward and young beaver tend to radiate downstream when establishing new lodges.

The distribution of hunters at 30-60 and 60-90 mile distances from the settlement, which include the far ends of the coastal traplines and practically all of the 'near' inland traplines, did not shift outside of three-year pre-ISP limits. There appeared to be a marginal increase in the percentage presence of hunters in the more distant of the two ranges, and a decrease in the closer one in 1976-7, with decreases in absolute and percentage terms of hunters at both ranges in 1977-8. Some of these hunters went slightly further, and others remained closer to the settlement.

There was a more marked increase, in both absolute and percentage terms, in winter hunters operating at less than thirty miles from the settlement in 1976-7 and 1977-8. This may help to explain the fact that for coastal traplines, the total beaver harvest stayed at the same level or increased only quite marginally by comparison with the three-year pre-ISP average, and the average number of beaver caught per hunter dropped, in spite of the fact that the number of hunters (and even more so, the number of man-weeks in harvesting) increased (see Table 2.33). This effect was more severe in 1976-7 however, than in 1977-8 when total beaver harvests increased despite a slight drop in the number of hunters by comparison with the former year. The coastal traplines have lower beaver quotas and individual catches than inland traplines, particularly on the coastal ends, and in those zones diminished return per hunter-week may have been the response to avoid depleting the beaver population.

On inland traplines, the number of beaver per hunter-week in camps also declined in 1976-7, but less, and in 1977-8 it recovered to within pre-ISP variation. The average number of beaver per hunter for the season increased somewhat in both years. We would interpret this to mean that hunters were staying within customary

quotas,[33] although they were filling them with higher rates of success, having more months in the bush to do it. The total beaver harvest increase reflects both the 35% increase in harvesters and a 27% increase in average harvest per hunter, but did not increase in direct proportion to the increase in total hunter-weeks, which doubled. The fact that tallymen have not raised customary individual quotas, in spite of an increase in man-weeks on the land, has probably exerted a moderating influence on the level of the beaver harvest. Since individual camps on average did not contain more hunters, since hunters were more heavily equipped with skidoos and gasoline, and since beaver densities were at levels similar to recent years, increases in the harvest more closely in proportion to doubled man-weeks in the bush might have been expected, in the absence of some conscious restraint.

Both coastal and inland tallymen whom we talked with in summer of 1977 stated that beaver populations on their traplines had been stable or increasing in recent years. No one expressed the view that the 1976-7 winter hunt had altered the situation in any particular zone. This tends to be confirmed by the fact that beaver harvests were slightly larger in 1977-8 than the previous year, with 4% fewer trappers. But data for more than one rotational cycle (2-3 years) would be required to state with certainty that increases in total beaver harvests are supportable in the longer term.

It was generally recognized that both moose and caribou populations in the region had been increasing in recent years. The increased average big game harvest per hunter-week in 1976-7 may be related to the decline in beaver productivity per hunter-week, since big game harvesting is more productive in terms of subsistence economic returns per effort expended, in comparison with beaver.

Meanwhile, the imperative of maintaining high beaver catches in order to help meet the costs of transport and outfitting was reduced by Income security. In 1977-8 big game productivity per hunter-week and total foodweight on the coastal traplines dropped sharply by comparison with the two previous years, but was probably still above a three year pre-ISP average. On inland traplines big game foodweight per hunter-week and total foodweight declined in 1977-8, but harvest per man-week was still higher, and total foodweight over double, pre-ISP averages. On both inland and coastal traplines, the 1977-8 decline in big game foodweight per hunter-week was accompanied by a more than offsetting increase in beaver foodweight per hunter-week.

Beaver and large game availability on most of the coastal trapline area is more restricted than on inland traplines, and it is probable that returns per man of these more efficiently harvestable larger species are more susceptible to reduction with increased hunting pressure. While combined big game and beaver harvests per man-week declined somewhat on coastal traplines in 1976-7 and 1977-8 by comparison with 1975-6, the last pre-ISP years, it appears from our data that the post-ISP figures are closer to other pre-ISP years. This decline in beaver and big game productivity per man-week was therefore limited, and combined total foodweight of these species increased in post-ISP years. On inland traplines, combined beaver and big game harvests per man-week did not decline under ISP, and combined foodweight almost doubled. While there was less margin for increased beaver and

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33. Previously quotas were established by the Québec Ministère du Tourisme, de la Chasse et de la Pêche, in consultation with tallymen, but since 1976-7 have been established at the discretion of the tallymen.

big game harvests on coastal traplines, certain of the most distant portions of inland traplines continued to be underutilized, and some inland tallymen remarked that in recent years it had been difficult to get more hunters to trap with them, due to high air charter costs. ISP benefits have aided some "coasters" in 1976-7, and a few more in 1977-8, to join tallymen on the far inland traplines. Local people say, however, that more coasters would probably follow that lead if people with higher transportation costs were compensated proportionately. As ISP operates, benefits are not scaled to actual cash costs incurred in harvesting, and some hunters felt that it would be a positive measure if they were.

The ecological impact of increased numbers of goose hunters needs to be viewed in regional and even continental terms, since unlike beaver, the goose population is not manageable locally. In local terms, the significant issue concerning ISP impact would be whether increased numbers of more heavily equipped hunters have affected the efficiency of the goose harvest. In the local view of the goose camp "shooting bosses", intelligent and coordinated hunting based on the knowledge of experienced hunters will assure maximal returns under a given set of seasonal circumstances; and increased numbers of hunters are a less serious problem *per se* than the presence of even a few hunters whose practices are contrary to good hunting techniques. Insofar as ISP dollars further enhance the ability of younger hunters to equip themselves and hunt independently, and insofar as some of their activities are not coordinated by the leadership of older, experienced hunters, there is the possibility that ISP has contributed to some problems in coordinating the hunt. We have already discussed attempted local measures to reduce this problem; a problem which pre-dated ISP, but which was potentially heightened by the program.

Increased money for transportation was not a factor in altering the distribution of goose hunting camps, since the costs of reaching any camp along the coast are never prohibitive, unless one attempts to commute frequently from the settlement to the more distant sites. Commuting in the spring is limited by ice conditions, and in both spring and fall our data indicated about stable numbers of settlement-based hunters, with an increased population in customary locations for camp-based hunting. Increased numbers of hunters and increased man-weeks in hunting notwithstanding, there is no evidence that ISP led to increased overall goose harvests. 1976-7 fall and spring goose harvests appeared about average, and 1977-8 fall and spring goose harvests were somewhat lower, in relation to pre-ISP years. Poor weather conditions were cited in relation to the poor 1977-8 hunts, and some hunters also related these poor hunts to a longer term decline over the previous years, which they attributed to increases in uncoordinated hunting, and to interference by air traffic over coastal bays. Other hunters disagreed that there had been a decline in total harvests, but acknowledged that harvests per man had declined as the Cree hunting population had grown.

Sturgeon appears to have been an underutilized resource in the Wemindji area in the years preceding ISP implementation. The program appears to have encouraged its utilization, but we had no firm indication as to what further expansion into summer sturgeon fishing might be possible.

The particularly high small game harvests of 1976-7 and 1977-8 by comparison with the previous year are the most notable change indicated for species not monitored by the present case study (Tables 2.31, 2.48). Small game are primarily winter-harvested animals, and changes in total small game harvests by Cree appear

to be due mainly to an upswing in the hare population cycle.[34] As the hare cycle declines, winter harvesters need to rely proportionately more heavily on other species groups, on purchased food, and/or have smaller surpluses available for broader distribution. In some areas, heavier reliance on beaver and big game may be possible; in other areas, more intensive fishing or reliance on purchased food may result from cyclical declines in small game harvests.

There also appeared to be higher loon, duck, muskrat and seal harvests in 1976-7 and 1977-8, and these pertain primarily to spring, summer and fall harvesting periods. These increases were not sufficient to offset declines in Canada goose, snow goose, and brant harvests in the ISP years (Table 2.31).[35]

A quite marginal decline in annual fish harvests in ISP years by comparison with pre-ISP years is indicated by NHR data. However, 1976-7 was the low point in fish harvests, which in 1977-8 increased to within the pre-ISP variation indicated by NHR, and exceeded the estimate of annual fish harvest made by Feit and Penn (1975). Fish harvests continued to be lower than the annual harvests that would be expected from Salisbury *et al*'s (1972b) figures for the early 1970s. It is plausible that the years covered by NHR data at Wemindji represent depressed fish harvests relative to 1971-2, due to the controversy over mercury levels in fish.

The impact of increased harvesting effort in different zones warrants periodic monitoring, analysis against the game population capacities of specific zones, and against hunters' continuing observations. As many as ten Wemindji traplines underwent from marginal to severe impacts from the Eastmain diversion and LG-3 reservoir components of James Bay Energy Corporation's project after the time of our research. An examination of the resulting loss of resources would be particularly informative in view of generally increased utilization of traplines by hunters.

X. Subsistence Production and the Cash Economy - Settlement and Regional Impacts

In economic terms, subsistence production of the Cree is linked with the cash economy through the sale of primarily labor power and furs, through transfer payments, and through the use of industrially produced commodities and services.

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34. Salisbury's figure for hare indicates that 1971-2 harvests of that species were nearly as large as those for 1977-8 (Salisbury *et al*, 1982b). Apparently both years were at or near peaks in the hare population cycle.

35. The NHR study indicates higher ptarmigan, duck, and seal harvests in 1974-5 than in any of the three subsequent years (Table 2.31). The NHR Wemindji data for 1974-5 must be interpreted with some caution, however, because only 19% of potential hunters were in the sample on which projections were based, and for all species on which we obtained comparative data, NHR figures are higher than our own. The Native Harvesting Research Committee revised the annual seal harvest figure for 1974-5 to below their 1975-6 figure (JBNQNHRC, 1978:159). It would appear that ptarmigan harvests, while they might also have reflected an inflated projection for 1974-5, were nonetheless still high relative to other years, because the margin of difference was quite large, because ptarmigan is a relatively numerous species less subject to sampling distortions, and because harvests from other communities tend to confirm the relatively large 1974-5 harvest. The marginally higher 1974-5 duck harvest relative to subsequent years is less certain.

Studies covering other years in the pre-ISP period (Salisbury *et al*, 1972b; Feit and Penn, 1975) confirm increased harvests in the ISP years of muskrat, ptarmigan, grouse, loons and seals (Table 2.31).

We have discussed the impact of ISP on purchases of imported commodities in an earlier section. In this section we wish to discuss the impact of the program on participation in the local and regional wage and welfare economy, and to raise some implications of the program for economic development in the cash economy.

Wage Economy Participation

Several Cree at Wemindji had permanent jobs during the period of our research; about thirty permanent full-time jobs and an additional dozen permanent part-time jobs existed locally at Wemindji, by comparison with about one hundred family heads and single adults whose primary economic commitment was harvesting.[36]

Families whose primary income is from permanent employment or non-ISP transfer payments participate less than ISP beneficiary families in actual subsistence production; but on a seasonal and part-time basis they do contribute significantly to overall harvests. At the level of distribution and exchange, working families are integrated with the subsistence economy through a series of customary exchanges and community celebrations which provide numerous opportunities for a generalized circulation of subsistence and non-subsistence products.

On the other hand, intensively harvesting families are heavily engaged in casual employment during the summer months, which accounted for 30% of total employment income at Wemindji in 1976-7, but less in the year previous (Table 2.50).[37]

The great majority of Cree involvement in the current wage economy was local: in public administration, the delivery of social services, and the construction and maintenance of community infrastructure funded by supra-local governments. Permanent and seasonal employment with the Hudson Bay Company, regional transport companies, and construction employment outside the community marked the extent of wage involvement in private profit-making enterprises. Several Wemindji men had been on the migrant worker circuit in tobacco farms and orchards in southern Ontario and on construction jobs as far south as Florida until the few years immediately preceding ISP implementation, when the Ministry of Natural Resources in Ontario had begun employing about twenty Wemindji families each summer in forestry projects, and when government-funded community improvement projects provided more seasonal jobs locally.

We were concerned to discover whether the injection of ISP benefits to that portion of the population which was harvesting intensively would result in diminished participation in wage employment. A strong motive for hunters seeking wage employment was to make up the shortfall between fur income and the cash costs of hunting. It was reasonable to hypothesize that ISP would reduce commitment to wage employment, since cash benefits were considerably more ample than those previously provided by welfare for most hunters, and since ISP benefits are reduced

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36. An additional nine permanent jobs were held by non-natives: school teachers, nurses, the Hudson Bay Company manager and a federal Indian Affairs employee.

37. An additional 7% of total employment income was earned by non-intensive harvesters in seasonal employment (Table 2.51).

by 40% of each dollar earned in employment.[38]

Reduced commitment to seasonal employment by hunters seems not to have occurred, however. In 1976-7, in fact, employment weeks and income for Income Security families increased by about sixty percent (see Table 2.51). This increase was possible mainly because of two Canada Works projects obtained by the Band Office and increased expenditures by Indian Affairs and the local Band Council on employment in community infrastructure development. Evidently, labor supply during the summer months (between spring and fall goose migrations when returns per hunter effort are relatively low) remained consistently in excess of job availability. The increase of seasonal jobs locally available in the summer of 1977 was attended by a corresponding increase in wage employment, by hunters and unemployed non-hunters alike.[39]

In the winter, however, a different situation obtains. Hunters are less likely to accept short-term employment if it will interfere with key hunting activities. The necessity to search for employment if prospects for adequate fur income are not good in a given year is also reduced, since ISP benefits still allow hunters to outfit and transport themselves. Moreover, most hunters were reluctant to accept short-term employment if they thought it might interfere with future eligibility for ISP benefits.

In four cases where permanent employment became available, ISP beneficiary hunters left intensive harvesting during 1976-7 and no longer received ISP benefits. Younger hunters frequently were explicit that they would prefer permanent employment to intensive harvesting, but in practice they did not normally search for permanent employment beyond Wemindji or nearby Cree communities in Quebec or Ontario where low availability of permanent jobs was also restrictive. We would expect some move out of intensive harvesting if the local or James Bay regional wage economy was to present more permanent jobs.

Manpower training and academic upgrading courses provided several hunting families and non-intensive hunters with seasonal "employment" income through training allowances in 1975-6. Several of these courses were attended during the winter months. In 1976-7, however, there was practically no involvement in these courses. We did not discover whether this reduction was related to the presence of ISP, at either regional bureaucratic or local levels. Involvement in seasonal employment and manpower training and upgrading combined, however, was still considerably higher for ISP beneficiaries in 1976-7 than it was for the same group in the year previous.

ISP and Welfare

Beneficiaries of the Income Security Program are ineligible for participation in federally-funded "band welfare" or Quebec Social Aid. The implementation of ISP therefore resulted in a drop in welfare caseloads and payments, analyzed elsewhere by La Rusic (1978). His figures for Wemindji indicate an abrupt decline in month-

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38. Though this is a moderate deduction rate by standards of guaranteed income schemes proposed for general application.

39. Two hunters did say, however, that they were better off fishing in the summer of 1977 than holding seasonal employment.

ly caseload, beginning in September 1976, to about a third of the pre-ISP levels of 1975-6 (Tables 2.52, 2.53). The annual welfare benefits at Wemindji dropped by a smaller margin, reflecting increases in rates paid to recipients, and possibly also reflecting greater average dependency on welfare benefits in both pre-ISP and post-ISP periods by those who did not become ISP beneficiaries.

ISP and Local and Regional Economic Development

The Income Security Program contributed approximately $470,000 in 1976-7 benefits to the Wemindji cash economy, an amount not quite equivalent to the total employment income of Wemindji residents that year.[40] Very little of these amounts recirculated in the community or in the Cree region at the time of our study. The major purchased items (air transport, equipment, fuel, imported foods, etc.) were imported and sold primarily by concerns owned by non-Cree.[41] Cree benefited from employment with these sales outlets, but employment earnings were in turn mostly channeled out of the community when pay cheques were spent.[42] Several Wemindji residents were in the habit of making occasional major shopping trips to regional centers of Timmins, Ontario and, more recently, Val d'Or in Quebec, outside the Cree region, in which case even the benefit of employment of Cree by retailers did not accrue. Since the time of our study, local entrepreneurship has undergone significant expansion, to include general merchandise retailing, a snow machine and watercraft business, and a local air charter service, among others. Income Security benefits have been a major boost to these enterprises.

The Income Security Program has deepened consumer involvement. This is a positive development in the minds of local people - particularly of hunting families for whom commitment to the bush life remains high, while simultaneously the incorporation of industrially-produced goods and services is seen to improve life within the subsistence domain.

Meanwhile, permanent employment opportunities do not easily keep pace with the expanding Cree population. Growth in the availability of local and regional government administrative and service jobs was rapid in the early years of JBNQA implementation, but has tapered off. Locally owned enterprises have been developed which capture and recirculate more ISP and other income at community and Cree regional levels. There are causes for optimism. But over the longer term, one cannot confidently predict whether an expanding Cree population will avoid the pattern of regional underdevelopment and underemployment all too common in the North. Perhaps that is one of the strongest arguments for commitment to the subsistence sector, for a population that is aware of the limitations of urban economics for Indians, and that has for the most part decided to stay at home.

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40. Of this amount, about $100,000 were retroactive benefits for 1975-6 (Income Security Board).

41. Two exceptions were the Wemindji Co-op Store and a local family "corner store" which competed with the Hudson's Bay Company in certain lines of merchandise.

42. Note also, however, that increased amounts of bush food in the community could limit the amount of groceries sold, so that local employment to a marginal degree could be curtailed; but this was more than offset by expanded sales in other lines of merchandise.

XI. Summary and Conclusions - The Wemindji Case Study

The Income Security Program at Wemindji stimulated increased participation in subsistence production at Wemindji. Substantially more families engaged in intensive harvesting for longer periods of the year. ISP favored family and multi-family productive units based in camps in the bush, the preferred productive units in the subsistence sector. Apparently minor adjustments are occurring in roles in the division of labor in response to altered technological and demographic circumstances. These adjustments, however, seem to occur within the range of possibilities held out by pre-existing social and ideological structures, and do not seem to be moving toward fundamental transformations at the level of domestic social relations. The Program seems to have drawn the young at all ages more heavily into hunting camps and, by direct implication, into an improved knowledge of those considerable components of Cree culture whose historical and present meaning lie in the relations of humans to the natural environment, in the context of hunting as a way of life.

Purchased industrial goods and services, to which ISP has increased access for hunting families, are seen as conveniences which enhance the quality and security of life in the bush; some indispensable and some not. It is likely that with continuing access to these items, more of them will come to be regarded as indispensable. Any future development which inhibits this access could endanger the *continuity of* subsistence production. On the other hand, gradual attrition of the hunting economy would have been the consequence of continued erosion of access to equipment and services that was underway prior to the inception of ISP.

Additional families engaged in full-time harvesting have generally resulted in increased total subsistence productivity, which benefits both that portion of the population directly engaged in intensive subsistence production and the permanently settlement-based population which harvests less intensively. Indigenous forms of housing and energy for cooking and heating are being employed more heavily in direct proportion to increased person weeks in the bush. Home manufacturing of hunting equipment, clothing and other household items for domestic use has also increased. While Income Security involves substantial transfers of cash into the community, it has involved substantial stimulation of domestic production.

If we take NHR statistics on total harvests for Wemindji (Table 2.48), which reflect the same trends for the species we monitored for the years 1975-6 through 1977-8, and which provide additional data on smaller game foodweights, a total of about 174,000 lbs. of bush food would have been produced in 1976-7. This would represent a value of $436,000, $64,000 above the corresponding value for the last pre-ISP year, 1975-6 (Table 2.47). The increased value of furs taken from 1975-6 to 1976-7 was about $30,000 (Table 2.44). There were also increased values for bush dwelling and fuel of $32,000, for domestic manufactures of $57,000, and for miscellaneous vegetable products harvested of $18,000 (Table 2.47).

Subsidy, meanwhile, increased by $415,000 if we subtract from the $472,000 in ISP benefits received in 1976-7 the $32,000 reduction in welfare and the $25,000 reduction in manpower training allowance paid into the community (Tables 2.50 and 2.51). In sum, a rough estimate would be that between 1975-6 and 1976-7 a maximal increase in subsidy of $415,000 was accompanied by an increase in the

value of the hunting-fishing-trapping product of at least $200,000.[43] Meanwhile, a $140,000 increase in community employment income, including a $60,000 increase in ISP families employment income, also occurred; due largely to Canada works and Indian Affairs community projects.

Our field research occurred at a stage that was still early to weigh the ecological consequences of increased subsistence production, but indications were that an unused margin of wildlife productivity did exist on several Wemindji traplines, and that cheaper transport to those areas could be the key to achieving an optimum distribution of hunters to available resources. Whether current levels of utilization, continued, are within the ecological capabilities of different zones, receives further discussion in the regional analysis, and require longer term monitoring.

Income Security benefits did not result in a reduction of involvement by hunters in seasonal wage employment. On the contrary, hunters seemed prepared to move into more seasonal employment, provided it did not conflict with prime harvesting periods or continued eligibility for ISP. The offer of local permanent employment attracted some hunters away from harvesting for 1976-7 and the following year. Growth in the number of permanent jobs available locally is an important factor influencing participation in intensive harvesting.

Internal linkages in the Wemindji cash economy have undergone significant development since the inception of ISP and the implementation of the JBNQA. If the aspirations of a growing population of Cree for permanent employment are to be met, opportunities along these lines will need to be maximized into the future.

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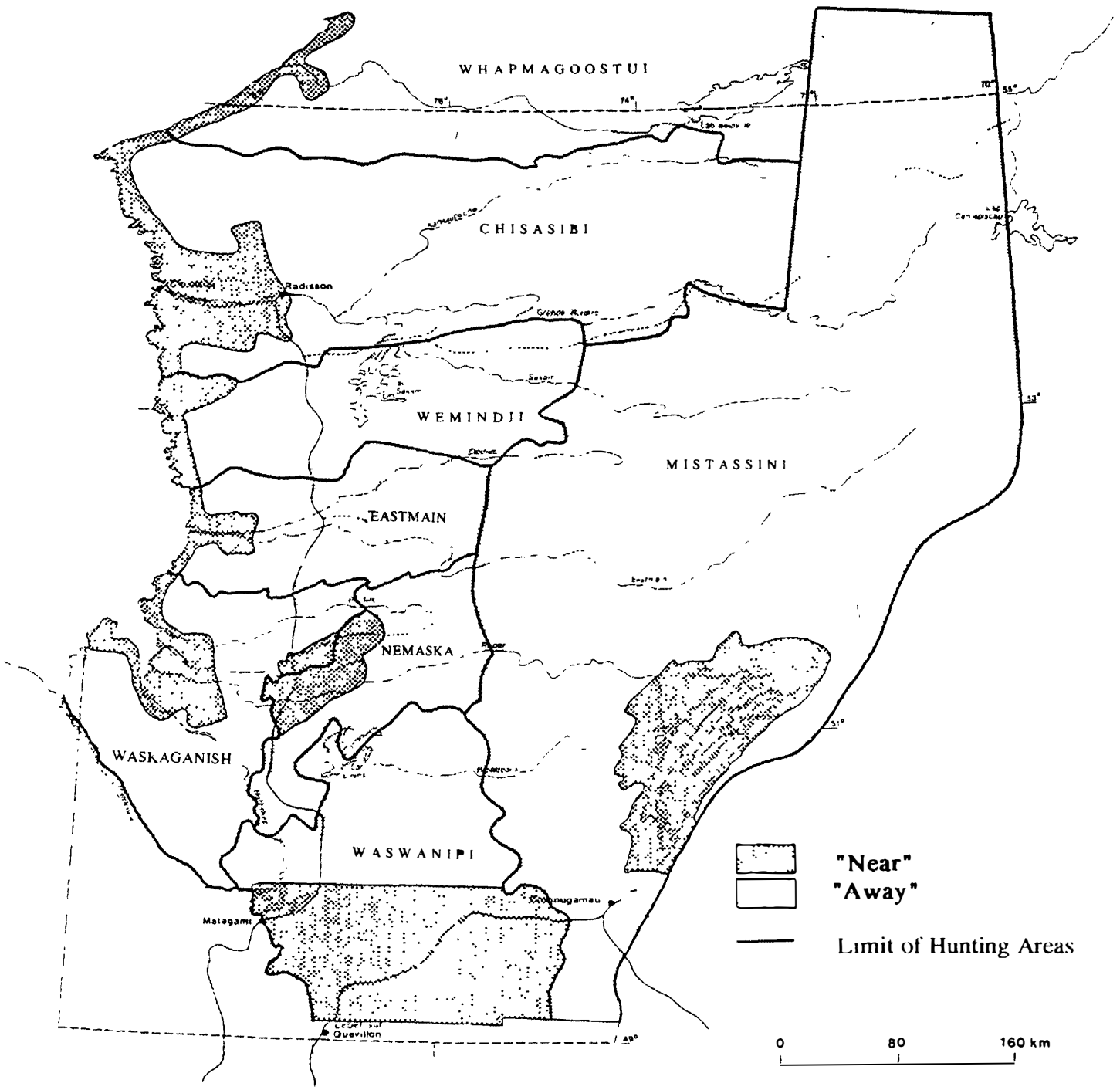
43. Note, however, that the $472,000 in ISP benefits included close to $100,000 in retroactive 1975-6 benefits, and also that probable drops in unemployment insurance, for which we don't have data, exaggerate our figure for net cash transfer increase. La Rusic (1978:101) notes that the trend to replace band welfare with higher-paying Quebec Social Aid further reduces the net transfer increase represented by ISP payments. $300,000 net subsidy increase in relation to the $200,000 increase in domestic production is more realistic, perhaps.

Map 2. "Near" and "Away" Harvesting Zones of James Bay Cree Communities



Chapter 3

Regional ISP Beneficiary Population

I. Regional Introduction

In the five regional chapters we examine the social, ecological and economic impacts of the ISP program in order to establish the patterns which were general to all Cree communities, and to consider the variations which occurred in people's responses to the program. Our focus is on the first two years of ISP operation but we also consider those data in the context of the development of the program during its first dozen years of its operation. Among the themes which receive special attention are: the implications of Cree harvesting patterns for the viability of wildlife resource populations; the long-term pattern of recruitment to the program; the implications of ISP for social integration or fragmentation in the Cree communities; the selective impacts on individual commitments to wage labor; and the reactions of Cree hunters to the program structure and administration.

Two types of data are used extensively in the regional chapters. Statistical data, including detailed material on demographic characteristics of the regional beneficiaries, time spent hunting and in wage labor, game harvests and subsistence production, and cash expenditures and incomes. For these statistics we draw on published and unpublished data from the ISP Board, the Grand Council of the Crees (of Quebec), the Cree Regional Authority, and the James Bay and Northern Quebec Native Harvesting Research; as well as on extensive tabulations we made from ISP Board files. Data from interviews, conversations, and meetings with ISP beneficiaries, Cree leaders and ISP administrators were collected at the regional, community and bush-camp level, and these are reviewed in some detail in Chapter 7, as well as being cited throughout these chapters. Data from direct observations made during brief visits to each Cree community, and longer research visits to Waswanipi and Mistassini, are incorporated into these chapters where appropriate.

In Chapter 3, we consider the process and the results of the initial recruitment of beneficiaries, whether more people are hunting, the demographic characteristics of ISP beneficiaries in general, and of those beneficiaries who were not hunting intensively at the time ISP began, what changes occurred during the "shake down" period - especially whether those who joined ISP by expressing an intention to hunt intensively continued to do so, and longer-term ISP recruitment patterns.

In the next chapter, we consider the impacts ISP had on the time Cree hunters devoted to hunting, the consequences of having more hunters spending more time in the bush for wildlife harvest levels and the conservation of the wildlife populations the Cree use intensively, whether ISP resulted in reduced commitment of hunters to

extra subsistence production for exchange in wider social networks within the communities, and the impacts ISP had on non-ISP hunters.

The following two chapters consider the participation of Cree ISP hunters in the regional cash economy, economic differences between "old" and "new" beneficiaries, what kinds of employment opportunities beneficiaries are willing to take, how beneficiaries spend ISP funds, and whether funds were sufficient to the hunters' needs. We also review the total ISP costs, and the economic benefits and production it stimulates.

In the final chapter we consider in depth the reactions of Cree hunters to the program and their perceptions of its structure and adequacy. Each chapter includes a brief summary and conclusions.

II. Initial Registration Procedures and the Available Data

Officially the ISP provisions of the James Bay and Northern Quebec Agreement came into effect with the signing of the Agreement on November 15, 1975, subject to certain provisions for ratification of the Agreement in the Cree communities. Legal, organizational, and financial start-up of the program were, however, expected to take nine months. The first actual payments were therefore planned for September, 1976, at which time cheques were to be issued for the initial installment due for the first full year of program operation, July 1, 1976 to June 30, 1977, and for the benefits accumulated between November 15, 1975 and June 30, 1976. The latter was called the "retroactive" payment.

The schedule for implementing the program was a very tight one, and the Grand Council of the Crees (of Quebec) and Government of Quebec staff worked closely and intensively in order to meet the deadlines. Enrollment of potential beneficiaries began in the winter of 1976. Each Cree community was requested to draw up lists of people it considered should be enrolled, given the applicable criteria. A person or family was to be eligible for the first year of the program, either because they exercised harvesting activities as a way of life, or if they intended to exercise such activities as a way of life. The enrollment list of those practicing harvesting as a way of life in the years immediately prior to 1976 was called the "A" list, and those listed on it were, if accepted into the program, eligible for retroactive payments as well as to participation in ISP for 1976-7.

Those individuals and families who had not practiced harvesting as a way of life in the years immediately prior to 1976, although they may have done so before, who desired to take up intensive harvesting as beneficiaries of ISP, were put on the "B" list, which entitled them, if accepted into the program, to participation in ISP for 1976-7, but not to receive any retroactive payments.

Initial ISP enrollment lists were drawn up by the administrators and/or chief and council of each Cree community, and were then posted in a public place for comments from the community members and possible revision by the administrators. The original and the revised lists were transmitted to the ISP Board during the spring of 1976, and the Board established files for each potential beneficiary unit.

During the spring the Board prepared data registration forms for enrollment of beneficiaries. The information forms were filled out in the Cree communities during the summer of 1976, and final determination of participation in the program was made by the Board on the basis of the data reported on the forms. Among the criteria for final admission to the program were that the heads of potential benefici-

ary units had to be planning to spend at least 90 days in harvesting and related activities during the coming year; and that those potential beneficiary units that sought admission on the basis of an intention to practice harvesting as a way of life had to have definite plans for the coming year, such as having made arrangements for the use of a hunting territory (trapline), or having made travel arrangements.

In the course of processing applications the Board had to set policies and interpret the provisions of the Agreement. Despite the detailed text negotiated in the JBNQA, administrative rules were needed in order to consider the specific circumstances of the individual cases. For example, were members of a Cree community who lived and hunted in Ontario, and who would clearly be eligible as beneficiaries of the provisions of the JBNQA in general, be considered eligible to benefit from the Income Security Program, a component of the Agreement funded by Quebec? And, what about band members who hunted in Quebec, but outside the territory covered by the land and hunting provisions of the JBNQA? In the end, the former were excluded, while living and hunting outside Quebec, and the latter were included. These policy developments extended over the first several years of program operation. On the basis of these and similar interpretations and policy decisions, the Board's review of the enrollment lists in 1976 resulted in ongoing decisions about whether or not to accept several potential beneficiaries into the program.

Because the enrollment lists had to be made during the spring while many hunters and their families were in isolated bush camps and could not be directly consulted, a schedule which was necessitated by the deadline for the first Program payments, it was anticipated that some potential beneficiaries might be omitted from the enrollment lists because information about their activities and plans were not adequate at the time the lists were made. Provision was therefore made for individuals and families to apply directly to the ISP Board for enrollment during the summer of 1976, when data registration forms were being completed. Such applications were processed as quickly as possible, but the inaccessibility of some applicants, and incomplete data, resulted in several decisions being delayed until the fall of 1976. This procedure resulted in beneficiaries being admitted to the ISP for its first year of operation up until about October, 1976.

Once registration of beneficiaries was largely completed, the Board then went on to establish the operating procedures and policies for regular revision of its data on beneficiaries during the course of an operating year. While application for admission could only be made once a year, during the summer, the Board could make adjustments of benefits during the year to reflect changes to the actual circumstances in which each beneficiary unit found itself during the year. This is desirable because, although eligibility is based on harvesting activities during the previous year, benefits are based on current year activities, a point insisted on by the Cree during negotiations. The aim was to allow actual benefits to keep pace with the intensity of a beneficiary's participation in harvesting, and hopefully to keep pace with his or her needs. The first payments each year are based on the expected activities for the coming year, reported on the data registration form filled out in summer. These data are then revised when future cheques are issued, or whenever possible during the year, in order to revise future payments. The periodic review system reduces overpayments by the Board, and is intended to limit the need to reduce future payments to beneficiary units in order to recover earlier overpayments to them; a practice which is very disruptive for beneficiaries as it reduces incomes in ways they cannot usually anticipate and plan for. It also reduces the need for the Board to seek repayments of amounts from former beneficiaries

who leave the program.

The beneficiary year ends on June 30th, and the process of the final revisions to the files for 1976-7 was completed in the summer and fall of 1977, as the second annual data registration forms were being completed in July and August, 1977. On these forms beneficiaries reported the final data on beneficiary unit composition, activities, and incomes during the year just completed, and the anticipated data for the next full year of operation.

Because of the ongoing development of these registration and revision procedures, data are available for several features of the first year of operation of the ISP, but the data are not always directly comparable, and there are very limited systematic data on the specific reasons and characteristics of beneficiaries moving into and out of the program during this period. In fact most of the changes in beneficiary unit participation occurred during the second year of ISP operation. Systematic data on the review of beneficiary files, and on the cancellation or revision of beneficiary participation are available for the end of the second year of operation and for the third year of operation, 1977-8 and 1978-9, and they are examined later in this chapter.

The data which are available for 1976-7 operations come from several sources, and include: the initial registration lists prepared in the communities in the spring of 1976, copies of which were provided by the Grand Council of the Crees (of Quebec); tabulated data on the initial registrations for the first year of ISP, as of September, 1976, from a report prepared by the Ministère des Affaires sociales (MAS, 1977); computerized statistical summaries for the first year of operation, prepared for the ISP Board by MAS in July, 1977, prior to processing of final data registration forms for 1976-7; and, a final version of the computerized statistical summaries prepared a year and a half after the end of the 1976-7 operations, in January 1979.

In addition to these data we have, with the assistance of the ISP Board, gathered additional statistical data from the files of the Board, in order to fill gaps in the previously available data sets. We examined their files in June, 1978 for data on 1976-77 beneficiary characteristics and practices, and for comparable data on the retroactive period. These data do not include all the files which were closed prior to June, 1978. The data we tabulated from their files provide basic social and economic data on ISP beneficiaries both for 1976-7 and in many cases for 1975-6. Those files for which we have data for 1975-6 include those who were eligible for retroactive payments, as well as those who were not but who nevertheless provided data on their 1975-6 activities as well as their 1976-7 activities. In general, and wherever appropriate and possible, we have given priority to the final edition of the computerized statistical summaries prepared by MAS for the ISP Board in January 1979, and where we have used data from other sources we have indicated their provenance.

III. Initial Recruitment Levels

ISP was intended and designed to increase the number of Cree people who would be able to pursue hunting as their primary activity and as a way of life. The available data on enrollment, registration and participation of beneficiaries in the first and second full years of ISP operation indicate both an initially high level of participation in the programme, and an ongoing evolution of that participation.

The initial registration/enrollment lists prepared by the Cree community administrations during the winter and spring of 1976 listed 986 possible beneficiary units (Table 3.1). The lists were incomplete because the information available at Eastmain and Whapmagoostui did not permit drafting of a "B" list of people who had not hunted intensively the previous years but who wished to hunt intensively now that ISP would be available. In the event, 27 beneficiary units from these communities (17 and 10 respectively) later applied for admission to ISP on the basis of their intention to practice harvesting as a way of life, and were registered as beneficiaries for 1976-7, along with some individual applicants from other communities.

After those on the enrollment lists filled out data registration forms in the summer of 1976, approximately 26 possible beneficiaries were rejected, and a total of 1012 beneficiary units were registered to participate for the 1976-7 year (Table 3.1). In addition, 14 beneficiary units qualified to receive retroactive payments for the period from November 15, 1975 to June 30, 1976, but did not qualify to be beneficiaries for 1976-7, the first full year of operation of the program.

Registration numbers varied over time as individuals were able, or decided, to apply. Although there were deadlines, some individuals who were on community prepared registration lists were unable to fill out registration forms, because of long absences from the community or medical or other circumstances, and they had to do so later; and the Board was flexible in some cases because of the personal circumstances of applicants. Several individuals refused to fill out the forms because they did not believe the government would assist hunters, and only after payments began to arrive were they ready to apply. Others were concerned that participation in ISP constituted approval of the James Bay Hydro-electric Project, and were reluctant to apply. At least one eligible individual continued to refuse to make an application throughout his lifetime.

The number of participants also changed as files were revised. A total of 980 beneficiary units completed the year and are listed as having participated officially in the full first year of the program (Table 3.1). The decline of thirty-two units between September-October, 1976 and July-September, 1977 reflects both the continuing Board reviews of incomplete data on cases, and the results of data updates completed during the year, on the basis of which some beneficiaries left the program. These changes and adjustments to files continued through the summer of 1977.[1]

The 980 beneficiary units which participated during the first full year of ISP operation comprised a total of 4,013 individuals, 1601 adults 18 years of age or older, and 2,412 children (Table 3.2)[2]

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1. Beneficiary tabulations by community were prepared for 1976-7 on July 8, 1977 (before beneficiaries completed final forms on the 1976-7 year) and on January 8, 1979. The regional totals are similar, but community variations indicate that changes in eligibility occurred as the forms were reviewed in the summer of 1977.

2. The 1979 figures differ from those used in later years by the ISP Board in its summary tables of ISP performance. The post-1979 figures on performance of ISP in the early years reflect later policy decisions. The development of a multi-year database by the Board, which was designed to be used for comparative purposes, required relative uniformity of treatment. When we examine data on continuing ISP operation over a number of years we use this latter dataset. But, where we are focussing on the pre-ISP and the immediately post-ISP years for analysis, we use the data which more accurately reflects actual participation and operation under the then evolving rules.

The high level of interest in the program is also indicated by the number of beneficiaries who had not practiced intensive harvesting activities during the year immediately prior to ISP, but who undertook in 1976 to begin intensive harvesting, and who therefore sought eligibility in ISP for 1976-7. Of the 1012 beneficiary units registered in September 1976, 304 were admitted for eligibility in 1976-7 but not for the retroactive period (Table 3.3). Thus 30 percent of those admitted were taking up intensive harvesting, either for the first time, or after a period of not harvesting intensively enough to be eligible for ISP benefits in 1975-6.

At the end of the 1976-7 year, 280 of the 980 active beneficiary units were from this group, or 29 percent (Table 3.3). The variation in recruitment of beneficiaries to intensive hunting in different Cree communities ranged from 25 percent to 36 percent (Table 2.4). Overall, the introduction of ISP therefore initially increased the intensive hunting population by nearly one-third.

The intensity of participation in ISP came as a surprise to several of those who participated in negotiating and/or implementing the program. However, initial participation rates generally conformed to estimates made by Cree community leaders a year earlier. During the negotiations leading to the JBNQA in 1975, the Quebec representatives had indicated that they were working with an estimate that there would be approximately 600 beneficiary units (GCCQ, 1977:14). The first opportunity the Cree negotiators had to develop detailed evaluations of the potential participants came in September and October 1975, when band councillors and representatives from all Cree communities met in Montreal to consider the ongoing results of negotiations.

The representatives from each community were asked by the Cree negotiators to list the community hunters who they thought might be able to meet the criteria of the Program, as it was then being discussed in negotiations. The groups produced lists of possible beneficiaries by a variety of techniques, and they provided various levels of detail on their lists.

The lists prepared by the community representatives had a total of almost 1200 possible beneficiaries on them (Table 3.5).[3] But there were also indications that there were numerous borderline cases, and the minimum estimate of beneficiaries was just over 900 (Table 3.5; and GCCQ, 1977:13). The maximum figure was considered too high in the light of continuing negotiations of eligibility criteria. Based on the final eligibility criteria the GCCQ reworked the original lists in April and May, 1976, and concluded that the best estimate of the number of ISP beneficiary units would be 1017 (GCCQ, 1977:18).

These figures proved remarkably accurate predictors of the initial operation of ISP which, as we have seen, started with 1012 beneficiary units in September 1976, and ended its first full year of operation with 980 beneficiary units. These estimates were also reasonably accurate, in most cases, on a community by community basis (compare Tables 3.1 and 3.5).

Since ISP began there have been a number of figures used to evaluate the intensity of participation which 980 beneficiary units represents. Differing standards of evaluation have been used because there are no full demographic surveys for the

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3. These estimates were initially discussed in negotiations, then after the JBNQA was signed they became the subject of a memo used to plan implementation of the ISP. Later they were presented in an unpublished report of the Grand Council of the Crees (of Quebec) (GCCQ, 1977), from which we draw this account.

period which indicate the frequency within the Cree population of family units identical in all respects to ISP beneficiary units. There is therefore no single comparable measure of each community's population, and of the percentages of those populations which initially participated in ISP.

The best data on the Cree population of the period are the Department of Indian and Northern Affairs statistics on band membership, and the James Bay and Northern Quebec Agreement Enrollment Commission community lists. Both provide lists from which the number of family units in the populations in the Cree communities can be determined. However, ISP tabulations are based on the community of residence of beneficiary units, whereas the Indian Affairs Band Lists and the Enrollment Commission Community Lists accurately reflected only community of registration. Enrollment Commission lists for later periods provided additional data on community of residence, but not for these years.[4] Also, Indian Affairs lists did not included "non-status" Cree people who were beneficiaries of the JBNQA, and eligible to participate in the ISP program.

ISP beneficiary units comprised 53 percent of the resident Cree band member family groups (Table 3.6), or 43 percent of the family groups enrolled under the JBNQA (Table 3.7). The former figure excludes both families who were registered in a band but who were not resident on the "reserve" of that band, and families who were without "status" under the Indian Act. Those Cree without "status" under the Indian Act, but who were beneficiaries under the JBNQA, are eligible to participate in ISP. The 43 percent figure includes in the denominator all families registered under the JBNQA in a given community on the first JBNQA Enrollment Commission Community Lists, dated July 1, 1977. These lists included enrollees whether resident or not, including those who were recognized as beneficiaries under the JBNQA although not under the Indian Act.

Those who are not resident could have resided in other Cree communities, in non-Cree communities in the James Bay Territory, or in other parts of Quebec or Canada. Those Cree who resided outside the Cree villages, and even outside the JBNQA territory, were technically eligible to participate in ISP, but the ISP Board regulations stated that they must have hunted in Quebec, so that only some were able to do so. For example, some non-resident JBNQA beneficiaries who resided in or near non-Native towns on the southern fringe of the James Bay territory, or who resided in Ontario at Moose Factory and Moosonee but who hunted in Quebec, were eligible and do participate in ISP. But many non-residents who lived in urban areas throughout Quebec and Canada did not harvest intensively and had no effective opportunity to participate in ISP. Thus, as neither figure is entirely satisfactory for our analyses, we will generally consider participation rates in relation to both the Indian Affairs resident band membership and the total population listed by the JBNQA Enrollment Commission.

On a community by community basis, ISP typically enrolled 49 to 51 percent of resident family units of a community in 1976-7 (Table 3.6), or 37 to 43 percent of the community membership recognized under the JBNQA (Table 3.7). At Mistassini the level of participation was decidedly higher than at other communities, 72 percent of residents, 60 percent of the whole community list. At Chisasibi and Whapmagoostui the initial levels of participation were lower than in other commu-

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4. For this period it was possible to identify those who were not resident in their community of registration on the Indian Affairs lists, but it was not possible to establish where they did reside.

nities, 41 and 39 percent of residents respectively, and 37 percent of the community lists in both communities. At Waskaganish, only 33 percent of the community list participated, but 49 percent of the residents list did, reflecting the somewhat distinctive demographic pattern of that community with respect to the significant numbers of both non-resident and non-status people in its population (Tables 3.6 and 3.7).

While we consider the percentage of family units which participate in ISP to be the best representative figures of the levels of participation of the population as a whole in ISP, family units are not tabulated by the agencies which prepare the community lists, and therefore the ISP Board and other researchers have found it more feasible to compare the ISP beneficiary population to the populations of the Cree bands or communities directly. These figures are influenced by variations in family size and composition, as we will indicate below, and they tend to give a higher participation rate, but they are particularly useful for ready comparative purposes (for example see Appendix 1, Table A1-6).

ISP beneficiaries represented 58 percent of the total resident Cree adult band members during the initial full year of ISP operation (Table 3.8).[5] The participation rate among communities was variable. Mistassini had distinctly higher participation rates than other communities. During 1976-7, Mistassini ISP participants were 74 percent of adults, whereas 55 to 61 percent participated at Waskaganish, Waswanipi, Wemindji and Eastmain, and 47 and 45 percent at Chisasibi and Whapmagoostui respectively. The pattern of variation among communities is similar to that found when percentages of family units in ISP were considered.

Because a substantial number of families which have large numbers of children participate in ISP, see below, a particularly high percentage of the children from the Cree communities are members of participating beneficiary units, 77 percent (Table 3.8). This has potentially important implications for long-term recruitment patterns over the next generation. It must be noted however that the fact that children are part of ISP beneficiary units does not mean that these children are living in the bush with their parents during the school year, a substantial number are in school during all or part of the school year. Unfortunately, there are no region-wide data on the participation of young people in the bush camps, but the data from the Wemindji case study provide some indications (Chapter 2).

ISP therefore attracted over a 1,000 family or individual social units, and over 1600 adults to participate it its initial year of operations. But it is also important to note the other side of the coin, that its eligibility requirements were rigorous enough that less than 60 percent of adults in the Cree communities, and less than 45 percent of families and adult single individuals, were able to apply and establish eligibility, even under the more lenient rules which applied during its first year of operation. ISP was therefore successful, both in recruiting a large participation, and in not becoming a general social assistance program. It established itself as a specialized program for a distinct but substantial sector of the community population.

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5. The ISP Board has estimated the participation rate at 64 percent, see Appendix 1, Table A1-6. Its figure differs because it reports all ISP beneficiaries (adults and children), as a percentage of the registered community populations (based on Enrollment Commission figures). The data presented here only include individuals over 18 years of age, and are based on the Department of Indian and Northern Affairs figures on resident populations. The mid-point between the resident populations as of December 31, 1976 and December 31, 1977 was used as an estimated mid-year figure appropriate for comparison to the ISP end of beneficiary year total for June 30, 1977.

IV. ISP Beneficiary Population, 1976-7

ISP beneficiaries are not drawn equally from all sectors of the Cree population. We will consider here the size and composition of beneficiary units, the ages of the heads of the beneficiary units, and of adult beneficiaries in general, and we will examine the participation of women in the ISP program.

ISP beneficiary units comprised a large number and a high percentage of the larger families in the communities. Fifty-eight percent of beneficiary units were comprised of two adults and children, but more than half of these beneficiary units were comprised of couples with 4 or more children, and fully ten percent of all beneficiary units (101 beneficiary units) were families with seven or more children (Table 3.9). This pattern was general, occurring across most communities (Table 3.10).

While families composed of two adults with children comprised 36 to 37 percent of the community and resident populations, these family groups comprised 58 percent of ISP beneficiary units (Table 3.11). By contrast, 31 percent of the 1976-7 beneficiary units were single adults, whereas single adults comprised 45 to 46 percent of the community populations (Table 3.11).

The initial intensive hunting population was thus distinguished by the large average sizes of their families, and by the high rates of participation in ISP by larger families. At the upper end, 101 of the 117 families with more than seven children enrolled under the JBNQA were participating in ISP (Tables 3.11 and 3.9). Overall, while approximately one-third of all single adult families were ISP beneficiaries, and a similar percentage of couples without children participated in ISP, by contrast, two-thirds or more of each family category of resident band couples with children, and 58 percent or more of enrollment list couples with children, were ISP beneficiaries (Table 3.12). [6]

The pattern of high ISP participation among large families is reflected in the high average number of children per beneficiary unit. As we have seen, a total of 2,412 children were registered in ISP beneficiary units in 1976-7 (Table 3.2), and children comprised 60 percent of the individual beneficiaries of ISP. This was an average of 2.5 children per beneficiary unit. If we exclude the single adult beneficiaries, the average number of children per family beneficiary unit was 3.6 (Table 3.13). The range by community is from 2.9 to 4.3 children per average family beneficiary unit.

Given the distinctive distribution of beneficiary family compositions, we were interested to examine the age structure of the beneficiary population. The regular statistical summaries the ISP Board developed during the initial years of ISP operation did not provide data on the age of beneficiaries. As a result we arranged to tabulate data from their files.[7]

Our first analyses are based on the ISP beneficiary list of payees for Septem-

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6. As these data indicate, large families are not only more common among ISP beneficiaries, they are more common in Cree communities, and constitute a significantly higher percentage of the total Cree population than would be the case among the Quebec and Canadian populations.

7. Because the ages had to be established for individuals on lists of beneficiaries, we were unable to use data from the ISP Board's summary computerized tabulations on Program operation.

ber/October, 1976, that is the first payments list from ISP. This list includes 1011 beneficiary unit heads who were eligible to participate at the beginning of the 1976-7 year, as well as the 14 beneficiary unit heads who received retroactive payments for 1975-6, but who were not eligible for 1976-7. We have retabulated the list to include only 1976-7 beneficiaries. The totals generally parallel, but are not identical with, the distribution of the 1012 beneficiaries cited on Table 3.1 from a Ministère des Affaires sociales tabulation of ISP beneficiaries in September, 1976.

Because this list only included beneficiary unit heads, and not consorts, we have also tabulated ages for the heads of beneficiary units and their consorts who were considered for participation in ISP by being virtue of being included on the enrollment lists prepared in the Cree communities in the spring of 1976. This totaled 1571 adults in 986 potential beneficiary units, by comparison with 1601 adults who participated in the 980 beneficiary units which participated in the full 1976-7 year.

We did not anticipate that in 1976 the largest age group among ISP beneficiaries was the 20 to 24 year-olds (Table 3.14). This pattern is found for male heads of beneficiary units in most communities (Table 3.15). The distribution of female heads of beneficiary units is suggestive of a similar pattern, although the small numbers involved limit interpretation, and there are a high percentage of 18 to 19 year-olds as well among female beneficiary unit heads (Table 3.16).

When we consider all the potential adult beneficiaries listed on the community enrollment lists, the pattern is similar among the men, but not among women beneficiaries. Among all adult women beneficiaries, including both heads of beneficiary units and the more numerous married or partnered women on these lists, the largest age group were the 30 to 34 year-olds (Tables 3.17 and 3.18).

All told, young adults, those from 18 to 30 years of age, comprise over one-third of the heads of beneficiary units (Table 3.14), while the middle aged group from 30 to 64 comprises more than half the heads of beneficiary units. Those over 65 comprised less than 8 percent of heads of beneficiary units (Table 3.14). The large cohorts of relatively young male and female heads of beneficiary units suggest that future replacement of aging ISP members was likely to remain strong, but this is a question which we will examine again below.

Participation rates among age cohorts, measured by calculating ISP participants as a percentage of the age cohorts in the population as a whole, were varied but were generally strong for males in all age groups but the youngest and eldest. Thirty five percent of 18-19 year-olds were ISP beneficiaries, 64 to 66 percent of those between 20 and 34 years old were beneficiaries, 75 to 88 percent of cohorts between 35 and 60 were beneficiaries, 65 to 70 percent of those between 64 and 70, and 35 percent or less of the over 75 cohorts were beneficiaries (Table 3.19).

The highest rates of participation occurred in the 40 to 44, and the 50 to 59 cohorts, the groups which grew up at a time when alternatives to hunting were limited in many communities, and who were at a fully active period of their lives when ISP commenced. However, because of the rapid growth of the Cree population in recent decades, and the larger numbers among younger age cohorts, while there tended to be more ISP beneficiaries from the cohorts between 20 and 35 than those between 35 and 60 (Tables 3.14 and 3.15), they were a smaller percentage of the community-wide cohorts (Table 3.19). Comparison of participation rates of different cohorts in each community is not presented because of the small size of the cohorts in the smaller villages, the small size of some cohorts in various villages, and because of the difficulty of determining residents precisely.

The age cohorts of women listed on community enrollment lists as possible beneficiaries were largest between 20 and 39 years of age. Participation in ISP by women, as a percentage of each age cohort in the population as a whole, was highest between 35 and 54 years of age (Table 3.20). Thus, as with males, participation rates were higher among the middle age group, although among slightly younger cohorts than in the case of males.

The age of beneficiaries was related to the family composition of the beneficiary unit. On the ISP enrollment lists prepared in the spring of 1976, the great majority of 18 to 24 year old heads of beneficiary units were single adults (Table 3.21).[8] While approximately one-third of the 25 to 29 cohort were single adults, more than half were young couples, typically with one to three children. Those under 30 comprised 69 percent of single individuals, although an increase in single individual families occurs after about 55 years of age. In the cohorts between 30 and 54, up to 15 percent of beneficiary units are single adults, up to 10 percent are single adults with children, and the great majority are families with widely distributed numbers of children. Single parent families occurred in three groups - 18 to 19, 25 to 39, and 45 to 64, and were most common in middle age groups (mostly widows and widowers).

The rapid rate of family growth among young Cree couples is suggested by the fact that the cohort which had the largest number of families with two or three children were the 25 to 29 year-olds, the largest cohort with four children was 30 to 34, with five or six children 35 to 39, and with seven or more children the 40 to 44 cohort.[9,10,11]

Women comprise 45 percent of the adult ISP beneficiaries (Table 3.2), but 12 percent of heads of beneficiary units (Table 3.14). A higher percentage of women heads of beneficiary units were under 25 and over 65 years of age than among male heads of beneficiary units (Table 3.14). This is the result of couples almost always listing the male as the head of the beneficiary unit, reflecting Cree cultural patterns,

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8. The data in these tabulations do not include 96 cases which could not be classified (12 percent), nor 13 potential beneficiaries under the age of 18. The latter were in general young people who had established families and were living in harvesting bush camps.

9. It should be noted that these are not cohorts of mothers, but of heads of families, of whom approximately 10 percent were women. As most ages are therefore for the male heads of families, any numerical interpretations of family growth patterns is not possible.

10. Possibly the most dramatic distribution is for the two cohorts between 35 and 44, among whom the most numerous family composition category were two adults with seven or more children. This is partly an artifact of grouping all families with seven or more children into one category, but it is a striking result. The second largest categories for these cohorts were five children and six children respectively.

11. Two adult only families were relatively less frequent than might have been expected by Canadian standards, indicating the relatively small number of couples who do not raise children among ISP beneficiaries, and actually among the Cree population as a whole. Most of the two adult families occur in older age groups when children have grown up and become eligible as beneficiaries in their own right. Heads of two adult families without children peaked in the 60 to 64 year old cohort, and were relatively frequent in the 50 to 69 bracket. Sixty-four percent of these families have heads over fifty years of age. This distribution is an artifact of the administrative definition of beneficiary units, as a result of which an individual turning 18 years of age is, if eligible, established as a separate beneficiary unit, and is deleted from the parental unit. This administrative definition is not necessarily a reflection of any actual reorganization of households or social units. But it accounts in part for the apparently rapid decline in family size among older cohorts.

although there are two women who were heads of beneficiary units comprised of couples (Table 3.23). Most women heads of beneficiary units are either single, or they are heads of single parent families (Table 3.23), either young parents or widows.

The age structure of all adult women who were beneficiaries of ISP, including partners of male heads of beneficiary units, was quite distinct from that of the female heads of beneficiary units. Among all women beneficiaries there is a much higher representation of middle age cohorts than among the heads of beneficiary units, as expected given Cree patterns (Tables 3.14 and 3.17). The overall age distribution of female adult beneficiaries was generally similar to that of male beneficiary unit heads, except that there tended to be modestly higher percentages of women than men in the 30 to 39 age bracket, and fewer women than men in the 20 to 24 and 65 to 79 cohorts (Table 3.17).[12]

Participation rates in ISP are somewhat lower for women than for men. Adult male beneficiaries comprised 64 percent of the resident adult male band members, whereas adult female beneficiaries comprised 53 percent of resident adult female band members (Table 3.24).

One of the aims of ISP, as indicated above, was to create an incentive for consorts to accompany heads of beneficiary units to bush camps, and to reverse the trend towards male only camps. The data we have presented on the composition of the 1976-7 beneficiary population describe those who were registered for ISP, but they do not address the question of whether spouses accompanied heads of beneficiary units to bush camps. We therefore tabulated data from ISP Board files on the frequency with which spouses of beneficiary unit heads reported spending time in harvesting and related activities outside the settlements.

Among those 478 beneficiary units with two adults for which we have data for both 1976-7 and for the retroactive period of 1975-6, 441 reported time in the bush in the post-November 11 period of 1976-7 (Table 3.22). For the previous year, 392 of 481 in this group for which we have clear data reported that consorts spent time in the bush. This represents a modest increase from 81 percent with time in the bush in 1975-6 to 92 percent in the same period of 1976-7. For those beneficiary units for which we have data only for 1976-7, 92 percent of consorts reported time in the bush in the post-November 11 period of that year, 49 of 53 (Table 3.22). ISP was thus moderately successful at encouraging spousal participation in bush camps, a topic to which we will return in the next chapter.

V. The ISP Beneficiary Population, 1977-8

In order to evaluate more accurately the long-term characteristics of the ISP beneficiary population, it was necessary to consider the evolution of the beneficiary population and of the program. This was done by examining the 1977-8 beneficiary population, the factors affecting the cancellations of files and the rate of new applications in 1977-8, and the longer-term pattern of Cree participation in ISP.

In the summer of 1977, the eligibility for the coming year of each beneficiary unit already receiving ISP for 1976-7 was examined by the ISP Board. At the same

12. Approximately equal percentages of adult men and women band members were residents of the Cree villages of registration.

time, new applications for admission were received and reviewed. For the first time the regular criteria for eligibility to the program were fully applied.

The JBNQA provided two general criteria, as well as five exceptional and time limited criteria, for admission to ISP. The first criteria was based on the amount of time devoted to harvesting and related activities.[13] As indicated above, heads of beneficiary units who spent more days, from July 1 of one year to June 30 of the next, in harvesting and related activities, than they spend in salaried or wage employment, and who spend at least 120 days in the former activities, of which at least 90 are spent away from the settlement, are eligible to be ISP beneficiaries for the coming year.[14] Almost all beneficiary units established their eligibility under this general criteria.[15]

As a result of the application of the regular provisions to determine the eligibility of beneficiary units to participate in ISP for 1977-8, a number of beneficiary units enrolled during 1976-7 were not eligible for ISP during the following year. Most of those found to be ineligible did not meet the criteria of having spent a sufficient number of days in harvesting and related activities, either as total numbers, or in relation to time working for wages or a salary.

On the basis of the data available to us, we could identify 93 beneficiary units which were eligible during 1976-7 but were either ineligible or withdrew from ISP for 1977-8. This number is only slightly larger than the total decline in the numbers of beneficiary units from 1976-7 to 1977-8. The implication is that only a few beneficiary units which had not participated in ISP during 1976-7 had applied and were admitted to ISP for 1977-8. It is likely that very few applied, because to establish eligibility for 1977-8, heads of potential beneficiary units would have had to spend the requisite number of days in harvesting and related activities during 1976-7. As will be recalled, those who intended to spend more than the minimum number of days harvesting during 1976-7 were eligible to benefit from ISP during 1976-7 under the special one-time criteria applicable during the first full year of operation of the program. This permitted those with the intention to take up harvesting as a way of life to receive benefits during 1976-7.

The two groups who would be applying for admission for 1977-8 were those who just turned 18 years old, and some of the small handful of regular hunters who chose not to enroll during 1976-7. The latter group, as we indicated above, gave several reasons for not participating. Some said they had hunted all their lives and did not want government assistance, some elders were reported to be unwilling to subject themselves to interviews needed to gather data for registration forms. Informal comments suggest that the total number of such cases was fewer than 10. It is not known how many of these individuals applied for 1977-8 benefits.

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13. Harvesting activities are defined as all activities involved in the exercise of hunting, fishing and trapping rights established by the JBNQA. Related activities are defined as men's and women's activities associated with the former. Often the term harvesting activities includes related activities in ISP Board documents.

14. Days spent guiding, outfitting, or commercial fishing, or in receipt of unemployment insurance, workmen's compensation or manpower training allowances, do not count as either harvesting and related activities, nor as salaried or wage employment.

15. A second general criteria provides eligibility for those who derive the greater part of their earnings from harvesting and related activities. Under the current conditions, those who could establish eligibility under this second rule would also be eligible under the first.

In summary, we know that 93 1976-7 beneficiary units were not eligible to participate at the beginning of 1977-8, and that a small but unknown number of new beneficiaries were admitted. Some beneficiaries lost their eligibility during the course of 1977-8 operations, and we know that the total number of ISP beneficiaries participating in ISP at the end of 1977-8 was 890, or 90 beneficiary units less than at the end of the 1976-7. Thus the overall net decline from the end of 1976-7 to the end of 1977-8 was 9 percent.

The ISP beneficiary population during 1977-8 was therefore not radically different from that during 1976-7, but there were shifts in certain distributions.[16] The family composition of ISP beneficiary units continued to show a significant number of single individuals, low percentages of single parent families and two adult families without children, and a relatively large number of families with three or more children, although some of these tendencies were less pronounced (Tables 3.25, 3.26 and 3.27).

Comparing the family composition of beneficiary units in 1977-8 to that in 1976-7, there were 50 less single individual units in 1977-8, or 17 percent less (Table 3.26), the decline being nearly twice the overall percentage decline. The modest increases in the numbers of two adult families without children and with one child may include newly married, formerly single, beneficiaries. The clearly high rate of decline in individual beneficiary units would be the result of several factors, the most important probably being the discovery by many single adults that benefits were higher on Quebec social assistance than on ISP, if the number of paid person-days was near the lower limit. While these beneficiaries could continue to hunt, the monthly payments schedule for social assistance would force most to abandon intensive harvesting. This factor affected many young ISP beneficiaries, see below.

The overall shifts in beneficiary unit participation, including the relatively larger declines in individual beneficiary units, and secondary declines in large families, reduced the number of adult beneficiaries by 128, or 8 percent. The decline among adult male beneficiaries was greater than among females (Table 3.28). The number of children declined by 220, or 9 percent, and the total beneficiary population declined by 9 percent (Table 3.28). The increase in the number of smaller beneficiary units, and the decline in large beneficiary units, led to a drop in the average number of children per beneficiary unit, from 3.6 to 3.4, although the number remained relatively high (Tables 3.30 and 3.10). The number of beneficiary units rose in only one village, Wemindji (Table 3.29). Overall, the shifts were not dramatic, and they did not significantly alter the overall picture. The most important trend, which required further examination, was the higher rate of drop-outs among single male beneficiaries.

VI. The Dynamics of Beneficiary Unit Applications and Withdrawals

In order to learn something more about the people who tried ISP but then left

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16. Two data sets are available from the ISP Board giving statistics on the 1977-8 beneficiary unit population. The first, dated January 9, 1979, provides data directly comparable to that for 1976-7 operations. The second, dated April 17, 1979, gives supplementary statistics. The number of beneficiary units identified in the two data sets is different, but by less than one percent. Priority has been given in these analyses to the first set of data, except where data is only available from the second set. Use of the latter data are specifically indicated.

the program after a year or two, we looked at the file review processes and their results. While the focus of this research was on the first two years of ISP operations, we also examined the transition and part of the third year, as more extended data were available for this period. This was especially useful because as we have noted, the transition from 1976-7 to 1977-8 included little potential for beneficiary growth, because the special eligibility criteria which applied in the first year left few potential beneficiaries unregistered. The 1977-8 to 1978-9 transition was therefore the first "normal" turnover.

As we have already indicated, ISP enrollments dropped from 1012 beneficiary units at the beginning of 1976-7 to 980 at the end of 1976-7, to 890 at the end of 1977-8. Most of the latter drop occurred at the time of registration for 1977-8, when 93 beneficiary units were either ineligible or chose not to continue for a second year.

At the beginning of the third year of operation, 1978-9, 58 beneficiary units ceased to participate in ISP, or seven percent. Offsetting this, 80 applications for admission to the Program were received, of which 69 were found to be eligible (Table 3.31). These represented eight percent of the 1977-8 enrollments. Initial 1978-9 ISP enrollments totaled 928, but by the end of the program year 901 beneficiary units were active, a one percent increase from 1977-8.

Of the 58 files which were closed, nearly half were of 18 to 30 year-olds and nearly a quarter were 30 to 40 years old (Table 3.31). Of the total, nearly half were withdrawals, the overwhelming majority because they did not intend to continue harvesting intensively during the coming year (27 beneficiary units), and in two cases because of health reasons. One beneficiary file was closed because of the death of the beneficiary. The other closed files were due primarily to beneficiaries having spent too few days during the previous year in harvesting and related activities (17 cases or 29 percent of closed files), or having spent more time in wage or salaried employment than in hunting during the previous year (7 cases or 12 percent) (Table 3.32). The remaining cases were each closed for a different reason, one head of beneficiary unit had full time employment, one married a non-beneficiary and did not plan to harvest intensively any more, one formed a family unit with another beneficiary, and one owed the Board a considerable sum of money.

Thus, at the beginning of the third year the single largest group of closed files were young adults who withdrew from the program after trying it for a year or two, although the number involved was less than 10 percent of the beneficiaries in the 18 to 30 age cohort. We wondered whether this had been the case throughout the first two years. We know the ages of a list of 93 beneficiary unit heads who participated in ISP in 1976-7 but not in 1977-8, having withdrawn or been found to be ineligible to continue either during the first year (1976-7), or at the beginning of the second year. The age structure of this group is similar to those whose files were closed at the beginning of the third year. While we could not determine the age structure of those who left the ISP program during the second year, we know that the major review of files during that period, completed in March 1978, reduced the number of beneficiary units by 39. If half of these were in the 18 to 30 age cohort, then the total attrition among this group would be 90 beneficiary units or 26 percent of the original cohort. As the highest attrition rate was clearly among young adults,[17] it was important to consider recruitment patterns.

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17. Reasons for leaving are not known, but higher social assistance was surely a factor for some.

Of the total of 69 new beneficiary units which were admitted to ISP at the beginning of the 1978-9 year, 27 units were comprised of individuals who turned 18 years of age, and were transferred from their parents beneficiary units to their own, 39 percent of new files (Table 3.31) . Another 26 beneficiary units transferred from social assistance programs. Four had been on unemployment insurance previously. And, six had been employed previously, four in casual employment, and two in JBNQA related work. The remaining six beneficiary units were elderly people who had not been working, but who were in receipt of Old Age Pensions. All told, 8 new beneficiary unit heads were over 60 years of age, 56 were 18 to 30 years of age, and five were 30 to 60 (Table 3.31).

The interesting pattern was therefore that while young heads of beneficiary units were overly represented in the beneficiaries leaving the program, they also comprised over eighty percent of new units. Thus, while on one hand our estimates suggest that during the first two years of ISP operations 90 heads of beneficiary units in the 18 to 30 age group left ISP, probably more than 60 joined, 58 at the beginning of 1978-9 and a smaller but unknown number at the beginning of 1977-8. Thus while there had been a modest net attrition among the younger adults, by the September 1978 review, the trend appears to have swung towards recruitment, and the new young adult beneficiary units were more than twice as numerous as those leaving ISP.

The second most numerous age group in numbers and in percentages of the age cohorts joining ISP were the sixty plus group. This probably reflects in part a number of people joining who had previously refused to participate in ISP, as indicated above. As well it indicates a number of elders deciding to return to bush camps because younger hunters now were in the bush as couples, and for longer periods, and the elders could find larger and more comfortable family groups to live with in greater security.

The eleven applicants denied admission were refused for several reasons. Three did not have clear intentions to pursue harvesting in the coming year. Three had not spent 120 days in harvesting and related activities during the previous year. Three had spent more time in wage employment than in harvesting and related activities during the previous year. And, two were not 18 by July 1, 1978. Nine of the eleven cases were of beneficiary unit heads who were between 18 and 30, and all were less than 50 years old (Table 3.31).

The number of applicants, and of new beneficiaries, was therefore primarily comprised of young people, and sufficient to replace the number of canceled beneficiary files during the transition from 1977-8 to 1978-9. There were 69 accepted new applications compared to 58 canceled files. This suggests some stability in recruitment and attrition; however the situation at the beginning of a benefit year does not fully determine the dynamics of withdrawal and admission to the program. Most files are reviewed before each of the other quarterly payments, and files are updated and may be canceled at each of these reviews. It is therefore worthwhile to extend our examination to the mid-year reviews of 1977-8 and 1978-9.

During March 1978, the last major review prior to the end of the 1977-8 year, declarations of the activities and income of beneficiaries up to January or February were received for 750 of the 890 beneficiary units. Not all beneficiaries can complete forms in January because some stay at bush camps all fall and winter without return trips to the settlements. Almost half of the declarations indicated that activities or incomes had changed significantly enough since the report completed during the summer of 1977 that a re-examination of the benefits which were

due, or of the eligibility of beneficiary units, was needed. Of the 374 files reexamined, 71 were canceled, and 263 had adjustments made, mainly reductions in benefits.

Reductions in benefits were mainly due to reductions in the number of days for which per diems were due. The reductions were caused by: taking employment; receipt of transfer payments such as manpower training allowances or unemployment insurance benefits; time out of the bush due to pregnancy and births, the average reduction being sixty days; or failure to go to the bush extensively.

The 71 files canceled seems high for a mid-year review, but files were canceled completely in only 39 cases, in the other 32 cases eligibility was not lost (Table 3.32). Seven of the 9 beneficiaries whose files were closed due to marriage were women whose spouses were beneficiaries. These seven remained beneficiaries of ISP, but in the new family beneficiary unit formed with their consorts. In addition, 25 of the 47 beneficiaries who left ISP to take up temporary employment went to work on environmental and remedial work initiated under provisions of the JBNQA. They worked mainly on animal relocations and were selected for the work because of their harvesting skills. Under these conditions the ISP provisions provide that they retain eligibility for ISP, and could re-enter the program immediately at the beginning of either of the next two beneficiary years, after they finished working. It was expected by the Board that these 25 beneficiaries would indeed return to the program at a later date, as they did.

In December, 1978 the first review within the 1978-9 year was undertaken. The number of declarations received was 876, and 397 required modification. However, only 15 files were canceled, 6 because beneficiaries took up extended employment, and 5 because beneficiaries left ISP to return to social assistance rolls (Table 3.32).[18] In March 1979, 827 statements were reviewed, and 424 required changes. These included 233 files in which per diems were reduced, 156 in which the "basic amount" was reduced, and 35 in which the "basic amount" was increased. Again, only 17 files were canceled, 11 because of employment, three as a result of marriages, and three as a result of withdrawal, and in at least one case transfer to social assistance programs.

By contrast to the March 1978 review, both reviews during 1978-9 involved substantially fewer cancellations of beneficiary files. The number leaving ISP due to taking employment, due to withdrawal, to transferring to social assistance, and even due to marriages declined by half or more. The number of cases canceled per review was down to less than 2 percent.

These changes, along with the fact that overall participation in ISP changed little between 1977-8 and 1978-9, suggest that the program was past its "shakedown" period by its third full year of operation. The data suggest that ISP had begun to reach a relatively stable operating pattern, in which the total outflow of beneficiary units and the admission of new beneficiary units was roughly equivalent.

These findings suggest that the evaluation of the impacts of the Program in this report, focussing in greatest detail on its first two years, does represent an examination of the impacts during the initial period of rapid and extensive changes, and

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18. As noted above, for single adults, with near the minimum number of days spent in the bush which are needed for eligibility for ISP, the payments under provincial social assistance programs could exceed the funds they would have received under ISP, because of their low per diems.

does give an adequate picture for the consideration of the longer-term patterns of change induced by ISP.

VII. Effectiveness of ISP Recruitment of "New" Harvesters

The number of beneficiary unit changes which occurred during the first two years of ISP operation suggested that we should examine how those beneficiaries who had joined ISP on the basis of their intention to harvest intensively had fared during the initial years. It was clear that most of them had stayed in the program, as the decline in beneficiary units from September 1976 to September 1978 was less than the units which had joined in 1976 under the specific provision. But how many had stayed and how many left? And, were they distinguishable demographically from the group of beneficiaries who had been practicing harvesting intensively in the years immediately before ISP?

Some information on the background of these beneficiary units was tabulated from ISP Board files, some from the "A" and "B" lists prepared by community administrators.

Men and women on the "B" list came from all age groups, but proportionally the younger age cohorts were more strongly represented on the "B" list than on the "A" list (Table 3.33). More of the 18-19 year old males were on the "B" list than on the "A" list, and more women heads of families between the ages of 35 and 59 were on the "B" list than on the "A" list (Table 3.33). Thus the opportunity to take up intensive hunting which was provided by ISP was particularly important to young men (half the men on the "B" list were under 30), and for middle aged women (half the women on the "B" list were between 35 and 64).

Among those who became ISP beneficiaries, and who provided data only on 1976-7, and therefore were among those eligible for benefits only in 1976-7, there was a decidedly stronger than average representation of single adults, and a more modestly stronger representation from among single parent heads of beneficiary units, and couples without children, most of whom would be young adults (Table 3.34). Nevertheless, although the average number of children per beneficiary unit among this group was somewhat lower than among those who had been harvesting intensively, the average number of children was still above 3.5 per beneficiary unit (Table 3.35); and families with seven or more children were well represented among beneficiary units that began receiving ISP in 1976-7 (Table 3.34)[19]

From ISP Board lists of the 134 beneficiary files which were closed between September 1976 and October/November 1977, we were able to identify 129 as beneficiaries by whether or not they were on the "A" or "B" lists (Table 3.36). This allows us to compare whether those originally listed on the "B" list dropped out of ISP more quickly than those on the "A" lists, and at what rate.

Those listed on Tables 3.36 and 3.37 as having been dropped for 1975-6 were found to be ineligible for benefits in either 1975-6, the retroactive period, or in 1976-7. These decisions were made in the summer and fall of 1976 when application forms were completed and reviewed. Sixteen "A" list applicants were found not to have been eligible for benefits in either year, whereas three of those for

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19. We will consider other characteristics of the "B" group hunters in the chapters on hunting and employment patterns of ISP beneficiaries.

whom we have data were found eligible for retroactive payments but not for 1976-7 (Table 3.37). This represented a loss of less than three percent of the "A" list total.[20] Among those on the "B" lists, 11 were found to be ineligible for benefits in 1976-7,[21] or less than 4 percent (Table 3.37). By the beginning of the 1977-8 year the number of canceled files, withdrawals and rejected applications, rose sharply, as we have seen above.

Among the "A" list applicants, 46 files were closed, and among the "B" list applicants 35 (Table 3.37). In addition 11 files of applicants who had been on neither list were closed. This represented six percent of the original "A" list applicants, and 12 percent of the "B" list.

The rate of attrition among "B" list applicants was considerably above that for the "A" list, but this is not surprising as those on the "A" list were already practicing intensive harvesting, whereas those on the "B" were not. What is more striking is that the attrition rate from both lists is low or modest, 9 percent of the "A" list, and 15 percent of the "B" list throughout the "shakedown" period of the program (Table 3.37).

One of the reasons for the modest attrition rate, even among "B" list applicants, is indicated by an examination of the hunting experience of those men on the "B" list in the two largest communities, which was conducted by the Grand Council of the Crees (of Quebec). They found that 63 percent of the "B" list me were considered to be experienced hunters whom ISP had encouraged to return to hunting intensively (Table 3.38). Another 33 percent were classified as men who were actively "in training," a Cree label used typically for young men who are in the process of learning hunting skills in depth, but who do not yet know enough to hunt entirely on their own. Only five percent were labeled as inexperienced, that is neither experienced nor in training.

The data suggest that possibly only 35 to 40 percent of the "B" list hunters were not already skilled at intensive hunting, and that if the attrition came mainly from the latter group, then over half of them tried ISP and stayed on, while slightly less than half of the not yet experienced eventually withdrew from the program. Based on 304 "B" group beneficiary units, ISP attracted 115 individuals or heads of families who had not hunted intensively before, of whom up to 46 may not have continued on ISP after the first two years.

On the other side of the coin, the data indicate that about 190 of the 304 beneficiary unit heads who established eligibility for ISP by undertaking to harvest intensively were experienced hunters who were returning to intensive harvesting, and not "trying" it for the first time. ISP did clearly bring some new people into intensive hunting, but it was much more effective at recruiting, and we assume retaining, those who had formerly hunted intensively than those who had not. Thus an aspect of ISP being a specialized program is that it did not immediately draw into more intensive hunting activities any large number of those Cree who had very limited experience with hunting. It was however effective at attracting those who

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20. Our data cover 129 of 134 canceled files, or 96 percent, so we have not adjusted our estimates of the percentage of the total beneficiary files which were canceled by making specific projections for the missing five cases, as this small adjustment would not result in any substantial change to any numbers or our conclusions.

21. It is unclear from the data why some "B" list files were listed as canceled for 1975-6 as well as for 1976-7, although it may be that these applicants asked to be considered for retroactive payments.

were already committed to learning intensive hunting skills.

VIII. ISP Beneficiary Population from 1978-9 to 1986-7

In the decade following the initiation of ISP the number of beneficiary units participating in the program was relatively stable, ranging from between 838 and 929 in the years from 1978-9 to 1981-2, to between 1,112 to 1,205 in the years from 1982-3 to 1986-7 (Table 3.39). The modest growth of the program, and its long term stability indicate that the recruitment of new beneficiaries is about balanced with the number leaving the program, especially due to aging. The variations that occur between years and communities reflect various demographic and economic factors, but appear to not usually be leading to major trends in the levels of participation, especially since 1982-3.

The single largest change was the 21 percent increase in beneficiaries in 1982-3 (Table 3.40), and the single most important factor affecting shifting participation was the availability of special work projects in the Cree villages. This increase coincided with the completion of several community development and community rebuilding projects. Many of the men who were employed on these projects were intensive hunters who had either left ISP temporarily over the previous several years to participate in these special projects, or they were young people who intended to hunt intensively but who delayed entry into ISP while working on the community projects. The pattern is indicated at Chisasibi, where there was a 29 percent decline in ISP beneficiary units in 1979-80, with very small increases in the immediately previous year and the following year. There were however 23, 62 and 17 percent increases in the number of beneficiary units in 1981-2, 1982-3 and 1983-4 respectively, as the relocated community of Chisasibi was completed (Table 3.40). About half of the beneficiary unit heads who joined ISP in 1982-3 were reported to be people who had been on ISP before, the others were joining for the first time, many of them young adults. While this was a very clear example of the pattern, similar patterns can be seen at Waskaganish.[22] ISP is thus somewhat responsive to employment opportunities for intensive hunters in the communities, a relationship which we will consider in greater detail in Chapter 5.

While the total number of ISP beneficiary units has been generally stable, and the size of the ISP beneficiary population as a whole has shown about the same patterns of variation as have the beneficiary units,[23] the ISP beneficiary population has been declining as a percentage of the total and resident Cree populations (Table 4.41). While initially over one-half of the total Cree population participated in ISP, the relatively stable numbers of ISP beneficiaries in the mid-1980s represented about one-third of the rapidly growing total Cree population (Table 3.41). Variations between levels of participation in different communities have remained im-

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22. Some people in the Cree communities have noted that the numbers on ISP varies not only with the availability of community rebuilding work, but sometimes with the availability of jobs and training programs in a community. In this sense, ISP has tended to expand and include those Cree who are intermittently intensive hunters during periods of reduction in the employment/enterprise/administrative sector. It does not however serve as a reserve pool for the large number of unemployed or under-employed, due to the restrictiveness of ISP eligibility criteria.

23. See Appendix 1, Tables A1-3 and A1-4.

portant throughout the period, although levels at some particular communities have varied more than at others. Mistassini beneficiaries continued to be an especially high percentage of the community throughout the decade, and were 48 percent of the total community population in 1986-7; whereas Waskaganish participation rates dropped more rapidly than elsewhere during the period, and only 21 percent of the membership of that community was participating in ISP by 1986-7 (Table 3.41). Participation rates also reflected the temporary work situation which we discussed above, as at Chisasibi from 1978-9 to 1983-4.

The age and family composition structure of ISP beneficiary unit heads appears to be following the general demographic shifts in the Cree population as a whole. Data on the demographic characteristics of ISP heads of beneficiary units were prepared by the ISP Board in the early 1980s, and these permit us to compare patterns with those prevailing in the mid 1970s. In 1983-4, the last year for which there were data on age cohorts, the number and percentage of beneficiary unit heads who were under 30, and the number and percentage who were over 50 were both higher than in 1976-7 (Table 3.42). And the differences were most pronounced among the 20 to 24 year-olds, and those over 65. In our view, this reflects both that the large group of people who were in the middle age cohorts, with high proportions of intensive hunters, are aging but staying active in bush camps and in ISP, and that a substantial recruitment is occurring among the young adult population which is sufficient to replace those leaving ISP and to maintain relatively stable membership.

This growth of young and of elder beneficiary units is reflected in the decreasing size of ISP families. In 1983-4 the number and percentage of single adult beneficiary units and units comprised of couples without children had increased substantially from 1976-7, whereas there was a corresponding drop in all categories of beneficiary units with two or more children. This shift would be contributed to both by the growth of beneficiary units with young adult heads, as well as by those with elderly heads, whose children would no longer be listed as dependents. The trend also reflects general patterns in Cree society, with declining family sizes among those who are becoming middle age today.

In general, the recruitment of young adults has been relatively stable, and ISP is serving a continuing and renewing group of intensive Cree hunters. We emphasize the renewing, because there were some who thought that ISP would be a sunset provision of the JBNQA, that it would provide a benefit for a core but declining group of traditional Cree hunters who would eventually age and pass away without being replaced. This has not turned out to be the case. ISP has become a permanent program because it has helped to sustain and renew intensive hunting as a choice of a significant number of Cree.

IX. Chapter Summary

The 980 beneficiary units which completed the first full year of ISP, 1976-7, comprised 4,013 individuals, and they represented 53 percent of the Cree family groups resident in communities, 43 percent of families enrolled under the JBNQA, and 58 percent of the total resident adult Cree population; although the level of participation between communities varied from about 60 to 35 percent. Thus eligibility requirements were rigorous enough that less than 45 percent of all Cree families were able to join. ISP therefore both recruited a large beneficiary popula-

tion, and it established itself as a specialized program and not a general assistance scheme.

Thirty percent of those who joined were not currently pursuing intensive harvesting, and the program was thus effective at recruiting a substantial group of "new" intensive hunters. This group included more 18 to 19 year old men than joined under the regular provisions of ISP. While the attrition rate among this group was higher than among those already practicing intensive hunting, only 15 percent left in 1976-7 or 1977-8.

ISP did not however primarily recruit the unexperienced. Fully 60 to 65 percent of those men who joined ISP under these special provisions were experienced hunters, although they had not been practicing intensive hunting immediately prior to the introduction of ISP. And most of the others were young men who were considered "in training" in the communities.

The largest group of ISP beneficiary unit heads was the 20 to 24 year-olds, and young adults from 18 to 30 comprised over one-third of beneficiary unit heads. Those 30 to 64 comprised half of the heads of beneficiary units, and those over 64 comprised 8 percent. However, while there were more ISP beneficiaries in the cohorts between 20 and 35 years of age, they were a smaller percentage of the community-wide population of those ages than were the beneficiary cohorts between 35 and 60.

About 45 percent of beneficiaries were women, and twelve percent of beneficiary units were headed by women, all but two of which were single adult beneficiary units. Among adult women beneficiaries, including those who are consorts as well as those who are heads, the largest age group were the 30 to 34 year-olds, with large cohorts from 20 to 39 years of age. Women participants were 53 percent of resident adult Cree women, compared to male participants who were 64 percent of the resident adult male Cree population.

ISP was intended to encourage partners to accompany heads of beneficiary units to bush camps. While only about 20 percent of the partners did not accompany the heads in the bush camps in 1975-6, this percentage dropped by half when ISP was introduced in 1976-7.

At the end if its second year, and the beginning of 1978-9, the first year with potentially normal recruitment patterns, the number new beneficiaries comprised 8 percent of the enrollments. The single largest group of files which had been closed were young adults, but 80 percent of the new beneficiaries were also young adults, and the number recruited among this age group was exceeding those leaving. The other substantial group of new beneficiaries were those over 60, reflecting both an acceptance of ISP after doubts on the part of some, and an increased opportunity for the elderly to participate in larger and better equipped bush camps.

In the decade which followed, the number of beneficiaries increased somewhat, but was generally stable. Between 1,100 and 1,200 beneficiary units were eligible each year from 1982-3 to 1986-7. However, they represented a declining percentage of the rapidly growing Cree population, and about one-third of the total Cree population was participating by the mid-1980s. The shift in the age structure of beneficiaries was toward larger number and percentages of those under 30 and those over 50 years of age. Recruitment of young adults was generally stable, and ISP was serving a continuing and renewing group of intensive Cree hunters.

Chapter 4

Hunting and the ISP Programme

I. ISP and the Encouragement of Hunting as a Way of Life

ISP was intended to encourage the continuity of hunting as a way of life, not only by increasing the number of people who pursued hunting as their primary activity, but by encouraging and making it possible for people to spend more time and effort in these activities. However, the program was designed, as we have noted above, to avoid requiring or directly encouraging increased harvesting, so as to avoid creating incentives which could lead to disruption of Cree wildlife management practices, and to possible depletion of game populations. It was intended to facilitate Cree hunters continuing to make harvesting decisions according to their own conservation practices.[1] Nevertheless, the program was intended to maintain or enhance existing harvests, to the extent this was possible, in the face of the extensive and increasing disruption of land and wildlife by industrial developments, including both hydro-electric construction and flooding, and large-scale forestry clear-cutting.

The increased number of hunters who participated in intensive hunting, which has been reported in the previous chapter, and the increased expenditures and purchases of hunting equipment (discussed below in Chapter 6), were accompanied by increases in the time spent in harvesting and related activities as described in the first section of this chapter. The increases in people, time spent in the bush, and quality and availability of hunting equipment each pose questions requiring an assessment of the changes in harvesting levels and the ecological impacts of the introduction of ISP, which form the center sections of this chapter. In the later sections we consider some of the consequences of these changes for social relations among Cree.

II. Time Spent in the Bush by ISP Beneficiaries

The structure of ISP program benefits provides an incentive for beneficiary units to increase the number of days spent in harvesting and related activities outside the settlements because the main cash payment is a per diem amount for time spent in the bush. In 1976-7, the per diem amount was $13.12 for each day the

1. For information on those practices see Feit, 1978, 1986, 1987; Scott, 1986: Berkes, 1977, 1982.

head of the beneficiary unit spent in harvesting or related activities "in the bush," and $13.12 for each day a consort spent in the same activities in the bush, up to 240 days (approximately eight months).[2] In addition, days spent by the head of the beneficiary unit in harvesting or related activities conducted from the settlement can count towards meeting the eligibility requirement of 120 days of harvesting and related activities (of which 90 days must be in the bush), although if the greater part of such days are spent in the settlement they do not count towards any per diem.

The impacts of the introduction of the program were examined with data tabulated from the files of the Income Security Board, from questionnaire data collected by the James Bay and Northern Quebec Native Harvesting Research Committee (NHR), and from material collected or tabulated by the Grand Council of the Cree (of Quebec).

Because the period of operation of the ISP program for 1975-6 covered only the period following November 11, 1975 the statistics for the 1975-6 program year are not directly comparable to those for the following years. Data for comparative purposes were therefore tabulated from the individual files of the ISP Board.

The available data indicate that the introduction of ISP lead to an immediate increase in the number of days spent in harvesting by beneficiary units. In aggregate, heads of beneficiary units who provided data to the ISP for both 1975-6 and 1976-7 reported an increase by twenty-five percent in the number of days they spent in harvesting in the post-November 11 period of 1976-7 compared with the same period of operation of ISP in 1975-6 (Table 4.1).[3] The most common range of increase by community was from 15 to 35 percent. The increase was over 60 percent in Eastmain, where the 1975-6 number of days harvesting was lowest, and the per hunter mean (79 days) was substantially lower than in any other community (Table 4.2). At the other end of the range, the increase at Waskaganish was comparatively small, 6 percent.

In 1975-6 these heads of beneficiary units spent an average of 124 days in harvesting activities between November 11 and June 30, and they spent a mean of 154 days for the same period in 1976-7 (Table 4.2). In effect they were involved in harvesting for an additional month during the winter and spring of 1976-7 as compared to the previous year. In the 1976-7 program year an average of 202 days was spent in harvesting and related activities in the bush, and 214 days in harvesting and related activities in total (whether in the bush or in the settlement) (Table 4.2).

While these data are the most detailed and precise available to us, other data are also useful. During the final stages of the negotiation of the James Bay and Northern Quebec Agreement the band counselors and representatives from all of the Cree communities met in Montreal to discuss the negotiations. While they were there they were asked to estimate, in their best judgment, the number of Cree hunters who would be able to meet the criteria for eligibility in the ISP, as the

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2. To give some sense of these amounts in more current figures, the $13.12 had risen for 1990-1 to $35.03 per day, having been increased annually to cover most (but not all) of the change in the value of the dollar due to inflation since 1976.

3. These data were tabulated by our staff. A total of 716 heads of beneficiary units for whom there were unambiguous data on harvesting periods in the ISP Board files were included in these comparisons between 1975-6 and 1976-7. The data were tabulated from the individual files anonymously, and aggregated, to assure confidentiality.

criteria were described at that stage of the negotiations. As we have indicated in Chapter 3, representatives from each community met as groups and made lists of potential beneficiaries. These included estimates of the number of days or months hunters typically spent in the bush hunting. Community representatives stressed that they did not know the hunting patterns of all individuals, especially in the larger communities, and they were therefore forced to guesstimate some figures. While keeping in mind this caveat, their data are useful because they provide an estimated baseline of what hunters typical patterns were in the few years immediately prior to 1975, and their estimates are therefore not dependent on the fluctuations which may affect a single year of data.

Overall the 1976-7 average number of man days spent by those hunters who did participate in ISP was 19 percent higher than the 1975 community representatives' estimates for the hunters they thought would be eligible for ISP (Table 4.3).[4] We therefore feel some confidence that the overall impact of the introduction of the ISP was to raise the time hunters spent harvesting by between 20 to 25 percent.

The percent increase among heads who had been hunting intensively over the previous several years does not necessarily reflect the changes which occurred in the hunting patterns of those hunters who did not meet the criteria of eligibility for ISP in 1975-6, but who joined the ISP program in 1976-7. The ISP Board data do not cover many of these hunters before they joined ISP, but some information on the changes which they made are reflected in data collected in the annual harvesting interview/questionnaires of the NHR Committee. Hunters were asked to recall the number of weeks they were trapping during the year.[5] These data were specially tabulated by the NHR Committee and the Grand Council of the Crees to examine the different categories of hunters.

Of the 247 male heads of households who were listed in the spring of 1975 as not qualifying for the ISP program in 1975-6, but who undertook to begin intensive hunting in 1976-7 to be eligible for ISP benefits in that year (this is the "B" list discussed in Chapter 3), 146 were interviewed by the NHR about their 1975-6 hunting.

For 1975-6, 145 of the 146 "B" list men who were interviewed by NHR staff

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4. The differences between the estimates of typical time spent hunting prior to 1975, and the ISP Board data on man-days spent in harvesting and related activities in the bush by beneficiary units in 1976-7 vary by community. For example, the differences are similar to the differences found between the 1975-6 and 1976-7 ISP data for four communities: Mistassini (34 per cent increase in ISP data from 1975-6 to 1976-7, and 33 percent difference between Cree representatives' estimates and 1976-7 ISP data), Chisasibi (16 and 23 percent), Waswanipi (21 and 16 percent), and Wemindji (18 and 19 percent). In the other three communities (Eastmain, Waskaganish and Whapmagoostui) the differences were greater, and either 1975-6 may have been an unusual year, or the original estimates by community representatives may have been less accurate. As we have already indicated, the evidence suggests that 1975-6 was an atypical year at Eastmain, as the per hunter man-days were lower than elsewhere (Table 4.2) At Waskaganish it appears that the community estimate was higher than anywhere else, whereas at Whapmagoostui it was unusually low (Table 4.3).

5. We have focussed the analysis on the number of days trapping, although the NHRC research also collected data on days spent hunting Canada geese and also fishing days. We discuss below the impact on time hunting geese, but as the days spent geese hunting are significantly limited by the migration patterns of the geese we have not used those data in this analysis. Fishing effort was reduced significantly in 1975-6 in a number of communities as a result of a public information campaign concerning the danger of methyl-mercury poisoning, see below. The days trapping are therefore the best indicator of how harvesting effort responded to the introduction of ISP.

answered questions about their trapping activities.[6] Sixty-two men, or 43 percent, reported that they did not trap at all in 1975-6 (Table 4.4)[7]. Of those 83 who did trap, they averaged 11.2 weeks of trapping during the year. The average for the "B" list group as a whole, including both those who trapped and those who did not, was 6.4 weeks (Table 4.4). In 1976-7 the NHR interviewed 116 male heads of households who were on the "B" list, not necessarily the same individuals as in 1975-6, and they averaged 17.3 weeks of trapping (Table 4.5), nearly three times the 1975-6 average.[8] In most communities, the increase involved approximately doubling the number of weeks trapping, but in the two coastal communities which had reported the lowest number of weeks trapping in 1975-6, Wemindji and Waskaganish, the rate of increase was higher (Table 4.5).

The "B" list men therefore intensified their hunting more than those who were on the "A" list, the men who were initially listed by the communities as having already been hunting intensively enough to be eligible for ISP in 1975-6. This difference was greater in absolute terms as well as in percentage terms. Those on the "A" list increased their reported weeks of trapping between 1975-6 and 1976-7 by 4.7 weeks, from 14.7 to 19.4 weeks, compared to the 10.9 week increase which "B" list hunters undertook, or the 6.1 week increase between those "B" list hunters who did trap in 1975-6 and the 1976-7 "B" list average (Table 4.5).[9]

The results of the NHR research also closely approximate the changes indicated in the ISP Board data. ISP data, as we have seen, indicate that hunters who provided data to ISP in both years increased their time hunting, on average, by 30 days in the post-November 11 period of 1976-7 when compared to the same period in 1975-6 (Table 4.2). NHR interviewees who were on the "A" lists reported their trapping time, which is largely a late fall, winter and early spring activity,[10] in-

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6. It should be recalled that when these lists were reviewed by the ISP Board staff, some of these applicants were found ineligible, and others were found to be eligible for ISP in 1975-6 and were given the retroactive payment for that year and treated in all respects like those who were eligible for ISP benefits in both years. In addition, various individuals who were omitted from the "B" lists by oversight were able to apply directly to the ISP Board to have their eligibility considered, and a number of these hunters were also added to the list of beneficiaries. As was indicated in Chapter 3, there were no "B" lists prepared at Great Whale or at Eastmain, two of the smallest communities, so the totals reflected here do not include hunters from those communities. There are therefore a number of differences between the list of people whose names appeared on the "B" list and those who participated in the ISP program for the first time in 1976-7.

7. The majority of the men who did not trap, all but 5, were from the coastal communities of Chisasibi, Wemindji, and Waskaganish. In coastal communities spring and fall goose hunts along the coast are organizationally and conceptually distinct from winter trapping camps, whereas on inland hunting territories the waterfowl harvests are more modest, and they often are conducted from the same camps, being integrated with early and late trapping. In coastal communities it was therefore more common for some hunters to participate in fall and spring goose hunts, but not in winter trapping camps. This also explains in part the higher number of trapping weeks reported by hunters from Mistassini and Waswanipi, the inland communities.

8. Unfortunately, the tabulations available to us do not indicate how many did not winter trap, if any, in 1976-7.

9. For 1975-6 500 "A" list hunters were located in NHR data, for 1976-7 data on 475 men were included from the NHR data.

10. While the increase in time trapping does not include any increase in the spring goose hunt, these increases were modest, see below.

creased by an average of 4.7 weeks, or 33 days, when comparing the 1976-7 year with 1975-6 (Table 4.5).

The tabulations from NHR data also permit us to compare the time spent trapping by hunters who were to become ISP beneficiaries with that spent by non-ISP hunters. In 1975-6 "A" list hunters spent an average of 14.7 weeks trapping, as we have seen, whereas hunters who were not thought to be eligible for ISP (who were either on the "B" list or on neither list, and including those not on the "A" list at Eastmain and Whapmagoostui), trapped for an average of 5.0 weeks during that hunting year (Table 4.6). In 1976-7 hunters who were not thought to be eligible for ISP (who were not on either the "A" or "B" lists), spent an average of 8.1 weeks trapping, whereas we have seen that "A" and "B" list hunters had an average of 19.4 and 17.3 weeks trapping respectively (Table 4.6).[11] The separation between those on ISP and those who are not is considerable.[12] Nevertheless, it is interesting to note that there was an important increase trapping time by non-ISP hunters in 1976-7 as well as among ISP beneficiaries (Table 4.6).[13]

In addition to the increases in ISP beneficiary units time in the bush, ISP was intended to also provide an incentive for consorts to accompany partners in the bush camps. Data on the time spent out of the settlement in harvesting and related activities by consorts were examined from the ISP Board data we tabulated. In 1975-6, 81 percent of the consorts in beneficiary units which provided data to ISP on 1975-6 and 1976-7 reported that they spent time in harvesting and related activities in the bush in the post-November 11 period (Table 4.7). In two coastal communities, Chisasibi and Eastmain, the percentages were considerably lower than elsewhere, at 45 and 58 percent respectively. This reflects the pattern of spouses not accompanying the heads of households to hunting camps. In 1976-7, consorts reporting time spent in the bush rose to 92 percent (Table 4.7). And, at Chisasibi and Eastmain the percentages reporting time in the bush rose to 78 and 79 percent respectively, suggesting that the change was greatest where the pattern of spouses not accompanying heads had been most extensive.

In terms of duration of time spent in the bush, consorts reported an average of 108 days in the post-November 11 period of 1975-6, and 135 days in the same period of 1976-7 (Table 4.8). The 25 percent increase closely follows the increase in time spent in the bush by heads of beneficiary units reported above. The average number of days spent in the bush by consorts was twelve percent less than for heads, 135 versus 154 days, or nearly three weeks less on average. At Chisasibi and Eastmain the change in days spent in the bush by consorts was the lowest of all the communities, and a small decline was actually recorded at Eastmain (Table 4.8). Thus while the number of consorts going to bush camps increased considerably in these communities, the average time spent by consorts in the bush did not

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11. In 1976-7 the fact that no "B" lists were made for Eastmain and Whapmagoostui results in including with the non-ISP hunters those hunters who would have been identified by inclusion on that list as potentially eligible for ISP benefits in those two communities. However, the number of hunters involved is small, and the means for these villages are consistent with the overall patterns.

12. The average number of weeks trapping by hunters not listed as eligible for ISP is especially high at Waswanipi, which both reflects the fact that several hunters who were later admitted to ISP were not included on the "B" list, and also the fact that several men who were regularly employed did extensive trapping near the settlement on a seasonal and weekend basis.

13. See discussion later in this chapter.

change, or did not change as much as in other communities. The incentive for consorts to accompany spouses to bush camps was therefore generally effective, but beneficiaries did not respond to it uniformly.

The number of days spent in harvesting and related activities in the settlement was not subject to the same incentives as days spent in the bush. Only days the greater part of which were spent in harvesting or related activities outside of the settlements were eligible for per diem payments. Days spent solely in related activities in the settlements, preparing for time in the bush were not eligible for per diems.[14] While not paid, up to 30 such days could count towards establishing the eligibility of those beneficiary units with 90 or more days, but less than 120 days in harvesting and related activities outside the settlement.

ISP heads of beneficiary units reported that they spent *less* time in harvesting related activities during the period of ISP operations in 1976-7 than in 1975-6 (Table 4.9). The data collected by the ISP Board do not permit us to distinguish between pre- and post-November 11 days spent in harvesting related activities, and we therefore have no direct measure of percentage change in time devoted to related activities for comparable periods of 1975-6 and 1976-7. The comparison of the two years, which shows a small difference of two days per head of a beneficiary unit, therefore under-estimates the difference, because in 1975-6 the program covered only the 231 days between November 11, 1975 and June 30, 1976, and not the whole year covered in 1976-7. However, the number of days spent in harvesting related activities was modest, 14 per head of a beneficiary unit in 1975-6 and 12 in 1976-7 (Table 4.9). In relation to the increases in days spent in the bush, time spent in harvesting and related activities in the settlement accounted for only five percent of the combined total in 1976-7 (Table 4.9).

The time spent in related activities in the settlements by consorts is neither eligible for a per diem, nor does it affect the eligibility of a beneficiary unit. A decline occurred in the days spent in related activities by consorts, who reported a total of 7629 days spent in activities related to harvesting in the settlement in the 1975-6 program period, and 4802 in the 1976-7 program year (Table 4.10). This is an average of 16 days in 1975-6 and 10 days in the following year.[15]

In 1976-77, the total adult beneficiary unit population was spending over 250,000 person-days in harvesting and related activities in the bush (Table 4.11). For heads of beneficiary units, this averaged 201 days per year, or nearly seven months, and for consorts it averaged 163 days per year (Table 4.11).

This considerable intensity of the hunting effort is also indicated by the percentage distributions of beneficiary units among harvesting duration categories.

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14. The ISP Board forms list this time as including: making or repairing equipment; processing, transport, or sale of products; handicrafts production; work on remedial works activities; wildlife surveys and management; travel to and from bush camp and harvesting sites; and other preparation time.

15. The relatively dramatic differences between the reported levels of time spent in harvesting and related activities in the settlements among beneficiaries from different communities, which are greater than the differences among communities which are found in the reported days spent in the bush, as well as the near disappearance of days spent in harvesting related activities at Chisasibi in 1976-77 (Table 4.10), indicate the likelihood that there were variations in understandings beneficiaries had in the early years of ISP about how or whether to report days in the settlements. The variation probably is most strongly affected by the irrelevance of the category for the great majority of beneficiary units.

One-third of the beneficiary unit heads were spending over 230 days in harvesting and related activities in the bush, many and probably most of these exceeding the 240 day limit, and forty eight percent of beneficiary unit heads were spending over 210 days, whereas only 6 percent spent under 120 days (Table 4.12). The lowest percentages of beneficiary unit heads with over 210 days were at Waskaganish and Eastmain, the highest percentages spending under 120 days were at Waskaganish. An exceptionally high percentage of Mistassini heads of beneficiary units spent over 230 days (60 percent), whereas for most communities 18 to 27 percent of heads of beneficiary units spent over 230 days, nearly eight months, in the bush (Table 4.12). For many ISP beneficiaries therefore the time spent in the bush was not limited by the maximum number of days for which per diem payments were made, and some spent substantially above the limit.

Looking at the longer term, we generally found that the increases in time in the bush which followed the introduction of ISP were maintained or intensified somewhat in succeeding years. NHRC data on the days ISP hunters reported trapping in the two years following 1976-7 indicate that 9 percent and 10 percent increases in days trapping occurred in those years (Table 4.13). As a result, the number of days trapping per hunter in 1978-9 was 44 percent above the 1975-6 level, 168 versus 103 days.

Data on actual time hunting by heads of beneficiary units are not available for succeeding years, but the trends can be discerned in data from the ISP annual tabulations. The number of person-days paid to ISP beneficiaries was relatively steady between 1976-7 and 1986-7, with a slow rise from 1976-7 to 1978-9, a peak in 1980-1, and then an especially stable level slightly above that of the first four ISP years (Table 4-14).[16] The increases in time in the bush, which ISP facilitated, thus established new patterns of hunting which were maintained throughout the first decade of ISP operation.

The impacts of the introduction of the ISP program on the allocation of time by beneficiaries were thus clear and considerable. The Cree hunters' commitment to hunting is high both in terms of the absolute periods spent in bush harvesting and living, an in terms of the increases in commitment made possible by ISP. These results tend to confirm the Cree hunters' statements during the negotiation of the JBNQA, that economic factors were restricting their ability to hunt as extensively as they would have wished. ISP partially solved this problem.

III. Harvests by ISP Beneficiaries and the Conservation of Wildlife

Data on the changes in Cree harvesting patterns during the years just before and after the introduction of the ISP program were gathered by the James Bay and Northern Quebec Native Harvesting Research Committee, and we have used the published results of that research, supplemented by some hand-tabulated data from their surveys, to evaluate the regional changes in Cree harvesting activities.

We have focussed on harvesting activities related to a selection of species which affords a broad consideration of different seasonal activities, regional pat-

16. These data average both heads and consorts, and they only include days for which per diem payments were made. They are not directly comparable to the data on hunting effort by heads of beneficiary units presented above. They also under-estimate total hunting effort, as days above the 240 per head of a beneficiary unit per year are excluded.

terms and types of harvesting. We have included all of the species which provide five or more percent of the mean annual food harvest weight available to three or more of the Cree communities. These harvests include: Canada geese and ducks, taken mainly in the fall and spring waterfowl hunting seasons; beaver, the most important fur-bearing mammal both in terms of food and income produced; moose and caribou, the most important big game species; hare, the most important small game species; and whitefish, the most abundantly harvested fish throughout the region (statistics from JBNQNHRC, 1982:230-1 [Table 3-64]). In addition we have also examined harvests of three other species or groups of species: mink, a fur bearing mammal not part of the normal food supply, but harvested for sales of its fur pelt; grouse, small game animals which were in different phases of their population eruption cycles than the hare; and seals, the marine mammal of greatest importance in northern coastal communities.[17]

For each type of harvesting we have examined whether there was an increase from 1975-6 to 1976-7, and in succeeding years, in the number of people estimated to have harvested the specific species. For each species or species group we have then examined the intensity of participation (percentage of ISP hunters harvesting), the intensity of the harvest effort or harvest success (the harvest per harvester), and the changes in the intensity of the harvest (the number of animals of the species which were harvested by ISP hunters and by the total community of hunters). After reviewing each type of hunting, we provide a statistical analysis comparing the pre- and post-ISP harvests of each species or species group.

Between 1975-6 and 1978-9, the NHRC research sought to complete interviews with as many of the "resident adult male hunters" of each community as possible. Respondents were stratified by whether they were "intensive hunters," those males who identified themselves as beneficiaries of ISP (effectively male heads of ISP beneficiary units), and "active hunters," a residual category which included those who said they were not on ISP. To identify the total number of male ISP hunters the NHRC used the currently available ISP Board data.[18] The NHR study interviewed over three-quarters of the ISP male hunters in each year between 1975-6 and 1978-9 (JBNQNHRC, 1982:71-4 [Tables 3-6 to 3-9]).

Geese and Waterfowl Hunting

Canada geese are the most numerous of the waterfowl harvests, and they are harvested in large numbers by hunters from the Cree communities along the James Bay and part of the Hudson's Bay coasts, during both fall and spring migrations. As indicated in the Wemindji case study, coastal hunters typically have specific

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17. Data on ISP hunters' harvests from all the species and species groups which provide food, plus the mink, will be found in Appendix 4.

18. For the exact NHRC definitions of these categories see JBNQNHRC, 1982, pages 23-8. Because the overall number of ISP hunters was based on the number of male beneficiary unit heads reported for the given year by the Cree Hunters and Trappers Income Security Board at the time the NHR data were being processed, later reviews and updates of files by the ISP Board led to slight changes in its official numbers. The total number of non-ISP hunters for each year was the difference between the number of resident adult males on official membership and JBNQA beneficiaries lists who were physically active "potential" hunters , minus the ISP male heads of beneficiary units. The 1975-6 NHRC used a figure of 666 intensive hunters among the resident adult male potential hunters, and 877 intensive hunters in 1976-7 (JBNQNHRC, 1982: 71-2 [Tables 3-6 and 3-7]).

hunting seasons and camps for hunting Canada and/or lesser snow geese, depending on the geese migration patterns along each stretch of coastline. Hunters from the interior communities have much less access to good geese habitats, and duck harvests are much more important than other waterfowl at those communities.

The estimated number of ISP hunters who harvested Canada geese[19] in the highly valued spring hunt increased by 29 percent regionally, from 593 to 763, from 1975-6 to 1976-7, and increases occurred in all villages but two, Waskaganish and Whapmagoostui (Table 4.15). The number of summer/fall Canada goose hunters in 1976-77 (a period which occurred partly before the first ISP payments were distributed) increased by 20 percent regionally over the previous year, 366 to 439 ISP hunters, although the pattern was more varied among villages (Table 4.15). ISP duck harvesters increased regionally by 23 percent in the spring (from 613 to 754), and 51 percent in the summer/fall (from 413 to 623), in the same six of eight communities (Table 4.16).

This increase in ISP hunters is not unexpected, given the number of beneficiaries who were eligible for the program for the first time in 1976-7, and it does not therefore indicate whether the overall rate of participation of hunters in waterfowl hunting increased. The percentage of ISP hunters who reported harvesting Canada geese and ducks did not change dramatically at the regional level (Tables 4.17 and 4.18). By community, there was a sharp rise in the percentage of Mistassini hunters reporting summer/fall Canada geese and duck harvests, and some decline in the percentage harvesting at Waskaganish in the same season (Tables 4.17 and 4.18). In the spring hunt there were only more modest changes in waterfowl harvesting participation levels in most communities, and these pattern continued through 1978-9 (Tables 4.17 to 4.18).

In addition, the increase in the number of ISP hunters of Canada geese and of ducks does not necessarily indicate that there was a comparable increase in the total number of waterfowl hunters. Because the spring and fall goose hunting seasons are of limited duration, due to geese migration patterns, they are often periods in which many active hunters can participate in the highly valued hunt, including those who are employed and who take holidays to coincide with the goose seasons. Many part-time hunters arrange to participate in hunting camps during the fall period especially. The high level of participation among ISP hunters is reflected in spring goose hunts between 1975-6 and 1978-9, when 91 to 100 percent of ISP hunters in each of the coastal communities, except Whapmagoostui after 1976-7, reported harvesting Canada geese;[20] and generally similar percentages of ISP hunters reported harvests of ducks, with a few lower participation rates in specific communities (Tables 4.17 and 4.18). On a regional basis, very high levels of participation were also reported by non-ISP hunters in the spring, 83 to 86 percent for Canada geese, 76 to 86 percent for ducks (JBNQNHRC, 1982:745-6 [Table A21-1]; for comparisons of the mean values see discussion later in this chapter and Table 4.56)). For the fall hunts the percentage participation rates are lower, but they are generally similar between ISP and non-ISP hunters, the latter having only slightly

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19. We have projected our estimates of the total number of ISP hunters harvesting a given species from the total number of intensive hunters in that year multiplied by the percentage of ISP respondents reporting that they did harvest a particular species.

20. Eighty-five and 79 percent of Whapmagoostui hunters had spring harvests in 1977-8 and 1978-9 respectively.

lower regional rates.[21]

The almost comparable levels of participation by non-ISP hunters in this highly valued harvesting activity means that the increase in the numbers of ISP hunters does not necessarily indicate that there were many more waterfowl harvesters in total. Because the participation rates in waterfowl hunting, especially in the spring, were high for all hunters in the community before the introduction of the ISP program, the great majority of those who joined ISP were already participating the goose hunts. Thus the estimated total number of Canada geese hunters did not increase in the summer/fall of 1976-7 when compared to the previous year, and the estimated total number of spring goose hunters increased by only 7 percent between the two years (Table 4.19). A similar increase occurred the next summer/fall hunting season, 1977-8.

The ISP hunters did however increase the time they spent hunting in 1976-7. There were thirty percent increases in the mean number of days ISP hunters who harvested Canada geese spent in both the summer/fall and spring the goose hunts of 1976-7 compared to those of 1975-6 (Table 4.20). The increase in the number of days hunting during the goose seasons was limited both by the duration of the stay of the migrating flocks in the region, and by the intensity of participation which already existed. The average time spent hunting waterfowl increased by 8 and 9 days in the spring and summer/fall hunts respectively in 1976-7, but they returned to the 1975-6 level in the following years. This pattern was common at coastal communities, and was parallel for both seasons at each community, with some specific variations. Chisasibi hunting days rose for two years in each season, and then declined to the 1975-6 level (Table 4.20). Waskaganish hunters harvesting days rose for one or two years and then declined somewhat. Wemindji and Eastmain harvesting days rose only in the spring, for two years.[22] At the inland communities,[23] the patterns were more erratic, but still parallel for both seasons at each community.

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21. Between 1975-6 and 1978-9, there were between 50 and 57 percent participation for ISP Canada goose hunters in the fall, compared to between 49 to 59 percent participation for non-ISP Canada goose hunters, and 62 to 74 percent versus 61 to 69 percent for ISP and non-ISP duck hunters during the same period (JBNQNHRC, 1982: 746 [Table A21-1]).

22. The NHR Committee noted that the number of man-days was defined in a specific way by the ISP program (JBNQNHRC, 1982: 239). Hunters' reports of days spent waterfowl hunting to the NHR interviewers may have been affected by this definition of "hunting days" following 1975-6. Before ISP, hunting days may not have included days in the bush camps in related activities, that is days not hunting because of weather conditions, travel, other camp activities, health problems, or conservation considerations. After ISP all days in bush camps would be more commonly included. The estimate of the increase in total waterfowl harvesting time in 1976-7 may therefore be somewhat high when compared to the previous year. However the fact that harvesting days declined after one or two years, generally to the 1975-6 level, suggests that either no systematic redefinition of harvesting days occurred with respect to waterfowl hunting, or there was a decline in 1978-9 below 1975-6 levels. The reports of time trapping were not subject to the same considerations, because the NHR asked hunters about weeks spent trapping, not days; and it was therefore clear that weeks would include some individual days which were not spent trapping but in other harvesting or related activities.

23. Some inaccuracy may occur in inland communities because goose hunts there are often conducted from combined waterfowl hunting and trapping or fishing camps, and are less distinctive from other days specifically spent in other harvesting activities. There is therefore somewhat greater ambiguity with respect to which days to include as goose hunting days.

Despite the additional time in goose hunting during the first year, or two in some communities, there was a somewhat lowered per hunter harvest of both Canada geese and ducks by ISP hunters in most communities (Tables 4.21 and 4.22). ISP per hunter harvests of Canada geese fell by 28 percent in the region as a whole between the fall of 1975-6 and of 1976-7, from 38.3 geese per ISP harvester to 27.5, and by 17 percent in the spring, from 45.7 to 37.9 geese per harvester (Table 4.21). Duck harvests per ISP hunter declined by 37 and 3 percent respectively, from 25.6 ducks per ISP hunter in the summer/fall to 16.1, and from 32.9 per harvester in the spring to 31.8 (Tables 4.21 and 4.22).[24] Modest declines occurred in most communities.

As a result of this combination of increased numbers of ISP hunters, only temporary and modest increases in time spent waterfowl hunting, and declines in waterfowl harvests per ISP hunter, the regional estimated harvests by ISP hunters of both Canada geese and ducks increased by only 6 percent and 12 percent respectively in 1976-7, from 42,677 to 45,182 Canada Geese, and from 29,579 ducks to 33,450 (Table 4.23). In the following two years, as per ISP hunter harvests generally stayed low or declined somewhat further (Tables 4.21 and 4.22), the ISP harvests of Canada geese and ducks dropped to pre-1975-6 levels, to a total of 33,091 Canada geese and 26,644 ducks (Table 4.23).[25]

The overall estimated harvest of Canada geese by all hunters in the Cree communities declined somewhat from 1975-6 to 1978-9, but the variation was within the range of variation found for the two previous years, 1973-4 and 1974-5 (see Table 4.42), and the NHR Committee concluded that there were no obvious trends in the harvests of Canada geese between 1973-74 and 1978-9 (JBNQNHRC, 1982:78). The regional duck harvest similarly declined somewhat from 1975-6 to 1976-7 (Table 4.42), but was overall "remarkably stable" during the period for which there were data, 1974-5 to 1978-9 (JBNQNHRC, 1982:80).

These data on waterfowl harvests demonstrate clearly that the responses to the introduction of the ISP program were complex, and that there was no necessary or direct connection between the increase in participation in ISP and wildlife harvest levels taken by ISP hunters, or by the community as a whole, even in highly valued hunting activities. The fact that per hunter harvests declined also suggests that ISP hunters may have been limiting their individual harvests in response to potential for having too large a harvest overall, a topic we will examine in more detail below.

Beaver and Fur Mammal Harvesting

Beaver harvesting is primarily a winter trapping activity, although a wide variety of techniques are used to capture beaver that do not require traps, and there is also an important spring hunt at some communities, when beaver are also shot. Beaver are the most important fur mammal with respect to both the quantity and

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24. In the following year the duck harvest per ISP hunter in the spring declined a further 18 percent. Reasons for a different, and possibly delayed, response in spring duck hunting may be related to the fact that most spring duck hunting is done from inland hunting camps, and is an extension of the winter hunting and trapping period, which was considerably extended immediately following the commencement of ISP. See below on the patterns in winter hunting and trapping.

25. The 1977-8 and 1978-9 ISP hunter harvest estimates for Canada geese were 17 and 22 percent below the 1975-6 harvest levels respectively, and for ducks they were 24 and 10 percent lower.

value of the food produced, and during the period of this study, with respect to the value and number of pelts sold, and the income derived from the sales (JBNQNHRC, 1982). Mink were an important source of fur incomes during that period, and were trapped extensively in the region especially in the fall and early winter. Both these species are therefore particularly associated with the winter hunting/trapping period.

The estimated number of ISP hunters who harvested beaver increased in all but one community, and by 35 percent regionally in 1976-7 (Table 4.24), and mink hunters increased by 68 percent. However, the number of beaver harvesters declined in each of the two following years, so that the 1978-9 estimated number of ISP hunters was eight percent above the 1975-6 level. The estimated number of mink harvesters did not follow so clear a trend, either regionally or by community, but tended to stay well above the 1975-6 level, 62 percent higher in 1978-9 (Table 4.24).

Participation rates in the beaver harvesting were high in 1975-6, 88 percent region-wide, and this generally continued with the introduction of ISP (Table 4.25). Participation rates by community varied from 62 to 97 percent in 1975-6, and were generally lower in northern communities with territories less suited to high beaver populations. Harvesting of mink was participated in by less than one half (44 percent) of the ISP hunters in 1975-6, and by an average of about 60 percent of ISP hunters after the program began (Table 4.25). Participation rates increased in most communities, with the exception of Chisasibi.

Participation rates for non-ISP hunters were considerably less than for those on ISP according to JBNQNHRC data. Between 1976-7 and 1978-9, an average of 86 percent of ISP hunters harvested beaver in each year, whereas an average of 25 percent of non-ISP hunters harvested beaver (Table 4.56). In the case of mink, an average of 60 percent of ISP hunters harvested this species during the same period, whereas 18 percent of non-ISP hunters did (Table 4.56). Thus it is likely that many of those hunters who joined ISP, were not previously harvesting beaver or mink, and began to do so when they joined the ISP program.

The harvesting effort for fur bearing mammals also increased. It will also be recalled that the number of winter trapping days reported per respondent to the NHRC increased in 1976-7 over 1975-6 (37 percent increase), and it rose again but more modestly in the two following years (Table 4.13).

Thus, in contrast to the changes which occurred with respect to waterfowl, in the case of fur bearing mammals time spent harvesting increased initially, and in the following years the percentage of ISP hunters who harvested these species increased initially for the beaver, and more dramatically and permanently for the mink. These changes would be expected to increase harvests by ISP hunters, and initially they did.

In the case of beaver, harvests by ISP hunters rose from 12,830 to 16,776, by 31 percent, from 1975-6 to 1976-7 (Table 4.26). But ISP hunters beaver harvests fell to 1975-76 levels by 1978-9, 12,479 (Table 4.26). This decline was the result of both a decline in the harvesting participation rates, already mentioned (Table 4.25), and of a decline in the number of beaver harvested per ISP hunter reporting a harvest, which occurred in all but one community, and on a regional basis from 21.6 and 22.2 beaver per harvester in 1975-6 and 1976-7 respectively to 18.9 beaver per harvester in 1978-9 (Table 4.27).

The situation with mink was somewhat different. ISP harvests rose by 145 percent between 1975-6 and 1976-7, and they stayed relatively high thereafter

(Table 4.26). Both participation rates (Table 4.25) and harvests per ISP hunter reporting a harvest varied around the higher post-ISP levels (Table 4.27). Thus overall harvests in the Cree region of beaver were "relatively stable" (JBNQNHRC, 1982:106), whereas mink harvests were reported by NHRC to have begun increases in 1976-7, although the year in which the upturn began was somewhat later in some communities (JBNQNHRC, 1982:111).

While it is impossible, given the survey data available to us, to systematically test the reasons for these differences, it is noteworthy that beaver populations were generally considered by Cree hunters to have been relatively intensively harvested in many areas when ISP began, whereas mink populations were thought to be generally under harvested. This suggests that increased mink harvests were seen to be sustainable, whereas hunters may have perceived the increased beaver harvest to be too high, and reduced the intensity of their participation and harvesting.[26]

This is consistent with comments we heard at Waswanipi among hunters, but we do not have systematic data on a regional basis to confirm how widespread this perception was (see below for some additional discussion). This situation is however complex to interpret because although beaver harvests were higher in 1976-7 than in the previous year, an even higher level of harvest was estimated by the JBNQNHRC for 1972-3 (Table 4.42). The 1976-7 levels were therefore not unprecedented, although in the views of at least some Cree hunters they could not be sustained, and there were reasons to restrain harvests.

Big Game Hunting - Moose and Caribou

Moose and caribou are the two main big game species of the region, hunted intensively by both Cree hunters, and non-Aboriginal sport hunters. The latter have been extending both the geographical range and the size of their harvests in recent years, and when ISP began moose were being taken in large numbers by both groups. In general moose populations are heaviest in the southern portions of the James Bay territory, although they are spreading further north in modest numbers. Caribou are most numerous in the northernmost areas, although groups of caribou are appearing in more southern areas with greater frequency, and there are several small resident herds as far south as the Rupert River, which are harvested by Waskaganish, and some Nemaska and Waswanipi hunters.

The estimated number of ISP hunters who harvested moose and caribou increased in nearly all communities in 1976-7, and regionally the estimated number of ISP hunters harvesting increased by 75 percent in the case of moose, from 246 to 430 hunters; and by 80 percent in the case of caribou, from 107 to 193 (Table 4.28). Participation in each of these hunting activities increased by a substantially higher rate than the rate of increase in the number of ISP beneficiaries.

The percentage of ISP hunters who harvested moose varied considerably in different communities in 1975-76, with no one taking moose in Whapmagoostui, less than five percent taking moose in the other northern communities of Chisasibi and Wemindji, and 69 and 73 percent harvesting moose at the inland communities, Waswanipi and Mistassini respectively. Among non-ISP hunters the rates were considerably lower in all communities, with only 11 percent of all non-ISP hunters

26. Mink populations fluctuate over periods of years, but we do not have any data on these patterns during the study period.

harvesting moose in 1975-6, compared to 37 percent of ISP hunters (JBNQNHRC, 1982:749 [Table A21-3]; and see below and Table 4.56). There was thus a potential for a significant number of those joining ISP to begin harvesting moose. In 1976-7, the percentage of all ISP hunters who reported harvesting moose increased in every community where there were harvests, and the regional percentages increased from 37 to 49 percent harvesting moose (Table 4.29). This increase was a result of increased hunting both among those who joined ISP in 1976-7 and among those who had been hunting intensively enough to be eligible in 1975-6. The harvest per hunter increased marginally in some communities, but declined marginally in others, and was unchanged overall (Table 4.30).

The combined effect of the growth of the ISP population, and the increase in the percentage of ISP hunters harvesting moose was dramatic, and ISP hunters estimated harvests increased from 760 in 1975-6 to 1305 in 1976-7, a rise of 72 percent (Table 4.31). Increased harvests were estimated for every community with harvests.

The pattern for caribou harvests was similar, but less dramatic. In 1975-6, the percentage of hunters harvesting caribou varied from zero in Eastmain, and five or less percent in Chisasibi, Waswanipi and Wemindji, to 14, 24, 29 and 41 percent in Nemaska, Waskaganish, Mistassini and Whapmagoostui respectively (Table 4.29). Among non-ISP hunters only five percent harvested caribou, compared to 16 percent of ISP hunters regionally in 1975-6 (JBNQNHRC, 1982:749 [Table A21-3]; and see below and Table 4.56). The harvest per hunter however declined from 1975-6 to 1976-7 in two of the three communities where caribou harvests were most frequent, Whapmagoostui and Mistassini, and the regional decline was from 7.7 caribou per ISP harvester to 5.9 (Table 4.30). The overall effect was that estimated caribou harvests by ISP hunters increased from 764 in 1975-6 to 1071 in 1976-7, an increase of 40 percent (Table 4.31).

While one of the researchers was in Waswanipi on brief trips in 1976 and 1977, a constant topic of discussion raised by hunters and by band administrators alike was the increase in the harvests of moose, and the perception by all that the new levels were too high. This discussion was not only about Waswanipi, but about the adjacent communities, as the newly distributed system of two-way radios for bush camps made "listening in" on communications between camps and other communities a favorite evening pastime. And hunters often were reporting their big game catches to relatives and friends in other camps or back in the community. For example, we were told how many moose had been caught on specific days in the winter, when many kills had been made by hunters from different communities in widely dispersed areas. While some of the administrative personnel of the community did not realize that harvests of moose are typically grouped on specific days which have the best weather conditions for successful hunting (Feit, 1978), the hunters were clear that the problem was not just the totals on particularly good hunting days, the totals were increasing dangerously throughout the region in many of their views. And their vocal expressions of concern made the whole of the population in the communities aware of the potential problems.

It is therefore not entirely surprising that in 1977-8, the percentage of ISP hunters who reported harvesting moose declined in every community in which there were harvests, and on a regional basis the percentage returned to the same level in 1977-8 and 1978-9 as in 1975-6, 36 to 38 percent (Table 4.29). There were still however more ISP hunters than there had been in 1975-76, and the number estimated to be hunting moose was still 15 to 22 percent higher than it had been in 1975-6,

284 to 300 harvesters (Table 4.28). However the harvest per harvester declined in all but one community in 1977-8, and in the largest communities again in 1978-9, Mistassini, Chisasibi and Waskaganish (Table 4.30). On a regional basis the harvest per ISP hunter declined from 3.2 and 3.3 moose in 1975-6 and 1976-7 to 2.9 and 2.7 moose per ISP harvester in 1977-8 and 1978-9 (Table 4.30).

The effect was that the total ISP hunter harvest of moose went from 760 and 1305 in 1975-6 and 1976-7 respectively, to 868 in 1977-8, and to 782 in 1978-9 (Table 4.31). For the total moose harvest by all Cree hunters, a similar pattern occurred, 1978-9 harvests were within the range of harvests estimated for 1972-3 to 1975-6 (cf. Table 4.42).

The pattern for caribou was similar. The percentage of ISP hunters making harvests declined in all communities but one in 1977-8, and the regional levels were 16 and 13 percent in 1977-8 and 1978-9 respectively, compared with 22 percent in 1976-77 and 16 percent in 1975-6 (Table 4.29). The estimated number of ISP caribou hunters declined from the 1976-7 peak of 193 to 126 in 1977-8 and to 103 in 1978-9, a figure comparable to 1975-6 (Table 4.28). The harvest per ISP harvester declined further than it had in 1976-77, to 4.3 and 4.4 in each of the following two years, a drop of 43 percent from its 1975-6 level of 7.7 caribou per ISP harvester (Table 4.30). The overall effect was that the 1977-8 and 1978-9 estimated caribou harvests by ISP hunters declined to 480 and 434, 37 and 43 percent below the 1975-6 estimated ISP harvest of 764 caribou (Table 4.31). Looking at data for the estimated total harvests by all hunters, the 1975-6 harvest was itself one of the higher harvests between 1972-3 and 1978-9, and the 1977-8 and 1978-9 harvests were in the lower end of the range which characterized that period (Table 4.42).

Both moose and caribou harvests therefore increased rather dramatically in response to the introduction of the ISP program, but in each case, extensive concerns with the new harvest levels, raised and expressed in the communities by Cree hunters and Cree administrators alike, led to a reduction of hunters' harvests of these species to pre-ISP levels in the two following years.

Small Game Harvesting

Small game are an important source of food in four of the Cree communities, accounting for 13 percent of the total foodweights available in each of the four northern-most coastal communities (Table 4.49). They are as, or more, important than fur bearing mammals in Whapmagoostui and Chisasibi, and more important than big game at Wemindji and Chisasibi (Table 4.49). On average, hare were the most important small game species in the regional food supply (JBNQNHRC, 1982:228 [Table 3-61]).

Small game harvesting is one of the most labor intensive of harvesting activities, in terms of returns on time and energy inputs, but small game are also some of the most productive biological populations, and they are often under utilized (Feit, 1978; see also Weinstein, 1976). Harvesting of small game can be done on a casual or part-time basis, and participation in small game harvesting often includes all members of the family, including children. One of the questions we had was whether small game harvesting would decrease or increase, given on one hand that it is less productive and less prestigious than other types of hunting, but on the other that ISP hunters and their families would have more time to harvest, and more demand for bush food during their longer stays in the bush.

ISP appears to have played a role in stimulating increased harvesting of small game. The number of small game hunters increased in almost all communities between 1975-6 and 1976-7, by 37 percent in the case of hare, and by 41 percent for grouse (Table 4.32). The number of hunters stayed high during the following two years in the case of hare, but declined to 24 and then 17 percent above the 1975-76 level in the case of grouse (Table 4.32). The percentage of ISP hunters participating in hare and grouse harvesting was high in 1975-6, 79 percent for hare and 87 percent for grouse, but the hare level rose in the next three years to levels comparable to those for grouse (Table 4.33).

The harvests per hunter of small game rose more dramatically. Grouse harvests per ISP harvester increased by 42 percent from 1975-6 to 1976-7, and then were relatively steady (Table 4.34). Hare harvests per ISP harvester increased 44 percent in the same year, but then continued to increase in the following years, so that in 1978-9 ISP harvesters were taking an average of 84 hare each, over three times as many as in 1975-76 (Table 4.34).

ISP hunters' harvests of hare rose dramatically in successive years as a result, from 14,483 by ISP hunters in 1975-6 to 63,363 in 1978-9 (Table 4.35). However this increase was not limited to ISP hunters, the total harvests by all Cree hunters rose by a nearly proportional amount during the same period from 20,083 to 81,903 (Table 4.42). Furthermore, the community data on 1974-5 hare harvests (11,171) make clear that the increases for hare began by 1975-6, before ISP commenced (Table 4.42). Hare populations are known to go through periodic eruptions and declines in the north, which do not appear to be influenced by the levels of harvesting, and comments in the Cree communities indicate that this was a period of quickly increasing hare populations. The implication therefore is that the ISP hunters took advantage of the increases in the abundance of hare to increase their individual and family efforts to harvest this species.

Grouse harvests by ISP hunters also rose, but less dramatically than those of hare, from 11,684 in 1975-6 to a plateau of between 23,836 and 18,172 between 1976-7 and 1978-9 (Table 4.35). Harvests by all Cree hunters followed a similar pattern, except that they indicated that 1974-5 and 1975-6 harvests were similar, 16,296 and 17,869 respectively, whereas harvests in the following three years were between 31,330 and 25,422 (Table 4.42). While grouse populations are also known to go through population eruptions and declines followed by relatively stable periods, as hare do, the grouse harvests during this period did not show incremental trends, and were the most stable of the small game (JBNQNHRC, 1982:311). Thus, unlike the case of hare, increased per ISP hunter effort and harvests occurred in the case of grouse without there being significant increases in the game populations; and by implication, these increases resulted from the greater time families spent in the bush, and the other incentives stimulated by ISP.

In the case of both hare and grouse, ISP contributed to intensified harvests, and by implication intensified harvesting effort, and dramatic increases in harvests occurred in both cases, although these had already begun at least a year earlier in the case of hare, whose populations were going through a periodic eruption.

Fishing and Seal Hunting

Fishing, and the data on fish catches during this period, were strongly influenced by publicity about the presence of methyl-mercury in fish, and the recommendation of the Department of National Health and Welfare which advised the

Cree "to close the subsistence fishery" until adequate information was available (see JBNQNHRC, 1982:297-8, 723-5). An information program took place in the winter of 1975-6, most intensively in the four most southern Cree communities. In Mistassini and Waswanipi the 1975-6 harvests of nearly all species declined by over 80 percent from previous harvest levels, and less dramatic but almost universal reductions in harvests took place in other communities (Table 4.36; and JBNQNHRC, 1982:298). In the following years the NHR research asked hunters if their fishing activities were curtailed by the methyl-mercury danger and, in one or more communities in each year, high percentages of those who usually fish reported they had stopped fishing because of the danger (Table 4.37). The pattern of advice and the responses varied dramatically from one year to the next in each community, and the overall fishing effort was therefore quite variable during this period (Table 4.37).

The percentage of ISP hunters who reported catching whitefish thus fluctuated between years at different communities (Table 4.38), and the harvests per ISP harvester declined in 1976-7 and 1977-8, with some recovery in 1978-9 (Table 4.39), shaped by the health information and the responses to the program put in place to inform Cree of the dangers. Thus, while the number of ISP hunters who fished rose (Table 4.40), their estimated harvests generally declined, although there was a partial recovery in 1978-9 (Tables 4.41 and 4.42).

Seals are only hunted in significant numbers in three communities, and responses varied somewhat between communities. Whether as a result of the dramatic changes in fishing, or as a result of the increased intensity of other harvesting activities between 1976-7 and 1978-9, the regional percentage of ISP hunters reporting harvests of seals was relatively steady (Table 4.38), the estimated number of ISP seal hunters was relatively stable (Table 4.40), but the harvest per ISP seal hunter declined in 1978-9 (Table 4.39), and the estimated harvest by ISP hunters was relatively steady until 1978-9 when it declined by over 50 percent (Table 4.41). The implications of ISP for fishing and sealing were therefore limited by the special circumstances during this period, and could not be separated from those conditions.

Statistical Analysis of Cree Wildlife Harvests

In order to complete the assessment of the changes brought by ISP to Cree levels of harvests of wildlife, and to consider the conclusions reached above that some changes were managed so as not to endanger the conservation of wildlife populations of the region, we utilized a statistical analysis of wildlife harvest levels before and after the commencement of the ISP program.

The analysis consisted of graphing the harvests for each species and community by year, and examining the graphs and descriptive statistics to reveal trends, and then statistically analyzing harvests to detect if there were any significant differences in the means or the variability of the harvests between the period before ISP payments were made (1972-3 to 1974-5), and the period after (1975-6 to 1978-9). This method of analysis was developed for the NHRC, and we have directly used the NHRC analysis of trends which may have occurred during the period from 1972-3 to 1978-9. With respect to the analysis for trends, we cite here the results reported in their statistical analysis. For comparing the pre-ISP and post-ISP periods to determine if the mean harvests or the variability of harvests were statistically different, we have used the same methodology as the NHR research, but have changed the groupings of the years to be compared to match the pre-ISP and post-

ISP periods we want to examine.[27]

The NHRC harvest estimates for our selected species are presented by community and by year on Table 4.42. The graphed data and the statistical tests are presented in full in Appendix 3, and the statistical test results are summarized on Tables 4.43 to 4.45. The analyses were done on the total harvests for each species, or group of species (eg. ducks), for each community and for each year, including the estimated harvests of both ISP hunters and non-ISP hunters in the totals. This total harvest analysis was done both because the most aggregated harvest from a game population is the most relevant statistic for conservation considerations, and because it allows us to eliminate from the statistical results those changes and/or trends which result simply from hunters joining the ISP group and thereby increasing the ISP group and its harvests; and it avoids ignoring any corresponding decline in non-ISP group numbers and harvests. The total harvest was therefore the most relevant data for analysis both on conservation and statistical grounds.

The analysis covers the full range of years of data collected by the NHRC, varying by species between five and seven years of data for the period between 1972-3 and 1978-9. Because the harvest estimates and the graphs have already been analyzed and published by NHRC, we quote the results of their analyses of the trends found in these data by the statistical analysts:[28]

> Canada Geese: A sharp decrease in the spring of 1975 in almost all communities. A decline in the summer and fall figures over the period of the survey (except in [Chisasibi] and Nemaska).
>
> ...
>
> Ducks: General decline except in Nemaska, with some recovery in [Chisasibi] in the last year.
>
> ...
>
> Beaver: Decrease in Mistassini and Waswanipi, increase in Great Whale.
>
> ...
>
> Mink: General pattern of decrease until 1975, 1976, or 1977 followed by increase.
>
> ...
>
> Grouse: All communities showed an increasing tendency, although this leveled off in 1978, and dropped significantly in 1979.
>
> ...
>
> [Hare]: Despite its rapid overall increase, hare shows some sign of decrease in the first years in three communities.
>
> ...
>
> Whitefish: For all of the winter, summer and fall, and spring, we see a sharp drop between 1974-75 and the succeeding years, with a par-

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27. This analysis was developed by David Sankoff of the Centre de recherche de mathématiques appliquées, Université de Montréal, and his methods are discussed at greater length in JBNQNHRC, 1982: 612-629 (Appendix 12). The analyses for both the NHR research and this study were done by Dr. Sankoff and Dr. P. Rousseau (Département de mathématiques, Université du Québec à Montréal), although we remain responsible for the presentation and interpretation of the results.

28. Where the names of communities have changed since Sankoff's text was written we have inserted the new names.

> tial recovery in 1978-79....
> ...
> Moose: Generally stable pattern in all communities, with 1977 being a particularly good year in most communities.
>
> Caribou: No widespread deviation from stability except for high 1977 values.
> ...
> Seal: Of the three major sealing communities, [Chisasibi] and [Wemindji] show an unequivocal sharp decrease, while [Whapmagoostui] shows a fluctuating pattern with a net decreace [sic]. (David Sankoff, 1982 in JBNQNHRC, 1982:620-7 [Appendix 12]).

These trends are consistent with the discussion above by species or species group. From the analysis of trends it was clear that there was no basis for distinguishing pre-ISP harvests from post-ISP harvests in a global or uniform way across species and activities.

For the statistical testing of the harvest data, our analysis was run using the same computer program as that developed for the NHRC, but with the data grouped to correspond to the pre-ISP and post-ISP periods. The t-test results, summarized on Table 4.43 indicate the cases where the differences between the mean harvests of the pre-ISP years and those of the post-ISP years by community, and for the region, were statistically different at 0.05 and 0.10 levels of significance.[29]

Including differences at the 0.10 level of significance, and excluding the special circumstances for fish and seals, a total of 16 statistically significant differences were found out of 63 test combinations. The significant changes were all increases, with the exception of a decline in duck harvests at the regional level (Tables 4.43 and 4.45). Only the small game, hare and grouse, showed significant increases at the region-wide level, and they showed significant increases in three and four communities respectively (Tables 4.43 and 4.45). Together the small game accounted for over half of the statistically significant results.

The harvests of fur bearing mammals, beaver and mink, showed the next most common statistically significant increases, increasing in three and two communities respectively, but not on a region-wide basis.

The most highly valued, and probably the most intensively harvested species both before and after ISP was introduced, big game and waterfowl, showed no statistically significant increase at the region-wide level, and but one significant increase at the community level, the harvests of moose at Mistassini (Tables 4.43 and 4.45).

The F-test results, summarized on Tables 4.44 and 4.45 indicate cases where the variation of the harvests of a species within each group of years was different from that of the other group of years. Such changes were less common than statistically significant differences in the mean (Table 4.45), but this is not surprising as the number of years in the groups is small (maximum of 4). Increased variability of the harvests occurred in 10 cases in 63 tests. Where differences in variance

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29. We have not included in these summaries the data from Nemaska, where the test results were affected by the growth in the number of hunters associated with that community after it was established in 1977. The test results for Nemaska are included in Appendix 3.

occurred, they tended to group in the big game and waterfowl species. In the former case this reflects the substantial one year increase in the big game harvests, and its subsequent decline. This variance therefore reflects both changing harvests and the results of management practices.

In summary, statistically significant differences in the mean harvests of the years just before and after the introduction of the ISP program, and in the variance of harvests between years, were both found to be consistent with the conclusions reached above. There was but one statistically significant increase in the harvests of those species which were generally thought to be most susceptible to over harvesting in the three years following the commencement of ISP payments, and that in a single community where the 1978-9 harvests did return to pre-ISP levels (moose at Mistassini, Table 4-42). And, such statistically larger harvests as occurred were concentrated among those species which were thought to be either under utilized in part or much of the region (beaver and mink respectively) and which ISP was intended to facilitate being used more intensively; or in species increasing rapidly (hare), or species not normally or easily subject to over hunting (hare and grouse), which ISP was intended to encourage be used more intensively.

The ISP program therefore appears to have succeeded in increasing the number of hunters and families in the bush, the length of time they spent in bush camps, the quality of their equipment, and the harvests of some animal species, without resulting in any continuing general problem of over harvesting, nor endangering the conservation of species populations of the region.

IV. ISP and the Geographical Distributions of the Harvests

One of the goals of the ISP program was to geographically disperse the harvesting effort more uniformly across the Cree hunting territories. In the years prior to the commencement of ISP the shortage of cash which had forced many hunters out of intensive harvesting, had forced many others to concentrate their hunting efforts on the lands relatively easily and cheaply accessible from the settlements. These included lands immediately around settlements, and those along roads and easily accessible waterways. As a result of the cash shortages, lands which were distant and only readily accessible by expensive bush charter airplanes were not entirely abandoned, but they were typically used only once every few years. This way, fur bearer populations would be high, and hunters could take a substantial harvest when they visited every second, third or more years, to pay for the costs of travel, without endangering wildlife populations. By dispersing the effort it was thought that the conservation of the wildlife on the more easily accessible territories would be facilitated, whereas more frequent use of more distant territories would result in a more efficient use of resources on those lands and assist an increase in the number of hunters.

The data collected by the NHRC permit us to examine the percentage of the harvests of several species which were taken in the areas near the settlements or along the coasts, called the "near" areas, with those taken elsewhere on the community hunting territories, the "away" areas. The near zones were initially defined as the areas close enough to the settlements to be used regularly on a daily basis, or on short excursions by people who were living in the settlement. Starting with the data collected on 1975-6 harvests, the near area was expanded to include a narrow strip along the entire east coast of James Bay and the relevant portion of the

coast of Hudson Bay, see Map 2.[30] We have examined the NHRC data for fur bearing mammals and for small game.[31]

The data on near and away harvests show considerable variability between communities and between years. In general, they either indicate that ISP had no impact on the percentage of regional harvests of a species taken in the away zone, as in the case of mink and grouse; or they suggest that somewhat higher percentages of the harvests were taken in the away zone after ISP was initiated, as in the case of beaver and hare (Tables 4.46 and 4.47). But as the time sequence is especially short, the differences are modest, and the inter-community variation is considerable, we would conclude that these data show no clear impact of ISP on the geographical distribution of the harvests.

This situation becomes clearer when data on the distribution of hunting camps is considered in chapter 6, where we will see that the geographical dispersion of hunting camps was only modestly and temporarily increased in those communities for which we have specific data. The equalization of harvesting effort on hunting territories is therefore a goal which ISP has not achieved, because its payments do not remove the differences in the cost of using distant territories (see Chapter 6).

V. Subsistence Food Production

The NHRC converted its estimates of wildlife harvests into estimates of the food available for consumption by the Cree from their harvesting efforts.[32] We have examined their food data for Cree hunters as a whole, and have recalculated data specific to the ISP hunters from their published harvest estimates and the food weights they used for individual specimens of each species (JBNQNHRC, 1982:221-32, 316-20, and 781-7 [Appendix 26]).

To summarize first their community-wide findings, the total available food weight from Cree wildlife harvests ranged from a high of 906,200 kg in 1974-5 (before the dramatic decline in fish harvests) to 767,000 kg in 1977-8, a variation of about 15 percent. The mean annual available food weight from harvests was 803,300 kg (Table 4.48).

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30. In the data for 1976-7 the "near" area at Waswanipi was expanded in order to include the "buffer zone" recognized in the JBNQA as a special management area because of intensive use by both Cree and non-Aboriginal hunters. This is reflected on the map.

31. Because the "near" areas were intended to include most, and later all, of the coastal areas, where waterfowl concentrate, and where harvesting of waterfowl is also concentrated, any dispersing of waterfowling effort would take place largely within the "near" zone in the coastal communities, and therefore no analysis was made from these data for waterfowl. In the case of big game, the NHRC asked for harvests within the community hunting territories of the community to which the hunter belonged, and those taken on other community's hunting territories, called "incom" and "outcom" respectively. As it was not the intention of the ISP to encourage hunting outside the hunting territories of a hunter's community, but rather on the more distant territories of his community, the values for big game are also not meaningful for purposes of this report. In addition the reduction in fish harvests prior to the beginning of ISP means that fish harvest locations do not clearly reflect the impacts of ISP. Seals are, of course, a coastal and therefore "near" harvest.

32. The NHR Committee noted that it used conservative estimates in its calculations, and that it figures should be taken as minimums. For details on the calculations involved, see the JBNQNHRC report (1982). We have suggested some modifications to their average food weights of selected species in Chapter 2.

Two different patterns of dependence on harvested foods occur in the region, one among coastal communities, the other at inland communities. At the coastal communities waterfowl account for the largest proportion of the available harvested foodweights, between 29 and 44 percent (Table 4.49; and, JBNQNHRC, 1982:223). Fish rank second or third at three of the coastal communities, Whapmagoostui, Chisasibi, and Wemindji. Big game ranks second or third at three of the coastal communities as well, Waskaganish, Eastmain and Whapmagoostui. Fur mammals rank second or third from Wemindji south, including Eastmain and Waskaganish (Table 4.49, and JBNQNHRC, 1982:223).

At the inland communities, big game accounts for over one half of the mean annual harvested foodweight, mainly of moose. Fur bearing mammals rank second at the inland communities, beaver being the predominant species in the harvest weights. Fish rank next in importance at Waswanipi, but are of approximately equal importance with waterfowl at Mistassini (Table 4.49).[33]

The estimated mean annual food harvests from 1974-5 to 1978-9 would provide a minimum of 121 kg of animal food per person per year, or 0.33 kg per person per day (Table 4.50). The range between communities was from 0.26 kg to 0.47 kg per person per day. Over the period of five years per capita harvests declined by 20 percent (Table 5.51), reflecting the impacts of the decline in fish harvests especially at Mistassini and Waswanipi, and the increase in the population by 11 percent (7 percent in adult consumption units) between 1974-5 and 1978-9 (Table 4.51; JBNQNHRC, 1982:316-7). These data confirmed the ongoing importance of harvesting as a source of fresh food in the Cree diet, and its importance to the health and well-being of the Cree. Numerous previous studies had shown this as well, and in the next section we will discuss the social implications of harvesting and food production activities. The NHR Committee concluded from its analyses of these data that the levels of food harvesting were somewhat variable from year to year, but overall they were "relatively stable" (JBNQNHRC, 1982:317).

ISP hunters harvests have been converted into estimates of the food available for consumption from their wildlife harvests,[34] and these total over 500,000 kg per year, ranging from a low of 570,431 in 1975-6 to a clear peak of 779,790 kg in the year ISP payments were initiated, 1976-7 (Table 4.52).[35] ISP hunters were producing on average approximately 80 percent of the total foodweight produced by all Cree hunters, although after the peak year of 1976-7 a level closer to 75 percent

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33. But it must be kept in mind that the decline in fish harvests resulting from the medical dangers of methyl-mercury reduced fish usage below previous levels.

34. In making these calculations we have used the NHR food weight values for individual species, and not the revised values used in Chapter 2 of this study. While this under estimates the foodweight from Cree harvests, it permits us to maintain comparability between our regional data on ISP hunters and the NHRC data on all Cree hunters.

35. These calculations required the assumption that the percentage of ISP hunters' harvests which were taken in the near and away zones were proportionally identical to the percentage of the total hunter populations' harvests. The average foodweight available from several species of fish is higher in the away zone than along the James Bay coast, because specimens are larger. Because it is likely that ISP hunters took a somewhat larger proportion of their fish harvests in the away zone than did other hunters, this calculation probably marginally under estimates the foodweight produced by ISP hunters. In addition, we have not included in the food total the six polar bears reported harvested from 1975-6 to 1977-8, because NHR data do not indicate if these were harvested by ISP or non-ISP hunters (3 at Chisasibi in 1975-6, two in 1976-7, and one at Wemindji in 1977-8).

appears to be established (Table 4.53). The percentage varied somewhat by community, being highest at Waswanipi, Mistassini, and Eastmain, and lowest at Whapmagoostui, and Chisasibi.

On a per hunter basis, ISP hunters were producing on average some 807 kg of food from wildlife per hunter per year (Table 4.54). There was some inter-annual variation, with 1976-7 being an especially high per hunter harvest year in most communities. In 1978-8 food production per hunter declined in all but two communities, and in 1978-9 production changes were mixed between moderate increases and moderate decreases in different communities. The per ISP hunter levels of food production in 1978-9 were above the 1975-6 levels in Chisasibi, Waskaganish, Waswanipi, Wemindji, and Eastmain, and below the initial year levels in Mistassini and Whapmagoostui (Table 4.54). The highest mean per hunter harvests were found in Whapmagoostui, followed by Eastmain and Mistassini, 1041, 927 and 873 kg per hunter per year, and the lowest per hunter harvests were taken in Nemaska, Chisasibi and Wemindji, 552, 664 and 672 kg per hunter per year. Although the range is considerable, most communities fall between 660 and 930 kg per hunter per year on average, a substantial return on hunting effort for ISP hunters.

On a per capita basis, ISP hunters were producing approximately 176 kg of food from wildlife per ISP beneficiary, per year, or 0.48 kg per person per day (Table 4.54). The range between communities was from 0.43 to 0.60 kg per person per year (Table 4.54).[36] ISP beneficiaries were thus, as would have been expected, "rich" in bush foods at their disposal. The significance of this abundance for social relations is a critical aspect of Cree society, and of the impacts of ISP.

VI. ISP, Social Relations and Subsistence Production

The social fabric of Cree society is founded both on the domestic unit, and on the social relations between people from different households. Social relationships among households are constantly recreated and changed in the day to day and face to face interactions people have with each other in the settlements and in the bush camps. Hunting is therefore not solely an economic activity, it is a social activity at the core of the processes that form and reform Cree society, and which shape the Cree as a distinctive people. The close relations that bind Cree in very wide-ranging but tightly knit networks are not just an expression of abstract kinship bonds, but of the close daily contact people have who live together from birth to life in small settlements of only a few hundred or a couple of thousand people, and the still more intense interactions in the small hunting camps of typically five to twenty-five people who are in daily contact for several weeks or up to six or eight months together. Such extended social interactions beyond the immediate household are now relatively rare in Canadian society, and they create a distinctive richness and emphasis on personal relationships throughout the networks of Cree community members.

Hunting camps are powerful crucibles for enduring social bonds because the

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36. These figures include all beneficiary units, and not just those headed by male hunters, because the male hunters interviewed by the NHR researchers were asked to include in their harvest estimates the harvests of all harvesters living in the household, which would have effectively included the harvests of all ISP beneficiary units.

people who use a hunting territory together share residency and have complex working partnerships and exchange relationships to unite them during their extended periods of close daily contact. And the extended patterns of visiting and sharing continue into village life, where people tend to maintain in the larger setting the close social bonds and the social practices that form in bush camps. Kinship is important in Cree society, but the social bond among kinsmen is incorporative rather than solely exclusive, and the friends, co-workers and co-residents with whom close bonds of residency and cooperative work develop are soon called kinsmen, and where appropriate are given kin names and relationships. The social fabric is therefore always changing, and generally tends towards expansion and towards a growing richness of relationships.

The close relations among many people are expressed and also extended by an extensive system of gift giving or reciprocity. A significant portion of the bush food which is produced is exchanged between households, and much equipment is given away or loaned regularly. Reciprocity is one of the most basic values, and Cree children are taught early to share effectively everything they receive.

With the extension of government social programs throughout Canada during the last century, and especially in recent decades, researchers have repeatedly found that the social fabric and practices of small communities and families are altered. Two general problems have been emphasized concerning the potential impacts of expanded transfer payments programs, which would include ISP.

It has been found that because transfer payments are paid to individuals or to heads of family units, they tend to emphasize the distinctiveness of nuclear family groupings and single individuals, and correspondingly to de-emphasize wider social ties and obligations. One effect, it has been argued, is to undermine the responsibility or willingness to offer reciprocity and mutual aid.[37]

It is also claimed that where access to land becomes a condition of access to cash and transfer payments, rights to land become more highly valued, and they become sources of greater inequality between those controlling such rights and those without guaranteed rights. The result is that access becomes more restrictive and greater social differentiation develops. We will consider each of these possibilities in turn.

ISP and Social Reciprocity in Bush Foods

ISP benefits are paid to beneficiary units comprised of nuclear families, or

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37. Furthermore, it is sometimes claimed that transfer payment programs of general application tend to equalize all beneficiaries, by paying them roughly similar amounts, irrespective of age or experience, thus transforming the indigenous patterns of social stratification, especially differences according to age. This is true with ISP, but only partly so because the payments only go to those who hunt intensively, and ISP is thus an equalizer among participants, but it is also a distinguishing marker among the Cree population as a whole of those with the skill and commitments to harvest intensively. Even among ISP beneficiaries, as we have indicated elsewhere, benefits do increase with family size, and therefore with age to some degree. The age differential is also enhanced by the experience and knowledge of elder hunters, which tends to be enhanced by ISP, although it may also be ignored more easily by those who choose to do so in the security of ISP benefits. It is a view of many younger intensive Cree hunters that ignoring the skills of the elder hunters, and failing to learn from them, limit their own skill and hunting efficiency. It is our impression that the most young ISP hunters place a premium on learning from elders by hunting in their camps, and with their advice if not direction.

single individuals, and they do increase the security of income and subsistence of these small social units. We therefore examined whether beneficiary units reduce their commitments to wider social networks, and reduce production for reciprocity and actual social and economic exchanges with other groups. One question we asked was do ISP beneficiaries reduce hunting effort in order to only produce sufficient bush foods to meet the needs of the immediate commensal group or household? That is, have they reduced their effort to produce bush foods for social exchanges?

Evaluating harvests and bush food production in relation to subsistence needs requires extremely detailed data on commensal group composition, including ages, weights, sex, and activity diaries or programs for each member, as well as nutritional data on harvesting activities and foods. These data are rarely available, especially for large groups. We have access to such data for a sample of the hunters and their families in one Cree community, Waswanipi, which permits us to compare data from a period several years before ISP with information on a period some years after ISP began.

General data were available on all Waswanipi hunting groups in 1968-9, and the extensive data needed for detailed analysis were available for an adventitious sample of five hunting groups in 1968-69. For these groups it was possible to determine a nearly complete record of all food harvests, and purchases of store bought foods, and to calculate the food energy available from all sources and the approximate food energy requirements of the groups (Feit, 1978, 1991).[38] In these groups, on average, 49 percent of the food harvested was required to feed the members of the groups themselves, and their dogs. Of the remainder, it was estimated that 14 percent of the total was put into storage for future use in the summer in the settlement. And the residual 37 percent were estimated to have been used as the net quantity given away through reciprocal exchanges. Actual exchanges were higher, probably about one-half of all bush food harvested by hunters living in bush camps was given away to others; because the groups not only gave food away, they received some in return. Food was given to others living in the bush camp, to people in other bush camps, and to people living in the settlement. The net amount given away, total gifts less what was received, thus equaled just over one-third of what the hunters harvested.

This represents a considerable labor effort which Cree hunters were putting into producing sufficient food harvests to have a surplus over their own immediate needs which could be used as gifts to other Cree, especially but not only those who did not hunt as intensively. In addition, hunters spent about 10 to 15 days per hunting season traveling to other bush camps and to the settlements, in a period before snow machines were common, to pay social visits, a major part of which was to carry or haul bush food "gifts" to others.

For all hunting groups at Waswanipi in that year, the average number of kilocalories available from the two main subsistence species, moose and beaver, were

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38. Detailed examination of all micro-nutrients and nutritional requirements on which data were available had indicated that, with this diet comprised predominantly of fresh meat, calories were the nutrient in scarcest supply. This justifies concentra ing this analysis on energy availability and requirements, to the exclusion of other nutrient requirements.

4,351 per adult-consumption unit per day.[39] All groups had sufficient food to have a surplus, considering their moose and beaver harvests, their small game and fishing takes, and the food they purchased. Fully 83 percent of the groups harvested more than the 2,500 kilocalories estimated as required on average to support an adult for a day under their living conditions.

In 1981-2 there were data on the harvests and composition of 20 bush camps formed by Waswanipi hunters that year. All had produced sufficient food to meet their needs, taking account of purchased store foods in the diet. But increased time being spent in the bush, as well as the per harvester reductions in some harvests due to both conservation considerations and reduced wildlife due to industrial development, meant that somewhat fewer groups were able to produce a substantial surplus of bush food. Average kilocalories produced from moose and beaver per adult-consumption unit day of subsistence dropped to 3,040. At this level 55 percent of camps were producing more than 2,500 kilocalories per adult-consumption unit day from moose and beaver, and therefore a definite surplus. Most of the other groups could and did have bush foods to exchange, but only by supplementing their diets with more purchased foods, and by receiving substantial gifts in return (see Feit, 1991:250-1). This represents a continuing and widespread commitment to hunting intensively enough to produce substantial food for social exchanges, within the limits of conservation and the social valuing of working time.

Thus, following ISP, nearly all groups continued to produce enough food for net exchanges through gift giving, and 55 percent could probably have continued the earlier level of giving away one-third or more of what they produced. It is also our sense, although we have only impressionistic data, that ISP beneficiaries have put some of the additional time they spend in the bush camps toward increasing their production of the critical items of hunting technology and clothing which are traditionally produced in the domestic household, such as snowshoes, moccasins, toboggans, mitts, etc. Only a portion of this extra production is required by the ISP families, as a result of increased people and time in the bush. Part of the rest is used as gifts and exchanges to families less skilled in the production of these items, but nevertheless in need of them for winter trips to the bush as well as for comfortable and stylish settlement living in the north.

The significance of this level of production within the small community might be roughly compared to the average Canadian citizen working to pay 35 percent of their income in social taxes. The levels of work for the social whole among Cree hunters are therefore high, but they might be considered to be not entirely dissimilar to the levels other Canadians work for each other. This is so, although the Cree figure is a net additional effort, while the Canadian taxation rate is gross, we get a significant percentage of what we pay in taxes back in government services that we do not otherwise have to provide for ourselves. But the Cree system is also different, because it is effective at sustaining social and community bonds among people, for it is voluntary, and the benefits are personally shared and exchanged by identifiable community members. Thus while ISP increases autonomy of social units, it also encourages and facilitates the commitment to social exchanges which

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39. An adult-consumption unit day, also called on the tables an adult-day of subsistence demand, is calculated by giving children aged 0 to 6 years old a value of one-third or an adult daily caloric nutritional requirement, and children 7 to 17, plus elders over 65, a value of two-thirds of a daily adult caloric requirement.

reaffirm and create mutual responsibilities among Cree.

The one partially contrary trend occurred among groups living in roadside camps, where harvests were significantly lower than in more isolated bush camps. They are a changed form of bush camp, which have grown in size and number as a result of the introduction of ISP. They are all year round camps along the roadsides, especially in the southern portions of the James Bay area, from which hunters can pursue harvesting activities and comply with ISP rules, but from which access to reserves or towns is usually easy. These sites are generally larger and more enduring than bush camps formerly were, although isolated bush camps are also becoming more permanent. The roadside camps also permit people to move back and forth between the bush and settlements more frequently than from most traditional camps, and in some cases to split their time between the two at any season of the year.

Such camps can have the effect of depleting some of the wildlife resources in the areas immediately surrounding the camp, as the permanent village sites do on a larger scale. There are also some concerns among hunters about the reduced separation of bush and town activities on the social life of the camps and on the transmission to younger hunters of the traditional skills needed for more isolated bush living and survival.

The data we have for the larger and more permanent roadside camp populations from Waswanipi show that as a result of the intense competition from settlement based hunters on the lands adjacent to roads, both Cree and non-Aboriginal hunters, there were substantially reduced harvests for hunters living in such camps. Our data on 9 hunting groups living in these camps in 1981-82 indicated that their harvests of moose and beaver provided only 1,008 kilocalories per adult-consumption unit day of subsistence need, compared with the 3,040 kilocalories provided in more isolated bush camps in that year (Table 4.55). The difference would have been made up in part from increased small game harvests. And, having lower travel expenses per trip, and regular access to settlements, more purchased store foods were used by families in these camps.

The result however, from the point of view of the present analysis, is that hunters living in these camps had less food surplus to give to others in the community. Nevertheless, our impression is that these groups did make significant food gifts, and get back significant store bought foods from townspeople. What these camp families also offered in reciprocity to other settlement based members of the community was easy access to camps from which settlement based hunters could conduct weekend hunting trips, or a place to live for periods of a few days or a few weeks as a base for intermittent hunting.

The introduction of ISP has not therefore increased family autonomy at the expense of social sharing and mutual responsibility among the hunting population. And hunting has continued to be one of the critical central activities uniting and bonding Cree together with enduring social ties.

Access to Hunting Territories and Social Relations

The impact of ISP on Cree social relations is also linked to the processes of gaining and granting people access to hunting territories. A result of the increase in the number of people hunting for longer periods has been to intensify the use of hunting territories. This is both a result of the increase in the number of people seeking to find places to hunt, and of the structure of the income security program

which adopted a procedural rule which asks each beneficiary unit head to specify the hunting territory on which they will be residing during the coming year. This increase in the demand for access to land replicates the conditions in which it has been thought likely that restrictions on reciprocity, and increases in inequalities and exploitation would occur. We therefore examined whether access to hunting territories had become more restricted, formalized or monetized following the introduction of ISP.

The increased demand for access to hunting lands led to an intensification of the number of invitations to use hunting territories, as we indicate with the case study material from Waswanipi on Figures 16 to 18. These indicate the invitations from the "bosses" of hunting territories for other hunters to use their territories, as recorded for 1968-9, 1969-70, and 1981-2 respectively. Comparison of Figure 18 with Figures 16 and 17 indicates the greater number of exchanges via invitations.[40]

A more direct measure of whether the intensification is leading to use of hunting territories more exclusively by those who have primary rights of access because they have lived on them for years, or whether, conversely, other hunters are finding access less easy, can be indicated by comparing the frequency of cases where hunters gained access to a territory in a given year through specific invitation from a hunting "boss" of a hunting territory, with the frequency of hunters who had access through primary rights such as close kin ties. If the frequency of invitations as a percent of all access was declining, this would be an indication that hunting territories are being used increasingly by the groups of kin and close friends who have used them over the long term, and that hunters who were seeking access to other hunting territories were having fewer choices. This question is important for broader issues of changes in Cree social organization because invitations to use hunting territories are one of the most substantial gifts that can be offered in the system of social reciprocities that creates much of the extended Cree social relations. Access to a hunting territory is essential to intensive hunting, and to benefit from ISP, and an invitation is conceptualized as in effect a gift of the food an invitee will harvest. And, as we have indicated above, the close living in hunting camps creates intense and enduring social bonds.

In 1968-70, only 26 percent of the commensal groups which lived on hunting territories, which were used by two or more commensal groups, were linked to each other through long-term rights of access. The other 74 percent of the heads of commensal groups used the hunting territories because they had invitations to do so from "bosses" (from Feit 1978, 1991). This high level of invitations confirms the way in which social reciprocity and sharing permeate Cree social life. And the system of land tenure was thus a major means of expressing and creating social linkages between families in Cree society.

In 1981-82, we found that the groups using the same hunting territories as had been surveyed earlier, had increased from 18 and 21 in 1968-9 and 1969-70, to 34 in 1981-2, but that invitations continued to account for three-quarters of all linkages of heads of commensal groups to the hunting territory "bosses" on whose land they hunted (Feit, 1991). There had thus been no increase in the exclusivity of use of hunting territories by the specific families closely associated with each "boss," and

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40. It should be noted that there were no data for 1968-70 for the territories down the right side of the diagrams. These are territories W10, 10A, 12, 22, 16, 23, 23A, 23B, 27, 26, 25A, and 25B. But even when the invitations involving these territories are excluded, the intensification is clear.

sharing remained the predominant means of access to hunting lands. ISP did not therefore detract from the social reciprocities and bonds that unite Cree society, as it might have done in a society less committed to reproducing non-market social values and practices.

The seeking of invitations to hunting lands has however become more formalized, as prospective use of hunting territories must be reported earlier each summer, well before hunters prepare to leave for their camps in the fall. But the territory "bosses" have not made these arrangements more formal than ISP procedures have required. For example, we have information on the number of invitations to use a hunting territory which were accompanied by explicit instructions on how many animals the invitee could harvest. Of a sample of 64 hunters who were not "bosses" who were interviewed at Waswanipi in 1983 only 12, or 19 percent, indicated that they were told how many beaver they could catch when they were invited to use the hunting territory. Thus the frequency of "bosses" giving formal hunting quotas at Waswanipi is quite low. Unfortunately there are no quantitative data from the pre-ISP period, but we know that this occurred infrequently at that time as well, and it is clear that the frequency could not have changed much given how uncommon this still was in 1983.

With respect to monetization of exchanges, only very limited case specific data are available. Requests from "bosses" that an invitee give him a number of beaver pelts, or a percentage of the fur pelts caught, for permission to use a hunting territory has been a pattern followed by several specific "bosses" of hunting territories at Waswanipi for the last several decades, and it therefore pre-dates ISP. The number of pelts involved has been modest, usually up to 5, where annual harvests of beaver average 20 to 35. There are no statistical data on whether such monetization is increasing. But occasional stories of "bosses" asking a particular potential invitee for more than half of the harvested pelts have occurred in recent years. These caused considerable and widespread disapproving commentaries while we were in the community. The cases we are aware of were all of instances of men who inherited a hunting territory, but who ceased to hunt it intensively themselves. It is significant that these same "bosses" have reported that they have considerable difficulty controlling unauthorized access to their hunting territories. This is consistent with how other hunters react when they consider a "boss" to be exercising improper stewardship. Thus the community appears to be resisting these occasional efforts of a small number of "bosses" to increase the monetization of invitations to use hunting territories. Increased compensation has not therefore become a common or accepted pattern of action, although it does occur, and may be more frequent than in the past.

Thus, while the increased number of people hunting puts pressure for more intensive use on accessible hunting territories, invitations to use hunting territories continue to constitute a very high percentage of all access, and increases in formalization are limited, while some increases in the monetization of access occur and are resisted. Customary access to hunting territories has not been reduced by ISP, and such access continues to provide a basis for expressing social exchange and mutual aid, and for enhancing the social fabric of Cree society.

Community-Level Decision-Making

While hunters have maintained the patterns of traditional social relations, some changes have occurred at the community level of decision-making. There has been

a new emphasis on the community's interest in the hunting territories of the "bosses" who belong to a given community. For example, there is now a stronger feeling by hunters and community administrators that the territories should not be transferred to another community by the men who are "bosses," for example if they relocate or wish to name a successor from another community.[41] There are also, it is our impression, more cases of hunters from two communities using and claiming the same areas, and increasingly there have had to be inter-community meetings of hunters and in some cases community and regional administrators to try to resolve these disagreements. These patterns are probably typical of any period when land use intensifies, and they are not therefore the direct result of the design of the ISP program. Nevertheless, the intensification of hunting encouraged by ISP has created the conditions for more conflicts, and the existence of the JBNQA in general now provides a more formal context in which these issues are responded to.

Community participation and involvement in decisions take place through several new or expanded local initiatives. Local trappers' committees established by the Cree Trappers Association to give it local input and direction have often become fora for hunters, and especially hunting territory "bosses," to meet and reach consensual decisions at a community-wide level. The CTA annual meetings are a new regional forum. There have been no detailed studies of the operation of these committees, but they are an important recent development. Run mainly by the hunters themselves at the local level, these meetings often formalize the decision of the wider consensus-building processes by which many decisions relating to hunting and hunting lands continue to be taken.

Nevertheless, it is noticeable that knowledge of the JBNQA, of relevant laws, and of the Cree administrative structures have become important resources in these decision-making processes, and as a result middle-aged bi-lingual and in some communities tri-lingual men, and some younger men, probably have greater influence now than they formerly did. But this process, at least as far as we have observed it, is one of degree not of fundamental change. All of the active participants at the meetings we saw were intensively engaged in the hunting economy. These meetings also focus on hunters inputs to administrative decisions, on inter-community issues, and on issues related to the parts of the community that hunt less intensively.

Because of the intensification of hunting, it has become important for the ISP hunters to have a means of interacting as a group, and of being able to express shared viewpoints to administrations, and other sectors of the community. Here ISP has not played a central role, but other entities created by the JBNQA have contributed to the evolution of structures for hunters' decision-making at the community-wide and regional levels.

VII. ISP and Non-ISP Hunters - Alternative Commitments to Hunting

Many commentators have noted that attachment and commitment to harvesting activities extend widely in James Bay Cree society, and are not restricted to those

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41. A factor in the sometimes conflicting claims between community administrators and hunting territory "bosses" arises when the administrators want to develop the economic resources on a hunting territory, to benefit the wider community, but the "boss" disagrees because of the impact or danger to land and wildlife. These cases are however beyond the scope of this report.

who hunt full-time, or for whom hunting involves their predominant commitment to a way of life. This is reflected in the harvest patterns of those Cree hunters who do not participate in the ISP program, and whom for various reasons are ineligible for its benefits. While the primary focus of this report is on ISP harvesters, we will briefly consider non-ISP hunters. This affords a further examination of the relationships of ISP beneficiaries to the wider community.

In many parts of the north today, it has been found that those adult men who have jobs are often also the ones who can do the most extensive wildlife harvesting, because although their time is already partly committed, they can afford modern hunting equipment, and the operating costs for travel and hunting activities. In the James Bay area, the interactions are equally complex, but different. ISP beneficiaries are the most active and autonomous hunters in the communities. But those who work do enter extensive reciprocal relationships with full-time hunters, exchanging cash and equipment for both food and access to hunting areas. Full-time hunters not only offer access to hunting lands and camps, but also many indirect services, such as having established and maintained effective trails around camps, having provisioned camps with firewood and bush produced equipment, and having extensive and current knowledge of the hunting territory and its wildlife, all of which give part-time hunters quicker and more efficient access to successful hunting sites and activities.

The close relationship between the two forms of hunting is reflected in the general data collected by the NHRC research, which we have re-analyzed here from the perspective of comparing ISP and non-ISP hunters, and seeing the impacts of ISP on the non-ISP population.

Non-ISP hunters, generally equivalent to part-time hunters, often concentrate their harvesting activities around those harvests which can be taken most efficiently in a brief period of time, for example waterfowl migrations or fish spawning runs, or the fall rutting season of moose. Alternatively, they disperse their activities among harvesting opportunities which can be conducted in evenings or on weekends in the areas readily accessible from the settlements, where fish and small game may be reasonably abundant. These are often intensively harvested lands, and harvests of larger game may be less accessible in these areas. In the more efficient of their activities, part-time hunters can, for the period of a migration or a rut, commit similar levels of effort, and take similar levels of harvests to the ISP hunters.

Thus the percentages of non-ISP hunters participating in both the spring and fall goose hunts is similar to that for ISP hunters in the years immediately following the commencement of the ISP program. In most communities only a slightly smaller percentage of non-ISP hunters participate in the goose hunts in both fall and spring. And regionally both groups have about 85 percent participation in spring and 54 percent in summer/fall (Table 4.56). Furthermore, the number of days non-ISP hunters report hunting geese is not much less than ISP hunters report spending in most communities, 16 versus 18 days on average in the fall and 22 versus 29 days in the spring (Table 4.57). As a result, in the fall, the non-ISP hunters in most communities had per hunter harvests just slightly lower than those of ISP hunters; and on a region-wide basis the non-ISP hunters harvested 2 more Canada geese in the fall than ISP hunters, 31 versus 29 per hunter on average (Table 4.58). In the spring non-ISP hunters harvested half as many Canada geese than ISP hunters in some communities, and averaged 25 per harvester as opposed to 32 for ISP hunters (Table 4.58). Thus, in the concentrated goose hunting seasons, when most goose hunting in coastal communities is from camps accessible by canoe or

snow machine (more easily in the fall than in the spring), non-ISP hunters harvest a substantial portion of what ISP hunters take.

The duck hunt shows very similar comparative patterns of participation and per hunter harvests, despite being a somewhat more dispersed hunt geographically and temporally. Unfortunately, the data are not adequate to analyze fishing patterns because, as we have indicated above, fishing activities were significantly disrupted during the years immediately following the commencement of ISP.

The pattern is very different however in relation to fur mammal harvests and big game hunting. Whereas 86 percent of ISP hunters reported harvesting beaver, only 25 percent of non-ISP hunters did so (Table 4.56). Considerable differences also occur with participation in mink trapping. Those non-ISP hunters who do winter trapping spend a considerable effort, 87 days on average, but this is still only a bit more than half (56 percent) of the 154 days reported by ISP beneficiaries (Table 4.57). However, non-ISP hunters harvests of beaver averaged nearly two-thirds (62 percent) of the per hunter harvests of ISP hunters, 13 versus 21 (Table 4.58). The fact that they achieved comparable, or somewhat better overall efficiency, reflects both the utility of concentrated trapping activity in the most productive parts of the winter periods, and also the efficiency which some part-time hunters could achieve by joining the camps and having the assistance of full-time hunters.

Big game hunting is predominantly an activity of full-time hunters, although there are increasing opportunities for part-timers as moose and caribou populations expand their ranges, and as the road network of the region is expanded. Forty percent of ISP hunters harvested moose, whereas only 8 percent of non-ISP hunters did (Table 4.56). There was however only a modest difference in the per harvester take, 3 versus 2 moose per hunter, as moose are harvested in small numbers per hunter (Table 4.58). In the case of caribou, 5 percent of non-ISP hunters were harvesters, as opposed to 17 percent of ISP hunters (Table 4.56), and per hunter harvest levels were similar, 5 caribou per harvester (Table 4.58).

The pattern of small game hunting falls somewhere between the two major patterns described above. The good level of participation in small game harvesting by non-ISP hunters, 60 percent in the case of hare and 70 for grouse (Table 4.56), probably reflects the fact that small game can be readily harvested around settlements, and during occasional hunting activity. But small game hunting is not generally concentrated into a brief harvest season, so the limited availability of time for hunting does affect non-ISP hunters harvests. Thus, non-ISP hunters, despite relatively high levels of participation in small game harvesting, took on average only a bit more than one-half of the number of hare and grouse which ISP hunters harvested per hunter, 35 hare and 18 grouse compared to 63 and 30 respectively for ISP hunters (Table 4.58).

Overall food production by non-ISP hunters totals 277 kg per hunter per year, a significant contribution to the larder of any household (Table 4-59). It is nevertheless, only about one-third of the per hunter food production of ISP hunters, the differences generally being smaller in the northern coastal communities such as Chisasibi and Whapmagoostui (Table 4.59).

Non-ISP hunters are thus, overall, able to take substantial harvests. In some hunting activities their effort, and harvests, are not fundamentally dissimilar to those of full-time hunters. In other cases, their harvests are only a portion of those of the full-time hunters. What we would emphasize is that non-ISP hunters do put in considerable effort, and do achieve significant harvests. The ISP hunters are thus just a portion of the hunters and the hunting effort of the community, albeit

that they are a core of that activity in many respects.

The close linkages between hunters and hunting resources and activities in the communities suggests that the introduction of the ISP program could have had an effect on the non-ISP hunters, over and above the effects we have examined on the ISP beneficiaries. We have suggested in various parts of this report, for example, that improved travel facilities, equipment and trails, bigger and more long lasting bush camps, and better hunting equipment of ISP beneficiaries, could materially and socially benefit the hunting activities of non-ISP hunters. Some of the data available to us suggest that in some instances this was indeed the case.

The percentage of non-ISP hunters harvesting appears to have been generally unchanged in the years following the introduction of ISP (Table 4.60). Nor were there clear changes in time spent in waterfowl hunting (Table 4.62). But, the time spent in winter trapping does appear to have increased from 74 to 95 days per non-ISP hunter per year from 1976-7 to 1978-9 (Table 4.62), and beaver and mink harvests per hunter show a corresponding modest increase from 10.0 beaver and 2.6 mink per harvester in 1975-6 to 12.3 and 4.4 per hunter in 1978-9 (Table 4.61).

These limited data suggest that ISP effects on hunting effort and returns were felt more widely than solely among ISP beneficiaries. Those non-ISP hunters who were already active in more intensive winter hunting and trapping seem to have intensified their effort further. This we have suggested was facilitated by the intensified bush living and hunting of ISP hunters.

VIII. Conclusions and Summary

The final question we want to examine here is whether the land can support additional hunters and hunting effort. At one level, we have shown that the introduction of ISP did not lead to continuing higher new levels of harvesting of those wildlife species which are most intensively harvested in the James Bay region, big game or waterfowl, and this is encouraging with respect to the ecological impacts of such programs.

At another level, it is important to also note that our data indicate the capacity of land and wildlife to support hunters is not solely determined by biological or ecological factors, it is also a function of the social and economic conditions of hunting. And a program such as ISP altered the carrying capacity of the environment for Cree hunters.

While it is certainly true that there are not an unlimited number of people who can live on the land of the James Bay region, it is also true that some of the most biologically productive wildlife of the region are being under harvested at the present time. Because there are some considerable wildlife resources in the James Bay region which are under utilized (see Feit, 1978 for data on the Waswanipi region), the limit on the number of people living on the land is not simply the resources, but the hunting patterns of the harvesters, which were affected by the structure of ISP.

While wildlife such as big game, Canada geese and beaver, are intensively utilized today, the small game of the region are probably three times more biologically productive than the big game, and they presently provide only one-third to one-half as much food as the big game. At present therefore, only a modest portion of the small game which could be harvested are utilized. Many fur-bearers, and

some waterfowl such as ducks, are also under utilized.[42]

Our research has shown that harvests of small game increased following the introduction of ISP. Hunters found that given more time in the bush, and given sufficient cash to be able to purchase somewhat more of their diet, it was attractive to them, and efficient, to work to increase small game harvests. As we show above, this facilitated giving away more of their bush food harvests to others in the community, which fulfilled social responsibilities to friends and kin, and brought acknowledgement and mutual respect.

This increased use of small game as a result of the introduction of ISP changed any pre-ISP calculations of the carrying capacity of the land. ISP thus changed the numbers of Cree who could live on the land today, because it changed how intensively they used those wildlife which were under utilized. And ISP therefore changed the carrying capacity of the land. Rather than the number of hunters being limited in any simple way by the biological capacity, the biological constraints had their effect through socio-economic factors, and the number who could hunt was changed by the kind of social programs which were available. Our research suggests that were the ISP program to provide means and incentives for hunters to further disperse their harvests more evenly over the Cree hunting territories, a similar benefit would be created.

On the whole however, the complex interactions between the ISP program, Cree hunting patterns, and the environment which the Cree utilize with care and respect have been enhanced by the introduction of the program, despite the complex challenges to the Cree hunters arising from the increased number of ISP beneficiaries spending considerable additional time in the bush, which ISP made possible.

With the introduction of ISP beneficiary units increased the time they spend in harvesting activities in the bush by about 25 percent, up to a mean of 202 days per beneficiary unit head per year. In general, those who joined ISP with the intention to begin intensive harvesting increased their hunting time by more than the average, and they spent similar numbers of days harvesting in 1976-7 as did those hunters who had continued hunting intensively. Modest increases in hunting time occurred over the next several years, and a high intensity of harvesting remained common throughout the first dozen years of ISP.

The impacts of ISP on Cree harvests of wildlife were varied. Most of the hunters who joined ISP were already goose hunters, but ISP encouraged all intensive hunters to spend some additional time in goose and waterfowl hunting for the first year, or two. Nevertheless, per hunter harvests of both Canada geese and ducks declined. As a result, estimated ISP harvests of Canada geese and ducks rose by only 6 and 12 percent respectively in 1976-7. But, per hunter harvests stayed low or declined further in the following two years, so harvests of Canada geese and ducks declined to pre-1976-7 levels by 1977-8 or 1978-9. Thus the hunters' responses to ISP were complex, and there was no direct link of increased hunters or increased time in the bush to increased harvests. The decline in per hunter harvests suggested the possibility that hunters limited their harvests intentionally after the harvests of waterfowl had increased in the first year of ISP.

In contrast to waterfowl hunting, the percentage of ISP hunters who harvested fur mammals increased initially, as did the time spent in winter hunting camps.

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42. Fishery resources are under utilized as well, although increased use of fish may only be possible within very specific limits due to the danger of methyl-mercury poisoning.

The estimated number of ISP beneficiaries who harvested beaver and mink increased in 1976-7, but beaver harvesters declined in the next two years to 8 percent above pre-ISP levels. The beaver harvests increased by 31 percent in 1976-7, but then fell to 1975-6 levels over the next two years, as participation rates and harvests per hunter dropped. The harvest pattern for beaver was therefore somewhat similar to that for geese, first increasing then returning to pre-ISP levels. The changes in mink harvests, a generally under utilized species, were different. Harvests rose by 145 percent in 1976-7, and they stayed relatively high thereafter.

Moose and caribou harvests were subject to the most dramatic changes. The estimated number of ISP harvesters of these species increased by 75 to 80 percent in 1975-6, and estimated harvests of moose rose by 72 percent, with increases recorded in all harvesting communities. Caribou harvests increased by 40 percent regionally. In our field research we heard from Cree hunters and administrators alike that the moose harvest levels were too high. In 1977-8, the percentage of ISP hunters who reported harvesting moose declined in all harvesting communities, although not to pre-ISP levels, and the harvest per harvester generally declined in that and the next year. The result was that total moose harvests dropped in 1977-8, and returned to the 1975-6 level in 1978-9. The pattern for caribou was similar. In both these cases extensive expressions of concern with post-ISP harvest levels in the Cree villages clearly led to reductions of harvests.

The small game species examined, which are an important and generally under utilized resource in most communities, went through very different patterns. ISP encouraged dramatic increases in harvests of hare and grouse, and in the former case hunters also responded to an upturn in the population cycle as well as to the opportunities provided by spending additional time in the bush.

Statistical analysis of the trends in Cree harvests, and statistical tests of pre- and post-ISP harvest differences by species confirmed the overall pattern - that most harvests were relatively stable, moose harvests definitely peaked, and small game harvests increased. These conclusions are consistent with the view that Cree hunters responded to ISP in ways that conserved the most intensively utilized wildlife populations of the region, while increasing harvests of populations which could support intensified hunting.

Total harvests by ISP hunters produced an average of 807 kg of meat per hunter per year, compared to 277 kg produced on average by non-ISP hunters, or about 0.48 kg of meat per ISP beneficiary per day. ISP was not however effective, so far as the data permit us to test, at dispersing the wildlife harvests significantly more evenly over the Cree hunting territories, because the differential costs of travel to isolated areas were not full compensated. Therefore some less utilized hunting areas remain.

Nevertheless, exchange and reciprocity of bush foods continue to play a key role in the formation and affirmation of wide social linkages among families and between hunters and those who live in the Cree settlements. Despite the enhanced autonomy of families and individuals with ISP benefits, it was still common for hunters to produce bush foods at levels substantially above their own family needs, for giving to other community members. The social exchange of invitations to use hunting territories, which some feared might become less common with ISP, continues to account for about three-quarters of all opportunities to access hunting territories by hunters who do not have their own. ISP has therefore not reduced or transformed customary patterns of hunting relations, and it has facilitated not reduced social responsibility and mutual aid within the Cree communities.

Chapter 5

The ISP Beneficiary Population in the Regional Cash Economy

In this chapter, we first present a profile of ISP beneficiaries' participation in the cash economy, based primarily on the Income Security Program's computerized statistics for 1975-6 and 1976-7 concerning beneficiary unit income (summarized and reworked in Tables 5.1 through 5.9). This data source allows us, in the first two sections below, 1) to describe cash economy participation with respect to income from employment and related programs, fur sales, welfare, and old age pensions for intensive hunters in part of 1975-6 and all of 1976-7, with some measurement of ISP impacts, and 2) to compare the cash economic activity of those "nouveau" beneficiary units who joined the Income Security Program on the strength of a declared intention to practice harvesting as a way of life in 1976-7, with the "ancien" beneficiary units who had been harvesting intensively during the 1975-6 retroactive period, before ISP became operational, and who continued on ISP in 1976-7.[1]

A third section analyses in more detail the regional effects of the Income Security Program for the employment patterns of hunting families. Since ISP computer printouts were not, as they stood, in a form for measuring effects for comparable periods of 1975-6 and 1976-7, and because we wanted a finer break-down of employment and related income into specific employment activities, we based this portion of the analysis on employment data tabulated manually from ISP files, for comparable periods of 1975-6 and 1976-7 (Tables 5.11 to 5.29).

Unfortunately, we did not have regional-level data that would have allowed us to set ISP-related and seasonal employment activities of hunting families into the context of overall economic activity, as with the Wemindji case study. A fourth section of this chapter, nonetheless, provides a quantitative summary of the regional economic contribution of ISP during its first dozen years, based on statistics available from Income Security Board Annual Reports (Appendix 1, Tables A1-1 to A1-39).

I. The Cash Incomes of Cree Hunters

Income Security benefits for intensive hunters in both the 1975-6 retroactive

1. This comparison can be made only with respect to 1976-7, since for 1975-6 data are available only for the "ancien" group.

period and in 1976-7 exceeded cash income from all other sources. In the 1975-6 retroactive period, when hunting families received approximately $2,000,000 in retroactive payments, a total of over $1,700,000 was obtained by the same families from furs, wage employment, unemployment insurance, manpower training allowance, old age pension, Quebec Social Aid, band welfare, and workmen's compensation. The corresponding figures for 1976-7 are about $5,000,000 from ISP benefits as compared with over $2,300,000 from these other sources (Table 5.1).[2]

Employment and related income (unemployment insurance, workmen's compensation, and manpower training allowances) accounted for just over 40% of $1,700,000 in non-ISP income for the latter part of 1975-6 (Nov. 11/75 - June 30/76), before ISP was implemented. Welfare from two sources (Quebec Social Aid and Federal Band Relief) accounted for another 40%. Fur sales contributed about 15%, and old age pension about 4% (Table 5.2).

Welfare and ISP are mutually exclusive programs, so that with the advent of ISP in 1976-7, welfare contributed much less significantly to hunting families' incomes. It still constituted 10% of non-ISP income, but most of this is doubtless due to welfare received between July 1976 (the beginning of the first operational year of ISP) and September 1976, when ISP beneficiaries received their first cheques. In subsequent years, welfare would rarely be a component of ISP families' incomes, except in the case of beneficiary units which dropped out of ISP in the midst of a year and received welfare benefits.

With the replacement of welfare from 1975-6 to 1976-7, employment and related income of course assumed a higher proportion of non-ISP income (60%), as did furs (20%) and old age pension (8%; see Table 5.3).[3]

Income from non-ISP sources for ISP beneficiaries varied considerably from community to community. In 1976-7, for example, the mean income from non-ISP sources ranged from a low of $1650 for Mistassini beneficiary units to a high of $3670 for Waskaganish beneficiary units. Mistassini, Wemindji, and Waswanipi had mean non-ISP income per beneficiary unit from $1650 to $2100; while Eastmain, Chisasibi, Whapmagoostui and Waskaganish had mean incomes per beneficiary unit from $2900 to $3670, with an overall regional mean of $2414. Higher rates of non-ISP income per beneficiary unit were due primarily to higher rates of employment and related income, although at Eastmain in 1976-7 fur income contributed significantly to the high level of non-ISP cash income.[4] Mean welfare income of beneficiary units, by community, varied rather independently of employment and fur income in 1975-6, so that welfare did not necessarily decrease inter-community differences in cash income of hunters, prior to the Income Security Program (Tables 5.4 and 5.5).

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2. Figures quoted exclude family allowance, for which data were unavailable. Family allowance makes significant contributions to the incomes of families with several children.

3. These proportions, however, are not strictly comparable between 1975-6 and 1976-7, since data for only part of 1975-6 are available. In addition, the 1976-7 figures quoted here apply to all beneficiary units, both "old" and "new", while the 1975-6 figures are for only "old" beneficiary units: i.e., those who received a retroactive payment for 1975-6 harvesting. For a 1976-7 breakdown by "old" and "new" beneficiary units, Table 5.3 may be consulted.

4. As Tables 5.6 to 5.9 further show, high employment and related incomes in different communities were due either to a high proportion of beneficiary units with employment income, or a high mean employment income per beneficiary unit with employment, or some combination of both.

An important measure of cash economy involvement of Income Security Program beneficiaries is the proportion of ISP beneficiary units who receive income from various non-ISP sources (Tables 5.8 and 5.9). In 1975-6, 77% received fur income, 61% received employment and related income, 7% received old age pension, 23% received Aide Sociale, and 74% received Band Relief. The corresponding figures for 1976-7 were 80% for fur income, 67% for employment and related income, 9% for old age pension, 17% for Aide Sociale, and 40% for Band Relief. Again, 1975-6 figures refer to only the portion of the year from Nov. 11/75 onward, so that the 1975-6 figures under-represent the proportions of beneficiary units receiving income from certain sources on an annual level.

The above figures for the percentage of beneficiary units with employment and related income would exclude a significant proportion of beneficiary units who had seasonal employment and related income only prior to Nov. 11/75. The above figures are poor indicators, then, of shifts in employment participation, which we have reserved for discussion in the third section.

There is less difficulty in using the figures just presented as a rough indication of changes in welfare participation prior to and following implementation of ISP. Most harvesting families receiving welfare during the year would have obtained assistance at some point between Nov. 11 and June 30. On the basis of the 1975-6 figures for the retroactive period, it is clear that virtually all harvesting families relied on welfare for a portion of their cash income, with the exception of old age pensioners. As mentioned earlier, however, the 1976-7 drop does not yet represent the full impact of ISP. The figures quoted above show that over half of the ISP beneficiary units received some welfare, and the great majority of these probably were not welfare recipients past September 1976, when they received their first ISP cheque.

The 1975-6 percentages of individuals receiving fur income would be close to the annual figures, since virtually any person who trapped in 1975-6 would have most of his furs to sell after Nov. 11. There is little difference (3%) in the proportion of beneficiary units with fur income between 1975-6 and 1976-7.

The 1975-6 percentages of individuals receiving old age pension would also be near full annual figures, since old age pension recipients prior to November 11 were also recipients after that date. A slight increase occurred in the proportion of beneficiary units receiving old age pension benefits in 1976-7, possibly reflecting renewed commitment to harvesting by individuals formerly semi-retired from harvesting.

As previously suggested in noting the relationship between employment incomes and mean non-ISP income in general, rather wide variations occur in the composition and level of non-ISP income from one community to the next.

As few as 25% of beneficiary units (at Whapmagoostui) and as many as 94% (at Eastmain) had indicated receiving fur income for the 1975-76 period, with an average for beneficiary units in all communities of 77%. Mean fur income per beneficiary unit with fur income had also varied widely, from a low of $98 at Whapmagoostui to $1177 at Waskaganish, with an average for all communities of $474. Fur income had been of varying importance as a proportion of all non-ISP income, contributing from less than 1% at Whapmagoostui to a high of 34% at Waskaganish, with a regional contribution of 15%. In 1976-7, the variation in proportions of beneficiary units with fur income was reduced, from a low of 76% at Whapmagoostui to a high of 93% at Wemindji, and the regional percentage increased to 80%. Mean fur income per beneficiary unit having that source of

income also varied less widely, from a low of $361 at Whapmagoostui to $1073 at Waskaganish, with an increased regional mean of $600. As a proportion of non-ISP income, fur income ranged in 1976-7 from 8% at Whapmagoostui to 35% at Wemindji, with a regional contribution of 20% (see Tables 5.2-5.3 and 5.6-5.9).

Significant variations were also in evidence with respect to employment and related income, which regionally accounts for roughly three times more income than furs in both 1975-6 and 1976-7 (although a lower percentage of beneficiary units received income from employment than from furs). The proportion of community beneficiary units with employment and related income for the retroactive payment period in 1975-6 ranged from 48% at Mistassini to 88% at Whapmagoostui. Mean employment income for those beneficiary units who had employment income varied between a low of $940 at Mistassini to a high of $2813 at Whapmagoostui. As a contributor to overall non-ISP income, employment and related income varied from 25% at Waskaganish to 71% at Whapmagoostui (somewhat the inverse of the situation with fur income at these two communities).

In 1976-7, the proportion of beneficiary units with employment and related income ranged from 57% at Chisasibi to 84% at Waskaganish and Waswanipi; while the mean employment and related income, for the beneficiary units that reported it, ranged from a low of $1191 at Mistassini to a high of $3917 at Chisasibi. As a proportion of total non-ISP income, employment and related income accounts for from a low of 44% at Mistassini to a high of 78% at Chisasibi (see Tables 5.2-5.3 and 5.6-5.9).

Mistassini and Chisasibi, the two largest James Bay Cree communities, are representative of two extremes in the levels of hunting families' income from employment. Taken as an average over all ISP beneficiary units in each community, Mistassini beneficiary units had on average only $722 in employment and related income in 1976-77, as compared with $2335 for Chisasibi in the same year (Table 5.5).

Employment availability at different communities varies significantly from year to year and season to season. Waskaganish, for example, was at the high end of the range in terms of mean employment and related income (in terms of a mean taken over all beneficiary units) in 1976-7; while for the retroactive period in the year before, it had been at the low end of the range (Tables 5.4, 5.5).

As a proportion of the ISP population, beneficiary units with old age pension income ranged from 5% at Wemindji to 8% at Mistassini and Chisasibi in 1975-6 (7% regionally); and from 6% at Eastmain to 15% at Whapmagoostui in 1976-7 (with an increased regional proportion of 9%. The most significant percentage increases from 1975-6 to 1976-7 in beneficiary units with pension income occurred at Whapmagoostui and Wemindji (see Tables 5.8 and 5.9).

Welfare as a contributor to cash incomes in 1975-6 was most important in percentage terms at such communities as Mistassini and Wemindji, where employment and related income were relatively low. Lower employment and fur incomes, however, did not necessarily result in higher mean welfare income (compare communities in Table 5.4).

To summarize, there was substantial inter-community variation, continuing in 1976-7 with the first year of the Income Security Program, in both employment and related income, and fur income. This variation applied both to the proportions of ISP families receiving income from these sources, and to the average amounts those families obtain. ISP beneficiary units at the inland community of Mistassini had relatively low employment and related income, while the two northernmost coastal

settlements, Chisasibi and Whapmagoostui, had relatively higher employment and related income, as did Waskaganish in 1976-7. The southern coastal communities of Wemindji, Eastmain and, in 1975-6, Waskaganish, as well as the inland community of Waswanipi, fell between these extremes. Welfare payments, prior to the institution of the Income Security Program, did not necessarily function to reduce differences in average cash incomes froms community to community. Communities with high mean income from employment had substantially higher mean cash incomes overall. The highest levels of fur income were reported at the southern coastal communities of Waskaganish, Wemindji and Eastmain, while the northern coastal communities of Chisasibi and Whapmagoostui reported the lowest, with the inland communities of Mistassini and Waswanipi falling in between.

II. The Composition of Cash Incomes of "Old" and "New" Beneficiary Units - A Comparison for 1976-7 (5)

Given differences in the age and family structures of old and new beneficiary units, and given less involvement in intensive harvesting of a portion of the "nouveau" beneficiary units prior to the Income Security Program, one might predict some average differences in economic adaptation between the two groups. Here we will attempt to see how significant these differences were with respect to the composition and level of cash income from non-ISP sources, in 1976-7.

The most notable variation between the two groups occurs with respect to the level of fur sales. Of "ancien" beneficiary units, 85% had fur sales which accounted on average for $665 in income; while 67% of new beneficiary units had fur sales of, on average, $400. Fur sales constituted 24% of non-ISP income for "ancien" beneficiaries, as compared with 11% for "nouveau" beneficiaries (Tables 5.3, 5.7 and 5.9).

The employment and related income of "nouveau" beneficiary units generally exceeds that of "ancien" beneficiary units. Only marginally higher proportions of "nouveau" beneficiary units had employment and related income (69%, as compared with 67% for "ancien" beneficiary units). However, mean employment and related income for "nouveau" beneficiary units having such income, at $2400, was about $400 more than the parallel figure for "ancien" beneficiaries. While employment and related income was 58% of "ancien" beneficiaries' non-ISP income, it was 68% of "nouveau" beneficiaries incomes (Tables 5.3, 5.7 and 5.9).

At first glance, it would be easy to assume, taking fur income as an index of commitment to harvesting, that "nouveau" beneficiary units are considerably less committed to harvesting than "ancien" beneficiary units, and moderately more committed to employment. This would be a premature interpretation, however. Young hunters in their 'teens and 'twenties tend to have considerably lower beaver quotas than older hunters. While only about a quarter of "ancien" male beneficiary unit heads were under 30 years of age, one-half of "nouveau" male beneficiary unit

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5. The terms "old" and "new" are based on the "ancien" and "nouveau" categories of ISP computerized statistics, and both are used here. On our summary tables they are often labelled as "original" and "secondary" beneficiaries. As shown, many "nouveau" beneficiaries will have had experience in intensive harvesting in recent years. Nonetheless, there are differences overall between the two groups, which we attempt to analyze here.

heads were under 30 years of age, and a third under 25 years of age (Table 5.10)[6]. There were also marginally more women among the "nouveau" beneficiary unit heads (11%) than among "ancien" beneficiary unit heads (9%). These factors would be reflected in significantly lower mean fur income for "nouveau" beneficiary units, regardless of how "nouveau" beneficiaries conform to modal hunting patterns in other respects.

The differences by community in the proportions of beneficiary units in "ancien" and "nouveau" categories with fur income nonetheless suggests that several "nouveau" hunters at some communities are pursuing a subsistence hunting strategy that does not include fur trapping. While lower proportions of "nouveau" beneficiary units than of "ancien" beneficiary units are evident in all communities, the difference is more marked in some than in others. Mistassini, for example, has 83% of "ancien" beneficiary units reporting fur income, as compared with 73% of "nouveau" beneficiary units; while Waskaganish has 84% of "ancien" beneficiary units reporting fur income, as compared with 44% of "nouveau" beneficiary units (Table 5.9). In cases where spring and fall waterfowl hunting or fishing figure heavily into subsistence patterns, or where many traplines have little untapped margin of harvestable fur animals, fewer new hunters may be making fur trapping part of their subsistence strategy.

Employment income, compared to beaver quotas, is potentially more equivalent among younger and older hunters. As already mentioned, only marginally higher proportions of "nouveau" than "ancien" beneficiary units had employment and related income; and in percentage terms, the difference in mean employment and related income between "ancien" and "nouveau" groups was much less than in the case of fur income.

In overall terms, however, higher employment income more than compensates for the lower fur income of "nouveau" beneficiary units.[7] Mean reported income for "ancien" beneficiary units from all non-ISP sources, at $2381, is slightly lower than for "nouveau" beneficiary units, at $2496 (Table 5.5). This difference is a small one and, in terms of mean total non-ISP cash income at a regional level, there is little to distinguish "ancien" from "nouveau" beneficiary units.

In general, then, and to summarize, fewer "nouveau" beneficiary units have fur sales, and more have employment and related income, than "ancien" beneficiary units; while mean "nouveau" beneficiary unit fur sales are lower than "ancien" fur sales and mean "nouveau" beneficiary unit employment income is higher than "ancien" employment income.

The only exceptions to this general rule are Eastmain and Whapmagoostui with respect to employment and related income. At those communities, higher percentages of "ancien" than "nouveau" beneficiary units had employment and related income, and of those that had income from this source, "ancien" beneficiary units had more on average than "nouveau" beneficiary units. This reflects in higher mean non-ISP cash income overall for "ancien" beneficiary units at those two

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6. Based on 'A'-listed and 'B'-listed (roughly, "ancien" and "nouveau" respectively) beneficiary unit heads with the exception of Whapmagoostui and Eastmain, where our age-structure data for "nouveau" beneficiary unit heads were incomplete.

7. Mean welfare in 1976-7 was only about $60 higher for "nouveau" beneficiary units (using means obtained by totalling Aide Sociale and Board Welfare, and dividing by all beneficiary units in each group; Table 5.5).

communities, contrary to the general pattern (Tables 5.5, 5.7 and 5.9). At Waswanipi, almost equivalent percentages of "ancien" and "nouveau" beneficiary units had employment and related income, but the general pattern holds with respect to mean income derived, with "nouveau" beneficiary units having higher mean employment and related income, and higher non-ISP income overall.

While there are some fairly consistent differences across communities between "ancien" and "nouveau" beneficiary units with regard to average involvement in employment and fur harvesting, we can conclude from our discussion that these differences are much less significant than the differences between "ancien" beneficiaries from one community to the next, or "nouveau" beneficiaries from one community to the next.

III. Income Security Program Impacts on Employment

Our discussion of the preceding two parts of this section has identified employment and related income as the chief contributor, other than ISP, to cash income. The Wemindji case study indicated that there was potential for an increase in both seasonal employment and harvesting engagement by intensive hunters. What has been the impact at the regional level?

The data contained in Tables 5.11 through 5.29 represent the employment activities of all ISP beneficiary heads and consorts who provided information in each of 1975-6 and 1976-7, with the exception of those beneficiaries who had dropped out of ISP by June, 1978, when the data were compiled. For a group 'A' of 716 beneficiary unit heads and their consorts, we have both 1975-6 information (November 11 to June 30 only, the period for which retroactive ISP payments were made at program commencement), and 1976-7 information. For a group 'B' of 136 beneficiary unit heads and their consorts, we have 1976-7 information only.

Group 'A', then, represents the maximal sample against which we can compare shifts in employment activity from before ISP, to after.[8] To achieve this comparison, it was necessary to separate from the 1976-7 data the Nov. 11/76 to June 30/77 period, to match the corresponding period of 1975-6 for which data had been provided. This operation was performed with respect to both wage employment and manpower training. It was not performed for guiding, outfitting, and commercial fishing, most of which we predicted would fall into the July 1 to Nov. 10 period not covered by our comparison. Nor did we perform the operation for self-employment, which was of very limited importance to the group 'A' in 1975-6, and was insignificant in 1976-7.

A profile of the relative magnitude of involvement in different employment activities in the 1975-6 retroactive period and the full 1976-7 year, by 'A' and 'B' groups, will help indicate the importance of the activities for which we performed the controlled comparison; i.e., wage employment and manpower training.[9] Wage

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8. Group 'A' is comprised primarily of "ancien" beneficiary units who received a retroactive 1975-6 payment, but also includes as many as a hundred "nouveau" beneficiary units who submitted 1975-6 data registration forms. "Nouveau" beneficiary units who did not submit 1975-6 data forms constitute group 'B' entirely.

9. The percentages presented in this profile are based on figures in Tables 5.17, 5.18, 5.23 and 5.24, but have not been tabulated separately.

employment was the most important of the sources of non-ISP earned income, both prior to and following implementation of ISP. In the 1975-6 retroactive period it accounted for 75% of all beneficiary unit head days spent in non-ISP income-earning activities, and 84% of all consort days. It accounted for 82% of beneficiary unit heads' income, and 82% of consorts' income (group 'A'). In 1976-7, for the same group, wage employment accounted for 84% of beneficiary unit head days in income earning activities, and 92% of consort days; while for group 'B' it accounted for 87% of beneficiary unit head days and 52% of consort days (with only 3 consorts having had non-ISP earned income). Wage employment income in 1976-7 comprised for group 'A' 87% of heads' earned income, and 97% of consorts' earned income; and for group 'B', 93% of heads' earned income and 50% of consorts' earned income.

Manpower Training in the 1975-6 retroactive period was the next most important source of earned income, accounting for 17% of combined head and consort days in non-ISP income earning activities, and 9% of combined head and consort income.[10] In 1976-7, however, it was much less important, comprising only 4% of combined head and consort days and 2.4% of income (groups 'A' plus 'B').

Guiding, outfitting and commercial fishing in the 1975-6 retroactive period accounted for 4% of combined head and consort days, and 6% of income, in non-ISP income earning activities.[11] In 1976-7, however, they were more important than the reduced activity in manpower training, comprising 11% of combined head and consort days and 9% of income (groups 'A' and 'B' combined).[12]

Self employment in both the 1975-6 retroactive period and the 1976-7 year of ISP was the least important source of non-ISP earned income. It accounted in 1975-6 for 2% of combined head and consort days, and 2% of income. In 1976-7, only one beneficiary unit head reported self-employment earnings, which comprised less than one-tenth of one percent of combined head and consort earnings (groups 'A' and 'B' combined).

By measuring changes in wage employment and manpower training for the 716 group 'A' beneficiary units between 1975-6 and 1976-7, then, we are taking account of over 90% of person days and income earned in non-harvesting activities for 84% of all ISP beneficiary units still on the Program in June, 1978. In our more tightly controlled comparison, however, we needed to restrict our measurements to the Nov. 11 - June 30 period of 1976-7. This period in 1976-7 represents just under one-half of group 'A' combined head and consort days and income in all wage employment for the year; and just over one-third of combined head and consort days and income in all manpower training for the year.

Our results for this controlled period are as follows. The numbers of both

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10. At one community, Eastmain, in 1975-6, where there was very limited wage employment, there was fairly substantial involvement in manpower training programs. These accounted for 74% of combined head and consort days, and 68% of income from non-ISP income-earning activities.

11. These guiding, outfitting and commercial fishing figures might not be representative of the year as a whole, since guiding and outfitting are particularly intensive in the fall period, not included in the 1975-6 retroactive figures. Big game and waterfowl guiding are fall activities.

12. Note that in Mistassini, where guiding, outfitting and commercial fishing were more important than at other communities, they account for 18% of combined head and consort days and 33% of income in 1976-7. Since Mistassini is a large community, these figures inflate the regional figures beyond typical levels for other communities.

heads and consorts with wage employment dropped, taking the regional total. Where 230 heads (32%) and 19 consorts (4%) had wage employment in the 1975-6 period, 197 heads (28%) and 10 consorts (2%) had wage employment in the 1976-7 period (see Tables 5.13 and 5.16).[13] This was not a uniform effect across all communities, however. Drops in the percentage of beneficiary unit heads with employment occurred at Mistassini (from 25% to 16%), Chisasibi (from 35% to 22%), Waswanipi (from 54% to 32%) and Wemindji (from 46% to 33%). Increases occurred at Waskaganish (from 25% to 43%), Eastmain (from 8% to 47%) and Whapmagoostui (from 38% to 48%). The percentages of consorts with wage employment held constant (Waswanipi, Wemindji, Eastmain), or decreased (Chisasibi, Waskaganish Whapmagoostui), with the exception of Mistassini where an increase of one consort with employment occurred.

A more marked decrease in global days in wage employment occurred: from 10,475 in the 1975-6 period to 7,383 in the 1976-7 period for beneficiary unit heads, and from 2,577 to 1,082 for consorts. Regionally, this may reflect a tendency for ISP beneficiaries to concentrate their seasonal employment activities in the summer and early fall period (partially from our Nov. 11 - June 1 comparison) when subsistence activity is less rewarding. But again, there was not a consistent drop from community to community. Usually, but not always, settlements where person days in employment had decreased were those settlements where a decreased number of ISP beneficiaries had employment. At Chisasibi, there was a marginal increase in global beneficiary unit head days in wage employment, despite the decrease in the percentage of heads with employment, since mean time spent in wage employment by those who had it increased considerably. In contrast, at Whapmagoostui more beneficiary unit heads had employment, but for considerably shorter average periods, so that global beneficiary unit head days in employment dropped to less than half of the 1975-6 level. Mistassini had drops in global beneficiary unit head days in wage employment in 1976-7 to 40% of the 1975-6 level; and Waswanipi to less than 30% of the 1975-6 level. Waskaganish beneficiary unit heads, on the other hand, nearly doubled their global 1976-7 days in wage employment over the previous year. Eastmain had an increase of over 50%, and Wemindji global 1976-7 days were 63% of the previous year's figure (Table 5.19).[14]

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13. In 1976-7 as a whole, 349 out of 716 heads (41%) and 19 out of 478 consorts (4%) had wage employment. Thirteen of the nineteen consorts with wage employment were from one community, Chisasibi, where several women have permanent jobs. As reflected by the mean income from wage employment of those consorts who had it, by comparison with that of beneficiary unit heads (Table 5.28), several of the few consorts who become involved in wage employment did so on a permanent basis.

14. This finding appears to be in disagreement with the results of the Wemindji case study which indicated increased global beneficiary weeks in employment. The case study, however, compared employment for full years in both 1975-6 and 1976, on an Oct. 1 to Sept. 30 basis. At Wemindji in 1976-7, most of the increase in employment activity occurred from about July 1/77 onward, which falls within the 1977-8 year for Income Security Board purposes. We did not adopt the July 1 - June 30 year in our case study research for several reasons, the most important being that ISP impacts on employment could not be expected to occur before people received their first ISP benefits in early Sept., 1976. By basing our year on an Oct. 1 to Sept. 30 period, we made July - Sept./76 part of our 1975-6 year. July to Sept./76 is considered part of the first year of the Income Security Program for Income Security Board purposes, but would not yet reflect the effects for employment, if any, of ISP. By using only the Nov. 11 to June 30 period of the 1976-7 year in our comparison of Income Security Board data, we have eliminated the ambiguous July 1 - Sept./76 period.

Predictably, given the discussion of the previous paragraph, there were wide variations in the mean time spent in wage employment by beneficiary unit heads that had it, ranging in 1976-7, for example, from a low of 23 days at Waswanipi to a high of 78 days at Chisasibi, with a mean of 40 days for the region (Table 5.22).

Regionally, a drop of 30% in beneficiary unit head days in wage employment corresponded to a drop of only 22% in dollar income earned. Taking into account inflation of wages and consumer costs, this probably represents a more or less unchanged real income per unit of labour time.[15] For Chisasibi, however, dollar income from wage employment dropped by 8%, while beneficiary unit head days in wage employment had increased by 3%, suggesting that available seasonal employment was less remunerative in 1976-7 than it had been the year previous. At Whapmagoostui, on the other hand, where global beneficiary unit head days in wage employment had dropped about 55%, global income from wage employment declined by only about 7%, probably reflecting the presence of well-paid construction jobs in that community. At Eastmain, where days in wage employment had considerably less than doubled from 1975-6 to 1976-7, dollar income nearly tripled, again indicating the presence of well-paying seasonal employment by comparison with the previous year (Tables 5.19 and 5.25).

Participation in manpower training programs for our sample was significantly reduced in 1976-7, and more uniformly across communities. Percentages of beneficiaries in manpower training programs dropped to a third of 1975-6 levels, and even those involved committed many fewer days to these programs, earning considerably less income. Only at Waskaganish did a small increase in the percentage of beneficiaries with manpower training allowance occur, and this represented two beneficiary unit heads in 1976-7, where in 1975-6 there had been none. At Chisasibi in 1976-7 one consort had manpower training allowance, where the previous year there had been none. Nowhere were the decreases in manpower training involvement from 1975-6 to 1976-7 large enough to offset the trends to increased wage employment noted for some communities (Tables 5.13, 5.16, 5.22, 5.28).

In summary, reduced involvement in employment has not been the uniform reaction of ISP beneficiaries. In two communities, Mistassini and Waswanipi, there were significant reductions in all of our measures of employment activity: proportions of beneficiaries with employment, global and mean person days committed to employment, and global and mean income from employment.[16] Given that beneficiaries in these more southern inland communities have more stable access to a labour market than many coastal communities, it would appear that reduced employment activity may be related to intensified commitment to harvesting under new conditions of the Income Security Program. It is difficult, however, without knowing details of employment availability in the regional economies surrounding these communities, to know how far to attribute decreases in employment activity to ISP.

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15. On the basis of Table 5.29, a dollar increase of 10.8% in mean weekly salary occurred, at the regional level.

16. Judging from the 1976-7 figures for the year, guiding, outfitting and commercial fishing have maintained their pre-ISP position at Mistassini and Waswanipi, unlike other forms of employment. Income in this category is particularly significant at Mistassini, but still only about half as important as wage employment in 1976-7, when wage employment activity had declined.

Waskaganish and Eastmain are cases opposite to Mistassini and Waswanipi. In the coastal communities, employment activity increased by all the same measures it had decreased in the two inland communities. To a less marked extent, this was true also of Wemindji, on the basis of our case study, if not of the present figures. It is perhaps worthy of note that these are the three communities with the least access to a relatively longer-term industrial or tertiary job market, and therefore the ones which depend most heavily on the band offices' ability to obtain Indian Affairs and other government projects to bolster seasonal employment availability. Hunters may be more disposed under these circumstances to take advantage of seasonal employment when they can get it.

At Chisasibi and Whapmagoostui, where considerably more employment in services and industry was available locally than at coastal settlements further south, the shifts in employment activity are less marked. At Chisasibi, fairly substantial reductions in the proportion of beneficiaries with employment, a small reduction in overall employment income, and a small increase in global beneficiary days in employment indicate that a portion of beneficiaries intensified their employment activity in 1976-7, while another portion reduced theirs. At Whapmagoostui, more beneficiaries were employed less time on average to make less mean income, but about the same global employment income, as in the year previous.

Caution should be exercised in extending these conclusions to full first-year post-ISP trends, particularly in the case of small communities and communities where local employment depends heavily on government-subsidized seasonal projects. As we saw in the case of Wemindji, two community improvement projects in the latter half of summer, 1977, employing primarily ISP beneficiary unit heads, changed the results from reduced post-ISP employment activity for winter and early summer of 1976-7 to a net increased employment activity over the longer Oct. to Sept. term. At other communities, however, the trends are marked enough, the communities large enough, and/or access to wage employment sufficiently more uniform, that our conclusions about post-ISP trends would probably hold for the full one-year period following the first issue of ISP cheques.

IV. Regional Economic Contribution of ISP, 1975-6 to 1986-7

Summing regional ISP cash benefits for the first twelve years, the program contributed roughly $90.6 million (real dollars) into the regional cash economy (Table A1-20). Projecting crudely from regional statistics which established the value of intensive hunters' subsistence production (including fur) to be about 1.4 times the value of ISP cash benefits in the late 1970's (Scott 1984:83), perhaps $220 million in regional income over a dozen years stemmed from ISP-supported activities. To place this figure roughly in perspective, it exceeds cash compensation paid in lump sums to the Cree under the 1975 JBNQA. Hunting, and the ISP benefits which support it, continue to be central in the regional economy.

Regionally, average annual cash benefits payable per unit showed no discernible trend to increase or decrease, fluctuating between $4200 and $4600 (1975 constant dollars). Average benefits payable per unit of $10,000 in 1987 real dollars

were quite typical (Tables A1-25, A1-26).[17]

There are some regular differences between communities through the years in the average number of person-days spent in harvesting, and hence average payable benefits, per beneficiary unit (Tables A1-16, A1-26). Intensive hunting households at Wemindji and Eastmain have average benefits per household in the $3500-$4000 range in most years, while those at Mistassini, Waswanipi, and Whapmagoostui are in the $4500-$5000 range (1975 constant dollars), with other communities intermediate. There is a tendency for hunters at inland communities to spend more days and derive higher average benefits than hunters at coastal communities, due in part to differences in the subsistence cycle. At the coast, hunters engage in relatively brief periods of intensive, highly productive waterfowl harvesting during fall and spring, with breaks between fall, winter, and spring harvesting periods; while at inland communities, hunting from bush camps is less interrupted from fall through spring.

At the level of individual communities, few show any trend toward increasing or declining average benefits per unit. At Chisasibi, there were marked increases in average payable benefits from 1981-82 to 1983-84, with a significant overall increase during the first seven years of the 1980s; at Whapmagoostui there has been some overall decline during the same period; but in both cases, average benefits payable per unit remained in the most recent years at levels that were neither the highest nor the lowest for the region (Table A1-26).

V. Summary and Conclusions - Cash Economy Participation of ISP Beneficiaries

We observed in the first section of this chapter that beneficiaries of the Income Security Program had different employment patterns from community to community prior to and following the implementation of ISP, and somewhat different patterns of fur income. Differences in fur income tended to be diminished with the implementation of the Income Security Program, with a higher proportion of beneficiaries earning higher average fur incomes as a regional trend. Significant differences remained, however, in the level of involvement in employment activities from community to community. ISP virtually eliminated welfare payments as significant contributors to the incomes of intensive harvesters (with the exception of some younger single parents who found that welfare benefits were still superior to ISP benefits, given their number of days spent in harvesting activities).

Overall, ISP benefits are more than double the cash income from combined non-ISP sources as cited in Income Security Board statistics: furs, wage employment, unemployment insurance, manpower training allowance, old age pension, welfare, and workmen's compensation.

In the second section of this chapter we considered the possibility that "ancien" beneficiaries (those who had been intensive harvesters the year prior to ISP imple-

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17. At a community level, there were wider fluctuations year by year, from a 1983-84 low at Eastmain of $2,937 to a 1979-80 high at Whapmagoostui of $5,124 (1975 constant dollars). These are small communities, however, where average payable days per beneficiary unit on ISP are more susceptible to fluctuate in response to such factors as employment availability on community projects.

mentation, as well as during the first year of its operation) had economic commitments substantially different from "nouveau" beneficiaries (those who had not been intensive harvesters the year prior to ISP implementation, and who joined the Program on the strength of their intention to be intensive harvesters in the first year of its operation). We found that in the majority of communities, "ancien" beneficiaries had higher average fur incomes and lower average employment and related incomes than "nouveau" beneficiaries. This does reflect a marginally greater involvement in employment on the part of "nouveau" beneficiary unit heads; however, it does not necessarily reflect a lesser commitment to trapping, since the "nouveau" beneficiary unit heads are usually younger and include more single individuals, who have less trapping experience and who receive lower average beaver quotas than older, married hunters. The relative differences between "ancien" and "nouveau" beneficiaries with respect to employment and related income and fur income were fairly consistent throughout the region; but these differences were not as great as the differences between "ancien" beneficiaries from one community to the next.

Seasonal and casual employment was the single largest contributor to non-ISP income and accounted for the main differences from community to community in total non-ISP income. The implementation of the Income Security Program was accompanied by decreased participation in wage employment in some communities, and increased employment participation in others. The least shift in total wage employment participation in ISP's first year was observed in Chisasibi and Whapmagoostui, where the most primary and tertiary employment was available locally. Where there had been involvement in a regional labour market which offered jobs at some greater physical distance from the home community, as at Waswanipi and Mistassini, ISP appears to have encouraged a reduction in wage employment involvement and a particular intensification of harvesting locally. This may mean that relatively few jobs per capita were available locally in these Cree communities, but that people used the Income Security Program to keep closer to home while maintaining acceptable cash incomes. This should not be interpreted to mean that employment in general is not wanted by hunters at those settlements, since guiding and outfitting, which are jobs available locally, maintained their pre-ISP position at Waswanipi and Mistassini. Moreover, there was a third group of communities, the more southern coastal ones, where seasonal employment involvement of ISP beneficiaries increased, in spite of increased harvesting activity by the same people in 1976-7. Here, however, it was an increase in jobs available locally through community improvement projects which would account for the increased wage involvement by intensive hunters; since these communities have neither the regional out-of-community wage economy that is more accessible to Waswanipi and Mistassini, nor the more active and local primary industry-related wage economy of Chisasibi and Whapmagoostui.

Sustained and even increased levels of seasonal wage employment appear to have been compatible with increased involvement in intensive harvesting, provided that seasonal jobs are accessible locally. For hunters, however, ISP benefits are the primary source of cash income and, supplementing the income-in-kind from supported harvesting activities, are a mainstay of the regional economy.

Chapter 6

Hunters' Costs and the Adequacy of ISP Benefits

The present chapter examines the annual hunting-related and other living costs of families on the Income Security Program, identifies areas of expenditure where changes occurred in the first two years of program operation, and attempts some measure of average ISP benefits in relation to hunting-related expenditures and other living costs. Our data are derived from interviews with Cree hunters on their annual costs, from manually-generated statistics from the Income Security Board, and from earlier studies of hunters' and trappers' expenditures. In addition, we present some views and reactions from Cree community residents, and hunters in particular, concerning their cash economic situation following the implementation of the Income Security Program.

I. Composition of Bush and Settlement Expenditures

Tables 6.1 through 6.10 summarize data gathered through interviews with about forty beneficiary unit heads at five coastal Cree communities, as well as at one inland community, Mistassini, with respect to hunting families' costs. During this extensive inter-community data-gathering, we unfortunately were unable in most cases to elicit full expenditures and incomes throughout a full annual cycle.[1] Time in each settlement was limited, other kinds of data had also to be obtained, and we generally had only one interview session per individual. In addition, hunt-

1. Winter hunting-trapping and, for coastal settlements, spring goose hunting, summer fishing and waterfowl hunting, and fall goose hunting are referred to here. Spring goose hunting is a distinct activity for some Mistassini hunters, as well; as is summer fishing. However, we have insufficient data for those activities at that settlement to have included them in our figures. We attempted at each settlement to interview a cross-section representative in terms of distance to winter hunting grounds, but samples by community are too small to generalize about inter-community variations. We think the data for winter hunting costs, including air charter, are reasonably representative for coastal settlement hunters on the whole, taking into account the average family sizes and distances to winter camps included in the tables. Hunters with more distant traplines are considerably over-represented for Mistassini in Tables 6.2 and 6.3. There would appear to be more moderate over-representations of hunters with more distant traplines for some of the remainder. The average number of consorts and children per hunter appear to be reasonably typical for the coastal sample taken as a whole, although middle-aged hunters were somewhat over-represented. Our samples for spring, summer, and fall hunts on the coast are smaller, but conform well with expectations based on our general knowledge and experience.

ers did not always remember figures for each of the categories of expenditure and income. We therefore generated totals and means for largely overlapping, but not identical samples of hunters for each of winter, summer, spring, and fall harvesting periods.

Winter hunting-trapping accounted for the largest expenditures of hunting families at all settlements. For 24 coastal community hunters in 1976-7 at the five coastal settlements, average winter hunting costs were $2,307. As the data for 1976-7 and 1977-8 for Mistassini show, however, winter hunting expenditures can be considerably in excess of this figure for hunters with atypically large families, great distances to hunting grounds, and particularly lengthy stays in the bush. Our Mistassini figures over-represent hunters with these characteristics, and serve to show that winter hunting expenditures alone can exceed $6,000 in exceptional cases (Table 6.1). All hunters who were asked about winter hunting costs had incurred expenses. For spring goose hunting, camp-based coastal community hunters spent an average of $545, while settlement-based hunters spent an average of $169 (costs of the family remaining in the settlement are not included), and one out of a sample of sixteen had no spring hunting expenses. Summer fishing and waterfowl hunting expenses were $488 on average for the camp-based hunters, $260 for settlement-based hunters, and half of those asked had no expenses for this activity. Fall goose hunters based in camps spent an average of $372, settlement-based hunters spent an average of $324, and two-thirds of those asked had no fall goose hunting costs.[2] (Tables 6.1, 6.4, 6.5, 6.6).

The above figures do not include major hunting equipment, most of which is used for more than one harvesting period. Major hunting equipment accounted for $1,580 average expenditures for the coastal settlement group (Table 6.1; this figure does not include road vehicles). This amount represents 35% of the mean annual bush costs of coastal settlement hunting families (Table 6.9). Mean major equipment expenditures for the Mistassini hunters interviewed were $2,275 in 1977-8, higher than for the coastal community hunters, in spite of the fact that winter hunting expenses were also higher for Mistassini respondents.

Next to major equipment, air charter costs are the single largest item of hunting expenditure for most hunting families. Coastal community hunters spent an average of $1,183 on air charter, out of average total winter costs of $2,307 (Table 6.1; all air charter utilization in connection with harvesting activities reported to us was for the winter hunt). For the somewhat larger sample of 37 hunters in Table 6.2, the 31 who used air charter spent an average of $1,533; while the average for the entire group of 37 was $1,285.

The figures for air charter utilization at Mistassini are for individuals with considerably larger distances to travel than three-quarters of the hunters from that settlement, and therefore cannot be taken as typical of the community at large. But Mistassini is the community with the largest number of hunters who regularly harvest at ranges beyond 150 miles from the settlement, and average air charter costs for that settlement are relatively high. Our figures show that beneficiary unit heads with distances to fly of up to 300 miles sometimes spent over $3,000 in air charter costs alone. This probably represented maximal expenditures at any settle-

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2. Note that in summer, it is common for many hunters to devote themselves primarily or exclusively to wage employment, while those hunters with inland traplines often participate marginally or not at all in the fall goose hunt.

ment.

At Mistassini, we obtained detailed information on camp locations and the number of hunters in each camp for 1976-7 and 1977-8, which permitted us to match numbers and percentages of hunters in camps to distance intervals, much as we did at Wemindji (see Chapter 2, sections VII & IX, and Tables 2.23 & 2.49). The comparative data from Mistassini included in Tables 6.11 through 6.13 indicate that the average distance per hunter to winter hunting locations was 109 miles (compared with 78 miles at Wemindji). While only 3% of Wemindji hunters established a main camp at 150 miles or more from the settlement, 23% of Mistassini hunters established a main camp at 150 miles or more from the settlement.[3]

A local estimate of the amount spent on air charter for 1976-7 winter harvesting at Mistassini was $375,000, which is about $1100 per beneficiary unit head. Based on the corresponding estimate of $90,000 expenditures on air charter at Paint Hills the same year, the amount per beneficiary unit head was $900. Assuming that the average mileage to winter camps for male hunters holds for beneficiary unit heads at large, the mean amount per beneficiary unit head-mile to winter camp for the two settlements would be about equivalent ($10.00 at Mistassini and $11.50 at Wemindji).

Local reports at Mistassini were that, due to high transportation costs, not as many camps were established in 1977-8 (the second year of ISP) in the Nichicun area, which includes the most distant traplines harvested by families living at Mistassini settlement. A number of these families went to traplines closer to Mistassini, and were expected to go as far as Nichicun only every second year.[4] Our figures (Table 6.13) indicate that there was a moderate drop in the average distance to camp per Mistassini hunter from 1976-7 to 1977-8, from 109 to 103 miles. However, the percentage of hunters traveling 210 miles or more to camps remained about constant (21 hunters in each of the two years), as did the number of camps. The number and percentage of hunters and camps at 150 to 209 miles likewise remained about constant.

In 1978-9, local reports in Mistassini were that harvesters had moved in closer to the settlement, due to air charter costs, and local air companies and other residents reported substantially less use of air charter in that - the third - year of ISP. We did not have the opportunity, however, to obtain detailed data concerning these observations.

Gasoline and oil costs (not including that portion of cost concealed in the cost of transporting these goods to the hunting camps), represented about 7% of all costs reported for the winter hunt, and about one-quarter of spring goose-hunting costs for the sample interviewed in coastal settlements (Table 6.1, 6.4, 6.5, and 6.6).[5]

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3. Note that these means are not strictly comparable to those in Tables 6.1 and 6.2, which represent primarily male beneficiary unit heads, most of whom were in mid-life or older.

4. If this means that hunters on closer traplines who extend invitations to Nichicun hunters will in turn just as often accept invitations to go to Nichicun traplines, then there would be some leveling-out of the air charter burden. If, on the other hand, Nichicun and other distant traplines are not used as frequently, there may be a relative underutilization of those areas, and possibly excessive pressure on areas nearer the settlement.

5. Unfortunately, our figures do not include the costs of gas and oil for private road vehicles used in hunting at Mistassini, Chisasibi and Waswanipi. Our figures are for skidoo, outboard motor, and other small motor fuel.

Over the hunting year as a whole, gas and oil costs for outboard, skidoo, and other small motors represent about 10% of the annual hunting budget (see Table 6.9). At the communities of Chisasibi, Mistassini, and Waswanipi, some portion of personal road vehicles would have been used in hunting for many families.

We compared the costs of transportation for hunters who use air charter with the costs of transportation for hunters who could depend primarily on skidoos and motorized canoes to reach winter hunting grounds from settlements (Table 6.3). It is apparent from this comparison that hunters who were within skidoo/canoe distance of settlements (and who typically make frequent returns to the settlement, often leaving families there) did indeed use significantly more gasoline and oil. Hunters using air charter only (and/or road taxi to distant camps) had average expenditures of only $147 for winter gas and oil, while hunters who used skidoo/canoe transport only (sometimes complemented by the use of road taxi, or air charter) consumed an average of $606. In rare cases, where a distant winter trapline along the coast could be reached by skidoo and trips back to the settlement were frequent, $1,000 to $2,000 worth of gasoline and oil were used. For the great majority of hunters able to use skidoos and powered canoes, however, total transportation costs are well below average costs for hunters using air charter, even where frequent trips between settlement and trapline by the smaller vehicles occurred.

Groceries, clothing, and miscellaneous dry goods (including some smaller tools and equipment not included in major equipment) amounted to about 30% of the annual hunting expenditures of our samples of hunters from coastal settlements (about 40% of winter costs, and three-quarters, one-third, and two-thirds of spring, summer and fall costs, respectively, not including major equipment; Tables 6.1, 6.4, 6.5, 6.6 and 6.9). These figures do not include the costs of groceries and other supplies for any family members that were in the settlements, during any of the harvesting periods.

From May or June through to August or September is the summer period during which the majority of hunting families are in settlements rather than in hunting camps, although heads of families may nonetheless be harvesting on short trips from the settlement. The grocery costs in the settlements in Table 6.7 therefore represent primarily the summer costs of groceries of hunting families while they are in the settlement. They include some families while they are in the settlement. They include some families the head of which had seasonal employment, and some families the head of which was harvesting out of the settlement with varying degrees of intensity, sometimes in combination with employment. Even given this component of bush food, weekly grocery costs per consumption unit (c.u.) living in settlements are three times the costs of purchased groceries taken to hunting camps per c.u. week ($33.00 as compared to $10.00; Table 6.8).

The annual budgets for 3 families at Chisasibi and 4 families at Whapmagoostui show that costs for families living in settlements, particularly grocery costs, are a significant proportion of the year's total expenditures. Out of a mean annual total of 260 consumption unit weeks per family at Chisasibi, and of 208 consumption unit weeks per family at Whapmagoostui, the number of consumption unit weeks resided in the settlement were 144 and 96, respectively. For the three Chisasibi families, groceries consumed in the settlement account for 34% of the total annual budget, and the Whapmagoostui families spent 22% of the annual budget on groceries while at the settlement (Table 6.10). If by going to the bush camps for extended periods these families saved $20 per c.u. week in groceries by relying heavily on

bush food, the average annual savings for the Chisasibi families were $2320, and the average annual savings for the four Whapmagoostui families were $2240 in purchased food costs (at 116 and 112 mean c.u. weeks in harvesting camps, respectively). There would be additional savings in purchased food for bush meat caught by settlement-based hunters, and for bush meat surplus to needs in camps while hunters were in camps.

Total costs at the settlement, which in addition to groceries included clothing, house payments, utilities, appliances, furniture, and home maintenance, comprised 54% of the total annual expenditures of the Chisasibi families, and 43% of the total annual expenditures of the Whapmagoostui families, with costs of bush activities comprising the remainder (46% and 57%, respectively).

Next to the cost of groceries in the settlements, house payments (8% for the Chisasibi families and 10% for the Whapmagoostui families) accounted for the largest proportion of total annual expenditures for living at the settlement. House payments, which ranged from $74 to $90 per month for the seven Chisasibi and Whapmagoostui families, are an item of expenditure for those families who occupy the newer housing constructed under the joint auspices of Cree local government and federal Indian Affairs. Monthly house payments, of course must be met even while the family is in the bush.

Other categories of expenditure for living at the settlement (clothing, utilities, appliances, furniture, home maintenance) each accounted for 6% or less of total annual budget for the seven Chisasibi and Whapmagoostui families. It should be remembered that some expenditures in the settlement, such as purchases of freezers, are harvesting-related, and that costs of living in the settlement are not necessarily divorceable from costs of harvesting.

II. Comparison with Previous Studies on Hunter's Costs

A comparison of hunters' expenditures cited in the previous section with those cited by previous studies indicates that there is a significant increase in 1976-7 in the average annual amounts spent in harvesting activities.

A study by Coon *et al.* (1975) of a small number of intensive harvesters indicated that annual cash costs for all harvesting activities were $3,695.[6] Our own study (Table 6.9) indicated a figure of $4,583 for 1976-7, but included the cost of groceries taken to the bush, which apparently the Coon figure did not. Since in our study groceries were included in a broader "supplies" category, it is not possible to produce a strictly comparable figure for total costs. The Coon study indicated that transportation costs for the group interviewed averaged $1048 (1976-7 dollars). This figure we can compare with the average of $1671 spent by our respondents on total annual transportation expenditure (charter aircraft, taxi, gasoline and oil).

Another study of pre-ISP expenditures by winter trappers was produced by the Cree Trappers' Association (1977), and included about 24% of the estimated 615 active trappers in the winter season covered by the survey (1975-6). The Cree Trappers' Association's figure for average transportation costs was $284, or $312 in 1977 dollars, compared with winter transportation costs of $1399 in 1976-7 accord-

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6. This figure is presented in 1976-7 dollars, as re-calculated in Grand Council of the Crees (of Quebec) (1977, Table 9C). The original uninflated value was $3,094.

ing to our survey. Taking the CTA's $761 average for grubstake expenditure, and $2320 in equipment and gear, an estimated one-third of which we might assume was replaced annually, total winter hunting costs plus gear and major equipment cost $1818 annually, or $2000 in 1976-7 dollars. The comparable figure from our survey would be $3890 (Table 6.9), an increase of $1890, or nearly 95% in average winter harvest expenditure in the first ISP year.

The larger CTA sample would appear to have represented the more typical cross-section of pre-ISP hunters, but is restricted to winter hunting-trapping costs only, while the earlier Coon study covered activities in other seasons as well. A much broader cross-section of the harvesting population has achieved a level of capitalization and cash expenditure in harvesting activities previously managed by only a limited minority of hunters.

III. Views from the Communities

In general, people recognized that the Income Security Program provided substantially improved cash incomes for hunting families in all settlements. Moreover, beneficiaries seemed satisfied that current levels of ISP benefits were appropriate to their needs. There were two exceptions to these general statements: that fraction of hunters whose traplines were most distant and reached by charter airplane, which elevated their costs; and several unmarried adults, some of whom had children, who had concluded that their potential income on Quebec Social Aid would be higher than Income Security Program benefits, and who had left ISP.

Because it is a costly item in annual hunting expenditures, hunters' transportation was an issue of concern in all communities. While ISP benefits undoubtedly improved access to purchased goods and services generally, some hunters whose traplines were long distances from their communities and not accessible by road had experienced cash shortages. In some cases this was a temporary situation. Moving by air charter into a distant winter camp in the fall was sometimes said to have required an entire quarterly ISP benefits cheque, so that equipment and supplies were purchased on credit and covered by future ISP benefits, or income from other sources. In other cases, it was observed that hunters who had high air charter costs had simply not been able to afford the new equipment that hunters with lower transportation costs had purchased since ISP commenced.

Several hunters, most often at Mistassini and Chisasibi where distances to winter hunting locations are from 150 to 300 miles for many families, suggested that ISP benefits should be adjusted for basic transportation costs. While this solution was usually proposed by hunters who used distant traplines, hunters who did not require expensive means of transport occasionally agreed that people whose traplines were very distant should have additional help. Some hunters at Chisasibi and Waskaganish whose families lived in the settlements during the winter hunt, however, claimed that the higher costs of maintaining a family in the settlement, and of frequent trips between the settlement and their traplines by canoe and skidoo, were just as burdensome as the higher costs of getting to more distant inland traplines. An additional factor mentioned by hunters at coastal settlements was that coastal (near) traplines are generally poor in beaver by comparison with inland (more distant) traplines, and that hunters further inland have more cash to put toward the high costs of air charter by virtue of higher fur incomes.

Other measures were also discussed as alternatives for reducing the cost of

transportation. Hunters stated that, when they are available, larger planes such as DC-3 and Canso craft greatly reduce costs, since in one trip such a plane can handle several families and their equipment and supplies. Some hunters had been able to avoid high air charter costs by moving to and from their traplines by truck-taxi or with personal vehicles. Others were transporting supplies and equipment part-way by truck or taxi, and the rest of the distance by aircraft.[7]

Other factors were occasionally cited in connection with a rapid increase in cash expenditure in recent years, and in connection with occasional cash shortages experienced by hunting families, even with Income Security benefits. Some hunters commented that fear of mercury poisoning from fish had meant elevated costs for store-bought food, particularly for families in settlements during the summer when fish would normally have been heavily relied on. In certain communities, hunters were just beginning to make monthly payments on houses, and some were having trouble making adjustments to this new cost.

Some families were said to have had difficulties in budgeting correctly, and had encountered cash shortages. Credit policies at some key retail outlets were said to be too restrictive to provide families with essentials over the full three-month period between ISP cheques, so that some families who had not conserved enough funds from a previous ISP cheque had exhausted available credit before their next ISP cheque arrived. People who had been accustomed to receiving welfare benefits on a monthly basis and applying them to accumulated debts, now had to set money aside in advance.[8]

ISP beneficiaries occasionally made comments about the desirability of obtaining income form non-ISP sources, which were related to their perceptions of the adequacy of ISP payments. At Whapmagoostui, some heads of family were emphatic that they had to get jobs in order to survive. Some of these simply meant that they still had to get seasonal jobs to supplement cash income from ISP. Others had drawn the conclusion that wage employment as a primary economic adaptation afforded superior benefits and security. At the other extreme were hunters who felt that their situation was better if, instead of seeking summer employment and enduring the higher costs of maintaining families in settlements while they worked, they rather maintained their families in summer fish camps and extended their harvesting to a more-or-less year-round endeavour. Some felt that deductions for earned income made against ISP benefits made it not worthwhile to seek seasonal employment. The majority of hunters, however, seemed to feel that it was worthwhile to

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7. While roads have solved some problems of access to hunting lands, they have created new problems in some other cases. Some Waskaganish and Eastmain hunters said they were no longer able to leave valuable equipment on their traplines as they used to, because passers-by and southern workers were stealing things. Equipment that would otherwise have been left in the bush had to be flown back to the settlements each spring. Once a trapper returns to his trapline in the fall, it is often too late to replace any equipment that has been stolen or damaged.

8. The "traditional" system of receiving equipment and supplies on credit against future fur catches or other cash income had not pre-disposed people to manage their money through savings. Nonetheless, hunting families were making wider use of savings as a budgeting mechanism. Many hunters were depositing ISP benefits in excess of immediate needs as a positive balance on their charge accounts at the local Hudson Bay Co. store. Some hunters expressed dissatisfaction with this arrangement, however, claiming that the retailer had applied ISP benefits against debts that the hunters would have preferred to pay over a longer period of time. Other hunters were beginning to use banks, but in settlements where there were no banking services, they had to go to such regional centres as Timmins, Chisasibi, or Chibougamau.

seek summer employment when it was available.

These apparently contradictory individual assessments can be related to many variables: the kinds of jobs available, the level of consumer access desired, the value attached to the activity of hunting by comparison to available wage employment, and the productivity of subsistence production from place to place.

Moreover, most hunters still had a very imprecise notion about how wage income would affect their ISP benefits by the end of 1976-7. We were aware of some hunters who, having lost an entire quarterly ISP cheque due to unexpectedly high seasonal employment income in the Program's first year, had since refused to accept employment of any kind. In some cases this refusal may be related to an inflated perception of the effect of employment income on deductions from ISP benefits.

IV. Conclusions

The Income Security Program has provided increased cash income to intensively-harvesting families, and these families have expended the great majority of ISP income on harvesting activities. In particular, increased amounts are being spent on transportation between settlements and hunting grounds, and on major equipment. Increased expenditures on harvesting-related supplies have occurred; but annual costs of goods purchased for settlement living, such as purchased food, have often declined.

Based on a sample of 24 hunting family heads from the five coastal settlements for costs of winter hunting and major equipment, and on smaller samples of 14 to 17 family heads for costs of spring, summer and fall hunting, mean annual bush costs were $4583 (Table 6.9). This mean is for a group which appears to moderately over-represent hunters with greater-than average distances to travel, and represents predominantly hunters 35 years of age and older, about 90% of whom had consorts with them in the bush for at least part of the harvesting year, and who had on average two to three children with them in the bush. Working from so small a sample involves some guesswork, but let us assume that the $4583 figure is typical of the annual bush expenditures of a beneficiary unit with two adults and three or four children, and average distances to hunting areas. According to Income Security Board statistics, the mean 1976-7 ISP benefits paid to families with two adults and three children are $5938, and for families with two adults and four children, $6478. It would appear, then, that ISP benefits for a typical family of this size are in excess of direct bush living expenditures by $1400-1900. This is taking no account of grocery expenses of families while they are resident at the settlement, even if the head of the family is involved in harvesting or related activities. It also takes no account of costs of such items as road vehicles and freezers which are of importance to many families in the course of harvesting activities. Our data do not permit us to quantify these factors.

From our small sample of seven coastal families for which we have complete annual budgets, however, it appears that direct bush living expenditures discussed in the previous paragraph may be only about 50% of annual living costs. This means that the Income Security Program alone cannot support current annual cash expenditures and probably falls short of meeting the essential expenditures of families half of whose consumption unit-weeks are spent in settlements.

For the hunting families for whom complete budgets were available, for

example, the total of direct bush expenditures plus costs of groceries consumed in the settlements alone exceeded the ISP benefits (Table 6.10). Other costs such as clothing and housing payments, utilities, and maintenance also require additional cash income from non-ISP sources. "Luxury" items such as televisions, plane fares to other communities, radios, stereos, etc., were not included in our figures, nor were road vehicles. Still, mean combined bush and settlement cash costs for the three Chisasibi families came to $9,217 (as against mean ISP benefits of $7,533), and for the four Whapmagoostui families came to $9,279 (as against $4,710 in mean ISP benefits). Employment income, family allowance, and fur income made up the difference between ISP benefits and total annual cash expenditures (mean employment income for the Whapmagoostui families, with lower mean ISP benefits, being higher than for the Chisasibi families). The Chisasibi families, even without the mean employment income reported, would have had income slightly in excess of the cash expenditures we have listed, because they were families with more than average numbers of children, and had substantial family allowance income. In light of the larger sample presented in Table 6.9, these Chisasibi and Whapmagoostui families had reasonably typical mean direct bush costs of $4,200 and $5325, respectively, and they all had substantial time in the bush (the complete yearly bush costs for four Waskaganish families provided in Table 6.10 also come to a comparable total of $5250).

It appears that, taking into account family allowance and fur income, a typical family with children could manage 1976-7 levels of harvesting expenditure with ISP benefits, provided that stays in the settlement for the family without employment were minimized; and provided also that particular circumstances (such as a typically large air charter bills) did not make particularly heavy demands on cash income. Families who wished to maintain new homes in settlements, however; who did not harvest intensively more than six months of the year; or who wished to meet payments on a road vehicle; were clearly often in the position of having to seek seasonal wage employment to augment their cash income.

It does appear that in 1976-7 hunters purchased more major equipment than they would need to replace annually in future years. However, they had 1975-6 retroactive ISP benefits at the beginning of that year which represented extra income for that year only.

Chapter 7

Program Structure, Policy and Administration - Community Views and Concerns

I. Overview

The present chapter reports on issues raised by community residents in the course of our research in 1977 and 1978. In the intervening years, some of these issues have been resolved (some only recently); others have not. In September 1988, following an extended period of negotiation over ISP improvements, an agreement was signed by the Grand Council of the Crees (of Quebec) and the Government of Quebec which makes several amendments to Section '30' of the original JBNQA (JBNQA Complementary Agreement No. 8; Anon. 1988).[1] It is significant that virtually all of the issues for renegotiation and modification of the Program had already been identified by beneficiaries during the period of our field research in 1977 and 1978. Difficulties in program design can become obvious very quickly to program participants; it can take much longer for structures to be modified, once in place.

We will not attempt an administrative history or analysis here.[2] It is appropriate, however, to mention how the major early concerns of program beneficiaries have been addressed at policy and administrative levels. It may be useful for aboriginal organizations and policy-makers who contemplate income support programs elsewhere to consider community reactions to the Income Security Program, and to reflect on the flexibilities and rigidities inherent in the original design in view of the things that have been possible to change, and those that have not.

Brief to extended visits in each of the Cree communities provided considerable opportunity to obtain residents' views about the operation of the Income Security Program during its first two years of operation. We talked with ISP beneficiaries, with band councils and personnel, with ISP local administrators, and with other

1. The Complementary Agreement was subsequently incorporated into legislation (Québec 1988).

2. Program review and modification has been an ongoing concern (Grand Council of the Crees [of Quebec], 1977; La Rusic, 1978, 1980; Cree Regional Authority, 1982, 1988; Cree Hunters and Trappers Income Security Board 1982, 1985).

community residents.[3] It became clear in the course of our research that people in the communities valued the Income Security Program as a measure which contributed substantially to fortifying the cash economic conditions of harvesting life. Hunters previously engaged in intensive harvesting generally acknowledged that the assistance of ISP made hunting more secure, and made it possible to afford equipment which makes some aspects of traditional harvesting easier. Some hunters, particularly those whose traplines are distant from settlements, said that recent increases in the cost of such imported goods and services as air transport had limited their ability to utilize their grounds effectively. ISP benefits were helping them to make more intensive use of grounds which in recent years had been under-harvested, due to high costs (although some with distant grounds were still experiencing difficulties meeting costs).

It was noted that there were some hunters who would not be involved in intensive hunting were it not for the security and wider range of goods and services that ISP made available to harvesting families. By and large, this category was comprised of mainly younger individuals and families who went into intensive harvesting after ISP was introduced. While a few of these, it was observed, had dropped out of intensive harvesting after an initial year's experience on ISP, most had remained. Since many of these younger families are those for whom inadequate employment opportunities had meant unemployment and welfare dependency in settlements, or emigration, hunting with ISP benefits was a welcome alternative.[4]

In general, then, the maintenance of the hunting economy was seen locally to be promoted by the presence of ISP. Hunters sometimes commented, however, that ISP could serve this purpose only as long as people had the land and land-based resources required to hunt. Several hunters with territories in the area of the proposed Nottaway-Broadback hydro-electric complex expressed anxiety about the longer-term viability of the natural resource base.[5]

Hunters often expressed the concern that children seem to have grown too fond of imported goods, and not to relish the bush foods. Such statements, we believe, symbolize a broader issue of concern to Cree parents. Taking food from the bush is central to the cultural complex which these Cree have been fighting to preserve.

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3. Where it was feasible, we held public meetings to which ISP beneficiaries and local councils in particular were invited, in an effort to obtain peoples'views on a wide range of issues relating to ISP. In other cases we relied more heavily on extensive discussions with hunters individually, and with local band personnel, ISP administrators, and other community residents.

At each community, we interviewed several ISP beneficiaries chosen from traplines at various points in the community's territory to elicit quantitative data about the economics of hunting ISP (presented in our chapter on hunter's costs), and to elicit impressions about the general functioning and impacts of the Income Security Program. In addition to these measures, we were available to receive comments that individuals might wish to make concerning ISP. In each community, we encountered active interest in making local views about the Program known.

4. Recent information indicates that some individuals and families initially on ISP have dropped off the Program, even where there was no alternative employment available. This is particularly the case with single individuals, who claim they can earn more cash income from welfare than from ISP benefits. We do not know how many of these individuals continued to harvest while receiving welfare benefits.

5. It is interesting to note that under the 1988 Complementary Agreement and parallel legislation, eligibility for the Income Security Program is not lost if a beneficiary unit head is forced to abandon or diminish his harvesting and related activities as a result of government action or development activities (Anon. 1988, para. 4; Québec 1988, para. 2).

And if, through prolonged separation of the school-aged young from the bush life, and through continual exposure to Euro-Canadian consumption patterns and consumer ideology, the products of the bush life come to be under-valued, this represents a danger. Community elders emphasized the need to maintain the interest and involvement of the young in the harvesting life, recommending that school scheduling and curricula be better adapted to this end.

Income security for hunters, then, cannot stand alone as a measure to guarantee the harvesting life, and this fact is clearly recognized by Cree people themselves. They must succeed in maintaining their physical relationship with the natural resources upon which harvesting has always depended, despite pressures from an eagerly-expanding metropolitan society. Moreover, institutions and ideologies alien to traditional culture must not make such inroads that the perceived value of traditional products is diminished, or traditional production becomes emptied of meaning. While the Cree have strengthened their cash economic position by way of a transfer from the state to hunters, they are conscious that diverse aspects of metropolitan influence need to be controlled to maintain hunting as a viable way of life.

II. Local Views of Program Structure, Policy and Administration

Cree community residents commented on several aspects of program structure, policy and administration, many of which they hoped would be reviewed by the Income Security Program directorship. Some of the changes sought by beneficiaries and others in the communities have involved administrative and policy decisions within the normal mandate of the Income Security Board. Others entail activating some terms of Section '30' of the JBNQA that had not been implemented at the time of our research, and still others have involved (or would involve) statutory changes as agreed between Cree and Quebec parties.

Concerns and recommendations raised fall under several categories: (1) the amount of ISP benefits (2) spacing of ISP payments (3) the timing of quarterly payments (4) administrative delays (5) local control of ISP funds (6) non-eligibility for per diem under certain circumstances (7) deductions from ISP benefits for "other income" (8) unexpected deductions, large deductions, and the manner of recouping overpayments (9) communications and understanding of the Program (10) establishing eligibility for ISP (11) indexing of ISP benefits (12) endorsement of ISP benefits cheques (13) illness, injury, and death as they affect ISP benefits or eligibility (14) maternity as it affects benefits (15) the definition of "net income" for certain activities (16) concern that ISP be a program for 'real' hunters, and that certain opportunistic uses of the Program be curtailed.

1. **The Amount of ISP Benefits**

There was some concern expressed by beneficiaries that fairly rapid rates of increase in the price of air transportation and fuel, in particular, might in future erode the stronger cash economic position recently achieved under ISP. Some hunters with hunting areas distance from settlements stated they already had difficulty in meeting transportation costs. The new costs, for many, of maintaining permanent modern dwellings in settlements, and the general high cost of living while at the settlements, were occasionally mentioned in connection with household cash shortages even with new additional income from ISP.

The adequacy of ISP benefits has been discussed in more detail in our chapter dealing with hunters' costs and incomes. There we noted the recommendation by several hunters that ISP benefits be adjusted to take into account differential transportation costs.[6] But to pursue within the regime of the Income Security Program a formula based partly on transportation costs would clearly require modifications in the terms of Section '30' of the James Bay and Northern Quebec Agreement. An alternative approach that has received considerable discussion in the Cree organization is a comprehensive subsidy program separate from ISP to equalize the transportation costs of hunters. This would enhance the productivity of harvesters by making more efficient use of remote territories, and taking pressure off territories nearer the villages. But the subsidy approach poses issues of its own for ISP benefits, as discussed later in relation to deductions for "net income".

2. The Spacing of ISP Payments

There was not a general consensus in communities on the ideal spacing of Income Security Benefits. But with the possible exception of Eastmain, there appeared to be a large proportion of people in all settlements who were content with the current scheme of quarterly payments, subject to minor modifications of the dates cheques were actually issued.

Other hunters, especially those who are within ground travel distance of settlements, sometimes said they would prefer payments more often, each one or two months. Hunters at Eastmain generally recommended that payments each two months would be superior to the present system, provided that those who would not be able to make returns to the settlement could obtain the semi-annual payment mentioned below. Several people at Chisasibi expressed a similar view, with a comment made at Whapmagoostui that more frequent cheques would fit better with the local credit limits at the HBC.

At several communities it was pointed out that hunters who have large distances to go to their traplines can find it costly and inconvenient to make a trip back to their settlements to pick up the January payment. These people preferred to receive one-half of annual payments for the period September through March in one lump sum in the fall, as provided for in Section 30.5.8(f) of the Agreement, which at that time had not been implemented.

There were other hunters who do come back very briefly to the settlement to visit school children at Christmas who thought it would nonetheless help to receive a one-half annual payment in September. One group of hunters explained that if they wait in the settlements until January 1st or 2nd to get their cheques, they have to take their beaver traps off while they are away from the trapline, otherwise

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6. Some hunters at Chisasibi and Waskaganish argued that it costs more for hunters who live in the settlement, or near it, for groceries for their families and gasoline for their skidoos, so that extra money spent by distant hunters on transport does not represent so great an inequality by the time other factors are considered. Particularly in the settlements along the Bay, the coastal traplines are poorer in beaver, and hunters further inland often compensate for higher air cots by having lower expenses for food supplies and higher fur income. There are hunters, however, such as the Nichicun hunters at Mistassini, who have trips of up to three hundred miles who appear to have very little money left over for the kind of equipment that nearer hunters can afford; and in several communities hunters who had more than a hundred miles to travel to their lands still find the costs burdensome, and were generally more vocal about high costs than nearer hunters.

beaver and traps can freeze into the ice. If they were able to leave their traps set, they could have two or three beaver during that period. Other traps on land can be left for more extended periods, but there is the danger that predators will damage animals and furs caught in traps unattended for several days.

It was widely recommended that JBNQA Section 30.5.8(f), concerning the option of a one-half annual September payment, be implemented.

3. The Timing of Quarterly Payments

Some hunters felt they would benefit from minor adjustments in the time of cheque arrivals. The September cheque is of critical importance for people outfitting and transporting themselves to winter hunting locations. Many hunters prefer to leave for traplines by the latter half of August. Reference was made to the fact that hunters need more time to accumulate stocks of fish and small game in the fall so they can concentrate more heavily on trapping later on. At most communities, the availability of air charter service is an important factor. Weather conditions along the coast are often rough in September, and there is a rush on available planes when weather is good and planes can be obtained. Several families end up waiting for a trip. At Mistassini, heavy demands on air charter services were made by nearby non-native industry, as well as sportsmen, and it could be difficult to get enough planes into Mistassini to fly people to their traplines without costly delays. Any delays in the arrival of cheques aggravate such difficulties. People reason that if cheques arrived by mid-August, they would have fewer problems, both along the coast and at inland communities.

The April payment was the other cheque which some hunters recommended should be received earlier. Especially at Waskaganish, hunters mentioned the difficulty and danger of ice conditions during April. People who wait for their cheques before going to goose camps, or who attempt to come in from camps to get cheques, might have problems. Hunters therefore wanted to receive their cheques between mid-March and the first of April.

Under the most recent round of amendments to the Income Security Program, the dates in question have remained "on or about" September 1, January 2, and April 1, with the fourth payment on or about June 30.[7]

4. Administrative Delays

Administrative delays had caused concern at various settlements in the early stages of Program implementation. Hunters frequently reported having had to wait in settlements for cheques when they would already have normally left for the bush. Late cheques aggravated the problems with transportation and with the weather in respect of time of cheques that have already been discussed. Moreover, people were quite aware of losing days in harvesting while they waited in settlements for their cheques, and frequently recommended that they be compensated for such losses when serious delays occur.

At Wemindji, the local council recommended that the provisions in the JBNQA for the holding of some funds locally be implemented. This measure, it was felt, would help administrators to meet some of the more urgent requirements arising

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7. Québec 1988, para. 12; Anon. 1988, para. 20.

when funds cannot be mobilized quickly enough from the central office in Quebec, and would serve other functions mentioned below.

5. Local Control of ISP Funds

During some of our visits it was strongly recommended to us by band councillors and local administrators that Sections 30.5.6 and 30.5.7 of the JBNQA, concerning the transfer of some ISP funds from the Income Security Board to ISP local administrators, be implemented. These funds, according to Section 30.5.9(a) and (b), could be used to pay beneficiaries modest advances for shorter harvesting trips, or to pay a beneficiary unit in the event of non-receipt from the Board of payment due.

There have been logistical arguments raised against these measures, however, and the transfer of funds to local administrators has been changed in the 1988 Complementary Agreement from an obligation of the Board to a decision to be taken at the Board's discretion.[8]

6. Non-Eligibility for Per-diem Under Certain Circumstances

Under section 30.3.3 of the Agreement, periods during which the head of the beneficiary unit or consort received salary, workmen's compensation, unemployment insurance or manpower training allowances are not included in the calculation of per diem benefits. This created a problem for some beneficiary unit heads who harvested, but whose wives had regular employment, since the beneficiary unit head could not obtain ISP per diem, and presumably after deductions might have little or no guaranteed amount. The beneficiary unit head was therefore restricted to very low cash income on account of his consort's regular earnings. In the context of Cree family roles, it was an unhappy outcome which seemed to underrate the importance of hunting.

An initial measure taken for 1976-7 by the Income Security Board in relation to this situation (Resolution 76.18) was to permit under the per diem calculation those days spent by the beneficiary unit head conducting harvesting and related activities on week-end and other days for which the consort was not in receipt of income.

A second solution, passed toward the end of 1976-7 year, went beyond the initial one and established as policy that the days spent in the bush by the beneficiary unit head be calculated for the purpose of benefits, even if the consort works full time, on a regular or seasonal basis (Resolution 77.13.A). An earlier related resolution (76.20.B) established that days spent by the beneficiary unit head in harvesting and related activities, while the family received income for boarding children (foster-home or hostels), be payable under ISP.

The 1988 Complementary Agreement and the Quebec legislation (1988) build on these earlier Board initiatives. Salary, unemployment insurance, or manpower training allowance received by the consort do not affect per diem payments to the head of the beneficiary unit.[9]

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8. Anon. 1988, para. 19; Québec 1988, para. 16.

9. Anon. 1988, para. 8; Québec 1988, para. 11.

7. Deductions from ISP Benefits For "Other Income"

Deductions against the "basic amount" of ISP benefits are made for income from "other sources" outlined in Section 30.3.4 of the Agreement. Although these deductions are part of a negotiated regime between the Cree and Quebec, there existed at the time of our research some controversy as to some of the specific decisions made, and the way in which deductions are in practice made from beneficiaries' quarterly payments.

The deductions for income from employment, guiding and outfitting and manpower training allowances were generally less controversial than the deductions for fur income and crafts income. There were, however, some hunters who said that their employment earnings should not be subject to a deduction rate against ISP benefits, or that the deduction rate should be lower. The reason most often given was that the cost of air charter transport for winter hunting was burdensome. Significantly, it was at Mistassini, where average distances to winter traplines are greatest, that the most opposition to the employment deductions was registered. Another reason given was that it was very costly to maintain a family while in the settlement, and that if a hunter was taking wage employment in the summer it was because he could not do much harvesting. There was, in other words, some correlation between people who said ISP benefits were inadequate to their needs and those who said there should be no deduction for employment earnings. The rationale seemed a primarily economic one.

In the case of the deductions for fur income and handicraft income, however, complaints seemed to be phrased less in terms of the financial consequences of those deductions. Some hunters did refer to the customary importance of fur income to offset air charter and outfitting costs. But sentiments against the fur and crafts income deductions were more generally pitched on principle, and in some communities had clearly taken on the aspect of moral consensus. These feelings were expressed most frequently in the coastal communities, particularly at Chisasibi and Eastmain, and but also at Mistassini, Wemindji and Whapmagoostui.

With regard to fur income, a common comment was that a trapper has to work hard for his fur money, and should not be penalized for that. Others stressed that when a trapper catches fur, he is doing that for himself and his family. Some people felt that the fur deduction eroded hunters' initiative and discouraged people from really working in the bush. When ISP was first being discussed publicly at Chisasibi, we heard, people were offered the metaphor that receiving ISP benefits for hunting would be like receiving wages for being employed (one translation of the Cree phrase for ISP benefits is "hunting wages"). Why, one hunter wanted to know, should ISP beneficiaries incur a deduction for fur income, when people who have wage employment and who trap at the same time do not have deductions made against their employment earnings? It is also significant that in the welfare system to which people had been accustomed, welfare benefits were not normally reduced in consequence of income earned from the sale of furs.

Our interpretation, after hearing many such comments and questions, was that fur income represents to people a certain cash-economic autonomy and the dignity of a degree of self-support; and that deductions to ISP benefits on account of fur income were perceived as negating those values. Casual employment and welfare in the past, it should be noted, were sources of cash income that were seen as complementing, not replacing fur income. And all of these sources of cash income together were supporting a primary occupation and way of life which was

harvesting.

Somewhat similar feelings seemed to prompt comments about deductions which had been made on account of income earned from crafts production. The argument was often put with respect to fur and handicraft income jointly. Two frank comments in this connection were that "a woman could not skin a squirrel or pick up a needle to sew without a deduction being made on ISP benefits", or that it was "like a child's game, going around trying to find every bit of pocket money that people made". Such feelings, while sometimes expressed in humour, reflected a serious underlying concerns.

People have experienced in recent years a proliferation of bureaucratic process in areas of their lives once regarded as personal and autonomous. Related to this development has been some frustration with the amount of information people find required of them; with all the things that have to be considered and kept track of that were not in the past. People do wonder where the limits are, and many of them were genuinely perturbed to find participation in the Income Security Program touching their affairs in ways they had not intended or foreseen, sometimes over amounts of money that they claimed were relatively small.[10]

Cree representatives who negotiated the terms of Section '30' of the Agreement were of course aware that the various forms of other income would be subject to formulae for deductions against ISP benefits. But Section '30' was negotiated under a very tight deadline, and some features of it were not thoroughly digested at the community level. Cree representatives and future beneficiaries perhaps had difficulty in foreseeing certain objections which would later be raised to some procedures required to implement the negotiated provisions. We did hear occasional comments, also, to the effect that "nobody said anything about fur income when the Income Security Program was first proposed here". This suggests to us that some people, whether due to their own lack of involvement or to some problem in the consultation process, received some surprises when the Program was actually implemented.

The deduction for fur income was said to have led to some general restraint in trapping at Chisasibi and Mistassini. At Mistassini, some people felt it was a good idea to let beaver populations increase, anyway; but several hunters expressed the same negative feelings about fur deductions that we had heard elsewhere.

There has been some concern expressed that the fur deduction may be disruptive at some communities for the fur marketing program that the Cree Trappers' Association had been trying to establish. At those settlements where small independent fur buyers can be contacted, there is the possibility of selling furs with less chance that fur income not reported to the Income Security Board will be detected. The hunter may accept a lower price from an independent fur buyer in order to avoid the 40% reduction, after his exemption for fur income under ISP has been reached.

The deduction for handicrafts income was said to have had an impact on the production of those items, as well. We were told by Cree administrative personnel in two communities that the production of handicrafts for sale had dropped to very

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10. Even fur income, or at least "net" fur income, is viewed as marginal income by some. Band councillors on two occasions told us there should be no deduction for fur income, noting that most trappers were making less than $1,000 in gross fur sales anyway.

low levels since ISP was introduced.[11]

Dissatisfaction over the issue of fur and handicraft deductions may have been exacerbated during the initial year under ISP by a still limited beneficiary understanding of the rules governing those deductions. In some instances beneficiary unit heads appeared not to understand that only 40% of "other income" was deducted against ISP benefits; that "other income" was discountable only from the "basic" or guaranteed portion of ISP benefits (and not from the per diem portion of benefits); or that in the case of fur income there was an exemption of $250 per beneficiary unit head and consort, and that only amounts in excess of that exemption would be deductible at 40%. The difficulties in-principle with these deductions remain, nonetheless.

Although Quebec has refused to cancel the fur deduction, Quebec has agreed in the 1988 Complementary Agreement[12] that the Income Security Board may, through by-laws, determine the amounts from fur sales that should be considered exempt, and that these

> "may vary according to categories of beneficiaries determined by the by-law, the income of the beneficiary unit and the territories where harvesting and related activities are carried out or the manner in which such activities are carried out."[13]

This measure leaves the decision in the hands of the Board, whose membership is equally balanced between Cree and Quebec members. In the event of non-decision by the Board, the amount of fur income exempted from the deduction was modestly increased to $750 per adult in a beneficiary unit.[14]

8. Large Deductions, Unexpected Deductions, and Recouping Overpayments

A second, somewhat different issue with respect to deductions was the manner in which they were subtracted from quarterly payments. If a beneficiary unit head or his consort earned considerably more income from other sources and/or spent considerably fewer days in harvesting than the administrator or beneficiary unit head anticipated when the level of beneficiary unit quarterly payments was set, there would follow a significant downward adjustment of annual ISP benefits. This would mean that the beneficiary unit had been overpaid on cheques already received for the year, and the Program would usually recoup the entire overpayment from the first quarterly cheque following a discovery of overpayment. This sometimes meant that an entire cheque would be withheld, and if the amount owing the Program was great enough, a subsequent cheque could also be considerably reduced.

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11. In addition to factors already discussed, it is possible that this drop in the availability of crafts for sale was due partly to the greater domestic demands of people in the bush. Moreover, crafts production is only marginally remunerative, and the 40% deduction against ISP benefits either discourages ISP beneficiaries from producing crafts for sale, or discourages them from reporting this income.

12. Anon. 1988, para. 9.

13. Québec 1988, para. 11.

14. Anon. 1988, para. 9; Québec 1988, para. 11. The fur exemption had been $651 per adult in 1987-88; with indexation of the new $750 exemption, it became $765 in 1988-89.

During the first few quarters of the operation of the ISP, at least, many hunters who earned a considerable amount of income from casual employment did not anticipate losing cheques as a result. For hunters who had chartered planes to the village from their traplines to pick up January cheques, unexpected deductions had sometimes resulted in cheques too small to return to their trapline for the rest of the winter. Had they known this, hunters in this predicament said they would have chosen to stay longer at their trapline before making a return to the village. In other cases, hunters had taken too many goods on credit in expectation of larger future cheques, and when they could not pay on time, restrictions on credit were placed on them by local merchants.[15]

Probably the time of the year when cash availability is most important is early fall. However, the September cheque may be particularly susceptible with respect to the Program recuperating any overpayments made to the beneficiary over the previous year. As Section 30.5.8(d) of the JBNQA (Anon. 1975) stated,

> "in the event of overpayment resulting from the (annual quarterly payments) the amount of such overpayment shall become due on September 1 of the year in which a benefits from must be filed".

On occasion, a deduction against the September cheque left a beneficiary unit with insufficient cash for fall and winter outfitting.

Hunters from several settlements recommended that where the Income Security Program must recoup sizeable amounts on a beneficiary unit's payments, that it spread the deduction over several quarterly cheques. In this way, it was hoped, there would be better predictability of individual beneficiary unit benefits.

This recommendation was in fact acted upon through the JBNQA Complementary Agreement No. 8 and its parallel legislation, which now allows overpayments to be reimbursed over a period as long as two years.[16] Specific terms, conditions and criteria are left to the Board to regulate by by-law.[17]

9. Communications and Understanding of the Program

People frequently remarked that the Income Security Program is a very complicated program to understand, and contrasted it with the relative simplicity of the welfare system previously used by hunting families. There was often a quite limited understanding of the general principles and regulations of the program, as well as more general difficulty with the mathematics of benefits calculations. As we have already stated, problems of unpredictability of payment size had led to some difficulties for beneficiaries, a problem related to lack of fluency with the rules and procedures of the Income Security Board.

A local administrator in one village said that there had been a "communications gap" between the GCCQ and community residents about the Income Security Program during negotiations. Another local administrator referred to communica-

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15. In 1976-7 after having received cheques in September 1976 for their retro-active 1975-6 benefits as well as their first normal quarterly payment for 1976-7, several hunters were not expecting the much smaller amount of their January 1977 (2nd quarterly payment) even when it was a normal-size payment. This, however, was a one-time occurrence.

16. Anon. 1988, para. 20; Québec 1988, para. 9.

17. Anon. 1988, para. 12; Québec 1988, para. 11.

tions problems during implementation of ISP, noting for example that people did not understand the difference between records kept for ISP and Native Harvesting Research. In two other villages, band personnel felt that there had been good general-level communications about the Income Security Program from negotiations onward, and their judgement tended to be confirmed by fewer, less urgent requests on the part of beneficiaries to have Income Security Board members come and explain one policy or another.

Chisasibi was one community where there had been early misunderstandings about the Program. However, there had been relatively frequent contact with Income Security Board personnel, in addition to the local administrator, and many, though not all cases of misunderstanding and grievance had been resolved to the satisfaction of the beneficiaries concerned. At Whapmagoostui, while some people felt that having been able to gain a good understanding of ISP through the local administrator, others remained antagonistic toward a number of policies and specific decisions. There was some lack of patience expressed for the idea that although some features of ISP may be unpopular, they had been negotiated by Cree representatives with Quebec, and some might be difficult to change. Whapmagoostui residents, including those who seemed more content with ISP, were strong in their view that it was important to have direct contact with the Income Security Board.

Local administrators at all settlements were limited in the amount of public education they had been able to do during ISP's first year. They themselves had a considerable amount of learning to do about the program, and were extremely busy during the process of implementation. While handing out quarterly cheques, interviewing and filling in forms, they acknowledged they could not immediately respond to all questions and concerns in detail, since long lines of people tended to develop outside their offices when the cheques arrived from Quebec City. The problem was compounded by the reticence of some beneficiaries who did not return to the administrator's office at a later time, leaving complaints or questions unvoiced or unanswered.

Income Security Board members and central personnel were likewise extremely busy in the course of implementing the Program and working bugs out of the system, in addition to routine administration. Where it was mutually convenient for Income Security Board personnel and local communities, meetings were held with bands or band councils. This resulted in better coverage for some communities than for others in the first year or two of program operation.

Some local administrators also made independent efforts to provide needed information and understanding of the Program through beneficiary meetings or group sessions with senior hunters. In addition, there was opportunity for one-to-one dialogue at administrators' offices when quarterly payments, interviews and other administrative duties did not occupy available time and when the beneficiaries were not in the bush.

Nonetheless, at the beginning of the second year of the Income Security Program, a number of unanswered concerns and mistaken notions about the Program remained in beneficiaries' minds. In part this was due to the fact that local administrators did not always know the rationale by which various provisions had been written into the Agreement, or subsequently adopted. More important, beneficiaries realized that local administrators do not make policy. Local administrators were not therefore regarded as the appropriate people to deal with complaints and inquiries about that policy.

Community residents clearly wanted to be able periodically to express their

concerns directly to the individuals who make decisions, and to be able to clarify points of policy about which confusions has occurred. They felt it important to have a forum for such direct interaction, in addition to the indirect channel represented by the local administrators. In three communities there was a call for visits by Income Security Board members.

In two communities there was an explicit recommendation that ISP educational sessions be held for two or three days. It was felt that group sessions are a more efficient way of communicating the basic logic of the Program than one-to-one talks with the local administrator or others. The sessions would have the advantage of providing a forum for some community-wide convergence of understanding about the Program, its aims and its functioning. Some local administrative people and beneficiaries indicated that where such efforts had been made, there was better understanding of the Program and better acceptance of some procedures that had initially appeared contentious.

A more specific information request was made with regard to the actual calculation of deductions and benefits. Most beneficiaries receiving their cheques had little idea how the amounts had been arrived at, and this particularly concerned them when the amounts of their quarterly payments had varied. In some cases they had approached the local administrator, who sometimes had to request more detailed information from the central office in Quebec before he could respond to the inquiry. Cheque stubs were provided for the 1975-6 and 1976-7 cheques, but apparently did not provide sufficiently detailed information to answer all questions about benefits calculations.

Beginning in 1977-8, however, the Income Security Board began to supply the local administrators with computer print-outs showing the detailed calculations for the current year, as well as the projections for the following year. The breakdown of each quarterly payment was also in the local administrator's files. Cheque stubs were signed and returned to the Board. Presumably families are now able to verify their benefits calculations with the local administrator if there are any serious disagreements over the amount of cheques, or deductions. In the early 1980s, the Income Security Board commenced producing a helpful information brochure for beneficiaries on the workings of the program and the determination of benefits.

At the GCCQ/CRA Annual General Meeting in summer 1980, the Cree Income Security Board heard first-hand the views of people in the communities about the Program, including a number of suggestions for program improvement that had been raised in the course of our research.[18] For its part, the GCCQ/CRA has taken important initiatives to keep lines of communication on ISP policy issues, including community consultations organized in 1986 to discuss changes to the Program proposed by the Income Security Board (1985). This process accompanied the negotiation of the 1988 Complementary Agreement. While communication about the Program has certainly improved through these and less formal channels, there continue to be some reports of poor understanding of the Program, particularly with regard to the complexities of benefits calculations.

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18. La Rusic (1980) sets a discussion of these in the framework of an important analysis of program structure, administration, and possible modification.

10. **Establishing Eligibility for ISP**

An individual not on the Program who wishes to be head of a beneficiary unit and to receive ISP benefits must first establish his or her eligibility. This is normally done by complying with the stipulation of Section 30.2.2.(a) of the JBNQ Agreement (Anon., 1976:438), which requires at least 120 days in harvesting and related activities, at least 90 of which must be away from the settlement, over the course of a year. During this year, the prospective beneficiary receives no ISP benefits.

Those who negotiated the Agreement intended that this provision would make it more difficult for people to abandon and rejoin the Program at whim. The suggestion was made to us by community residents (including two band chiefs), however, that the provision be reviewed. Their objection to the rule as it presently operates was that it seemed to "penalize" the first-time beneficiary, which was contrary to the Program's intention to encourage harvesting. Young individuals who wish to harvest for the first time (with the exception of those coming directly from their parents' beneficiary unit in the preceding year) have to accumulate income from elsewhere if they wish to get started in hunting. It was also observed that it is precisely in getting started that a person requires assistance most.

It was unclear to what extent the necessity to establish eligibility discourages these individual from entering harvesting. We were aware of cases in which individuals receiving welfare hunted on short trips from the settlement to establish eligibility, as well as of instances in which sufficient resources were obtained from employment and other income to outfit for a winter bush camp.

A second question with regard to eligibility arose in the case of individuals already on the Program who had been unable to meet the criteria for continuing eligibility due to illness. Beneficiaries were unclear as to policy in these cases. The Board has exercized discretion and flexibility. However, the inquiries apparently stemmed from the fact that there was no reference to the circumstance of illness in the Agreement (although accidental injury and circumstances are considered specifically in Section 30.2.2[c] through [f]; Anon. 1975).

11. **Indexing of ISP Benefits**

People expressed some concern about whether benefits would keep pace with the cost of living. The annual inflation index for the north, one band official recently told us, is about 4% higher than in the south. With the current indexing of ISP benefits at the same rate as social aid programs of general application in Quebec, there is a gradual decline of beneficiaries' real income.[19] Moreover, it appears that the indexation of Quebec social aid programs has not even kept pace, over the years, with the Consumer Price Index applicable to southern Canada.

Hunters rely heavily on gasoline for their motorized equipment. They are affected by transportation cost of all merchandise imported to the north, in which rising petroleum costs were a major factor. Hunters were also sharply affected by petroleum price rises through their use of air charter service to bush camps. When

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19. The increase of ISP rates used in benefits calculations, according to "l'indice des rentes ", was 7.5% as of January, 1978, and 9.0% as of January, 1979 (Income Security Board). We do not have a reference for the figure offered by the band official.

they fly gasoline for 'skidoos' and chainsaws to camps, the effect of price rises in petroleum is compounded. It is likely, then, that inflationary periods will result in cost of living increases substantially higher for northern hunting families than for southern families.

A cost of living index specific to the James Bay Territory is contemplated as an alternative in the JBNQA (Section 30.3.6), but has not been devised or implemented.

12. Endorsement of ISP Benefits Cheques

It was suggested by individuals at one community that it would be helpful if either the beneficiary head or the consort were able to endorse ISP cheques, since the benefits for the beneficiary unit as a whole are included in the same cheque. There had been instances in which the husband was away from the settlement when the cheque arrived, and the wife could not endorse the cheque.

The 1988 Complementary Agreement and the Quebec legislation (1988) establish that the consort in any beneficiary unit may apply for separate payment of those benefits pertaining to the consort, and that the Income Security Board may also pay to the consort rather than the beneficiary unit head all amounts owed to the unit, or expedient proportion thereof.[20]

13. Illness, Injury and Death in Relation to ISP Benefits

Illness, injury and death were problems frequently raised in relation to their effect on ISP income. Beneficiaries pointed out that when either a husband or wife falls ill, is injured, or dies, the family stands to lose a good deal of income at a time when they can least afford it. Their future ISP cheques may be adjusted downward to the point that they have insufficient income.

According to an initial policy resolution of the Income Security Board in 1976-7, the death of a child or an adult would not affect the guaranteed "basic amount" already calculated for the year. The death of an adult, however, **would** affect the per diem received by the beneficiary unit (Resolution 76.21). A subsequent resolution was adopted at the end of 1976-7 which modified the earlier position. According to Resolution 77.10, the death of an adult or of a child, the guaranteed "basic amount" of the beneficiary unit would **also** be adjusted the month following the death, to reflect the new composition of the beneficiary unit.

In the cases of illness or injury, presumably, only the per diem amount is reducible, and the guaranteed amount would rise due to lower deductions for 'other income', unless the individual opts to go on social aid.[21] Per diem amounts, however, account for the great majority of most beneficiary units' benefits and the guaranteed amount is low by comparison, so that hardship can result nonetheless.

It was pointed out to us during our visits in the communities that people with wage employment can get sick leave with pay, workmen's compensation or unem-

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20. Anon. 1988, para. 20; Québec 1988, para. 8.

21. The guaranteed amount would rise to an extent because the loss of per diem income would mean that the deduction made against the guaranteed amount at 40% of per diem income would be reduced.

ployment insurance in cases of illness or accident. These options are not generally available to ISP beneficiaries, and some people believe they were also restricted from getting social aid, as ISP beneficiaries.

One recommendation was put forward that per diem benefits based on the beneficiary unit's projected payable days at the beginning of the ISP year should be guaranteed during a period of recovery from accident or illness for a maximum of a year, provided that a certificate was required as evidence of genuine affliction. An alternative approach to would be to institute an insurance scheme in connection with ISP benefits, which would protect beneficiary units in various ways against loss of income when a spouse or consort is ill, injured, or dies. Concerning injury more narrowly, a third approach was contemplated during negotiation of the Income Security Program, but not adopted. That was to obtain eligibility for ISP beneficiaries under the Workmen's Compensation Board.

In the case of death, the 1988 Complementary Agreement and Quebec legislation (1988) introduced an amendment stipulating that a beneficiary unit shall continue to be entitled to income security benefits during the current year, in spite of the death of the head of the unit.[22]

14. **Maternity**

The loss of per diem income when a woman was unable to engage in harvesting and related activities for reason of pregnancy and infant care was noted. Indeed, there was a concern that mothers at this stage were being encouraged to minimize their time away from harvesting, when this was not necessarily in the best interest of their health or that of the child. There was, additionally, the problem that pregnancy and childbirth might prevent a beneficiary unit head in a given year from having enough days in harvesting and related activities to maintain Program eligibility for the following year.

Under the 1988 Complementary Agreement and the Quebec legislation (1988), Program eligibility cannot be lost due to the impact of pregnancy on the activities of the beneficiary unit head.[23] Furthermore, women who for reasons of pregnancy and infant care must suspend normal harvesting activities are now entitled to maternity benefits for as much as 120 days, not to exceed the standard per diem rate, and these benefits must be at least up to the standard of those available under any maternity benefit program of general application in Quebec.[24] Within these limits, the Income Security Board is empowered to determine through by-laws the criteria, conditions and amounts of maternity benefits, the general intent being to ensure that a woman who is a consort or the head of a beneficiary unit and who would normally be engaged in harvesting and related activities will receive her accustomed benefits.[25]

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22. Anon. 1988, para. 5; Québec 1988, para. 3.

23. Anon. 1988, para. 4; Québec 1988, para. 2.

24. Anon. 1988, para. 10; Québec 1988, para. 7.

25. Anon. 1988, para. 10; Québec 1988, para. 7.

15. The Definition of "Net Income" for Certain Activities

Included in "other income", for which a 40% deduction is made against ISP benefits, is

> "all net income earned in harvesting and related activities, excluding income derived from the sale of furs;[26] as well as all net income from guiding, outfitting and commercial fishing and from all other sources and all incomes otherwise received, excluding benefits from family and youth allowances, old age security pensions, social assistance for Indians or Inuit, guaranteed income supplement for the aged and other guaranteed annual income programs existing from time to time in the Province of Quebec".[27]

Families on the Income Security Program who board school children and operate hostels objected to having the then $150 per student allowance treated as income for purposes of ISP deductions. According to Resolution 76.20 (B) of the Income Security Board, 40% of such allowances were considered net income for purposes of deductions. The people we talked to in Chisasibi and Waskaganish pointed out that from the allowances they had minimally to provide the children's subsistence, including groceries and other items. In some cases clothing had also been purchased out of allowance.

We talked to families in both Waskaganish and Chisasibi who boarded school children but who were not on the Income Security Program, and they tended to confirm the statements of the ISP hostel-operating families: that depending on the ages and appetites of the school children boarded, the host family could derive very limited to moderate net income from allowances.[28] Payments received by beneficiary units in respect of child care were eventually excluded from net income for purposes of determining ISP deductions.[29]

The calculation of "net income" is difficult in the case of crafts. Equipment and materials represent some cost to the crafts producer which is not usually quantified in terms of depreciation, purchase cost, replacement cost, etc. in arriving at a realistic "net income" for the saleable product.

The question of treating fur sales as "net income" is more complex still. The costs of transportation and equipment depreciation have not been calculated in arriving at the figure used for the purposes of ISP deductions. In objecting to the fur deduction, some trappers said they had to pay the cost of their air charter with fur money. It would require a well thought-out formula to determine what portion of a hunters transportation and and equipment costs should be deductible from gross fur

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26. For furs, there was in 1976-7 a $250 exemption (indexed to the cost of living) per adult in the beneficiary unit, as per JBNQA Section 30.3.4(a).

27. Anon., 1976, Section 30.3.4 (c).

28. Based on our 1976-7 costs of groceries per consumption unit living in settlements, an adolescent (calculated at 2/3 of a consumption unit) would have consumed $80-100 per month in groceries alone. This would assume that the families caring for them were able to provide as much bush food to boarders as the average harvesting family provides for itself while living in the settlement -- an unlikely assumption, given that there is likely to be an unually high ratio of household members to hunters in such cases.

29. Anon. 1988, para. 9; Québec 1988, para. 5.

income, but it would be possible to arrive at such a formula. There would almost certainly remain very few trappers with sufficient net income from furs to incur deductions on the Income Security Benefits. As mentioned above, the 1988 Complementary Agreement and the Quebec legislation (1988) have recently given greater lattitude to the Income Security Board to decide on appropriate criteria for the inclusion of fur income in benefits calculations.

Difficulties with net income calculation are also raised by initiatives that have been or may be taken by entities such as SOTRAC[30] and the Cree Trappers' Association, to reduce transportation and equipment costs of hunters. The intent of subsidies is partly thwarted if they negatively affect ISP benefits. In any case, it is difficult to reconcile such subsidies with the concept of "net income" for purposes of deduction against ISP benefits.

The Income Security Board (Resolution 78.6) adopted the convention that "a lump sum of $200 be included as income in the calculation of benefits for each beneficiary unit participating in a project funded by SOTRAC, given that SOTRAC is assuming transportation costs". This expedient, however, brought into question the status of possible future efforts to subsidize the costs of trappers. We have noted above that several hunters were arguing for provisions which would reduce the differential impact of transportation costs on individual hunters' incomes. Cree entities, or other agencies supporting their programs, did not want to be in the position of spending monies earmarked for harvesters' use if a portion of that subsidy would be lost through deductions to Income Security Program benefits.

Any improvements through subsidies to address the transportation difficulties of hunters therefore require Board support. The 1988 Complementary Agreement enables the Income Security Board to determine what subsidies should be exempt from consideration as income for purposes of calculating deductions.[31]

16. Who are *Really Hunters?*

Beneficiaries in more southerly communities were critical of a few individuals who, they felt, made opportunistic use of the Program as a source of cash income, without engaging in authentic and customary Cree patterns of harvesting. It was felt by 'real hunters' that such practice reflected poorly on the Program and its legitimate beneficiaries. Furthermore, given the existence of a global limit on payable person-days, serious hunters could potentially lose income if opportunistic abuses contributed to the limit being exceeded.[32] A particular instance was the proliferation of hunting camps along roads and not far from town attractions, where some hunters were thought to be putting on a semblance of hunting merely to qualify for benefits. When, in 1984-85, the Income Security Board was forced by an expanded beneficiary population and a statutory ceiling of 286,000 annual payble 'man-days' to restrict benefits, community sentiment hardened against such instances of abuse. The idea of involving local committees of hunters in controlling access

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30. La Société des Travaux de Correction du Complexe La Grande.

31. Anon. 1988, para. 9; Québec 1988, para. 11.

32. Over a period of years, Cree have pressed Quebec to eliminate the person-day limit, arguing that it interferes with the principle of the Program's universality within the terms of Cree eligibility. Quebec has agreed to successive upward revisions of the ceiling, but not to eliminating it altogether.

to ISP began to be seriously negotiated, in conjunction with Cree attempts to have 'man-day' constraints on Program benefits scrapped altogether.

The 1988 Complementary Agreement and parallel legislative amendments allow for the creation of local committees to establish lists of hunters who "according to community custom, are practising harvesting and related activities as a way of life in accordance with the harvesting traditions and the rules of the community".[33] Eligibility requires inclusion on the community lists of committees so formed (with rights of appeal), additional to conformity to pre-existing eligibility requirements. This innovation represents an important step in adapting the Program to community-level values and decision-making processes. At the same time, the Quebec Government welcomed a process which would potentially help limit Program eligibility and costs, and would shift some of the associated political fallout to community leadership.

III. The 'Man-Day' Issue

While the "man-day" ceiling did not have effects that were being felt in the communities during our research, they were certainly felt in 1984-85 when the Income Security Board was forced to impose benefits recovery measures to respect a statutory ceiling of paid person-days in harvesting. The ceiling had been adjusted by Quebec to 286,000 days in 1977, because the 150,000 person-day ceiling specified in the JBNQA was exceeded in the first full year of Program operations. At that time and ever since, Cree leadership has argued for abolishing the ceiling altogether, saying that its last-minute insertion at Quebec's insistence during JBNQA negotiations led to an inherent contradiction in the the Agreement and its accompanying legislation. The JBNQA establishes the right of any Cree individual meeting eligibility requirements to receive up to 240 days of per diem payments for harvesting and related activities. Clearly, under circumstances of increasing enrollments, this right must come into conflict with any provision to "cap" the Program. Additionally, it has been pointed out that "capping" and benefits recovery are counter to standard policy for other social welfare programs.

It was clear to program administrators that the new ceiling would again be surpassed in 1982-83, and pending study of the issue, the limit was suspended for that year and the next, 1983-84. By decree, Quebec raised the ceiling to 350,000; but in 1984-85, total person days eligible for per diem went to 361,000, forcing the Board to recover six days' worth of per diem from each adult beneficiary to bring the total payable down to the statutory limit. It was recommended by Cree and Quebec members of the Board alike that there should be no more ceiling (Cree Hunters and Trappers Income Security Board 1985). The Cree, for their part, argued for the establishment of local committees to establish eligibility lists according to community custom, in large part as a demonstration of Cree determination to restrict the Program to those who genuinely practice harvesting as a way of life. Crucial players in the Quebec Government hierarchy, nonetheless, were unwilling to accept outright abolishment of a ceiling. They prefered, instead, upward revi-

33. Anon. 1988, para. 16; Québec 1988, para. 13.

sions from time to time of the person-day limit, as circumstances demand.[34] Under the 1988 Complementary Agreement and parallel legislation, a new ceiling of 350,000 person days is established.[35]

IV. Conclusions

The close involvement of Cree negotiators in the original design resulted in a Program that responded remarkably well to the needs of Cree harvesters from the outset, notwithstanding the rushed atmosphere of the later stages in JBNQA negotiations when ISP was dealt with. The Program has been able to evolve in important ways, through policies adopted at the discretion of the Board, through periodic review of operations, procedures and benefits as provided for in the JBNQA,[36] and through formal amendment to the JBNQA and its parallel legislation.

Nonetheless, some elements of Program design have proven both problematic and resistant to change, particularly where these relate to Quebec's concern to control long-term significant costs of the Program. Furthermore, dealing with these less tractable issues on a perennial basis has been wasteful of the energy and resources of those operating the Program - a particular burden for a relatively small organization like that of the Cree.

The Income Security Program is centralized in concept, compared to many other institutional forms that have developed under the JBNQA. On the positive side, the approach has resulted in relatively strong commitment by the Quebec bureaucracy to a Program which is extremely valuable to Cree society. On the other hand, the offices of the Income Security Board can seem remote to local people, even taking into account the strong presence of Cree regional representatives on the Board. In meeting qualitative objectives (e.g. ensuring that the Program serves those who genuinely pursue harvesting as a way of life) the rules and policies of a central agency have definite limitations. Decentralized decison-making and the social controls of community custom have come to the fore in the recent round of Program revisions. These comprise perhaps the most interesting aspect of ongoing evolution in the Program.

Simplicity is an important virtue in the design of an income support program. Elaborate - even well-founded - policy rationales can be built into rules, regulations, and procedures that are opaque to program beneficiaries; and that are apt to be interpreted in ways not consistent with their intent. No designer of a program, of course, is able to fully predict how a given measure will be perceived by a client population. Thorough community-level consultation at both design and implementation stages, rules and procedures capable of flexibility and modification in the

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34. This revision and adjustment is allowed for at Section 30.8.2 of the JBNQA (Anon. 1976).

35. Anon. 1988, para. 24; Québec 1988, para. 21.

36. Section 30.7.1. of the JBNQA explicitly provides for review and adjustments which by mutual consent of the Cree and Quebec are deemed necessary to give effect to program objectives; including specifically to ensure "that hunting, fishing and trapping shall constitute a viable way of life for the Cree people, and that individual Crees who elect to pursue such way of life shall be guaranteed a measure of economic security consistent with conditions prevailing from time to time (30.1.8)" and that "there exists through the program effective incentive to pursue harvesting as a way of life for the Cree people (30.1.9)".

service of program objectives, and the ability of local people to effect improvements and adapt program practices to their circumstances would seem to offer optimal conditions for program evolution.

Epilogue

A Commentary on ISP, Hunting and the Future of Cree Society

Two themes relating to the Income Security Program which we have heard on several occasions, from people within government and the Cree organizations, are worthy of commenting on in the light of the findings in this research. It is especially important to consider them because these ideas have significant implications for the future development of ISP, as well as for one of the major challenges facing Cree society. And we think and feel passionately about the issues involved.

On one hand it has been argued that hunting is limited as a means by which a growing number of Crees can create productive lives for themselves, because the land can only support so many people, and the present levels of ISP beneficiaries are near the limit. As a consequence, a second claim is made, that hunting and the ISP program will be less important in the future for Cree society, as a growing number of youth reach adulthood, and as a smaller and smaller percentage of their numbers can live by hunting.

The demographic trends are undeniable, many young Cree will reach adulthood in the next two decades. But it is easy to reach dubious conclusions about the consequences of demographic trends and ecological constraints if present conditions are seen as fixed and unchanging. For example, as we indicated at the end of Chapter 4, the most biologically productive resources of the James Bay region are being under-harvested at present, especially small game, some fur bearers, and waterfowl such as ducks.

As a consequence, it is not strictly the wildlife which today limits how many people could hunt or live on the land. As we showed at the end of Chapter 4, ISP increased the number of people who could live on the land, because it encouraged intensive hunters to harvest more of the under utilized small game populations, which helped to support their increased numbers and the additional time they spend in the bush. This not only allowed them to feed themselves and their families, it facilitated the production of bush food harvests which are given away to others in the community, fulfilling social responsibilities to friends and kin, and bringing acknowledgement and mutual respect.

What is most critical to the number of people who live on the land at any time is how many people want to hunt actively, and whether they have the resources and the support to do so. It is unlikely that anyone today would be prepared to live predominantly on small game, as some Cree had to do a couple of generations ago, for it is very hard work, and it is precarious, to feed a family solely off of small

game. Yet hunters could use small game more intensively as part of an attractive and diverse hunting pattern which included some waterfowl and some fur mammal hunting, with occasional big game hunts. Such hunters would also have to have access to adequate cash incomes to maintain a diverse diet, effective equipment, and modern comforts.

Such a pattern of hunting has the potential to support many more hunters on the land. And that is why our research leads us to question the claim that the land cannot support more hunters.

This does not deny what many of the tallymen say today, that much of the land is very heavily used and that some species may be over-hunted or nearly over-hunted in some areas. Nor does it deny the conclusion reached by many tallymen, that the land could not support many more intensive ISP hunters. There are limits to the number of people who can hunt intensively at any time. And this is a function in part of what the hunters harvest, and what they harvest is influenced by the social programs, the economic resources, and Cree values at the time.

We also do not ignore the spiritual aspects of hunting, the fact that animals must be respected, and must be willing to offer themselves to the Cree hunters. As we show in this study, Cree hunters responded to ISP with respect and moderation towards the animals, and they carefully limited their harvests of the heavily utilized game. So hunters and game continue to live in mutual respect. That the hunters were able to continue to respond respectfully was generally encouraged by the ISP.

A lesson from this experience is that it is important when thinking about the future to avoid assuming that hunting will always remain as it is today. James Bay Crees history reminds us that at different times Cree people have survived on big game, on fur bearing mammals, on fish, on waterfowl and on small game, often in varying combinations.

One possible development, which we think is emerging and which should not be overlooked, is that in the next generation of adults there seems to be a large group of young people who would like to live by what we might call non-traditional or new hunting. These are young adults who by choice, and because some are unable to find productive wage work, want to hunt, but in ways less intensive and less specialized than the ISP hunters. They need support and encouragement.

What is becoming clear at this time is that ISP hunting should not be taken as the only future of Cree hunting. As we have indicated, hunting is a vital part not just of the Cree economy and diet, it is a vital core means by which the distinctive social fabric of Cree society is continuing to survive in the face of pressures to fragment and become more like other Canadians. If the value of Cree community and culture are to survive, then expanding the support for different types of hunting ways of life should be explored.

The ISP program as it is presently constituted would not be the best way to support such a new type of hunting activity among Cree hunters. But it could be developed to meet these new needs, if the rules for ISP participation were supplemented, the limits on per diem payments were changed, and various other features were altered. Alternatively, a complementary program could be established alongside the present ISP. As it is, ISP facilitates such a development, because as this research has shown, it has had positive impacts on the non-ISP hunting population.

ISP was negotiated, and was always intended as a program which would have to be partially revised at various times, as all social benefits programs are redrafted

from time to time.[1] The ISP as it is now is a major success, and it is vital to the Cree communities, so any new benefits aimed at a new clientele would have to be designed so that they did not reduce in any way the current benefits which serve the intensive Cree hunters. A new or expanded program for less-intensive hunters would therefore require new negotiations at the highest level, and at the right time.

Such negotiations will be needed before long because there is a growing pressure toward new types of hunting from within the Cree communities. Several initiatives in various Cree communities have been started independently to try to assist young adults who want to learn to hunt, including bush summer camps, tallymen who have individually devoted themselves to training young hunters, and job training programs for inexperienced hunters; and most have been enthusiastically received. These efforts need to be expanded and significantly assisted by new income security benefits.

The rapid growth of Cree populations has been noted as the most vital problem facing the Cree people, and especially Cree leaders, and as a result a high priority for all is to find ways to create new jobs and productive lives for the large population of Cree now becoming adults. This task is as daunting as it is critical. It seems a battle in which it will be nearly impossible to create sufficient jobs, yet one in which there will be some success, and in which every step forward will be better than the alternatives.

But maximizing success will require that *all* opportunities are mobilized, and to date very little attention has been given to the idea that non-traditional or new forms of hunting might be *part* of these solutions. It is true that only a certain proportion of young people will want to practice hunting as a major occupation. But a new form of less intensive and less specialized hunting can be attractive to a significant number of younger Cree, who in our experience have a deep respect for the land, and who admire the autonomy of older Cree hunters, and the control over their lives which the latter exercise.

Many of these youth would be attracted to the chance to live as less specialized more part-time hunters. Some may not have many other alternatives, given how difficult it will be to create wage jobs for all the Cree who are becoming adults. We believe that with an adequate income support program, new forms of hunting could be a preferred choice for many of these youth. It is hard to say how many without extensive discussions in the communities. But it is worth remembering that many government and Cree support staff in the negotiations leading to the Income Security Program did not believe that over 1,000 hunters and their families would establish eligibility for the current ISP, and stay in it over many years. If the new hunters were to concentrate their hunting on under utilized species, the land could probably support a similar number of less intensive hunters; if the harvests were carefully spread over the traplines and supervised by more experienced hunters.

Such a pattern would not replace any of the programs to create full-time jobs, it would complement those efforts, and make that Herculean task easier. Indeed, it is hard to imagine a more effective and efficient way to assist a significant number of the youth who will reach adulthood in the next decade. Furthermore, expanded hunting could make job creation more effective, because a pattern of part-time hunting would fit well with those job creation programs which are able to only

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1. Such revisions probably go beyond the mandate of the present ISP Board, and could not be treated as part of its ongoing program revisions process.

create part-time or seasonal jobs.

That is, a program of support for new forms of hunting could be aimed both at people who make this their primary productive activity, as well as at people who want to split their time more evenly between wage work and hunting than the present ISP allows. We were told by a number of people in the Cree villages, some who had work and some who did not, that while they could not hunt full time, they would like the freedom to hunt more intensively than they now do, and to only work part-time.

ISP would need to be expanded and changed to serve this need. But if it were done it would greatly improve the chances that most of the younger generations of Cree will find productive and valued lives, and not face the more desperate alternatives which sometimes seem to be almost inevitable for some of them.

It should not be accepted that hunting, or the income security programs for the Cree hunters, are a static or declining area of importance for the future of the Cree people. Hunting and hunting support programs must be developed alongside and in an integrated fashion with the efforts to create employment, businesses and other services in Cree communities. Indeed a larger income security program would encourage these other developments by bringing an additional source of reliable cash to the communities.

All around the world today there are communities of people hoping for jobs and employment. But in most areas, jobs are not developing quickly, and in many areas they are declining. People are finding that to survive and maintain some well-being for everyone in their communities, they must build on local initiatives, using local skills and resources to serve regional needs. Whether one is in the James Bay region, in Alaska or the Northwest Territories, or in sub-arctic Russia, or rural South America, communities are finding that subsistence activities and local production need to be increased as a part of this process, and as a vital means of building autonomy as well as security for the longer term.

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Figures

For Chapters 2 and 4

Figure 1 1976-77 Income Security Program Beneficiary Population as a Component of Wemindji Resident Population

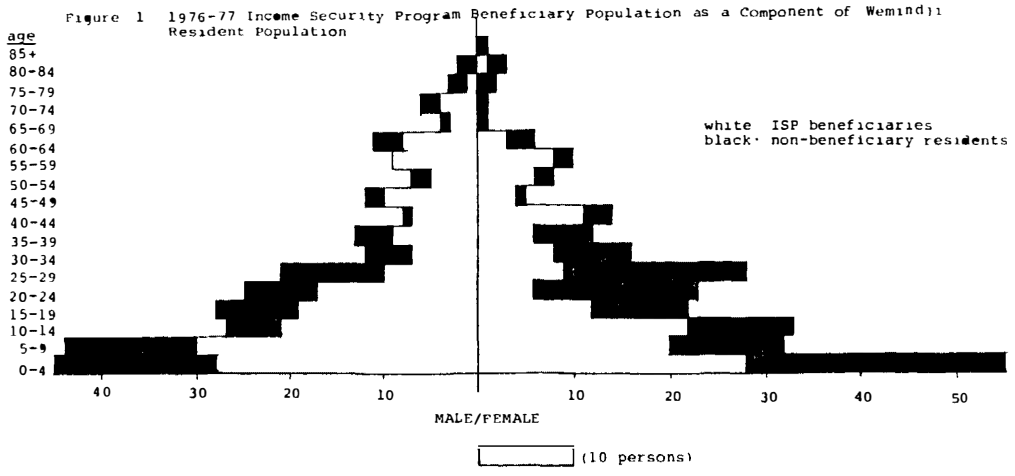


Figure 2 1977-78 Income Security Program Beneficiary Population as a Component of Wemindji Resident Population

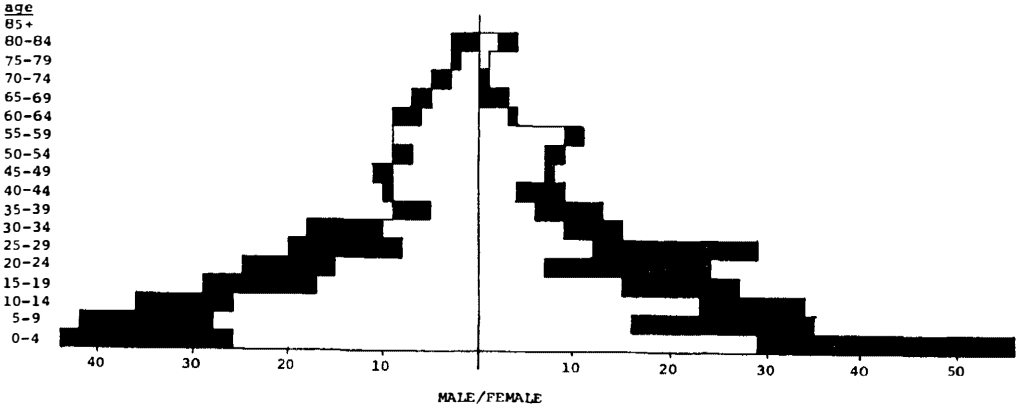


Figure 3a 1976-77 Winter Camp Population as a Component of Wemindji Resident Population

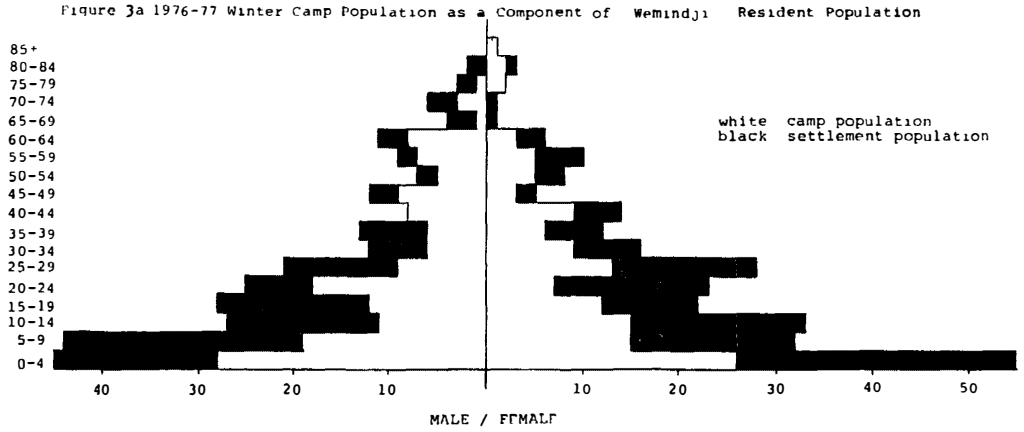


Figure 3b 1976-77 Winter Hunter/Trappers who were Based in the Settlement All Season*

* only men who trapped beaver are included -- other settlement-based hunters are very seldom full-time hunters in the winter

Figure 4a: 1977-78 Winter Camp Population as a Component of Wemindji Resident Population

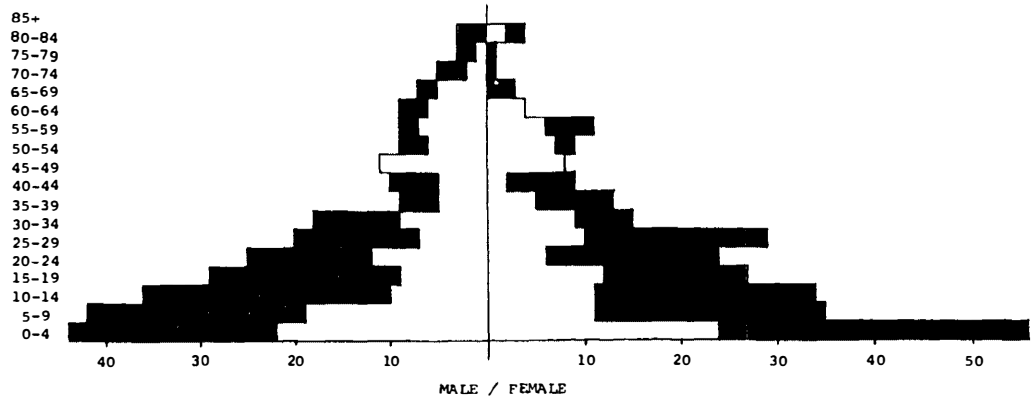


Figure 4b 1977-78 Winter Hunter/Trappers who were Based in the Settlement All Season

Figure 5a 1973-74 Winter Camp Population as a Component of Wemindji Resident Population

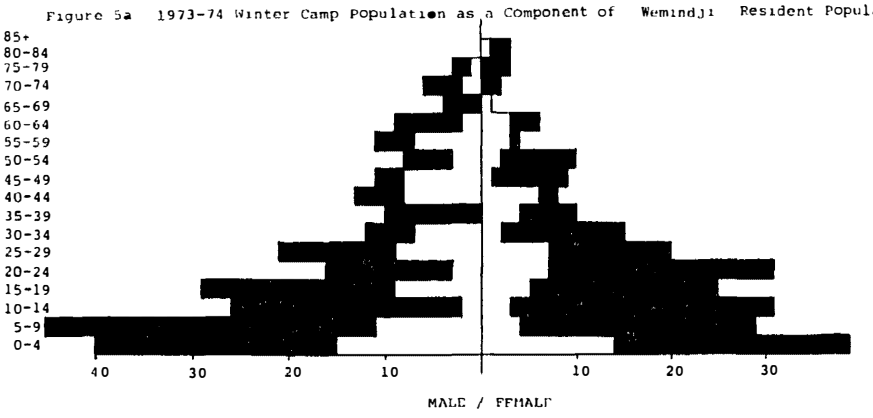


Figure 5b 1973-74 Winter Hunter/Trappers who were Based in the Settlement All Season

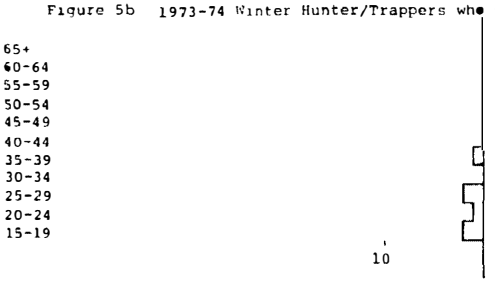


Figure 6a 1974-75 Winter Camp Population as a Component of Wemindji Resident Population

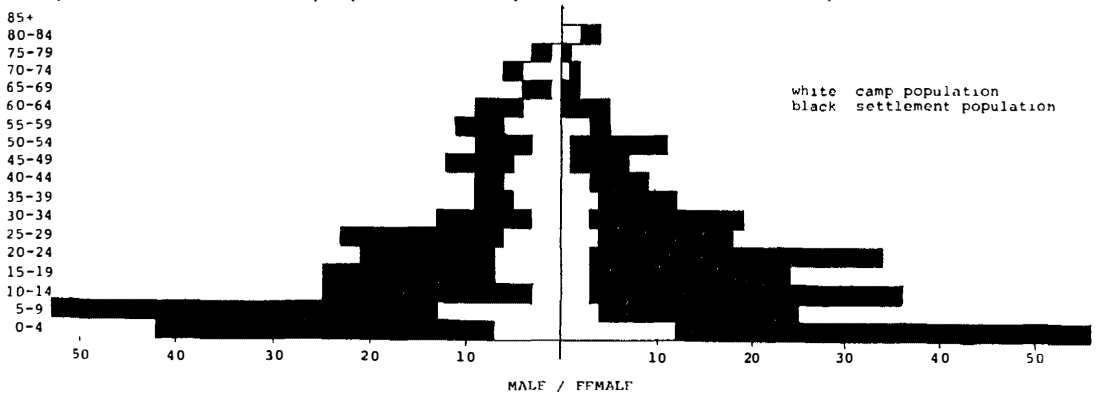


Figure 6b 1974-75 Winter Hunter/Trappers who were Based in the Settlement All Season

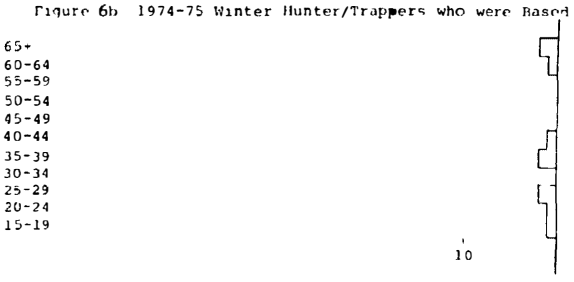


Figure 7a 1975-76 Winter Camp Population as a Component of Wemindji Resident Population

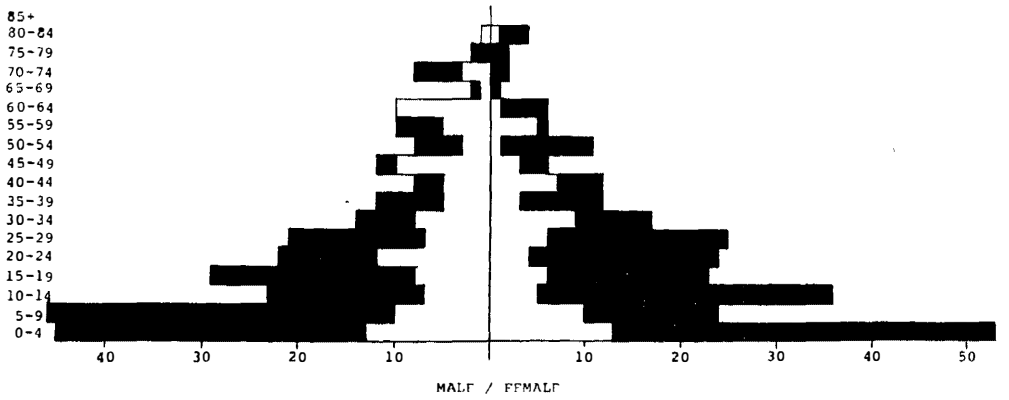


Figure 7b 1975-76 Winter Hunter/Trappers who were Based in the Settlement All Season

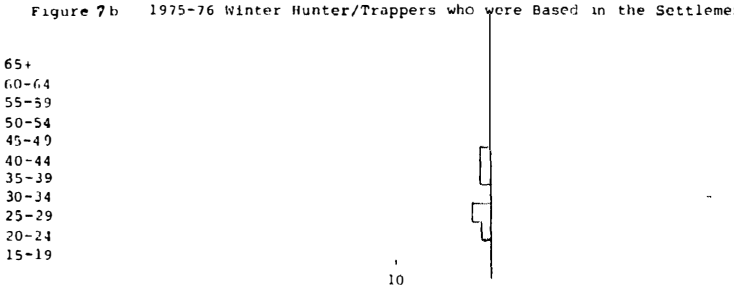


Figure 8a 1976 Fall Goose Camp Population as a Component of Wemindji Resident Population

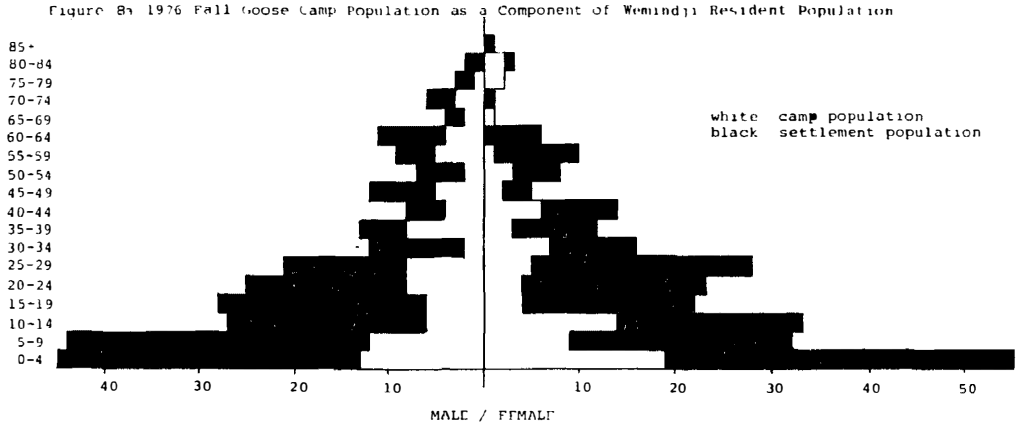
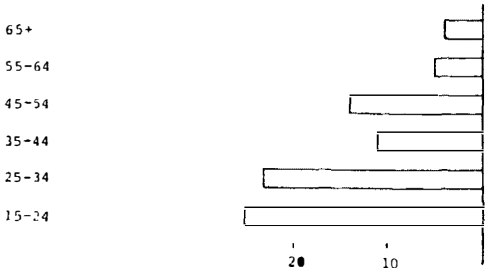


Figure 8b 1976 Settlement-Based Fall Goose Hunters at Wemindji *



* based on sample by ten-year age groups 15 and up

Figure 9a 1977 Fall Goose Camp Population as a Component of Wemindji Resident Population

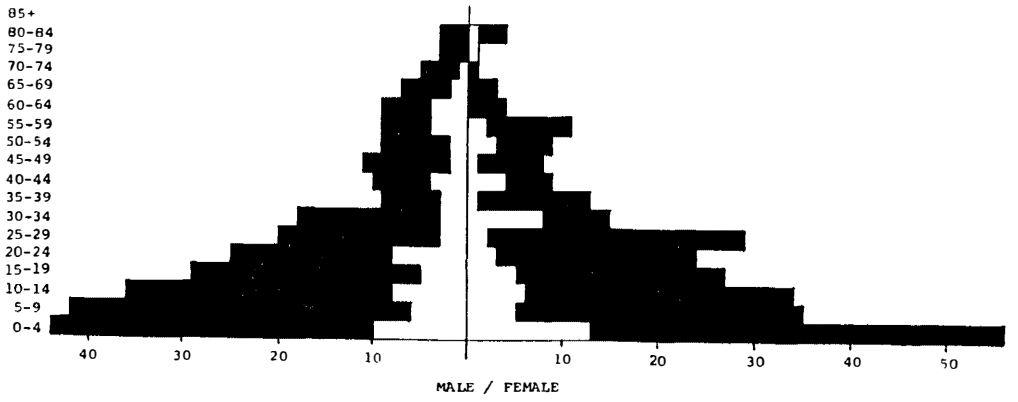


Figure 9b 1977 Settlement-Based Fall Goose Hunters at Wemindji

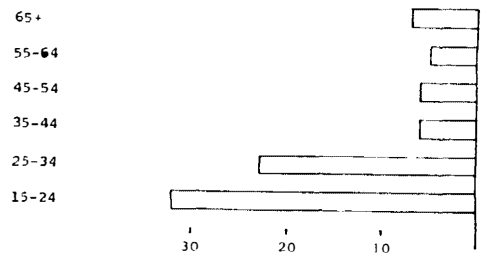
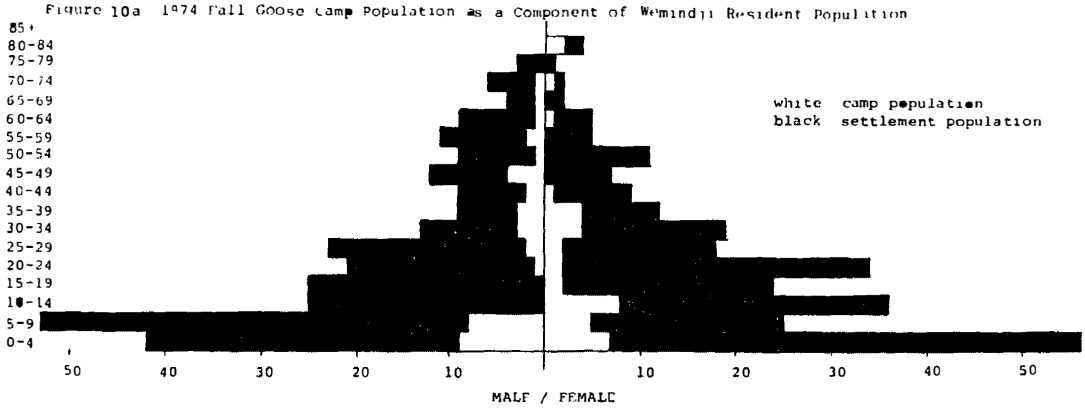


Figure 10a 1974 Fall Goose Camp Population as a Component of Wemindji Resident Population



1974 Settlement-Based Fall Goose Hunters at Wemindji -- NO DATA

Figure 11a 1975 Fall Goose Camp Population as a Component of Wemindji Resident Population

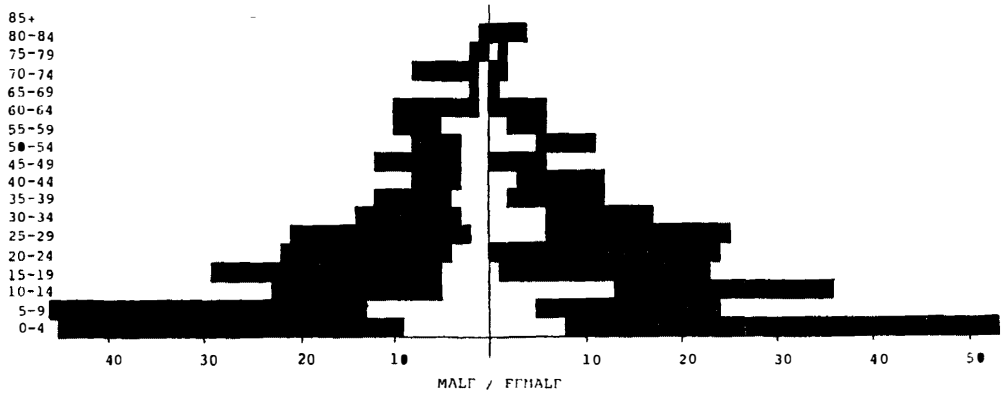


Figure 11b 1975 Settlement-Based Fall Goose Hunters at Wemindji

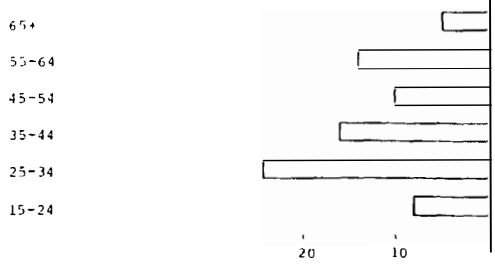


Figure 12a 1977 Spring Goose Camp Population as a Component of Wemindji Resident Population

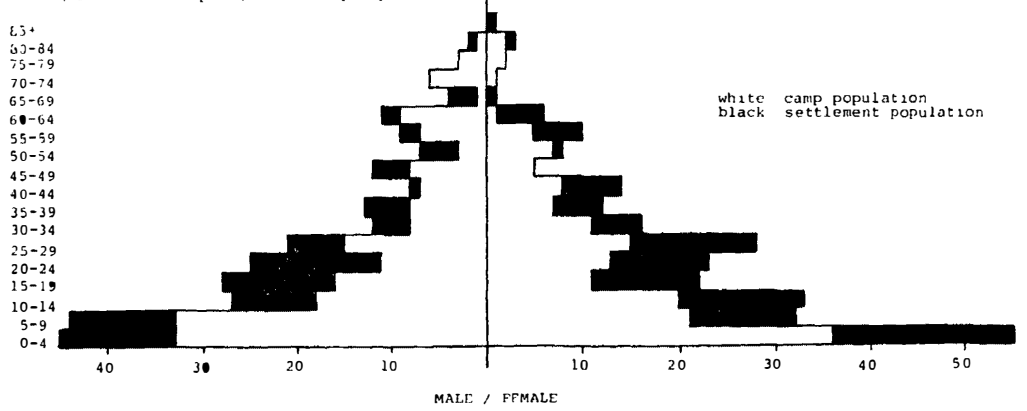
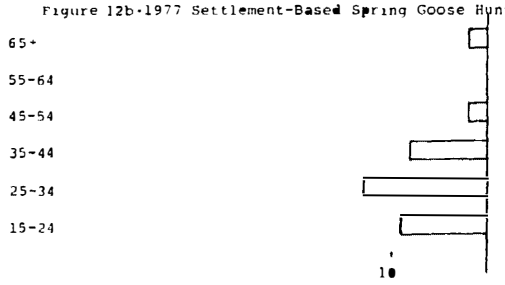


Figure 12b·1977 Settlement-Based Spring Goose Hunters at Wemindji *



* based on sample by ten-year age groups 15 and up

Figure 13a 1978 Spring Goose Camp Population as a Component of Wemindji Resident Population

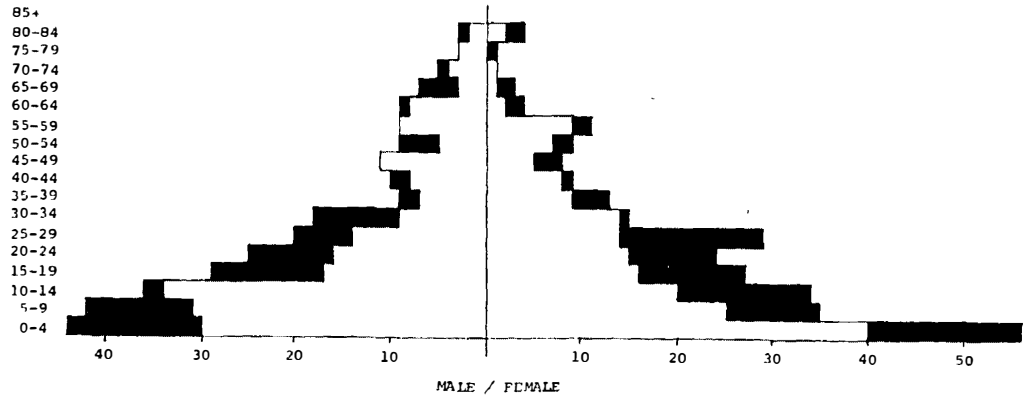


Figure 13b 1978 Settlement-Based Spring Goose Hunters at Wemindji

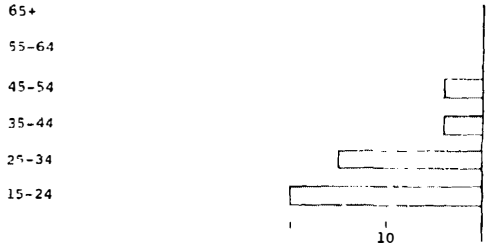
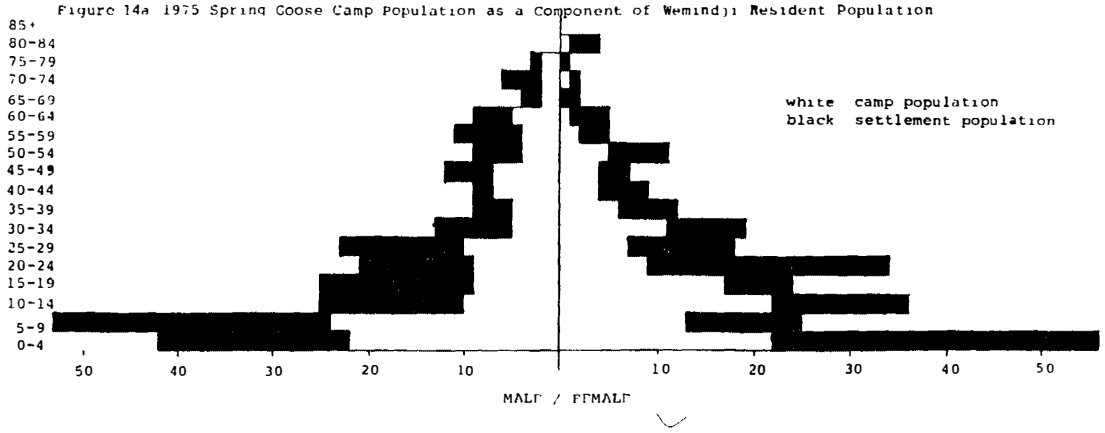


Figure 14a 1975 Spring Goose Camp Population as a Component of Wemindji Resident Population



1975 Settlement-Based Spring Goose Hunters at Wemindji -- NO DATA

Figure 15a 1976 Spring Goose Camp Population as a Component of Wemindji Resident Population

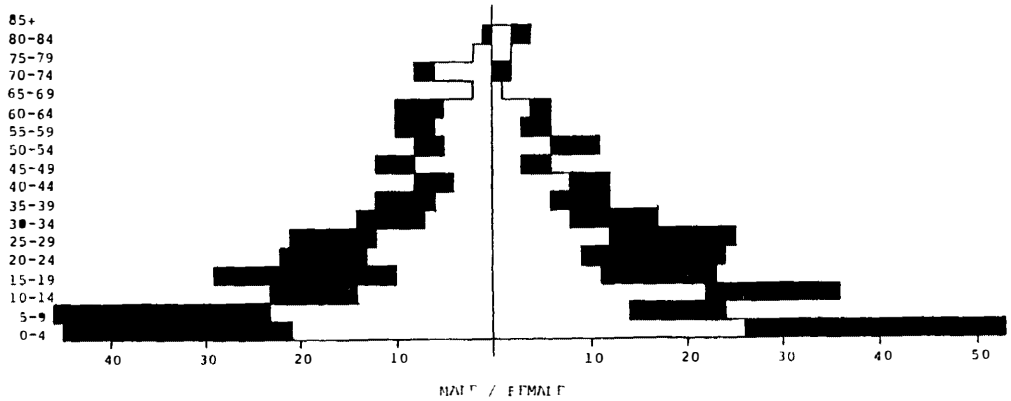


Figure 15b 1976 Settlement-Based Spring Goose Hunters at Wemindji

Figure 16: Invitations to Heads of Commensal Groups to Use Hunting Territories, Waswanipi, 1968-9.

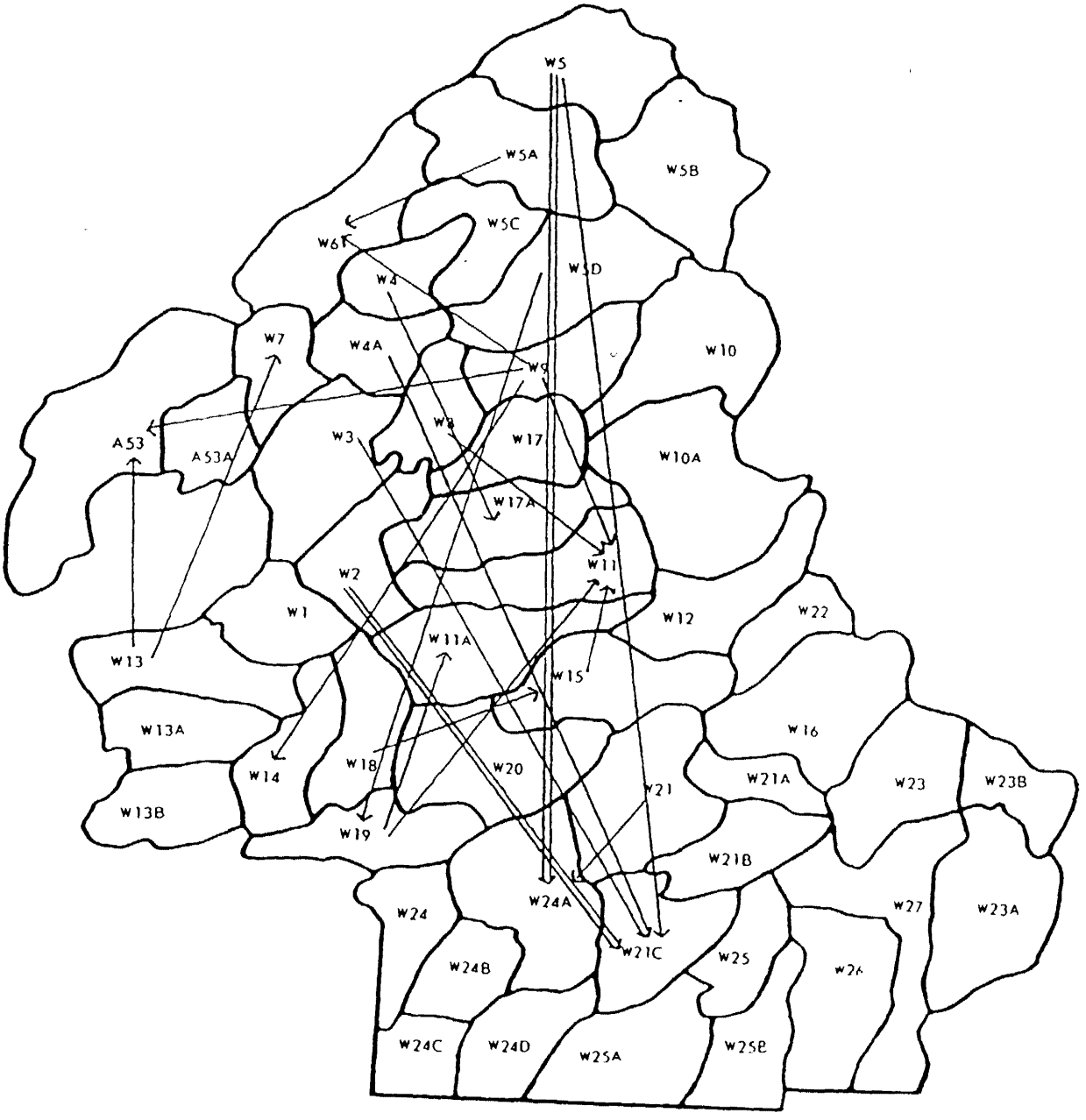


Figure 17: Invitations to Heads of Commensal Groups to Use Hunting Territories, Waswanipi, 1969-70.

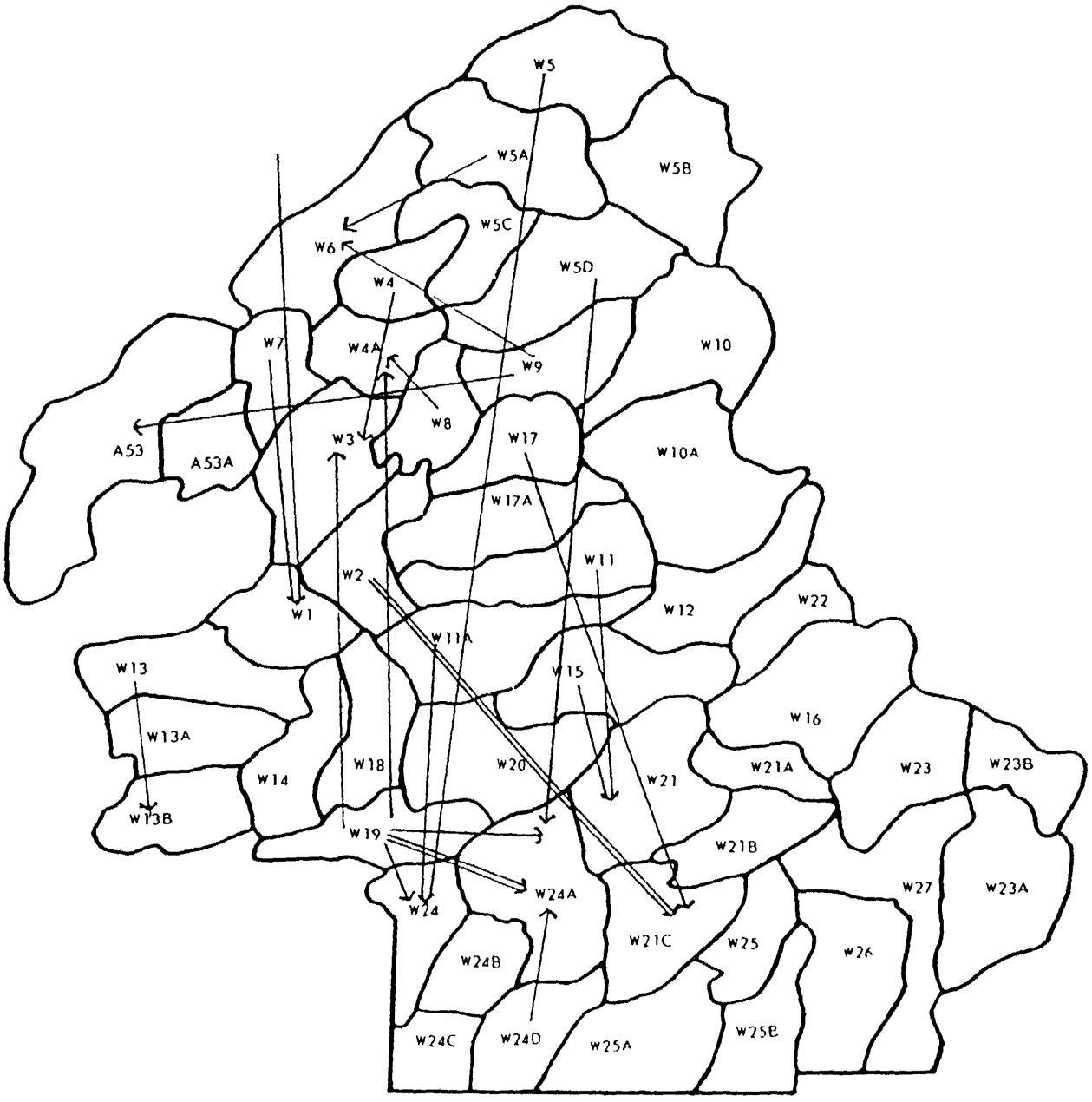


Figure 18: Invitations to Heads of Commensal Groups to Use Hunting Territories, Waswanipi, 1981-2.

Tables

For Chapters 2 to 6

Table 2.1: Age/sex composition of the population of all beneficiary unit heads and their nuclear family members, Wemindji, 1976-7 and 1977-8 (1).

Age	1976-7 Male	1976-7 Female	1977-8 Male	1977-8 Female
0-4	29	30	26	29
5-9	31	20	28	16
10-14	21	22	26	23
15-19	19	12	17	15
20-24	17	6	15	7
25-29	10	9	8	12
30-34	7	8	10	9
35-39	9	6	5	6
40-44	7	11	9	4
45-49	10	4	9	7
50-54	5	6	7	7
55-59	9	8	9	9
60-64	8	3	6	3
65-69	3	0	5	0
70-74	4	0	3	0
75-79	1	0	2	1
80-84	0	1	0	2
Total	190	146	185	150

Note (1): Beneficiary unit heads as according to Income Security Program records; spouses and dependents as determined from Department of Indian and Northern Affairs, Registered Indians as of December 31, 1976 and June 30, 1978, Wemindji Band.

Table 2.2: Age/sex composition of the resident population at Wemindji, 1973 to 1977 (1).

Age	1973 M	1973 F	1974 M	1974 F	1975 M	1975 F	1976 M	1976 F	1977 M	1977 F
0-4	40	39	42	56	45	53	45	55	44	56
5-9	45	29	53	25	46	24	44	32	42	35
10-1	28	31	25	36	23	36	27	33	36	34
15-1	29	25	25	24	29	23	28	22	29	27
20-2	16	31	21	34	22	24	25	23	25	24
25-2	21	20	23	18	21	25	21	27	20	29
30-3	12	15	13	19	14	17	12	16	18	15
35-3	10	10	9	12	12	12	13	12	9	13
40-4	13	8	9	9	8	12	8	14	10	9
45-4	11	9	12	7	12	6	12	5	11	8
50-5	8	10	9	11	8	11	7	8	9	9
55-5	11	4	11	5	10	6	9	10	9	11
60-6	9	6	9	5	10	6	6	9	9	4
65-6	4	1	4	2	2	1	4	1	7	3
70-7	6	2	6	2	8	2	6	1	5	1
75-7	3	3	3	1	2	2	3	2	3	1
80-8	0	3	0	4	1	4	2	3	3	4
85+	0	0	0	0	0	0	0	1	0	0
Tota	266	246	274	270	273	264	277	271	289	283

Note (1): From Department of Indian and Northern Affairs, Registered Indian Population by Age, Sex and Residence for Bands, Wemindji Band, December 31, 1973 through December 31, 1977.

Table 2.3: 1976-7 ISP beneficiary unit heads who were intensive winter harvesters on Wemindji traplines one, two, three or none of the winters 1973-4 to 1975-6, prior to implementation of the Income Security Program.

	3 yrs./3		2 yrs./3		1 yr. /3		0 yrs./3	
	M	F	M	F	M	F	M	F
No. of B.U. heads	37	1	32	3	11	3	14(1)	0

Note (1): Three of these were harvesting regularly in Ontario during the winter, as well as a few men in the 2 yrs./3 and 1 yr./3 categories in certain years.

Table 2.4: Resident family heads who were intensive winter harvesters on Wemindji traplines one, two or three of the winters 1973-4 to 1975-6, prior to implementation of the Income Security Program, but who were not ISP beneficiary unit heads in 1976-7.

	3 yrs./3		2 yrs./3		1 yr. /3	
	M	F	M	F	M	F
No. of family heads	1	1	3	3	7	3

Table 2.5: Wemindji winter bush camp population 1973-4 to 1977-8 and percentage increase between pre-ISP years and 1976-7, and pre-ISP years and 1977-8 (1).

	1973-4	1974-5	1975-6	3 years pre-ISP average	1976-7	Percent increase from pre-ISP avg.	1977-8	Percent increase from pre-ISP avg.
Adult men	55	57	74	62	86	39	81	31
Adult women	38	27	42	36	71	97	65	81
Pre-Ad. boys	32	24	34	30	65	117	55	83
Pre-Ad. girls	25	20	32	26	62	138	52	100
Total	150	128	182	152	284	87	253	66

Note (1): Figures exclude an Eastmain family for 1974-5 and a Chisasibi family for 1976-7 who lived with Wemindji tallymen, and on whom our information is incomplete. Four Wemindji hunters who hunted in Ontario are not represented in this data and subsequent winter hunting-trapping tables.

Table 2.6: Wemindji settlement-based hunters 1973-4 to 1977-8 and percentage decrease between pre-ISP years and 1976-7, and pre-ISP years and 1977-8 (1).

	1973-4	1974-5	1975-6	3 years pre-ISP average	1976-7	Percent decrease from pre-ISP avg.	1977-8	Percent decrease from pre-ISP avg.
From settlement only, all season	6	10	5	7	4	43	6	14

Note (1): Some hunters on coastal traplines who were in camps parts of the winter also made short excursions from the settlement. Our data are incomplete for these prior to 1975-6.

Table 2.7: Numbers of family camps, all-men's camps, and traplines on which settlement-based winter harvesting occured for the seven coastal traplines and thirteen inland traplines at Wemindji 1973-4 to 1977-8 (1).

	1973-4	1974-5	1975-6	1976-7	1977-8
COASTAL TRAPLINES:					
Family camps	4	2	5	6	8
All-men's camps	0	2	3	0	0
Settlement-based hunting (no. of traplines) (2)	6	6	7	4	4
INLAND TRAPLINES:					
Family camps	8	7	13	17	14
All-men's camps	3	4	1	0	0
Settlement-based hunting	0	0	0	0	0

Note (1): A coastal trapline is here defined as any one which has a border on James Bay. An inland trapline has no border on James Bay. One of the "inland" trapline defi this way, however, has much in common with the interior portions of the coastal traplines, in terms of location and harvest.

Note (2): Some of these traplines also had family or all-men's winter camps -- four traplines in 1973-4, two in 1974-5, five in 1975-6 and two in 1976-7.

Table 2.8: Demographic characteristics of winter family camps on Wemindji traplines 1973-4 to 1977-8.

	1973-4	1974-5	1975-6	1976-7	1977-8
Total family camp population	140	110	168	284	253
Total active male hunters	44	34	60	88	83
Total number of camps	12	9	18	23(1)	22
Average camp size	11.7	12.2	9.4	12.9	11.5
Average active male hunters per camp	3.7	3.8	3.3	3.9	3.8
Ratio of total camp population to active male hunters	3.2	3.2	2.8	3.2	3.0

Note (1): One camp on which our data were incomplete has been excluded from the calculations.

Table 2.9: Percentages of participation of Wemindji residents of selected age/sex groups in winter camps -- a comparison of 1976-7 and 1977-8 with a 1973-4 to 1975-6 three year average.

		1976-7 (percent)	1977-8 (percent)	3 year pre-ISP average (percent)
0-4	M	62	50	28
	F	47	43	27
5-9	M	43	45	24
	F	47	31	24
10-14	M	41	28	16
	F	45	32	11
15-19	M	43	31	28
	F	55	44	20
20-24	M	72	48	30
	F	30	25	17
25-34	M	45	42	39
	F	51	43	27
35-44	M	67	53	49
	F	58	32	44
45-64	M	74	79	55
	F	55	78	28
65+	M	33	44	36
	F	63	22	22

Table 2.10: Hunter man-weeks spent in winter harvesting at Wemindji 1973-4 to 1977-8.

	1973-4	1974-5	1975-6	1976-7	1977-8
INLAND TRAPLINES:					
Man-weeks Total	576	534	572	1138	1021
No. of hunters	43	45	49	61	59
Avg. wks/hunter	13.4	11.9	11.7	18.7	17.3
COASTAL TRAPLINES:					
Man-weeks					
-camp-based	99	172	169	508	324
-settlement based (1)	?	?	192	81	100
-Total	?	?	361	589	424
No. of hunters	18	22	28	32	30
Avg. wks/hunter	?	?	12.9	18.4	14.1

Note (1): Excludes one hunter for whom data were unavailable in each of 1976-77 and 1975-76. Settlement-based man-weeks for 1975-76 are estimates based on figures covering the period from November 11, 1975 to the end of the winter, Income Security Board records.

Table 2.11: Wemindji fall and spring goose camp populations 1974-5 to 1977-8 and percentage increase between pre-ISP years and 1976-7, and pre-ISP years and 1977-8 (1).

	1974-5	1975-6	2 years pre-ISP average	1976-7	Percentage increase over pre-ISP avg.	1977-8	Percentage increase over pre-ISP avg.
FALL GOOSE CAMPS:							
Adult men	21	34	27	53	93	38	41
Adult women	18	25	22	38	77	30	36
Pre-adult boys	17	28	23	36	60	25	9
Pre-adult girls	21	27	24	44	83	27	13
Total	77	114	96	171	79	120	25
SPRING GOOSE CAMPS:							
Adult men	68	79	73	94	21	103	41
Adult women	58	69	64	81	27	94	47
Pre-adult boys	59	65	62	96	55	109	76
Pre-adult girls	63	68	66	84	19	94	42
Total	248	281	265	355	34	400	51

Note (1): Fall figures exclude one person in each year except 1977-8 on whom data were incomplete. Spring figures exclude 3 to 5 persons in each year on whom data were incomplete.

Table 2.12: Demographic characteristics of goose hunting on Wemindji coastal traplines 1974-75 to 1977-8.

	1974-5	1975-6	1976-7	1977-8
FALL GOOSE CAMPS:				
Total camp population:	78	115	173	120
Total active male hunters:	22	34	54	41
Total number of camps:	3	5	8	7
Average camp size:	26.0	23.0	21.6	17.1
Average active male hunters per camp:	7.3	6.8	6.8	5.9
Ratio of total camp pop. to active male hunters:	3.5	3.4	3.2	2.9
SPRING GOOSE CAMPS:				
Total camp population:	252	286	359	400
Total active male hunters:	68	81	100	112
Total number of camps:	13	13	15	17
Average camp size:	19.4	22.0	23.9	23.5
Average active male hunters per camp:	5.2	6.2	6.7	6.6
Ratio of total camp pop. to active male hunters:	3.7	3.5	3.6	3.6
SETTLEMENT-BASED HUNTERS (1):				
Fall, no. of hunters	?	77	82	79
Spring, no. of hunters	?	36	34	44

Note (1): Projected from a 1/3 to 1/2 sample with representative proportions of each age group of all males fifteen years and older.

Table 2.13: Percentages of participation of Wemindji residents of selected age/sex groups in spring and fall goose camps - a comparison of 1976-7 and 1978-9 with a 1974-5 to 1976-7 two-year average.

		1976-7 (percent)	1977-8 (percent)	2 yrs. pre-ISP avg. (percent)
FALL CAMPS:				
0-4	M	29	23	21
	F	35	23	14
5-9	M	27	14	22
	F	28	14	21
10-14	M	22	22	11
	F	42	18	29
15-19	M	21	17	09
	F	18	19	06
20-24	M	32	32	12
	F	17	13	03
25-34	M	30	16	14
	F	28	23	23
35-44	M	57	37	32
	F	35	23	23
45-64	M	41	32	25
	F	21	19	14
65+	M	40	17	15
	F	63	22	22
SPRING CAMPS:				
0-4	M	73	68	50
	F	65	71	44
5-9	M	75	74	48
	F	66	71	55
10-14	M	67	94	51
	F	61	59	59
15-19	M	57	59	35
	F	50	59	56
20-24	M	44	64	51
	F	57	63	32
25-34	M	70	61	48
	F	60	64	49
35-44	M	71	79	59
	F	58	77	53
45-64	M	69	89	55
	F	62	72	49
65+	M	73	67	62
	F	63	44	39

Table 2.14: Hunter man-weeks spent in fall and spring goose hunting camps at Wemindji, 1974-5 to 1977-8.

	1974-5	1975-6	1976-7	1977-8
FALL GOOSE CAMPS:				
Total man-weeks	117	68	153	188
No. of hunters	22	32	52	41
Average weeks/hunter	5.3	2.1	2.9	4.6
SPRING GOOSE CAMPS:				
Total man-weeks	456	461	626	780
No. of hunters	65	78	95	112
Average weeks/hunter	7.0	5.9	6.6	7.0

Table 2.15: Camp-based summer coastal fishing population, duration, and nets utilized, Wemindji, 1977 and 1978.

	No. of camps	Adult men	Man weeks	Adult women	Women weeks	Sub-adults	Sub-adult weeks	Total pop.	No. of nets set	No. of net weeks
1977										
Aggregate	12	14	53(1)	18	58(1)	39	107.6(1)	71	40	135(2)
Averages per camp	N/A	1.2		1.5		3.3		5.9	3.3	11.3
Averages per person	N/A		3.8		3.2		2.8			
1978 (3)										
Aggregate	12	29	68	27	70	65	135.4	121	54	133
Averages per camp	N/A	2.4		2.3		5.4		10.1	4.5	11.1
Averages per person	N/A		2.3		2.6		2.1			

Note (1): Projected from 12/14 families on whom data were complete in 1977.
Note (2): Projected from 24/40 nets on which data were complete in 1977.
Note (3): One 1978 camp has been excluded from totals because data were too limited.

Table 2.16: Inland sturgeon camps, summer 1976 to 1978 - Camp population, duration, and sturgeon catch.

	No. of camps	Adult men	Man-weeks	Adult women	Women-weeks	Sub-adults	S-adult weeks	Total pop.	No. of sturgeon
1976									
All men camps	1	2	1.6	-	-	-	-	2	66
Family camps	0	-	-	-	-	-	-	-	-
1977									
All men camps	2	4(1)	5.0	-	-	-	-	4	167
Family camps	2	3	6.7	3	6.7	3	6.0	9	183
1978									
All men camps	0	-	-	-	-	-	-	-	-
Family camps	2	5	6.9	3	4.7	6	11.1	14	240

Note (1): One of these men was also in one of the family camps.

Table 2.17: Children registered at Wemindji School, Grades 1 to 7 inclusive who were not present at the settlement due to participation in bush camps, 1975-6 and 1976-7.

	Fall Goose Camps	Winter Camps Oct.-Xmas	Winter Camps Xmas-March	Spring Goose Camps (1)
1975-6	0	6	8	32
1976-7	5	51	37	no data

Note (1): School is closed for 3 weeks in the spring so children can go to goose camps. Their participation in those camps has always been high.

Table 2.18: Costs of transportation to and from traplines for a sample of Wemindji hunters in 1975-6 (1).

	1975-6
No. of trappers in sample:	18
Travel method:	
-Air only	14
-Ground only	4
-Air and ground	--
Average distance to trapline: (1)	69
Average months on trapline:	2.4
Average cost of travel:	$378

Note (1): Cree Trappers' Association Project Team, 1977:14.
Note (2): Average distance to camps or hunting location, all Wemindji hunters, was 73 miles in 1975-6 according to our research.

Table 2.19: A comparison of air charter utilization for two inland families, 1974-5 and 1976-7.

	No. of hunters	No. of trips- "Beaver" craft	No. of trips single- "Otter" craft	Combined distance to camps	Combined charter cost	Av. cost per hunter
1974-5	4	5	3	230 mi.	$ 2028	$ 507
1976-7	5	3	7	251 mi.	$ 4847	$ 969

Table 2.20: Increases in the value of capital goods for hunting, Wemindji, during 1976-7, reported by 101 beneficiary unit heads to the Income Security Board.

VALUE AS OF JULY 1976 (1)	Skidoos $	Canoes and outboard motors $	Guns $	Misc. $	Total capital goods $
All beneficiary unit heads	90,568	80,844	39,222	53,465	264,099
Mean value per b.u. head	896	800	388	529	2,615
VALUE OF ADDITIONS AS OF JULY 1977 (2)					
All beneficiary unit heads	50,730	30,154	7,995	2,298 (3)	91,177
Mean value per b.u. head	502	299	79	23 (3)	902
PERCENTAGE INCREASE	56	37	20	? (3)	35

Note (1): Prior to any Income Security Program payments.
Note (2): After the September 1976 retroactive ISP payment, and the first three regular payments for 1976-7.
Note (3): In the 1977 reporting, people did not normally provide independent figures for smaller and miscellaneous capital goods, i.e. chainsaws, canvas and stoves for dwellings, Coleman appliances, hand tools, etc.

Table 2.21: Number of sales of selected imported goods, Wemindji 1974-5 to 1976-7 (H.B.C. and Co-op outlets combined figures) (1).

	1974-5	1975-6	1976-7
SKIDOOS:			
12 h.p. and 14 h.p.	?	22	38
18 h.p.	?	11	21
20 h.p.	0	0	2
twin 15 h.p.	0	2	4
twin `340'	0	0	4
OUTBOARD MOTORS:			
5-10 h.p.	?	?	?
15 h.p.	2	2	2
20 h.p.	3	6	6
25 h.p.	4	13	14
35 h.p.	0	1	4
40 h.p.	3	3	2
CANOES:			
16 ft.	?	9	12
18 ft.	?	1	0
20 ft.	?	0	0
22 ft.	?	11	7
24 ft.	?	3	5
RIFLES:			
.22 cal.	28	25	?
.30.30	?	6	4
SHOTGUNS:			
12, 16 and 20 gu.	?	35	44
CHAINSAWS:			
(all sizes)	?	53	38
FISHNETS:			
4 po. mesh	?	64	incomplete

Table 2.21:

	1974-5	1975-6	1976-7
TRAPS: (2)(3)			
conibear 330	?	132	127
conibcar 120	?	53	30
conibear 110	?	38	7
leghold: Victor #0	?	16	20
leghold: Victor #1	?	17	12
leghold: Victor #1.5	?	75	0
leghold: Victor #2	?	48	9
leghold: Victor #3	?	60	24
leghold: Victor #4	?	60	48
All sizes	?	200	250
SNARE WIRE: (2)			
single strand brass	482	408	520
wolf, lynx snare wire	38	14	21

Note (1): Years indicated run from September 1 to August 31, so that figures for 1976-77 represent purchases which followed first payment of ISP benefits.

Note (2): For traps and snare wire, figures for 1975-76 and 1976-77 will represent predominantly sales made after September of 1975 and 1976, respectively. Some portion of the number however, will be comprised of sales made during the latter months of the hunting year previous.

Note (3): One outlet did not provide a breakdown by trap size or type. There are thus 200+ traps of all sizes not listed by type in 1975-6, and 250+ not listed in 1976-7.

Table 2.22: Number of sales of major household appliances, Wemindji 1973-4 to 1976-7 (H.B.C. and Co-op outlets combined figures).

	1973-4	1974-5	1975-6	1976-7
FREEZERS:				
all sizes	6	8	34	36
RANGES:				
all sizes	0	5	25	26
REFRIGERATORS:				
all sizes	4	12	13	12
WASHERS:				
all sizes	0	0	16	19
DRYERS:				
all sizes	0	0	12	11

Table 2.23: Average distances travelled by Wemindji hunters to winterhunting locations, 1973-4 to 1977-8.

	1973-4		1974-5		1975-6		3 years Pre-ISP average		1976-7		1977-8	
	No. of hunters	Average distance	No. of hunters	Average distance	No. of hunters	Average distance	No. of hunters	Average distance	No. of hunters	Average distance	No. of hunters	Average distance
Coastal traplines	17	23.6 mi	22	27.9 mi	29	37.1 mi	23	30.7 mi	33	26.2 mi	31	22.3 mi.
Near inland traplines	14	60.8 mi	6	80.0 mi	15	65.3 mi	12	66.0 mi	17	65.9 mi	14	58.0 mi.
Far inland traplines	29	105.7 mi	39	117.0 mi	32	110.1 mi	33	111.5 mi	44	122.3 mi	45	121.4 mi
TOTAL	60	72.0 mi	67	84.4 mi	76	73.4 mi	68	76.6 mi	94	78.3 mi	90	77.4 mi.

Table 2.24: Utilization of skidoos by hunters on six inland traplines, 1973-4 to 1976-7, Wemindji.

	1973-4	1974-5	1975-6	1976-7
No. of hunters	17	19	24	28
No. of skidoos	0	5	9	18
Percentage of hunters with skidoos	0%	26%	38%	64%

Table 2.25: Numbers of beaver, moose, caribou and black bear taken by Wemindji winter hunter-trappers on Wemindji traplines, 1973-4 to 1977-8. (Aggregates of totals reported by tallymen).

	1973-4	1974-5	1975-6	1976-7	1977-8
Beaver	1,252	1,738	1,653	2,302	2,450
Moose	0	4	6	22	15
Caribou	2	10	16	25	6
Black Bear	13	6	1	9	6

Table 2.26: Projected numbers of beaver, moose, caribou and black bear taken by Wemindji hunters all year on Wemindji traplines, 1973-4 to 1977-8, according to JBNQNHRC (1976: 199, 277, 285; and 1978: 113, 144, 149, 154; and 1979: 81, 100, 115, 120).

	1973-4	1974-5	1975-6	1976-7	1977-8
Beaver	1,935	2,592	1,751	2,377	2,576
Moose	15	24	3	27	17
Caribou	0	0	21	33	11
Black Bear	15	29	15	5	15

Table 2.27: Official sales of beaver pelts by Wemindji hunters in Quebec, 1973-74 to 1977-8 (1).

	1973-4	1974-5	1975-6	1976-7	1977-8
Beaver	1,137	1,846	1,608	2,195	2,344

Note (1): Source, Quebec Ministere du Tourisme, de la Chasse, et de la Peche. Section des Fourrures.
Fourrures Piegees sur les Lignes de Trappe Enregistrees.

Table 2.28: Beaver catches elicited as totals by hunter compared with beaver totalled from catches elicited by individual lodges for hunters on three traplines in 1974-5 and four traplines in 1976-7.

	1974-5	1976-7
Beaver catches elicited by hunter, Total all hunters	270	513
Beaver by lodges trapped, Total all lodges	309	575
% actual catch above catch as elicited through totals by hunter	14%	12%

Table 2.29: Tentatively adjusted figures for numbers of beaver taken by Wemindji winter hunter-trappers on Wemindji traplines, 1973-4 to 1976-7.

	1973-4	1974-5	1975-6	1976-7
Total from Table 25	1,252	1,738	1,653	2,302
Plus adjustment	188	243	215	276
Adjusted beaver total	1,440	1,981	1,868	2,578

Table 2.30: Foodweight of key species harvested by Wemindji hunters, 1973-4 to 1977-8 (1).

	1973-4	1974-5	1975-6	1976-7	1977-8
Beaver	21,786	30,241	28,765	40,054	42,630
Moose	0	1,752	2,628	9,636	6,570
Caribou	256	1,280	2,048	3,200	768
Black Bear	2,730	1,260	210	1,890	1,260
Canada and Snow Geese	?	?	68,062	60,923	38,866

NOTE (1): The figures presented here are calculated from our data on animal kills, and using average weight values, for beaver (17.4 lbs.), moose (438 lbs.), caribou (128 lbs.) and bear (210 lbs.) provided in NHR (1976:69). We judge the NHR goose food weight values of 4.7 lbs. for Canadas and 3.5 lbs. for Snow Geese to be too low. Using figures provided by Hanson (1965) cited in NHR (1976: Appendices:154) for Canada geese, and figures provided by Stirrett (1954) cited in NHR (1976: Appendices:165) for Snow geese, we arrived at new figures. We accepted NHR values of 70% edible portions for each of Canada geese and wavies, out of new whole weights of 8.0 lbs. and 5.7 lbs., respectively. Edible weights were therefore calculated here at 5.6 lbs. per average Canada and 4.0 lbs. per average Snow goose. The NHR Committee itself suggests that less conservative estimates based on the data cited would involve food weights of 75% of whole weight, since the Cree consume a large proportion of internal organs. The weights employed above may therefore be slightly conservative - perhaps 6.0 lbs. for the average Canada and 4.3 lbs. for the average Snow goose would be more accurate weights, as the NHR Committee (1976:124,133) has in fact suggested.

Table 2.31: Foodweights by species (or species groups) harvested by Wemindji hunters according to earlier studies and reports.

Species	Salisbury (1972b) community estimates: June 1971-Aug. 1972 (1)	Feit and Penn (1975) inland traplines average annual estimates (2)	NHR (1976) community projections 1974-5(3)	NHR (1978) community projections 1975-76(3)	NHR (1979) community projections 1976-7(3)	NHR (1980) community projections 1977-8(3)
Beaver	10,499	13,835	44,900	30,470	41,360	45,100
Lynx	1,080	379	400	100	470	550
Otter	210	274	1,400	870	1,520	1,260
Muskrat	861	288	500	1,310	2,120	2,130
Moose	2,190	4,380	10,600	1,310	11,830	5,690
Caribou	no data	no data	0	2,690	4,220	1,280
Black Bear	2,100	3,150	6,100	3,150	1,050	2,940
Porcupine	630	4,376	4,700	1,390	1,400	790
Hare	20,213	5,939	1,100	3,470	12,060	21,760
Ptarmigan	1,023	no data	5,600	730	1,380	2,990
Grouse	287	1,459	1,300	1,110	2,090	2,210
Canada Geese	74,234	no data	56,560	55,550	54,370	39,054
Wavies		no data	6,860	3,184	2,710	1,740
Snow Geese	1,104	no data	1,710	812	(Wavies)	(Wavies)
Brant	no data	no data	3,000	2,710	1,540	1,450
Loon	113	no data	1,200	1,140	1,700	4,210
Ducks	8,799	no data	8,800	6,740	7,560	6,910
Whitefish Cisco	34,143		16,900	19,130	14,430	18,290
Pike	639		2,600	2,670	2,300	1,930
Speckled Trout			2,700	2,640	1,920	1,820
Lake Trout	2,169	11,088	200	760	1,260	1,000
Dore	no data	to	1,200	880	410	600
Sturgeon	no data	16,800	700	130	760	1,741
Sucker	50		1,100	1,420	950	960
Char	no data		0	30	0	310
Burbot	no data		5,600	850	60	90
Seal	3,172	0	14,900	3,480	4,730	4,320
Polar Bear	no data	0	1,200	0	0	350

Note (1): Figures for beaver, moose, caribou, black bear, Canada and Snow geese total foodweights have been recalculated here using NHR (1976:69) values, except that we have employed average goose foodweights adopted for our data (see Table 2.30).

Table 2.31: Foodweights by species (or species groups) harvested by Wemindji hunters according to earlier studies and reports.

Salisbury's figure for trout has not been recalculated, since a breakdown by lake trout and speckled trout was not indicated.

Note (2): Figures for all species calculated using NHR (1976:69) values. Fieldwork by N. Elburg (Salisbury, 1972b) and Hughboy (1973) in 1971-72 and 1972-73 are the basis for the Feit and Penn figures on average harvests for inland trappers.

Note (3): Figures as provided in the NHR reports indicated, except we have employed the average goose foodweight values adopted for our data (see Table 2.30), ans the average sturgeon foodweight values adopted fou our data (Table 2.43).

Table 2.32: Projected fish foodweights for inland winter camps, NHR (1).

	1974-5 Inland camps	1975-6 Inland camps	1976-7 Inland camps	1977-8 Inland camps
Whitefish	2,100	5,685	6,187	5,454
Pike	100	1,725	1,797	1,155
Speckled Trout	0	378	472	235
Lake Trout	200	377	1,264	270
Dore	500	554	407	490
Sturgeon	0	96	270	50
Sucker	400	662	904	690
Char	0	26	0	315
Burbot	0	98	59	79
TOTAL	3,300	9,601	11,360	8,736

Note (1): Figures for inland camps are assumed to be more or less congruent with those for NHR's (1976:336, 1978:178-195, 1979:139-155, and 1980: 97-119) total "away" figures for 1974-75 and 1975-76, which are reproduced here. Season "1" and "3" sturgeon caught by "away" spring hunters are excluded, as these would be from special camps in most cases. It was not possible to achieve a successful specification of fish caught by intensive winter hunters in camps along the coast or in the settlement. It should be noted that by NHR's "away" definition, some hunting camps on the inland ("away") portions of coastal traplines will be included in the above figures, as well as those hunting camps on inland traplines as we have defined inland traplines elsewhere in this chapter.

Table 2.33: Intensity of beaver trapping, by year and by coastal and inland traplines, Wemindji 1973-4 to 1977-8.

	1973-4	1974-5	1975-6	1976-7	1977-8
INLAND TRAPLINES:					
Total man-weeks	576	534	572	1138	1021
No. of hunters	43	45	49	61	59
Weeks/hunter	13.4	11.9	11.7	18.7	17.3
No. of beaver	952	1251	1078	1815	1862
Beaver/hunter-week	1.7	2.3	1.9	1.6	1.8
Beaver/hunter	22.1	27.8	22	30.5	31.6
COASTAL TRAPLINES: (1)					
Total man-weeks	?	?	361	589	424
No. of hunters	18	22	28	32	30
Weeks/hunter	?	?	12.9	18.4	14.1
No. of beaver	253	487	572	480	588
Beaver/hunter-week	?	?	1.6	0.8	1.4
Beaver/hunter	14	22.1	20.4	15	10.6

Note (1): Excludes one hunter, his weeks and beaver catch, for whom data were incomplete.

Table 2.34: Intensity of beaver trapping, comparing inland traplines in Group "A", which had only family camps in the five-year period, with traplines in Group "B", which sometimes had family camps and sometimes had all-men's camps.

	1973-4	1974-5	1975-6	1976-7	1977-8
GROUP "A":					
Total man-weeks	209.8	309.6	267.6	618.6	512.9
No. of hunters	16	19	25	29	26
Weeks/hunter	13.1	16.3	10.4	21.3	19.7
No. of beaver	493	815	639	1158	1070
Beaver/hunter-week	2	2.6	2.4	1.5	2.1
Beaver/hunter	27	42.9	25.6	35.3	41.2
GROUP "B" (FAMILY CAMPS):					
Total man-weeks	215.4	104.6	220	454.7	470.8
No. of hunters	14	8	19	29	28
Weeks/hunter	15.4	13.1	11.6	15.7	16.8
No. of beaver	332	150	379	746	724
Beaver/hunter-week	1.5	1.4	1.7	1.6	1.5
Beaver/hunter	23.7	18.8	19.9	25.7	25.9
GROUP "B" (ALL-MEN'S CAMPS):					
Total man-weeks	89.9	119.3	110.6	0	0
No. of hunters	10	18	5	0	0
Weeks/hunter	9	10.3	15.8	n.a.	n.a.
No. of beaver	127	286	80	n.a.	n.a.
Beaver/hunter-week	1.4	2.4	0.7	n.a.	n.a.
Beaver/hunter	12.7	17.2	11.4	n.a.	n.a.

Table 2.35: Edible weights of beaver and larger animals (moose, caribou, bear) by total and by hunter week, coastal and inland traplines 1973-4 to 1977-8.

	1973-4	1974-5	1975-6	1976-7	1977-8
INLAND TRAPLINES:					
Hunter weeks	576	534	572	1138	1021
Beaver foodweight	16565	21767	18757	31581	32399
Beaver foodweight/ hunter week	28.8	40.8	32.8	27.8	31.7
Large animal foodweight	2776	3652	2602	9540	6744
Large animal foodweight/ hunter-week	4.8	6.8	4.5	8.4	6.6
Total beaver and larger animal foodweight	19341	25419	21359	41121	39143
Total beaver and larger animal foodweight/ hunter-week	33.6	47.6	37.3	36.2	38.3
COASTAL TRAPLINES:					
Hunter weeks	?	?	361	589	424
Beaver foodweight	4402	8474	9952	8352	10231
Beaver foodweight/ hunter week	?	?	27.6	14.2	24.1
Large animal foodweight	210	640	2284	5186	1854
Large animal foodweight/ hunter-week	?	?	6.3	8.8	4.4
Total beaver and larger animal foodweight	4612	9114	12236	13538	12085
Total beaver and larger animal foodweight/ hunter-week	?	?	33.9	23.0	28.5

Table 2.36: Comparison of three coastal hunters and four inland hunters and their households as to foodweight composition of the harvest.

	3 Coastal Hunters		4 Inland Hunters	
	lbs.	Percent of total	lbs.	Percent of total
Beaver	626	39	3550	73
Larger animals	-		438	9
Small animals, upland birds and waterfowl	950	58	570	12
Fish	29	2	266	6
Total	1605	100	4824	100
Total lbs. per hunter-week(1)	35.4		56.8	
Total lbs. available/ consumption-unit week(2)	11.8		23.9	
Total lbs. actually consumed per adult consumption unit week (3)	?		16.1	
Total surplus lbs.	?		1583.0	

Note (1): Actual weeks of intensive hunting employed here.
Note (2): Consumption unit weeks during periods of intensive harvesting employed here. Basis of calculation:
-ages 0-6 = 1/3 c.u. (both sexes)
-ages 7-17 = 2/3 c.u. (both sexes)
-ages 18-64 = 1 c.u. (both sexes)
-ages 65+ = 2/3 c.u. (both sexes)
Note (3): Available for inland group only.

Table 2.37: Numbers of canada geese and wavies taken by Wemindji camp-based and settlement-based hunters, 1974-5 to 1977-8 (1).

	1974-5	1975-6	1976-7	1977-8
FALL:				
Canada geesc				
-camp-based	939	1,482	2,150	1,221
-settlement-based (projected)	?	2,534	2,350	1,528
-Total	?	4,016	4,500	2,749
Wavies				
-camp-based	229	189	253	180
-settlement-based (projected)	?	674	188	119
-Total	?	863	441	299
SPRING:				
Canada geese				
-camp-based	3,521	5,388	4,733	3,307
-settlement-based (projected)	?	2,002	1,229	600
-Total	?	7,390	5,962	3,907
Wavies				
-camp-based	148	177	132	91
-settlement-based (projected)	?	7	11	3
-Total	?	184	143	94

Note (1): Based on full coverage for camp-based hunting; and samples corrected for age-grouping of all resident males 15 years and over for settlement-based hunting. Samples realized were as follows: Fall/75 - 41%; Spring /76 - 46%; Fall/76 - 45%; Spring/77 - 45%; Fall/77 - 32%; Spring /78 - 36%; of all resident males 15 yrs. of age and older.

Table 2.38: Projected numbers of Canada geese and wavies taken by Wemindji hunters, 1974-5 to 1977-8, according to James Bay and Northern Quebec Native Harvesting Research Committee (1976:126; 1978:103, 105; 1979: 67, 69; 1980: 58, 60).

Season and Species	1974-5	1975-6	1976-7	1977-8
SUMMER AND FALL:				
Canada geese	6515	3277	3,976	3,230
Wavies	2121	900	547	316
SPRING:				
Canada Geese	3585	5943	5,733	3,744
Wavies	325	99	131	119

Table 2.39: Intensity of goose harvesting, by season, for camp-based Wemindji hunters 1974-5 to 1977-8 (1).

	1974-5	1975-6	1976-7	1977-8
FALL GOOSE HUNT:				
Total man-weeks	117	68	153	188
No. of hunters	22	32	52	41
Weeks/hunter	5.3	2.1	2.9	4.6
No. of geese (Canadas and Wavies)	1168	1610	2403	1401
Geese/hunter	53.1	50.3	46.2	34.2
Geese/hunter-week	10.0	23.6	15.7	7.5
Foodweight/hunter-week (lbs.)	53	127.8	85.4	40.2
SPRING GOOSE HUNT:				
Total man-weeks	456	461	626	780
No. of hunters	65	78	95	112
Weeks/hunter	7.0	5.9	6.6	7.0
No. of geese (Canadas and Wavies)	3585	5353	4567	3398
Geese/hunter	55.2	68.6	49	30.3
Geese/hunter-week	7.9	11.6	7.4	4.4
Foodweight/hunter-week (lbs.)	43.5	64.5	41.4	24.2

Note (1): Figures here exclude man-weeks and goose kills of 3 men in Spring 1976, 1 man in Fall 1975 and 2 men in Spring 1975 on whom our data ta were incomplete.

Table 2.40: Average harvests of Wemindji settlement-based goose hunters, 1975-6 to 1977-8.

	1974-5	1975-6	1976-7	1977-8
FALL GOOSE HUNT:				
No. of hunters	?	77	82	79
No. of geese (Canadas and wavies)	?	3208	2538	1647
Geese/hunter	?	41.7	30.9	20.8
SPRING GOOSE HUNT:				
No. of hunters	?	36	34	44
No. of geese	?	2009	1240	603
Geese/hunter	?	55.8	36.4	13.7

Table 2.41: Comparative data, NHR, for Canada goose harvests, all Wemindji hunters (1).

	1974-5	1975-6	1976-7	1977-8
FALL:				
Total weeks	?	312	490	508
Weeks/hunter	?	2.8	3.5	3.5
Geese/hunter-week	14.8	7.8	8.4	6.6
SPRING:				
Total weeks	?	404	753	866
Weeks/hunter	?	3.8	5.3	6.0
Geese/hunter-week	7.0	10.8	7.8	4.2

Note (1) From NHR (1976:136, 1978:440, 1979:386 and 1980: 450). We have converted NHR's man-days to weeks by dividing by six, since geese are not hunted on Sundays.

Table 2.42: Comparison of two fall goose households as to foodweight composition of the harvest for portions of the fall 1977 hunt.

	Camp `A' lbs.	Camp `B' lbs.
Canada Geese	95	392
Ducks	5	5
Fish	132	40
Small game	18	4
Total	250	441
----------	---------	---------
Total lbs. per hunter-week	124	98
Total geese per hunter-week	3.5	15.5
Total lbs. available per consumption unit-week	31.8	28.1

Table 2.43: Intensity of sturgeon fishing at inland summer camps, Wemindji, 1976 to 1978 (1).

	1976	1977	1978
Total man-weeks	1.6	11.9	12.0
No. of hunters	2	7	8
Weeks/hunter	0.8	1.4	1.5
No. of sturgeon	66	350	369
Sturgeon/hunter	33	50	46
Sturgeon/hunter-week	20.6	29.4	30.8
Sturgeon foodweight	535	2835	2989
Foodweight/hunter-week	334.4	238.2	249.1
Foodweight available/ consumption unit-week	334.4	145.98	76.3

Note (1): NHR (1976, Appendices:130) caution that their average sturgeon weight is conservative, and that rather than the 4.8 lbs. average whole weight (3.1 lbs. foodweight) adopted by the study, something in the vicinity of 12.7 lbs. whole might be more accurate. On the basis of a sample of 72 sturgeon taken in the James Bay Cree area (Penn, 1978) we determined an average wholeweight of 12.5 lbs. Using the wholeweight/foodweight ratio adopted by NHR (1976), we calculate our foodweight per fish at 8.1 lbs.

Table 2.44: Total fur income and average fur income per trapper, Wemindji 1975-6 and 1976-7 (1)

	1975-6	1976-7
Total fur income ($)	$44,300	$73,680
No. of trappers	84	96
Average income/trapper ($)	$527	$768

Note (1): From Income Security Board records.

Table 2.45: Relative importance of beaver and other fur species to Wemindji total fur income 1972-3 to 1974-5 (1).

	1972-3	1973-4	1974-5	Mean
Beaver	$25,532	$28,425	$41,535	$31,831
Otter	$2,070	$2,268	$2,478	$2,272
Lynx	$11,680	$3,572	$2,530	$5,927
Marten	$0	$27	$12	$13
Mink	$624	$250	$380	$418
Red Fox	$0	$528	$1,406	$645
Arctic Fox	$0	$0	$23	$8
Muskrat	$861	$118	$439	$473
Other	$0	$12	$24	$12
Total	$40,767	$35,200	$48,827	$41,598

Note (1): From Ministere du Tourisme, de la Chasse, et de la Peche, Fur Division "Fourrures Piegees sur les Lignes de Trappe Enregistrees" cited in NHR (1976:198).

Table 2.46: List of items normally manufactured domestically by harvesting households, Wemindji.

ITEM:	Of bush material	Of commer material
Formed dwelling canvases		x
Dwelling logs, poles, insulation	x	
Flooring boughs	x	
Hearths and `drum' stoves	x	x
Drying racks	x	
Hide-stretchers	x	
Cooking sticks	x	
Shoulder yokes	x	
Hide fleshers	x	x
Webbing needles	x	x
Mitts, gloves	x	x
Moccasins	x	x
Sheepskin & duffel footwear liners	x	x
Rabbitskin footwear liners and lunch-warmers	x	
Goose-down quilts	x	x
Other blankets and quilts		x
Sleeping canopies		x
Bearskin rugs	x	
Pants, skirts, underclothing and sleepwear		x
Parkas	x	x
Toques and Sweaters		x
Showshoes	x	x
Snow shovels	x	
Toboggans and sleds	x	
Handles for several tools	x	
Waterfowl decoys	x	
Wood-carving knives	x	x
Ammunition pouches, bags	x	x
Fishnet floats and weights	x	
Fish hooks and leaders	x	x
Canoe paddles	x	
Gun cases	x	x
Various toys, games	x	
Medicines	x	

Table 2.47: Changes in replacement value of domestic production at Wemindji from 1975-6 to 1976-7.

	1975-6	1976-7
Total harvest foodweight value (1)	$372,000	$436,000
Bush dwelling fuel, service (2)	$28,000	$60,000
Clothing, equipement manufactured domestically (3)	$65,000	$122,000
Miscellaneous vegetable products (4) (berries, medicines, herbs)	$22,000	$40,000
Total replacement value	$487,000	$658,000

Note (1): Based on foodweight values for total harvest at Wemindji presented in Table 48, and a constant value of $2.50/lb. of harvested foodweight in the two years.

Note (2): Family camp-based man-weeks divided by 52 weeks, times $2120 fuel, service, maintenance costs per household year at settlement, times .61 proportion of married men = replacement value.

Note (3): No. of NHR Wemindji "respondents" times NHR average days spent in summer fishing, fall goose hunting, winter trapping and spring goose hunting, divided by 180 days perintensive hunter, times $905 per intensive hunter = replacement value,

Note (4): No. of NHR Wemindji "respondents" times NHR average days spent in summer fishing, fall goose hunting, winter trapping and spring goose hunting, divided by 180 days perintensive hunter, times $300 per intensive hunter = replacement value.

Table 2.48: Total harvest foodweight (lbs.) taken by Wemindji hunters, by species groups and by intensive and active hunters, 1975-6 to 1977-8 (1).

	1975-6	1976-7	1977-8
Fur mammals:			
intensive	30,590	41,470	46,850
active	2,160	4,000	2,200
all	32,750	45,470	49,050
Big game:			
intensive	5,980	15,750	9,270
active	1,170	1,350	650
all	7,150	17,100	9,920
Small game:			
intensive	5,350	14,540	22,370
active	1,350	2,390	5,380
all	6,700	16,930	27,750
Waterfowl:			
intensive	41,130	50,280	37,340
active	29,000	17,600	16,010
all	70,130	67,880	53,350
Fish:			
intensive	16,690	17,020	22,260
active	12,040	5,070	4,490
all	28,630	22,090	26,750
Seal and Polar Bear:			
intensive	2,090	3,500	3,380
active	1,390	1,230	940
all	3,480	4,730	4,320
All species:			
intensive	101,830	142,560	141,460
active	47,110	31,640	29,670
all	148,940	174,200	171,130

Note (1): Native Harvesting Research Committee figures (JBNQNHRC 1978, 1979, 1980) have been used here, except we have ammended the average goose foodweight values (Table 2.30, footnote) and the average sturgeon foodweight values (Table 2.43, footnote) adopted in our own study. Foodweight values for each species have been multiplied by the percentages taken by "intensive" and "active" categories of hunters in NHR's "Projected Harvest" tables on each species, and added by species group to obtain a breakdown of active and intensive hunters' harvests.

Table 2.49: Numbers and percentages of winter hunters at various ranges from Wemindji, 1973-4 to 1977-8.

	1973-4		1974-5		1975-6		3 years Pre-ISP average		1976-7		1977-8	
	No.	Percent	No.	Percen	No.	Percent	No.	Percent	No.	Percen	No.	Percent
00-29 mi.	7	11.7	11	16.4	13	17.1	10	14.7	21	22.3	24	26.7
30-59 mi.	16	26.7	11	16.4	21	27.6	16	23.5	17	18.1	12	13.3
60-89 mi.	14	23.3	8	11.9	10	13.2	11	16.2	18	19.1	9	10.0
90-119 mi.	20	33.3	19	28.4	19	25.0	19	27.9	11	11.7	28	31.1
120-149 mi.	3	5.0	13	19.4	13	17.1	10	14.7	24	25.6	12	13.3
150+ mi.	-	-	5	7.5	-	-	2	2.9	3	3.2	5	5.6
Total	60	100.0	67	100.0	76	100.0	68	100.0	94	100.0	90	100.0

Table 2.50: Native employment at Wemindji, 1975-6 and 1976-7 (1).

	Positions	Employment weeks	Net income $
Permanent Full-time:			
1975-6	31	1511	230 000
1976-7	32	1418	267 000
Permanent Part-time:(2)			
1975-6	7	88	18 000
1976-7	12	165	35 000
Casual, Seasonal:			
1975-6	91	517	93 000
1976-7	147	1021	178 000
Grand Total:			
1975-6		2199	341 000
1976-7		2682	480 000

Note (1): The employment year was calculated as running from October 1 to September 30, since some hunters held employment which continued on past the end of August, and we wanted to maintain Summer 1976 and Summer 1977 data as discrete blocks for comparative purposes.
Note (2): Does not include Band Councillor's honouraria.

Table 2.51: Casual employment and manpower training and upgrading - person-weeks involvement and income derived by Wemindji resident ISP beneficiaries and non-beneficiaries in 1975-6 and 1976-7.

	Employment weeks		Net income	
	1975-6	1976-7	1975-6	1976-7
CASUAL EMPLOYMENT:				
Beneficiary unit heads	452	723	82 900	131 700
Spouses (1)	2	6	200	1 000
Dependents	10	98	1 300	12 600
Non-beneficiary family heads	49	165	8 100	29 200
Spouses (1)	4	1	500	100
Dependents	0	28	0	3 400
MANPOWER TRAINING & UPGRADING:				
Beneficiary unit heads	139	1	16 300	100
Spouses	0	0	0	0
Dependents	0	0	0	0
Non-beneficiary family heads	107	1	9 200	100
Spouses	36	0	2 100	0
Dependents	0	0	0	0
GRAND TOTAL:				
Beneficiary unit heads	591	723	99 200	131 800
Spouses	2	6	200	1 000
Dependents	10	8	1 300	12 600
Total	603	827	100 700	145 400
Non-beneficiary family heads	156	166	17 300	29 300
Spouses	40	1	2 600	100
Dependents	0	28	0	3 400
Total	196	195	19 900	32 800

Note (1): Spouses of some families go tree-planting in Ontario, piece-work in which the whole family is engaged. This activity is not included in these figures for spouses, however, since income data were available to us only by family head, where the total family income from this activity is included.

Table 2.52: Welfare caseload by month at Wemindji, 1975-6 and 1976-7 (1).

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Averag
1975-6	89	89	110	118	143	95	91	114	116	85	90	96	103
1976-7	41	41	31	33	35	38	35	38	32	26	30	33	34.4

Note (1): Source: LaRusic, 1978: 35.

Table 2.53: Welfare expenditures for Wemindji, combined Band Welfare and Quebec Social Aid, 1975-6 and 1976-7 (1).

	1975-76	1976-7
Total benefits:	$184,484	$152,308

Note (1): Source: LaRusic, 1978: 33.

Table 3.1: Number of 1976-7 ISP beneficiary units and potential beneficiary units: on Cree enrollment lists (Spring 1976); beginning of year registration tabulations of ISP Board (Sept. 1976); and ISP post-1976-7 year-end summaries.

Community	Potential beneficiary units on enrollment lists spring 1976 (1)	Beneficiary units registered in Sept 1976 (2)	Beneficiary units officially participating in 1976-7 (3)
Mistassini	306	351	348
Chisasibi	214	220	213
Waskaganish	175	142	128
Waswanipi	113	95	99
Wemindji	105	101	100
Eastmain	37(4)	53	51
Whapmagoostui	36(4)	50	41
All	986	1012	980

Note (1): From enrollment lists "A" and "B" prepared by the Cree band administrations for the ISP Board.
Note (2): From MAS, 1977:Table 4, page 7. In addition, approximately 14 beneficiary units were eligible for retroactive payments. (See text)
Note (3): From ISP Board computer printouts, January, 1979 edition. See text for discussion of variation in totals.
Note (4): In Whapmagoostui and Eastmain the band councils only prepared "A" lists, totals are therefore somewhat lower than would be otherwise have been the case.

Table 3.2: Number of ISP beneficiaries by community, 1976-7 (1).

Community	Adult males	Adult females	Children	Total
Mistassini	282	270	854	1406
Chisasibi	205	154	545	904
Waskaganish	118	91	370	579
Waswanipi	92	75	254	421
Wemindji	93	64	181	338
Eastmain	49	34	102	185
Whapmagoostui	37	37	106	180
All	876	725	2412	4013

Note (1): Based on ISP Board printouts, January, 1979 edition.

Table 3.3: Recruitment of beneficiaries already practicing intensive harvesting in 1975-6, and those taking up intensive harvesting for the first time in 1976-7 or returning to it after not practicing for a time.

	Beneficiary units	Eligible both years	Eligible 1976-7 only	1976-7 only as percent of total
Sept. 1976 (1)	1012	708	304	30
End of 1976-7 (2)	980	694	286	29

Note (1): From Quebec Ministry of Social Affairs report (1977).
Note (2): Based on ISP Board printouts, January, 1979 edition.

Table 3.4: Recruitment of beneficiary units by community (1).

Community	Eligible both years	Eligible 1976-7 only	Percent of total 1976-7 only
Mistassini	239	112	32
Chisasibi	157	63	29
Waskaganish	101	41	29
Waswanipi	64	31	33
Wemindji	76	25	25
Eastmain	34	19	36
Whapmagoostui	37	13	26
All	708	304	30

Note (1): From MAS, 1977.

Table 3.5: Estimates of potential ISP beneficiaries made by representatives from the James Bay Cree communities in October, 1975 (1).

Community	October 1975 Minimum	Maximum	April-May 1976 (2)
Mistassini (3)	297	419	-
Chisasibi (4)	236	310	-
Waskaganish (3)	101	138	-
Waswanipi (3)	49	59	-
Wemindji (4)	103	136	-
Eastmain (5)	55	55	-
Whapmagoostui (3)	32	41	-
Nemiscau (5)	40	40	-
All	913	1198	1017

Note (1): Source: GCCQ, 1977, Tables 1 and 3A.
Note (2): Calculated by retabulating lists of October 1975 on the basis of ISP eligibility criteria finalized in the JBNQA in November 1975.
Note (3): Minimum and maximum estimates were calculated by excluding marginal cases.
Note (4): Minimum estimates were calculated as 76% of maximum estimates. The 76% figure is the average ratio of minimum to maximum estimates of other communities.
Note (5): In the smaller communities, where detailed knowledge of the activity patterns of individuals is more widespread, no calculation of minimum estimates was made when none was provided.

Table 3.6: Number of ISP beneficiary units as a percentage of Cree resident family units, 1976-7.

Community	Resident family units (1)	ISP beneficiary units	ISP as a percentage of family units
Mistassini	484	348	72
Chisasibi	516	213	41
Waskaganish	260	128	49
Waswanipi	193	99	51
Wemindji	203	100	49
Eastmain	102	51	50
Whapmagoostui	104	41	39
All	1862	980	53

Note (1): Mid-point between December 31, 1976 and December 31, 1977 band list totals from Department of Indian and Northern Affairs.

Table 3.7: Number of ISP beneficiary units as a percentage of family units on Enrollment Commission lists, 1976-7.

Community	Enrollment commission family units (1)	ISP beneficiary units	ISP as a percentage of family units
Mistassini	584	348	60
Chisasibi	572	213	37
Waskaganish	384	128	33
Waswanipi	258	99	38
Wemindji	234	100	43
Eastmain	127	51	40
Whapmagoostui	110	41	37
All	2269	980	43

Note (1): Includes all families eligible and enrolled as beneficiaries of the JBNQA, including non-residents of the James Bay region and formerly "non-status Cree."

Table 3.8: Adult and children ISP beneficiaries as a percentage of resident adult and children band members respectively, 1976-77 (1).

Community	Adult ISP beneficiaries as % of resident adult band members	Children ISP beneficiaries as % of resident children band members	All ISP beneficiaries as % of resident band members
Mistassini	74	98	86
Chisasibi	47	65	57
Waskaganish	57	79	70
Waswanipi	61	74	68
Wemindji	55	66	60
Eastmain	57	74	66
Whapmagoostu	45	54	50
All	58	77	68

Note (1): ISP beneficiary totals are from ISP Board printouts, January, 1979 edition. Resident band members are calculated as the average of the Department of Indian and Northern Affairs data sets on "Registered Indian Population by Age, Sex, and Residence for Bands", for December 31, 1976 and December 31, 1977.

Table 3.9: Family composition of ISP beneficiary units, 1976-7 (1).

Family composition (A=Adult;C=Child	Beneficiary Units Number	Percentage
1A-0C	303	31
1A-1C	23	
1A-2C	13	6
1A-3C+	20	
2A-0C	63	6
2A-1C	84	
2A-2C	97	
2A-3C	83	
2A-4C	72	58
2A-5C	62	
2A-6C	59	
2A-7C+	101	
All	980	101

Note (1): From ISP Board printouts, January 1979 edition.

Table 3.10: Family composition of ISP beneficiary units, by community, 1976-7 (1).

Family composition (A=Adult;C=Child)	Mistassini	Chisasibi	Waskaganish	Waswanipi	Wemindji	Eastmain	Whapmagoostui
1A-0C	109	65	42	27	38	17	5
1A-1C	16	0	0	1	3	1	2
1A-2C	7	1	2	2	1	0	0
1A-3C+	12	1	3	1	1	1	1
2A-0C	14	16	8	7	10	3	5
2A-1C	30	21	6	9	6	7	5
2A-2C	30	19	13	10	16	5	4
2A-3C	32	20	12	8	2	5	4
2A-4C	24	16	7	10	7	3	5
2A-5C	19	17	3	8	5	4	6
2A-6C	20	13	10	5	8	1	2
2A-7C+	35	24	22	11	3	4	2
All	348	213	128	99	100	51	41

Note (1): From ISP Board printouts, January 1979 edition.

Table 3.11: Family composition of ISP beneficiary units, resident band families and families enrolled under the JBNQA, 1976-7.

Family Composition (A=Adult, C=Child)	Percentage of ISP beneficiary units(1)	Resident band families(2)	Percentage of resident band families	JBNQA enrolled families(3)	Percentage of enrolled families
1A-0C	31	857	46	1011	45
1A,1C		71		108	
1A,2C	6	25	7	38	9
1A,3C+		31		57	
2A-0C	6	196	11	232	10
2A-1C		124		143	
2A-2C		104		144	
2A-3C	58	114	37	144	36
2A-4C		96		107	
2A-5C		73		98	
2A-6C		66		70	
2A-7C+		105		117	
All		1862		2269	

Note (1): From ISP Board printouts, January, 1979 edition.
Note (2): Mid-point between totals from Department of Indian and Northern Affairs band lists for December 31, 1976, and December 31, 1977.
Note (3): JBNQA Enrollment Commission lists.

Table 3.12: ISP beneficiary units as a percentage of resident band families and enrolled families by family composition, 1976-77 (1).

Family Composition (A=Adult,C=Child)	ISP Beneficiary Units as a Percentage of: resident band families	JBNQA enrolled families
1A-0C	35	30
1A,1C	32	21
1A,2C	52	34
1A,3C+	65	35
2A-0C	32	27
2A-1C	68	59
2A-2C	93	67
2A-3C	73	58
2A-4C	75	67
2A-5C	85	63
2A-6C	89	84
2A-7C+	96	86
All	53	43

Note (1): Calculated using ISP Board printouts, January 1979 edition; mid-points between Department of Indian and Northern Affairs band list totals for December 31, 1976 and December 31, 1977; and JBNQA enrollment lists.

Table 3.13: Family frequency and size of ISP beneficiary units, 1976-7 (1).

Community	Number of beneficiary units: Individual	Family	Family units as a percentage of beneficiary units	Average number of children per family unit
Mistassini	109	239	69	3.6
Chisasibi	65	148	69	3.7
Waskaganish	42	86	67	4.3
Waswanipi	27	72	73	3.5
Wemindji	38	62	62	2.9
Eastmain	17	34	67	3.0
Whapmagoostui	5	36	88	2.9
All	303	677	69	3.6

Note (1): From ISP Board printouts, January 1979 edition.

Table 3.14: Adult heads of ISP beneficiary units, by sex and by age group, 1976-7 (1).

Age group	Female Heads of Beneficiary Units		Male Heads of Beneficiary Units	
	Number	Percentage	Number	Percentage
under 18	1	1	0	0
18-19	20	17	38	4
20-24	30	26	150	17
25-29	7	6	110	12
30-34	2	2	99	11
35-39	11	9	84	9
40-44	4	3	92	10
45-49	5	4	75	8
50-54	6	5	66	7
55-59	3	3	64	7
60-64	8	7	57	6
65-69	6	5	28	3
70-74	7	6	20	2
75-79	4	3	5	1
80+	3	3	6	1
All	117	100	894	98

Note (1): Based on beneficiary units receiving benefits in the fall of 1976. Age on December 31, 1976.

Table 3.15: Adult male ISP heads of beneficiary units, by community and age group, 1976-7 (1).

Age group	Mistassini	Chisasibi	Waskaganish	Waswanipi	Wemindji	Eastmain	Wapmagoostui
18-19	15	5	5	7	2	2	2
20-24	56	35	22	11	15	5	6
25-29	33	30	17	8	11	5	6
30-34	33	25	18	5	7	4	7
35-39	23	18	12	13	8	6	4
40-44	33	23	8	9	9	5	5
45-49	19	19	5	12	9	7	4
50-54	17	18	8	7	6	5	5
55-59	23	10	6	5	10	5	5
60-64	22	13	3	5	8	4	2
65-69	4	12	4	1	4	2	1
70-74	8	2	3	1	4	0	2
75-79	2	1	0	1	1	0	0
80+	4	0	1	0	0	0	1
All	292	211	112	85	94	50	50

Note (1): Based on beneficiary units receiving benefits in the fall of 1976.
Age as of December 31, 1976.

Table 3.16: Adult female heads of beneficiary units, by community and age group. 1976-7 (1).

Age group	Mistassini	Chisasibi	Waskaganis	Waswanipi	Wemindji	Eastmain	Whapmagoostui
0-18			1				
18-19	13	2	4	1			
20-24	22	3	2	1	1	1	
25-29	5		1		1		
30-34	2						
35-39	4	1	2	2	2		
40-44	3				1		
45-49	1					1	3
50-54	5			1			
55-59	1			1	1		
60-64	5		1			1	1
65-69	2		1	1			2
70-74	3	2	1		1		
75-79	2		2				
80+	2			1			
All	70	8	15	8	7	3	6

Note (1): Based on beneficiary units receiving benefits in the fall of 1976.
Age as of December 31, 1976.

Table 3.17: Adult females and males on enrollmemt lists prepared during the spring of 1976, by age group (1).

Age group	Adult Females on Enrollment Lists		Adult Males on Enrollment Lists	
	Number	Percentage	Number	Percentage
18-19	38	5	49	6
20-24	80	11	128	15
25-29	80	11	113	13
30-34	106	15	90	10
35-39	88	13	91	10
40-44	62	9	91	10
45-49	63	9	73	8
50-54	61	9	70	8
55-59	53	8	64	7
60-64	42	6	55	6
65-69	9	1	26	3
70-74	7	1	16	2
75-79	2	< 0.5	4	< 0.5
80+	5	1	5	1
All	696(2)	99	875	99

Note (1): Enrollment lists were prepared by Cree community administrations. Adults include both heads of families and spouses.
Note (2): One person on the enrollment lists is excluded from this tabulation because their age could not be determined from available data.

Table 3.18: Adult females on enrollment lists prepared during the spring of 1976, by community and age group (1).

Age group	Mistassini	Chisasibi	Waskaganish	Waswanipi	Wemindji	Eastmain	Whapmagoostui
18-19	18	8	9	1	1	0	1
20-24	27	19	18	4	6	1	5
25-29	28	17	10	7	9	5	4
30-34	30	22	21	13	9	5	6
35-39	27	16	13	16	9	4	3
40-44	15	13	10	12	8	2	2
45-49	22	11	6	11	4	1	8
50-54	17	13	11	4	9	3	4
55-59	16	15	7	6	5	4	0
60-64	20	6	6	6	1	3	0
65-69	3	2	2	1	0	1	0
70-74	5	0	0	2	0	0	0
75-79	2	0	0	0	0	0	0
80+	2	0	0	3	0	0	0
All	232	142(2)	113	86	61	29	33

Note (1): Enrollment lists were prepared by Cree community administrations.
Note (2): One person is excluded because their age could not be determined from available data.

Table 3.19: Adult male beneficiary unit heads as a percentage of adult male resident band members by age group, 1976.

Age group	Resident adult male band members(1)	ISP adult male beneficiaries(2)	ISP male beneficiaries as a percentage of resident male band members
18-19	108	38	35
20-24	235	150	64
25-29	171	110	64
30-34	151	99	66
35-39	112	84	75
40-44	110	92	84
45-49	98	75	77
50-54	78	66	85
55-59	73	64	88
60-64	86	57	66
65-69	40	28	70
70-74	31	20	65
75-79	23	5	22
80+	17	6	35
ALL	1333	908	68

Note (1): From Department of Indian and Northen Affairs data on "Registered Indian Population by Age, Sex, and Residence for Bands", December 31, 1976.
Note (2): Beneficiary units receiving benefits in the fall of 1976. Age as of December 31, 1976.

Table 3.20: Adult females on ISP enrollment lists as a percentage of resident adult female band members, 1976.

Age group	Resident adult female band members(1)	Adult females on ISP enrollment lists(2)	Adult females on enrollment lists as a % of resident female band members
18-19	116	38	33
20-24	219	80	37
25-29	164	80	49
30-34	170	106	62
35-39	112	88	79
40-44	95	62	65
45-49	73	63	86
50-54	80	61	76
55-59	74	53	72
60-64	61	42	69
65-69	28	9	32
70-74	28	7	25
75-79	23	2	9
80+	29	5	17
All	1272	696(3)	55

Note (1): From Department of Indian and Northen Affairs data on "Registered Indian Population by Age, Sex, and Residence for Bands", December 31, 1975.
Note (2): Listed as potential ISP Beneficiaries by Cree communities during the winter/spring of 1976. These lists omitted people who applied later and were accepted into the program, and they include people who applied and whom were found to be ineligible and were not admitted.
Age as of December 31, 1975.
Note (3): This total does not include one individual whose age could not be determined.

Table 3.21: Relation of family size and composition to age of head of family on ISP enrollment lists, spring 1976 (1).

Family Composition (A=Adult, C=Child)	Age Group 18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80
1A-0C	57	90	32	11	16	3	11	7	14	10	4	3	3	
1A-1C	2		1	1	2			1	1	1				
1A-2C				1	1									
1A-3C	1			1	3		6			1				
2A-0C	1	7	10	3	4	5	5	9	10	19	14	5	2	4
2A-1C	2	13	9	7	6	4	4	9	11	5	3	1		2
2A-2C		7	20	11	4	7	7	6	10	10	3	1		
2A-3C		5	18	16	2	5	6	9	8	4	1	1		
2A-4C			7	10	8	9	3	8	7	4				
2A-5C			5	9	13	7	6	4	1	1	1			
2A-6C			2	7	11	10	8	6	2		1			
2A-7C+			2	7	20	32	12	7	1					
All	63	122	106	84	90	82	68	67	65	55	27	11	5	6

Note (1): Tabulated from ISP enrollment lists made in the spring of 1976. A total of 96 cases, 12 percent, could not be classified, all from the "B List". There were no "B Lists" from Eastmain and Whapmagoostui. A total of 13 potential beneficiaries under 18 years of age were not included.

Table 3.22 Consorts reporting time in the bush in the post-November 11 periods of 1975-6 and 1976-7.

Community and Units	1975-6 Consorts	1975-6 Number In Bush	1975-6 Percentage In Bush	1976-7 Consorts	1976-7 Number In Bush	1976-7 Percentage In Bush
Data for 2 Years (1)						
Mistassini	164	153	93	161	156	97
Chisasibi	91	41	45	92	72	78
Waskaganish	71	64	90	68	65	96
Waswanipi	53	49	92	53	52	98
Wemindji	53	47	89	55	52	95
Eastmain	24	14	58	24	19	79
Whapmagoostui	25	24	96	25	25	100
All	481	392	81	478	441	92
Data for 1 Year (2)						
Mistassini				34	33	97
Chisasibi				11	8	73
Waskaganish				0	0	-
Waswanipi				6	6	100
Wemindji				0	0	-
Eastmain				2	2	100
Whapmagoostui				0	0	-
All				53	49	92

Note (1): Includes beneficiary units in which the data were clear on consort days, and the head provided data for both years. Data tabulated from ISP Board files.
Note (2): Includes units with data only for 1976-7, for which clear data on consorts harvesting time was available from ISP Board files.

Table 3.23: Family composition, beneficiary units, 1976-7 (1).

Family Composition (A=Adult;C=Child)	Male heads of beneficiary units	Female heads of beneficiary units
1A-0C	242	61
1A-1C	3	20
1A-2C	4	9
1A-3C+	6	14
2A-0C	63	
2A-1C	83	1
2A-2C	97	
2A-3C	83	
2A-4C	72	
2A-5C	62	
2A-6C	59	
2A-7C+	100	1
All	874	106

Note (1): From ISP Board printouts, January 1979 edition.

Table 3.24: Adult male, adult female ISP beneficiaries as a percentage of resident adult male and female band members, respectively, 1976-7 (1).

Community	Adult male ISP beneficiaries as % resident adult male band members	Adult female ISP beneficiaries as % resident adult female band members
Mistassini	78	71
Chisasibi	55	40
Waskaganish	61	52
Waswanipi	67	54
Wemindji	64	46
Eastmain	68	47
Whapmagoostu	45	45
All	64	53

Note (1): ISP beneficiary totals are from ISP Board printouts, edition of January, 1979. Resident band members are calculated as the average of the Department of Indian and Northern Affairs data sets on "Registered Indian Population by Age, Sex, and Residence for Bands" for December 31, 1976 and December 31, 1977.

Table 3.25: Family composition of ISP beneficiary units, 1977-8 (1).

Family composition (A=Adult; C=Child)	Heads of beneficiary units			Percentage distribution of total
	Male	Female	Total	
1A-0C	194	59	253	28
1A-1C	4	19	23	
1A-2C	3	8	11	6
1A-3C+	6	14	20	
2A-0C	69		69	8
2A-1C	88		88	
2A-2C	90		90	
2A-3C	67		67	
2A-4C	70		70	58
2A-5C	61		61	
2A-6C	49		49	
2A-7C+	89		89	
ALL	790	100	890	100

Note (1): Based on ISP Board printouts, edition of January 1979.

Table 3.26: Family composition of ISP beneficiary units, 1976-7 and 1977-8 (1).

Family composition (A=Adult; C=Child)	1976-7 Beneficiary units Number	%	1977-8 Beneficiary units Number	%	Percentage change, in numbers
1A-0C	303	31	253	28	-17
1A-1C	23		23		0
1A-2C	13	6	11	6	-15
1A-3C+	20		20		0
2A-0C	63	6	69	8	+33
2A-1C	84		88		+5
2A-2C	97		90		-7
2A-3C	83		67		-19
2A-4C	72	58	70	58	-3
2A-5C	62		61		-2
2A-6C	59		49		-17
2A-7C+	101		59		-12
All	980	101	890	100	-9

Note (1): Based on ISP Board printouts, edition of January 1979.

Table 3.27: Family composition of ISP beneficiary units, by community, 1977-8 (1).

Family Composition	Mistassini	Chisasibi	Waskaganish	Waswanipi	Wemindji	Eastmain	Whapmagoostui
1A-0C	89	56	28	23	39	14	4
1A-1C	15	2	1	1	3		1
1A-2C	7	1	1	1	1		
1A-3C+	13		2	1	2	1	1
2A-0C	19	21	9	6	9	2	3
2A-1C	31	17	6	10	14	6	4
2A-2C	31	19	8	11	13	4	4
2A-3C	23	16	7	6	5	5	5
2A-4C	27	15	7	9	6	3	3
2A-5C	20	15	8	5	2	7	4
2A-6C	17	7	5	8	8	1	3
2A-7C+	35	20	18	9	4	3	
All	327	189	100	90	106	46	32

Note (1): Based on ISP Board printouts, edition of January 1979.

Table 3.28: Number of beneficiaries of ISP in 1976-7 and 1977-8 (1).

	1976-7	1977-8	Percentage change
Adult females	725	683	-6
Adult males	876	790	-10
Children	2412	2192	-9
Total	4013	3665	-9

Note (1): Based on ISP Board prinouts, edition of January, 1979.

Table 3.29: Number of beneficiary units and beneficiaries of ISP program, by community, 1977-8 (1).

Community	Adult males	Adult females	Children	Total	Beneficiary units
Mistassini	266	264	838	1368	327
Chisasibi	180	139	444	763	189
Waskaganish	93	75	306	474	100
Waswanipi	85	69	235	389	90
Wemindji	94	73	182	349	106
Eastmain	43	34	106	183	46
Whapmagoostui	29	29	81	139	32
All	790	683	2192	3665	890

Note (1): Based on ISP Board printouts, edition of January 1979.

Table 3.30: Family frequency and size for ISP beneficiary units by community, 1977-8 (1).

Community	Number of beneficiary units		Family units as a % of beneficiary units	Average no. of children per family unit
	Individuals	Families		
Mistassini	89	238	73	3.5
Chisasibi	56	133	70	3.3
Waskaganish	28	72	72	4.2
Waswanipi	23	67	74	3.5
Wemindji	39	67	63	2.7
Eastmain	14	32	70	3.3
Whapmagoostui	4	28	88	2.9
ALL	253	637	72	3.4

Note (1): Based on ISP Board printouts, edition of January 1979.

Table 3.31: Cancelled files and new applications in September/October, 1978 (1).

Beneficiary units by:	Cancelled files	New applications accepted	New applications denied
Age Group			
18-30	27	56	9
30-40	13	2	1
40-50	6	2	1
50-60	8	1	0
60+	4	8	0
Family status			
Single	20	51	9
Family	38	18	2
All	58	69	11

Note (1): Data from ISP Board memos and documents.

Table 3.32: Number of ISP files cancelled and reasons for cancellation, March 1978 to March 1979.

Reasons for Cancellation	Number of files cancelled (1): March 78	Sep/Oct 78	Dec 78	March 79
No intention to harvest in coming year or withdrew in midyear (some to go on social assistance)	12	27	5	3
Insufficient days	NA	17	NA	NA
More time working than hunting last year	NA	7	NA	NA
Withdrew due to health	0	2	0	0
Full-time employee (2)	47(22)	1	6	11
Deceased	2	1	3	0
Formed family with another beneficiary marriage (3)	9(2)	1	1	3
Not a JBNQA beneficiary	1	0	0	0
Other	0	2	0	0
All	71(39)	58	15	17

Note (1): Data from unpublished memos and documents of the ISP Board.
Note (2): Twenty-five of 47 in March 78 took temporary work on environmental and remedial programs set up under the JBNQA, did not loose eligibility, and would be able to rejoin ISP in either of the succeeding two years.
Note (3): Seven of 9 closed files in March 78 were women who married ISP beneficiaries, and who therefore remained beneficiaries, but as members of new family beneficiary units.

Table 3.33: "A" and "B" list individuals and heads of families by age group (1).

Age group	"A" List male heads	"A" List female heads	"B" List(2) male heads	"B" List(2) female heads
18-19	23	17	26	6
20-24	74	9	54	2
25-29	67	3	46	2
30-34	63	4	27	0
35-39	69	5	22	6
40-44	76	1	15	0
45-49	61	1	12	2
50-54	63	1	7	3
55-59	53	1	11	2
60-64	42	5	13	2
65-69	16	2	10	1
70-74	10	0	6	3
75-79	4	1	0	1
80+	3	2	2	0
All	624	52	251	30

Note (1): Tabulated from "A" and "B" lists provided by the GCCQ.
Ages could be determined for 957 listed heads of units.
Note (2): No "B" lists were made at Eastmain and Waskaganish.

Table 3.34: Family composition of 1976-7 ISP beneficiary units for which there is data on 1975-6 and those for which there is not (1).

Family Composition (A=Adult, C=Child)	Percentage of ISP beneficiary units(1)	Data for 1975-6 & 1976-7	Percentage 1975-6 & 1976-7	Data only for 1976-7	Percentage only for 1976-7
1A-0C	31	189	27	114	40
1A,1C		13		10	
1A,2C	6	8	5	6	8
1A,3C+		14		6	
2A-0C	6	38	5	25	9
2A-1C		68		16	
2A-2C		68		29	
2A-3C	58	61	62	22	44
2A-4C		57		15	
2A-5C		48		14	
2A-6C		49		10	
2A-7C+		81		20	
All		694		286	

Note (1): Tabulated from ISP Board files.

Table 3.35: Number of 1976-7 ISP beneficiary units which were eligible in 1975-6, and which were not, and the number of children per unit (1).

Community	Beneficiary units eligible 1975-6	Beneficiary units not eligible 1975-6	Avg. No. children per b.u. eligible	Avg. No. children per b.u. not eligible
Mistassini	238	110	3.88	3.54
Chisasibi	152	62	4.24	3.74
Waskaganish	94	33	4.87	4.35
Waswanipi	70	29	4.14	3.18
Wemindji	75	25	3.38	3.90
Eastmain	34	17	3.42	2.60
Whapmagoostui	31	10	3.75	2.28
All	694	286	4.03	3.58

Note (1): Based on tabulations from ISP Board files for end of year totals.

Table 3.36: Number of ISP applicants dropped as ineligible for benefits for 1975-6, 1976-7 or 1977-8 (1).

Program Year & Community	"A" List	"B" List	Neither List	Total
1975-6 (2)				
Mistassini	3	2	1	6
Chisasibi	3	2	0	5
Waskaganish	2	0	0	2
Waswanipi	1	0	0	1
Wemindji (3)	-	0	0	0
Eastmain (4)	0	-	1	1
Whapmagoostui (4)	7	-	1	8
All (5)	16	4	3	23
1976-7 (2)				
Mistassini	0	0	1	1
Chisasibi	0	1	1	2
Waskaganish	0	5	0	5
Waswanipi	0	0	1	1
Wemindji (3)	-	1	0	1
Eastmain (4)	1	-	1	2
Whapmagoostui (4)	2	-	0	2
All	3	7	4	14
1977-8				
Mistassini	5	13	5	23
Chisasibi	16	9	0	25
Waskaganish	13	9	2	24
Waswanipi	5	1	2	8
Wemindji (3)	-	3	2	5
Eastmain (4)	3	-	0	3
Whapmagoostui (4)	4	-	0	4
All	46	35	11	92

Note (1): Tabulated from ISP Board data. A total of 129 dropped files were tabulated, excluding 5 unidentifiable cases.
Note (2): Eligibility for both the 1975-6 and 1976-7 program years was decided in summer/fall of 1976, after applications were received.
Note (3): We did not have an appropriate "A" list for Wemindji.
Note (4): No "B" lists were prepared in Eastmain or Whapmagoostui.
Note (5): We do not have data on why some "B" list applicants were considered for 1975-6 benefits, but some may have requested benefits.

Table 3.37: Total number of ISP applicants dropped as ineligible for benefits for 1975-6, 1976-7 or 1977-8, as percentages (1).

Program Year & Community	"A" List	"B" List	Neither List	Total
1975-6 to 1977-8				
Mistassini	8	15	7	30
Chisasibi	19	12	1	32
Waskaganish	15	14	2	31
Waswanipi	6	1	3	10
Wemindji (2)	-	4	2	6
Eastmain (3)	4	-	2	6
Whapmagoostui (3)	13	-	1	14
All	65	46	18	129
1975-6 (4)				
Annual Total Dropped	16	4	3	23
As % of Annual Total	70	17	13	100
As % of List	2	1	-	3
1976-7 (4)				
Annual Total Dropped	3	7	4	14
As % of Annual Total	21	50	29	100
As % of List	<1	2	-	2
1977-8				
Annual Total Dropped	46	35	11	92
As % of Annual Total	50	38	12	100
As % of List	6	12	-	18
Three Years Totals				
Dropped	65	46	18	129
As % of Dropped	50	36	14	100
As % of List	9	15	-	24

Note (1): Tabulated from ISP Board data. A total of 109 men were dropped and 20 women, in addition 5 closed files were unidentified and not tabulated.
Note (2): We could not use the "A" list from Wemindji in this analysis.
Note (3): No "B" lists were prepared in Eastmain or Whapmagoostui.
Note (4): Eligibility for both the 1975-6 and 1976-7 program years was determined in the sumer/fall of 1976. The consideration of some "B" list applicants for 1975-6 benefits may be a response to requests.

Table 3.38: Hunting experience of men on "B" lists from two communities, Mistassini and Chisasibi (1).

"Classification"	Mistassini hunters	Chisasibi hunters	Percentage of total
Experienced hunters	77	40	63
"In training"	20	41	33
Unexperienced	8	1	5

Note (1): Data provided by the GCCQ.

Table 3.39: ISP Beneficiary units by year and community, 1976-7 to 1986-7 (1).

Community	76-7	77-8	78-9	79-80	80-1	81-2	82-3	83-4	84-5	85-6	86-7
Mistassini	348	327	296	284	285	308	349	359	356	339	343
Chisasibi	213	188	192	137	141	173	281	329	348	333	331
Waskaganish	128	99	85	81	99	107	114	113	113	117	119
Waswanuipi	99	90	95	105	117	119	139	144	144	145	140
Wemindji	100	106	109	106	97	93	94	105	95	102	110
Eastmain	51	45	43	40	48	41	42	44	36	33	33
Whapmagoostui	41	32	32	29	32	33	44	51	56	52	54
Nemaska	-	-	49	56	55	55	59	60	57	55	50
All	980	887	901	838	874	929	1,122	1,205	1,205	1,176	1,180

Note (1): 1976-7 data from this study, 1977-8 to 1986-7 from ISP Board Annual Reports. Summarized in Appendix 1.

Table 3.40: Percentage increase or decrease from previous year in number of beneficiary units, by year and community, 1977-8 to 1986-7 (1).

Community	77-8	78-9	79-80	80-1	81-2	82-3	83-4	84-5	85-6	86-7
Mistassini	-6	-9	-4	0	8	13	3	-1	-5	1
Chisasibi	-12	2	-29	3	23	62	17	6	-4	-1
Waskaganish	-23	-14	-5	22	8	7	-1	0	4	2
Waswanipi	-9	6	11	11	2	17	4	0	1	-3
Wemindji	6	3	-3	-8	-4	1	12	-10	7	8
Eastmain	-12	-4	-7	20	-15	2	5	-18	-8	0
Whapmagoostui	-22	0	-9	10	3	33	16	10	-7	4
Nemaska	-	-	14	-2	0	7	2	-5	-4	-9
All	-9	2	-7	4	6	21	7	0	-2	0

Note (1): 1976-7 figures used to calculate 1977-8 percentages are from this study.
1977-8 to 1986-7 figures are calculated from data in ISP Board Annual Reports.
Summarized in Appenddix 1.

Table 3.41: ISP Beneficiary population as a percentage of total Cree population (1).

Community	76-7	77-8	78-9	79-80	80-1	81-2	82-3	83-4	84-5	85-6	86-7
Mistassini	76	69	68	59	54	52	55	54	52	49	48
Chisasibi	59	43	42	23	19	24	40	44	46	39	37
Waskaganish	64	43	42	38	37	32	25	24	23	21	21
Waswanipi	55	48	43	44	45	44	44	39	37	35	33
Wemindji	52	52	54	49	43	40	37	39	29	30	33
Eastmain	64	55	48	42	41	36	33	35	30	26	26
Whapmagoostui	62	36	34	29	32	26	32	37	40	43	36
Nemaska	-	-	70	66	67	68	62	49	47	40	38
All	64	52	51	42	40	39	41	41	40	36	36

Note (1): Tabulated from ISP Board Annual Reports.

Table 3.42: Heads of ISP beneficiary units by age group, in 1976-7 and 1983-4.

Age group	1976-7 Heads Number (1)	Percentage	1983-4 Heads Number (2)	Percentage
under 18	1	<1		
18-19	58	6	40	3
20-24	180	18	283	24
25-29	117	12	149	13
30-34	101	10	76	6
35-39	95	9	76	6
40-44	96	9	66	6
45-49	80	8	85	7
50-54	72	7	79	7
55-59	67	7	77	6
60-64	65	6	58	5
65+	79	8	201	17
All	1011	100	1190	100

Note (1): Based on beneficiary units receiving benefits in the fall of 1976. Age on December 31, 1976.
Note (2): From ISP Board Annual Report for 1983-4, summarized in Appendix 1 of this report. Based on a study of 1190 of 1203 ISP Board files.

Table 3.43: Family composition of ISP beneficiary units, 1976-7 and 1983-4.

Family composition	1976-7 Number (1)	Units Percentage	1983-4 Number (2)	Units Percentage
1A-0C	303	31	501	42
1A-1C	23		27	
1A-2C	13	6	7	4
1A-3C+	20		11	
2A-0C	63	6	134	11
2A-1C	84		139	
2A-2C	97		88	
2A-3C	83		76	
2A-4C	72	58	70	44
2A-5C	62		41	
2A-6C	59		44	
2A-7C+	101		65	
All	980	101	1203	101

Note (1): From ISP Board printouts, January 1979 edition.
Note (2): From ISP Board Annual Report for 1983-4, summarized in Appendix 1 of this report.

Table 4.1. Days Spent by Heads of Beneficiary Units in Harvesting and Related Activities in the Bush During the Post-November 11 Periods of 1975-6 and 1976-7 (1).

Community	1975-6 Days	1976-7 Days	Difference	Percentage Difference
Mistassini	34,158	45,914	11,756	34
Chisasibi	16,022	18,634	2,612	16
Waskaganish	11,198	11,913	715	6
Waswanipi	9,878	11,994	2,116	21
Wemindji	11,573	13,691	2,118	18
Eastmain	2,836	4,570	1,734	61
Whapmagoostui	3,018	3,798	780	26
All	88,683	110,514	21,831	25

Note (1): Includes data on 716 heads of beneficiary units who reported days for both the 1975-6 and 1976-7 program years, and on whom there were unambiguous data available on harvesting periods in the ISP Board files.

Table 4.2. Average Number of Days Spent by Beneficiary Unit Heads in Harvesting and Related Activities, 1975-6 and 1976-7 (1).

Community	Beneficiary Unit Heads	1975-6 Post-November 11 Days Harvesting & Related Activities in the Bush	1976-7 Post-November 11 Days Harvesting & Related Activities in the Bush	1976-7 All Year Days Harvesting & Related Activities in the Bush	1975-6 All Year Days Harvesting & Related Activities All	1976-7 All Year Days Harvesting & Related Activities All
Mistassini	249	137	184	229	158	246
Chisasibi	138	116	135	194	119	195
Waskaganish	93	120	128	162	136	174
Waswanipi	72	137	167	205	149	210
Wemindji	99	117	138	192	131	205
Eastmain	36	79	127	177	98	197
Whapmagoostui	29	104	131	199	109	217
All	716	124	154	202	138	214
Days of ISP Operations		231	231	365	231	365

Note (1): Includes beneficiary unit heads who provided data for both years, and on whom there were unambiguous reports.

Table 4.3. Average Days Spent by Intensive Hunters in Harvesting, as Estimated by Cree Community Representatives in 1975 and as Reported by ISP Hunters in 1976-7 (1).

Community	Estimated Pre-1975 Days (2)	1976-7 ISP Days	Difference	Percentage Difference
Mistassini	172	229	57	33
Chisasibi	158	194	36	23
Waskaganish	189	162	(27)	-14
Waswanipi	176	205	29	16
Wemindji	161	192	31	19
Eastmain	180	177	(3)	-2
Whapmagoostui	133	199	66	50
All (3)	170	202	32	19

Note (1): Cree community representatives estimates from Grand Council of the Crees data. Data on 1976-7 ISP hunters days tabulated from ISP Board files on 716 heads of beneficiary units who provided data for both the 1975-6 and 1976-7 program years, and on whom there were unambiguous data available on harvesting periods.

Note (2): See text for a description of how data were prepared.

Note (3): Cree community representatives made estimates for 40 Nemaska hunters, but ISP Board data did not distinguish Nemaska hunters in 1976-7. We do not list Nemaska hunters by community, but they are included in the "All" category for pre-1975 days. They are included in their village of residence in the ISP Board data.

Table 4.4. Time Spent Trapping by "B" List Hunters in 1975-6 (1).

Community (2)	"B" List Household Heads	"B" List Males Heads	Interviewed By NHR	Trapped	Did Not Trap	Average Trapping Weeks	
						Per Trapper	Per Interviewee
Mistassini	105	91	30	26	4	16.1	13.9
Chisasibi (3)	82	80	52	33	19	9.6	6.1
Waskaganish	40	40	32	11	21	8.2	2.8
Waswanipi	12	9	9	8	1	10.8	9.6
Wemindji	28	27	22	5	17	3.6	0.8
Total	267	247	145	83	62	11.2	6.4

Note (1): Data tabulated from NHR files for the Grand Council of the Crees (of Quebec).
Note (2): No "B" lists were prepared for Eastmain and Whapmagoostui.
Note (3): One interviewee who did not anwer the question concerning trapping time is not included.

Table 4.5. Time Spent Trapping by "A" and "B" List Hunters in 1975-6 and 1976-7 (1).

Community	"B" List Mean Weeks Per:			"A" List Mean Weeks Per Interviewee	
	Trapper 1975-6	Interviewee 1975-6	Interviewee 1976-7	1975-6	1976-7
Mistassini	16.1	13.9	25.9	20.9	25.0
Chisasibi	9.6	6.1	12.3	8.1	18.8
Waskaganish	8.2	2.8	7.7	12.0	13.5
Waswanipi	10.8	9.6	21.0	21.1	26.1
Wemindji	3.6	0.8	7.8	9.4	15.9
Eastmain (2)	-	-	-	5.4	11.9
Whapmagoostui (2)	-	-	-	9.0	8.8
All	11.2	6.4	17.3	14.7	19.4

Note (1): Data tabulated from NHR files for the Grand Council of the Crees (of Quebec).
Note (2): No "B" lists were prepared for Eastmain and Whapmagoostui.

Table 4.6. Time Spent Trapping by Hunters Listed as Eligible and Those Listed as Not-Eligible for ISP, 1975-6 and 1976-7 (1).

Community	1975-6 Mean Weeks / Interviewee		1976-7 Mean Weeks / Interviewee		
	Not "A" List (2)	"A" List	Not "A" or "B" List (2)	"B" List	"A" List
Mistassini	7.3	20.9	10.1	25.9	25.0
Chisasibi	4.1	8.1	8.5	12.3	18.8
Waskaganish	1.6	12.0	4.3	7.7	13.5
Waswanipi	13.7	21.1	22.5	21.0	26.1
Wemindji	0.9	9.4	2.9	7.8	15.9
Eastmain (3)	1.7	5.4	4.3	-	11.9
Whapmagoostui (3)	6.4	9.0	2.4	-	8.8
All	5.0	14.7	8.1	17.3	19.4

Note (1): Data tabulated from NHR files for the Grand Council of the Crees (of Quebec).
Note (2): Those hunters who were not listed as eligible for ISP in that year, but see Note (3).
Note (3): No "B" Lists were prepared in the communities of Eastmain and Whapmagoostui. In 1976-7, the Not "A" or "B" category includes those who would have been on the "B" List in these two communities, and who therefore would have been eligible.

Table 4.7. Consorts Reporting Harvesting and Related Activities in the Bush, Post-November 11 Periods of 1975-6 and 1976-7 (1).

Community	1975-6			1976-7		
	Consorts	Number Harvesting	Percentage Harvesting	Consorts	Number Harvesting	Percentage Harvesting
Mistassini	164	153	93	161	156	97
Chisasibi	91	41	45	92	72	78
Waskaganish	71	64	90	68	65	96
Waswanipi	53	49	92	53	52	98
Wemindji	53	47	89	55	52	95
Eastmain	24	14	58	24	19	79
Whapmagoostui	25	24	96	25	25	100
All	481	392	81	478	441	92

Note (1): Includes beneficiary units in which the consort reported harvesting days in both years. Data tabulated from ISP Board files.

Table 4.8. Average Number of Days Spent by Consorts in Harvesting and Related Activities in the Bush, Post-November 11 Periods, 1975-6 and 1976-7 (1).

Community	1975-6 No. of Days	1976-7 No. of Days	Difference	Percentage Change
Mistassini	133	174	42	31
Chisasibi	74	82	8	10
Waskaganish	98	111	13	13
Waswanipi	129	165	36	28
Wemindji	80	119	38	48
Eastmain	85	82	-3	-4
Whapmagoostui	59	112	53	90
All	108	135	27	25

Note (1): Includes data on 392 beneficiary units in 1975-6 and 441 in 1976-7, in which the consort reported harvesting days in both years.
Data tabulated from ISP Board files.

Table 4.9. Days Spent in Related Activities in the Settlement by Heads of Beneficiary Units During the Period of ISP Operations in 1975-6 and 1976-7 (1).

Community	1975-6 Related Settlement Days	1976-7 Related Settlemeent Days	Difference	1975-6 Percentage of Total days in Settlement (2)	1976-7 Percentage of Total days in Settlement (2)
Mistassini	5091	4136	-955	13	7
Chisasibi	351	90	-261	2	1
Waskaganish	1444	1164	-280	11	7
Waswanipi	851	361	-490	8	2
Wemindji	1363	1274	-89	11	6
Eastmain	694	739	+45	20	10
Whapmagoostui	134	517	+383	4	8
All	9928	8281	-1647	10	5
All - Days/Head	14	12	-2		
ISP Operations	231	365	+134		

Note (1): Includes data on beneficiary unit heads who provided data for both years, and for whom there were unambiguous data on acivity periods in ISP Board files.
Note (2): Total days includes days spent in harvesting and related activities in the bush and in the settlement.

Table 4.10. Days Spent in Related Activities in the Settlement by Consorts During the Period of ISP Operations in 1975-6 and 1976-7 (1).

Community	1975-6 Related Settlement Days	1976-7 Related Settlement Days	Difference	1975-6 Percentage of Total days in Settlement (2)	1976-7 Percentage of Total days in Settlement (2)
Mistassini	2912	2567	-345	13	7
Chisasibi	251	0	-251	8	0
Waskaganish	734	279	-455	10	3
Waswanipi	1116	333	-783	15	3
Wemindji	906	824	-82	19	9
Eastmain	1550	407	-1143	56	16
Whapmagoostui	160	392	232	10	8
All	7629	4802	-2827	15	6
All-Days/Consort	16	10	-6		
ISP Operations	231	365	+134		

Note (1): Includes consorts in beneficiary units with data for both years, and on which there were unambiguous data on acivity periods in ISP Board files.
Note (2): Total days includes days in harvesting and related activities in the bush and in the settlement.

Table 4.11. Number of Days Spent in Harvesting and Related Activities in the Bush by Heads of Beneficiary Units and Consorts, 1976-7 (1).

Community	Head Days	Consort Days	Total Days	Days/ Head	Days/ Consort
Mistassini (2)	72,538	41,351	113,889	228	212
Chisasibi (2)	31,577	9,511	41,088	189	92
Waskaganish	15,721	9,097	24,818	160	134
Waswanipi	17,312	11,649	28,961	201	197
Wemindji (2)	21,250	8,523	29,773	188	152
Eastmain	7,234	2,305	9,539	181	89
Whapmagoostui	5,953	4,421	10,374	198	177
All (2)	171,585	86,857	258,442	201	163

Note (1): Includes all beneficiary units from whom there were unambiguous data in ISP Board files, 852 units.

Note (2): In approximately four families one of two adults died during 1976-7. These families are listed at the end of the year as single adult beneficiary units, but they have days recorded for a consort. These days are not included under the Consort Days heading, or in the Total Days or mean. The number of days involved are: 240 at Mistassini, 47 at Chisasibi, 368 at Wemindji.

Table 4.12. Days In the Bush in Harvesting and Related Activties by Heads of Beneficiary Units, 1976-7 (1).

	90 to 120 Days		121 to 210 Days		211 to 230 Days		Over 230 Days		Total
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Mistassini	1	0	88	24	56	15	220	60	365
Chisasibi	19	9	123	59	27	13	38	18	207
Waskaganish	22	19	82	73	6	5	3	3	113
Waswanipi	2	2	53	58	15	16	22	24	92
Wemindji	8	7	59	54	16	15	27	25	110
Eastmain	0	0	32	74	7	16	4	9	43
Whapmagoostui	2	6	17	52	5	15	9	27	33
All	54	6	454	47	132	14	323	34	963

Note (1): Tabulated from data provided by Ignatius LaRusic from ISP Board files compiled by Johnny Jolly and Henry Mianscum.

Table 4.13. Trapping Days Per Year, Per ISP Hunter, from 1975-6 to 1978-9 (1).

Community	1975-6	1976-7	1977-8	1978-9
Mistassini	146	184	225	214
Chisasibi	73	129	103	170
Waskaganish	84	103	93	99
Waswanipi	148	177	189	199
Wemindji	66	101	111	116
Eastmain	38	92	92	99
Whapmagoostui	63	77	94	113
Nemaska	(2)	(2)	183	194
All (3)	103	141	153	168

Note (1): Based on data published in JBNQNHRC, 1978, 1979, 1980.
Note (2): These data on Nemaska were not given by NHRC until 1977-8 as Nemaska village was not established until then. Nemaska hunters are included in the "All" category, and they are included with the communities where they resided in 1975-6 and 1976-7.
Note (3): NHRC did not publish a regional days per hunter figure for 1975-6. We have calculated the regional per hunter days from the total trapping days, divided by the number of ISP interviewees.

Table 4.14. Average Paid Person-Days in the Bush Per ISP Adult, 1977-8 to 1986-7 (1).

Community	1976-7	1977-8	1978-9	1979-80	1980-1	1981-2	1982-3	1983-4	1984-5	1985-6	1986-7
Mistassini	214	208	213	210	234	214	218	206	204	199	195
Chisasibi	122	125	144	160	187	192	181	190	181	190	184
Waskaganish	116	182	155	167	175	176	190	171	172	181	185
Waswanipi	203	189	204	198	227	222	223	214	214	209	204
Wemindji	172	181	175	142	159	185	150	151	167	164	178
Eastmain	128	135	132	153	151	145	150	109	136	153	149
Whapmagoostui	125	158	156	182	182	182	181	179	155	137	166
Nemaska	-	-	192	171	186	180	194	195	171	189	174
All	165	176	180	181	201	197	195	189	187	188	187

Note (1): Calculated from 1979-80 to 1986-7 data in ISP Board Annual Reports, and 1976-7 to 1978-9 ISP Board data tabulated by LaRusic (1984). The latter data was drawn from available printouts, and is not necessarily for final end of year tabulations. Includes only days receiving per diem payments, and includes both heads and consorts.

Table 4.15. Estimated Number of ISP Hunters Who Harvested Canada Geese, 1975-6 to 1978-9 (1).

Season and Community	1975-6	1976-7	1977-8	1978-9
SUMMER / FALL				
Mistassini	18	70	80	59
Chisasibi	134	176	171	175
Waskaganish	61	40	28	28
Waswanipi	21	19	27	36
Wemindji	64	86	86	82
Eastmain	28	36	32	33
Whapmagoostui	38	32	23	19
Nemaska (2)	5	16	14	9
All (3)	366	439	450	442
SPRING				
Mistassini	162	219	207	182
Chisasibi	146	197	175	171
Waskaganish	103	103	73	78
Waswanipi	38	54	45	64
Wemindji	70	91	92	94
Eastmain	37	47	43	37
Whapmagoostui	39	33	25	23
Nemaska (2)	12	27	34	28
All (3)	593	763	695	672

Note (1): Calculated from JBNQNHRC, 1982: 71-4, 745-6.
Note (2): As Nemaska village was established in 1977, ISP hunters listed as Nemaska hunters increased from 12 in 1975-6 to 38 in 1976-7, 40 in 1977-8, and 37 in 1978-9. Before they were listed with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is a separate estimate, not a total.

Table 4.16. Estimated Number of ISP Hunters Who Harvested Ducks, 1975-6 to 1978-9 (1).

Season and Community	1975-6	1976-7	1977-8	1978-9
SUMMER / FALL				
Mistassini	37	172	174	97
Chisasibi	123	158	153	162
Waskaganish	85	90	54	52
Waswanipi	46	44	56	66
Wemindji	61	82	75	79
Eastmain	23	38	36	37
Whapmagoostui	37	27	20	17
Nemaska (2)	7	21	22	17
All (3)	413	623	585	514
SPRING				
Mistassini	180	245	229	210
Chisasibi	137	158	158	167
Waskaganish	96	91	62	61
Waswanipi	59	72	61	77
Wemindji	57	82	80	82
Eastmain	32	38	30	23
Whapmagoostui	40	31	23	19
Nemaska (2)	10	29	34	28
All (3)	613	754	679	672

Note (1): Calculated from JBNQNHRC, 1982: 71-4, 745-6.
Note (2): As Nemaska village was established in 1977, ISP hunters listed as Nemaska hunters increased from 12 in 1975-6 to 38 in 1976-7, 40 in 1977-8, and 37 in 1978-9. Before they were listed with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is is a separate estimate, not a total.

Table 4.17. Percentage of ISP Hunters Who Reported Harvesting Canada Geese, 1975-6 to 1978-9 (1).

Season and Community	1975-6	1976-7	1977-8	1978-9
SUMMER / FALL				
Mistassini	10	27	33	25
Chisasibi	89	86	95	95
Waskaganish	59	38	36	35
Waswanipi	31	22	32	40
Wemindji	90	91	91	86
Eastmain	75	71	74	85
Whapmagoostui	95	88	78	67
Nemaska	43	35	36	24
All	55	50	57	56
SPRING				
Mistassini	88	84	86	77
Chisasibi	97	96	97	93
Waskaganish	100	97	94	97
Waswanipi	55	62	53	71
Wemindji	98	97	98	99
Eastmain	100	93	100	95
Whapmagoostui	97	91	85	79
Nemaska	71	76	86	76
All	89	87	88	85

Note (1): From JBNQNHRC, 1982: 745-6 (Table A21-1).

Table 4.18. Percentage of ISP Hunters Who Reported Harvesting Ducks, 1975-6 to 1978-9 (1).

Season and Community	1975-6	1976-7	1977-8	1978-9
SUMMER / FALL				
Mistassini	20	66	72	41
Chisasibi	82	77	85	88
Waskaganish	83	85	69	65
Waswanipi	67	51	66	73
Wemindji	86	87	80	83
Eastmain	61	76	83	95
Whapmagoostui	92	76	70	58
Nemaska	57	54	54	45
All	62	71	74	65
SPRING				
Mistassini	98	94	95	89
Chisasibi	91	77	88	91
Waskaganish	93	86	79	76
Waswanipi	86	83	72	85
Wemindji	80	87	85	86
Eastmain	86	76	70	60
Whapmagoostui	100	85	78	67
Nemaska	86	76	86	76
All	92	86	86	85

Note (1): From JBNQNHRC, 1982: 745-6 (Table A21-1).

Table 4.19. Estimated Number of Cree Hunters Who Harvested Canada Geese, 1975-6 to 1978-9 (1).

Season and Community	1975-6	1976-7	1977-8	1978-9
SUMMER / FALL				
Mistassini	40	85	103	79
Chisasibi	312	318	331	364
Waskaganish	105	75	64	34
Waswanipi	31	23	29	35
Wemindji	115	125	131	121
Eastmain	50	52	55	37
Whapmagoostui	71	64	70	71
Nemaska (2)	5	16	16	14
All (3)	717	716	775	750
SPRING				
Mistassini	270	288	306	295
Chisasibi	341	355	354	368
Waskaganish	166	168	174	181
Waswanipi	57	69	52	66
Wemindji	130	133	139	134
Eastmain	67	66	67	49
Whapmagoostui	70	64	71	71
Nemaska (2)	13	36	38	43
All (3)	1101	1175	1204	1203

Note (1): Calculated from JBNQNHRC, 1982: 71-4, 727.
Note (2): As Nemaska village was established in 1977, Nemaska hunters increased from 20 in 1975-6, to 49 in 1976-7, 52 in 1977-8, and 60 in 1978-9. Before they were listed with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is a separate estimate, not a total.

Table 4.20. Hunting Days for Canada Geese Per Season, Per ISP Hunter Who Harvested Canada Geese, 1975-6 to 1978-9 (1).

Season and Community	1975-6	1976-7	1977-8	1978-9
SUMMER / FALL				
Mistassini	14	33	17	40
Chisasibi	30	43	44	30
Waskaganish	45	69	75	57
Waswanipi	47	56	10	12
Wemindji	21	24	24	24
Eastmain	18	15	13	15
Whapmagoostui	35	24	23	31
Nemaska	(2)	(2)	19	48
All	30	39	32	30
SPRING				
Mistassini	19	35	15	28
Chisasibi	36	41	49	31
Waskaganish	44	51	43	31
Waswanipi	30	32	17	14
Wemindji	27	36	42	27
Eastmain	26	36	34	37
Whapmagoostui	39	40	44	35
Nemaska	(2)	(2)	22	23
All	30	38	33	28

Note (1): Calculated from JBNQNHRC, 1978, 1979, 1980, 1982.
Note (2): As Nemaska village was established in 1977, NHR did not provide necessary data for these calculations for 1975-6 or 1976-7. For these years Nemaska hunters were included with their community of residence, Waskaganish or Mistassini.

Table 4.21. Harvest Per ISP Hunter Who Reported Harvesting Canada Geese, 1975-6 to 1978-9 (1).

Season and Community	1975-6	1976-7	1977-8	1978-9
SUMMER / FALL				
Mistassini	8.8	5.4	4.3	5.5
Chisasibi	55.0	54.7	53.7	56.1
Waskaganish	11.5	7.2	5.4	12.9
Waswanipi	6.1	1.9	2.9	2.6
Wemindji	27.4	33.2	24.6	25.5
Eastmain	26.5	14.1	11.2	9.8
Whapmagoostui	66.7	28.1	32.1	33.9
Nemaska (2)	30.0	4.5	5.0	8.3
All	38.3	27.5	26.3	32.6
SPRING				
Mistassini	14.4	16.1	10.4	9.1
Chisasibi	52.8	46.0	44.1	36.5
Waskaganish	83.4	62.3	47.9	41.5
Waswanipi	4.5	4.6	7.8	6.7
Wemindji	56.2	48.0	30.5	29.3
Eastmain	108.9	101.6	96.8	98.3
Whapmagoostui	58.7	56.5	58.4	52.3
Nemaska	8.4	17.4	10.9	8.8
All	45.7	37.9	30.8	26.5

Note (1): From JBNQNHRC, 1982: 755-6 (Table A22-1).
Note (2): As Nemaska village was established in 1977, Nemaska hunters relocated there, some from Waskaganish, some from Mistassini. The sharp drop in summer/fall Canada goose harvests reflects the lower access of Nemaska hunters to coastal Canada geese populations.

Table 4.22. Harvest Per ISP Hunter Who Reported Harvesting Ducks, 1975-6 to 1978-9 (1).

Season and Community	1975-6	1976-7	1977-8	1978-9
SUMMER / FALL				
Mistassini	22.1	12.7	13.3	18.3
Chisasibi	21.9	23.8	22.5	26.0
Waskaganish	20.5	15.2	14.8	11.1
Waswanipi	28.0	10.0	15.4	8.8
Wemindji	17.3	18.2	17.8	18.3
Eastmain	44.7	18.6	29.4	22.5
Whapmagoostui	44.7	20.5	33.9	32.1
Nemaska	9.5	7.0	9.1	9.9
All	25.6	16.1	17.7	20.0
SPRING				
Mistassini	51.2	48.8	37.1	35.5
Chisasibi	21.9	21.2	23.1	26.8
Waskaganish	16.1	23.0	9.6	10.2
Waswanipi	25.9	24.9	27.6	20.2
Wemindji	21.0	20.0	17.2	17.7
Eastmain	14.7	11.1	10.3	9.8
Whapmagoostui	51.9	34.1	36.5	20.3
Nemaska	13.0	22.5	16.5	15.5
All	32.9	31.8	26.1	26.2

Note (1): From JBNQNHRC, 1982: 755-6 (Table A22-1).

Table 4.23. Estimated Number of Canada Geese and Ducks Harvested by ISP Hunters, 1975-6 to 1978-9 (1).

Species and Community	75-6 Fall	75-6 Spring	76-7 Fall	76-7 Spring	77-8 Fall	77-8 Spring	78-9 Fall	78-9 Spring
CANADA GEESE								
Mistassini	171	2,352	431	3,860	347	2,167	333	1,653
Chisasibi	7,300	7,649	9,591	9,030	9,175	7,672	9,776	6,236
Waskaganish	872	8,792	304	6,491	150	3,495	364	3,221
Waswanipi	133	170	36	246	79	350	95	429
Wemindji	1,752	3,911	2,855	4,387	2,117	2,802	2,095	2,746
Eastmain	736	4,030	498	4,706	357	4,164	324	3,643
Whapmagoostui	2,525	2,284	892	1,855	724	1,443	655	1,201
Nemaska	-	-	-	-	71	374	74	246
All/Seasonal	13,489	29,188	14,607	30,575	13,020	22,467	13,716	19,375
Annual	42,677		45,182		35,487		33,091	
DUCKS								
Mistassini	835	9,291	2,272	12,396	2,307	8,521	1,756	7,422
Chisasibi	2,708	2,993	3,761	3,353	3,461	3,657	4,188	4,485
Waskaganish	1,865	1,584	1,363	2,209	801	595	575	621
Waswanipi	1,299	1,562	443	1,791	866	1,682	576	1,535
Wemindji	1,059	1,193	1,491	1,637	1,332	1,372	1,435	1,452
Eastmain	1,004	465	705	418	1,045	308	834	230
Whapmagoostui	1,644	2,077	565	1,046	693	823	543	392
Nemaska	-	-	-	-	195	565	166	434
All/Seasonal	10,414	19,165	10,600	22,850	10,700	17,523	10,073	16,571
Annual	29,579		33,450		28,223		26,644	

Note (1): Calculated from JBNQNHRC, 1978, 1979, 1980, 1982.
Note (2): In 1975-6 and 1976-7 Nemaska hunters were included with their community of residence.

Table 4.24. Estimated Number of ISP Hunters Who Harvested Beaver and Mink, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
BEAVER				
Mistassini	178	258	239	215
Chisasibi	117	150	131	105
Waskaganish	94	78	53	63
Waswanipi	66	86	85	86
Wemindji	67	86	86	79
Eastmain	32	45	37	37
Whapmagoostui	25	30	23	26
Nemaska (2)	12	38	38	30
All (3)	586	789	695	632
MINK				
Mistassini	77	177	200	170
Chisasibi	86	92	90	70
Waskaganish	31	50	37	47
Waswanipi	48	52	61	75
Wemindji	21	40	53	53
Eastmain	12	25	32	27
Whapmagoostui	10	23	19	18
Nemaska (2)	3	19	23	17
All (3)	293	491	514	474

Note (1): Calculated from JBNQNHRC, 1982: 71-4, 747-8.
Note (2): As Nemaska village was established in 1977, ISP hunters listed as Nemaska hunters increased from 12 in 1975-6 to 38 in 1976-7, 40 in 1977-8, and 37 in 1978-9. Before they were listed with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is a separate estimate, not a total.

Table 4.25. Percentage of ISP Hunters Who Reported Harvesting Beaver and Mink, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
BEAVER				
Mistassini	97	99	99	91
Chisasibi	78	73	73	57
Waskaganish	91	74	68	79
Waswanipi	95	99	100	96
Wemindji	94	91	91	83
Eastmain	86	90	87	95
Whapmagoostui	62	82	78	88
Nemaska	100	100	96	82
All	88	90	88	80
MINK				
Mistassini	42	68	83	72
Chisasibi	57	45	50	38
Waskaganish	30	47	47	59
Waswanipi	70	60	72	83
Wemindji	30	43	56	56
Eastmain	32	49	74	70
Whapmagoostui	24	65	67	63
Nemaska	29	51	57	45
All	44	56	65	60

Note (1): From JBNQNHRC, 1982: 747-8 (Table A21-2).

Table 4.26. Estimated Number of Beaver and Mink Harvested by ISP Hunters, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
BEAVER				
Mistassini	4,120	6,087	4,182	3,316
Chisasibi	1,396	2,203	2,009	2,384
Waskaganish	2,723	2,225	1,632	1,638
Waswanipi	2,012	2,293	1,928	1,708
Wemindji	1,661	2,164	2,476	1,517
Eastmain	675	1,283	1,208	1,039
Whapmagoostui	243	521	351	427
Nemaska (2)	-	-	544	450
All (3)	12,830	16,776	14,330	12,479
MINK				
Mistassini	282	1,099	1,510	1,025
Chisasibi	205	292	371	226
Waskaganish	127	219	146	202
Waswanipi	177	159	219	306
Wemindji	38	150	156	143
Eastmain	22	76	91	99
Whapmagoostui	11	120	116	53
Nemaska (2)	-	-	67	69
All (3)	862	2,115	2,676	2,123

Note (1): Calculated from JBNQNHRC, 1978, 1979, 1980.
Note (2): As Nemaska village was established in 1977, NHRC did not publish separate Nemaska figures for these data for 1975-6 or 1976-7. For those years Nemaska hunters are included with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is a separate estimate, not a total.

Table 4.27. Harvest Per ISP Hunter Who Reported Harvesting Beaver and Mink, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
BEAVER				
Mistassini	22.6	21.5	17.5	15.5
Chisasibi	11.9	14.7	15.4	22.7
Waskaganish	27.7	26.0	30.8	26.7
Waswanipi	30.6	26.7	22.7	19.7
Wemindji	24.9	25.2	28.8	19.3
Eastmain	21.3	28.4	32.3	28.1
Whapmagoostui	9.8	17.6	15.6	14.8
Nemaska	19.3	18.7	14.1	16.8
All	21.6	22.2	21.0	18.9
MINK				
Mistassini	3.5	6.1	7.6	6.0
Chisasibi	2.4	3.2	4.1	3.2
Waskaganish	3.9	4.1	3.9	4.3
Waswanipi	3.6	3.0	3.6	4.1
Wemindji	1.8	3.7	3.0	2.7
Eastmain	1.9	3.2	2.9	3.6
Whapmagoostui	1.1	5.2	6.0	2.9
Nemaska	7.5	2.3	2.9	4.1
All	3.0	4.5	5.4	4.5

Note (1): From JBNQNHRC, 1982: 757-8 (Table A22-2).

Table 4.28. Estimated Number of ISP Hunters Who Harvested Moose and Caribou, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
MOOSE				
Mistassini	134	196	164	135
Chisasibi	5	12	4	7
Waskaganish	36	54	30	26
Waswanipi	48	69	58	62
Wemindji	3	16	9	21
Eastmain	11	17	9	18
Whapmagoostui	0	0	0	1
Nemaska (2)	2	30	18	19
All (3)	246	430	300	284
CARIBOU				
Mistassini	53	110	77	61
Chisasibi	8	16	2	11
Waskaganish	25	25	11	12
Waswanipi	1	0	2	4
Wemindji	3	8	3	4
Eastmain	0	3	2	0
Whapmagoostui	16	13	11	5
Nemaska (2)	2	7	6	3
All (3)	107	193	126	103

Note (1): Calculated from JBNQNHRC, 1982: 71-4, 749.
Note (2): As Nemaska village was established in 1977, ISP hunters listed as Nemaska hunters increased from 12 in 1975-6 to 38 in 1976-7, 40 in 1977-8, and 37 in 1978-9. Before they were listed with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is a separate estimate, not a total.

Table 4.29. Percentage of ISP Hunters Who Reported Harvesting Moose and Caribou, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
MOOSE				
Mistassini	73	75	68	57
Chisasibi	3	6	2	4
Waskaganish	35	51	38	32
Waswanipi	69	79	68	69
Wemindji	4	17	10	22
Eastmain	29	34	22	45
Whapmagoostui	0	0	0	4
Nemaska (2)	14	78	46	52
All	37	49	38	36
CARIBOU				
Mistassini	29	42	32	26
Chisasibi	5	8	1	6
Waskaganish	24	24	14	15
Waswanipi	2	0	2	4
Wemindji	4	9	3	4
Eastmain	0	5	4	0
Whapmagoostui	41	35	37	17
Nemaska	14	19	14	9
All	16	22	16	13

Note (1): From JBNQNHRC, 1982: 749 (Table A21-3).
Note (2): As Nemaska village was established in 1977, Nemaska hunters relocated there, some from Waskaganish, some from Mistassini. The sharp increase in the percentage of Nemaska hunters harvesting moose reflects this increased access to lands with good moose populations.

Table 4.30. Harvest Per ISP Hunter Who Reported Harvesting Moose and Caribou, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
MOOSE				
Mistassini	3.6	3.5	3.1	2.6
Chisasibi	3.0	3.0	2.0	1.5
Waskaganish	2.7	3.6	2.6	2.2
Waswanipi	2.9	3.1	3.8	3.9
Wemindji	1.0	1.7	1.3	2.4
Eastmain	1.6	2.1	1.0	1.8
Whapmagoostui	0.0	0.0	0.0	1.0
Nemaska	3.0	3.3	2.1	2.3
All	3.2	3.3	2.9	2.7
CARIBOU				
Mistassini	7.1	6.8	4.1	5.0
Chisasibi	5.5	6.6	1.0	2.4
Waskaganish	2.1	2.8	3.1	3.8
Waswanipi	1.0	0.0	8.0	1.5
Wemindji	7.0	3.0	3.3	1.3
Eastmain	0.0	1.5	1.0	0.0
Whapmagoostui	16.1	7.2	8.8	7.0
Nemaska	2.0	2.7	2.0	2.0
All	7.7	5.9	4.3	4.4

Note (1): From JBNQNHRC, 1982: 759 (Table A22-3).

Table 4.31. Estimated Number of Moose and Caribou Harvested by ISP Hunters, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
MOOSE				
Mistassini	482	771	505	348
Chisasibi	16	37	7	11
Waskaganish	105	217	79	56
Waswanipi	137	216	218	241
Wemindji	3	27	12	50
Eastmain	17	37	9	31
Whapmagoostui	0	0	0	1
Nemaska (2)	-	-	38	44
All (3)	760	1,305	868	782
CARIBOU				
Mistassini	383	765	313	312
Chisasibi	43	115	2	26
Waskaganish	56	72	34	45
Waswanipi	1	0	13	5
Wemindji	20	24	10	5
Eastmain	0	4	2	0
Whapmagoostui	261	91	95	34
Nemaska (2)	-	-	11	7
All (3)	764	1,071	480	434

Note (1): Calculated from JBNQNHRC, 1978, 1979, 1980.
Note (2): As Nemaska village was established in 1977, NHRC did not publish separate Nemaska figures for these data for 1975-6 or 1976-7. For those years Nemaska hunters are included with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is a separatc estimate, not a total.

Table 4.32. Estimated Number of ISP Hunters Who Harvested Hare and Grouse, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
HARE				
Mistassini	116	180	195	208
Chisasibi	131	189	171	175
Waskaganish	92	92	68	68
Waswanipi	61	79	78	88
Wemindji	60	85	92	94
Eastmain	34	49	41	37
Whapmagoostui	24	18	17	24
Nemaska (2)	12	33	37	37
All (3)	526	719	695	735
GROUSE				
Mistassini	169	253	231	196
Chisasibi	132	178	153	166
Waskaganish	82	88	62	57
Waswanipi	66	80	83	83
Wemindji	64	90	90	86
Eastmain	12	49	37	33
Whapmagoostui	37	35	27	27
Nemaska (2)	12	35	36	28
All (3)	579	816	719	679

Note (1): Calculated from JBNQNHRC, 1982: 71-4, 750.
Note (2): As Nemaska village was established in 1977, and ISP hunters listed as Nemaska hunters increased from 12 in 1975-6 to 38 in 1976-7, 40 in 1977-8, and 37 in 1978-9. Before they were listed with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is a separate estimate, not a total.

Table 4.33. Percentage of ISP Hunters Who Reported Harvesting Hare and Grouse, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
HARE				
Mistassini	63	69	81	88
Chisasibi	87	92	95	95
Waskaganish	89	87	87	85
Waswanipi	89	91	92	98
Wemindji	84	90	98	99
Eastmain	93	98	96	95
Whapmagoostui	59	50	59	83
Nemaska	100	86	93	100
All	79	82	88	93
GROUSE				
Mistassini	92	97	96	83
Chisasibi	88	87	85	90
Waskaganish	80	83	79	71
Waswanipi	95	92	98	92
Wemindji	90	96	96	91
Eastmain	32	98	87	85
Whapmagoostui	92	97	93	92
Nemaska	100	92	89	76
All	87	93	91	86

Note (1): From JBNQNHRC, 1982: 750 (Table A21-4).

Table 4.34. Harvest Per ISP Hunter Who Reported Harvesting Hare and Grouse, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
HARE				
Mistassini	16.6	14.1	29.4	54.0
Chisasibi	25.9	38.3	60.2	96.7
Waskaganish	44.3	71.7	123.1	117.4
Waswanipi	23.6	22.8	48.6	56.1
Wemindji	24.1	63.9	105.1	116.7
Eastmain	52.2	74.0	176.0	173.5
Whapmagoostui	5.2	5.1	6.8	10.4
Nemaska	25.7	30.9	57.3	124.2
All	26.0	37.5	67.7	84.0
GROUSE				
Mistassini	20.6	31.0	35.6	25.8
Chisasibi	19.8	31.7	23.8	33.5
Waskaganish	16.9	20.3	22.7	14.5
Waswanipi	29.3	27.8	39.0	32.6
Wemindji	18.2	29.5	28.0	20.4
Eastmain	12.7	31.7	43.8	18.9
Whapmagoostui	19.3	36.1	50.2	41.3
Nemaska	24.4	25.8	21.9	19.4
All	20.8	29.5	31.7	27.3

Note (1): From JBNQNHRC, 1982: 760 (Table A22-4).

Table 4.35. Estimated Number of Hare and Grouse Harvested by ISP Hunters, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
HARE				
Mistassini	2,106	3,085	5,710	11,190
Chisasibi	3,371	7,248	10,278	16,982
Waskaganish	4,195	7,093	8,368	8,014
Waswanipi	1,453	1,796	3,817	4,950
Wemindji	1,440	5,405	9,663	10,951
Eastmain	1,795	3,609	7,241	6,429
Whapmagoostui	123	91	116	250
Nemaska (2)	-	-	2,127	4,597
All (3)	14,483	28,327	47,320	63,363
GROUSE				
Mistassini	3,629	8,410	8,262	5,086
Chisasibi	2,607	5,670	3,625	5,521
Waskaganish	1,499	2,126	1,409	819
Waswanipi	1,926	2,226	3,252	2,712
Wemindji	1,162	2,655	2,519	1,767
Eastmain	151	1,546	1,640	626
Whapmagoostui	710	1,262	1,346	1,097
Nemaska (2)	-	-	783	544
All (3)	11,684	23,895	22,836	18,172

Note (1): Calculated from JBNQNHRC, 1978, 1979, 1980.
Note (2): As Nemaska village was established in 1977, NHRC did not publish separate Nemaska figures for these data for 1975-6 or 1976-7. For those years Nemaska hunters are included with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is a separate estimate, not a total.

Table 4.36. Change in Fish Harvests by Cree from 1974-5 to 1975-6 as a Percentage of the 1974-5 Harvests (1).

Community (2)	Whitefish	Pike	Dore	S. Trout
Mistassini	-82	-93	-94	-90
Chisasibi	-34	-28	-21	-9
Waskaganish	18	-35	-64	-13
Waswanipi	-94	-89	-93	(3)-
Wemindji	-32	-31	-58	-23
Eastmain	134	-25	-68	-35
Nemaska	-75	-81	-83	-
All	-30	-66	-85	-13

	L. Trout	Sucker	Sturgeon	Burbot
Mistassini	-85	-92	-65	-70
Chisasibi	-23	-6	-26	-79
Waskaganish	-	-18	-	-
Waswanipi	-	-97	-74	-97
Wemindji	-	-67	-	-84
Eastmain	-	-76	-	-46
Nemaska	-98	-89	-	-
All	-39	-60	-60	-77

Note (1): From JBNQNHRC, 1982: 303 (Table 4-19).
Note (2): No data were calculated for Whapmagoostui by the NHRC, see JBNQNHRC, 1978.
Note (3): Where the 1974-5 harvest level was less than 500, no percentage change was calculated.

Table 4.37. Percentage of Cree Hunters Who Usually Fish, Who Did Not Fish Because of the Methyl-Mercury Danger, 1976-7 to 1978-9 (1).

Community	1976-7	1977-8	1978-9
Mistassini	74.0	31.3	13.2
Chisasibi	4.5	48.3	2.5
Waskaganish	32.3	42.9	9.5
Waswanipi	94.2	79.2	68.2
Wemindji	12.0	36.4	0.0
Eastmain	0.0	0.0	0.0
Whapmagoostui	44.4	0.0	20.0
Nemaska (2)	-	66.7	31.6
All	52.9	43.0	16.5

Note (1): From JBNQNHRC, 1982, 305 (Table 4-23).
Note (2): As Nemaska village was established in 1977, NHRC did not publish separate Nemaska figures for these data for 1976-7. For 1976-7 Nemaska hunters are included with their community of residence, Waskaganish or Mistassini.

Table 4.38. Percentage of ISP Hunters Who Reported Harvesting Whitefish and Seals, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
WHITEFISH				
Mistassini	18	35	50	40
Chisasibi	63	42	45	60
Waskaganish	33	33	53	65
Waswanipi	23	19	40	29
Wemindji	58	37	58	56
Eastmain	61	46	57	70
Whapmagoostui	92	82	78	100
Nemaska	29	24	50	45
All	35	36	49	49
SEALS				
Mistassini	0	0	0	0
Chisasibi	33	29	26	21
Waskaganish	2	1	0	0
Waswanipi	0	0	0	0
Wemindji	24	37	38	37
Eastmain	0	5	13	5
Whapmagoostui	73	47	56	25
Nemaska	0	0	0	0
All	15	11	13	11

Note (1): From JBNQNHRC, 1982: 751 (Table A21-5); 753 (Table A21-6).

Table 4.39. Harvest Per ISP Hunter Who Reported Harvesting Whitefish and Seals, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
WHITEFISH				
Mistassini	93.5	60.9	53.8	70.3
Chisasibi	390.8	316.7	314.3	370.4
Waskaganish	323.0	310.4	302.1	437.8
Waswanipi	78.7	85.8	78.2	67.0
Wemindji	326.9	365.1	367.9	401.9
Eastmain	1053.7	429.3	250.3	503.3
Whapmagoostui	241.1	271.9	260.2	249.5
Nemaska	91.5	123.2	80.2	120.2
All	343.8	238.1	220.9	289.8
SEALS				
Mistassini	0.0	0.0	0.0	0.0
Chisasibi	2.9	2.7	5.0	2.2
Waskaganish	1.0	1.0	0.0	0.0
Waswanipi	0.0	0.0	0.0	0.0
Wemindji	2.3	1.9	1.8	1.5
Eastmain	0.0	2.0	1.0	1.0
Whapmagoostui	5.3	6.0	2.7	2.2
Nemaska	0.0	0.0	0.0	0.0
All	3.5	3.1	3.1	1.9

Note (1): From JBNQNHRC, 1982: 761 (Table A22-5); 763 (Table A22-6).

Table 4.40. Estimated Number of ISP Hunters Who Harvested Whitefish and Seals, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
WHITEFISH				
Mistassini	33	91	121	94
Chisasibi	95	86	81	110
Waskaganish	34	35	41	52
Waswanipi	16	17	34	26
Wemindji	41	35	55	53
Eastmain	23	23	25	27
Whapmagoostui	37	30	23	29
Nemaska (2)	3	9	20	17
All (3)	233	316	387	387
SEALS				
Mistassini	0	0	0	0
Chisasibi	50	59	47	39
Waskaganish	2	1	0	0
Waswanipi	0	0	0	0
Wemindji	17	35	36	35
Eastmain	0	3	6	2
Whapmagoostui	29	17	16	7
Nemaska	0	0	0	0
All (3)	100	96	103	87

Note (1): Calculated from JBNQNHRC, 1982: 71-4, 751 and 753.
Note (2): As Nemaska village was established in 1977, and ISP hunters listed as Nemaska hunters increased from 12 in 1975-6 to 38 in 1976-7, 40 in 1977-8, and 37 in 1978-9. Before they were listed with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is not a total.

Table 4.41. Estimated Number of Whitefish and Seals Harvested by ISP Hunters, 1975-6 to 1978-9 (1).

Species and Community	1975-6	1976-7	1977-8	1978-9
WHITEFISH				
Mistassini	2,547	4,153	4,585	4,909
Chisasibi	31,113	24,034	22,377	37,238
Waskaganish	8,682	8,754	7,289	19,612
Waswanipi	846	965	2,008	1,323
Wemindji	12,336	12,049	18,139	17,817
Eastmain	16,975	7,284	4,740	11,536
Whapmagoostui	8,745	7,575	5,747	6,675
Nemaska (2)	-	-	936	1,073
All (3)	81,224	64,814	65,821	100,183
SEALS				
Mistassini	0	0	0	0
Chisasibi	139	162	229	82
Waskaganish	2	1	0	0
Waswanipi	0	0	0	0
Wemindji	40	67	65	53
Eastmain	0	5	6	2
Whapmagoostui	154	102	43	16
Nemaska	-	-	0	0
All (3)	335	337	343	153

Note (1): Calculated from JBNQNHRC, 1978, 1979, 1980.
Note (2): As Nemaska village was established in 1977, NHRC did not publish separate Nemaska figures for these data for 1975-6 or 1976-7. For those years Nemaska hunters are included with with their community of residence, Waskaganish or Mistassini.
Note (3): "All" is a separate estimate, not a total.

Table 4.42. Estimated Annual Harvests by Cree Hunters, by Community and Year, 1972-3 to 1978-9 (From JBNQNHRC, 1982).

Communities	Year	C.Geese	Ducks	Beaver	Mink	Moose	Caribou	Hare	Grouse	Whitefish	Seals
Mistassini	72-3			8,106	1,676	496	397				0
	73-4	6,854		6,636	1,103	443	313				0
	74-5	4,670	22,198	6,674	1,020	463	384	3,580	6,430	16,956	0
	75-6	4,112	18,160	4,538	351	550	401	2,274	5,111	3,117	0
	76-7	4,944	17,689	5,819	1,149	733	795	3,054	9,158	4,761	0
	77-8	3,336	14,829	4,427	1,635	546	341	6,040	9,893	4,812	0
	78-9	2,831	13,373	3,623	1,173	379	380	12,097	6,142	5,561	0
	Mean	4,458	17,250	5,689	1,158	516	430	5,409	7,347	7,041	-
	StD	1,418	3,406	1,576	441	113	164	3,995	2,065	5,614	-
Chisasibi	72-3			2,285	302	0	151				628
	73-4	34,798		2,250	212	0	67				591
	74-5	25,679	16,296	2,085	160	26	52	2,340	4,359	78,510	473
	75-6	30,161	12,275	1,765	283	21	58	6,213	4,934	52,190	252
	76-7	29,871	11,040	2,673	368	39	140	11,195	8,287	29,520	212
	77-8	28,278	11,519	3,837	524	14	16	17,963	7,276	31,559	257
	78-9	30,648	17,031	2,847	267	15	32	27,473	8,682	52,257	156
	Mean	29,906	13,632	2,535	302	16	74	13,037	6,708	48,807	367
	StD	3,002	2,814	677	118	14	52	9,963	1,961	19,844	193
Waskaganish	72-3			1,581	50	89	44				8
	73-4	7,168		1,746	72	93	29				14
	74-5	3,817	2,053	1,172	26	47	41	1,221	294	11,578	24
	75-6	12,446	4,701	2,682	143	101	52	4,733	1,802	13,616	2
	76-7	8,701	4,930	2,229	211	202	80	7,502	2,199	9,978	1
	77-8	6,761	2,515	1,869	166	95	36	10,153	2,141	9,552	0
	78-9	6,159	2,411	1,848	255	62	75	10,805	1,354	24,914	0
	Mean	7,509	3,322	1,875	132	98	51	6,883	1,558	13,928	7
	StD	2,896	1,376	479	86	50	19	3,973	783	6,346	9

Table 4.42. Estimated Annual Harvests by Cree Hunters, by Community and Year, 1972-3 to 1978-9 (From JBNQNHRC, 1982).

Communities	Year	C.Geese	Ducks	Beaver	Mink	Moose	Caribou	Hare	Grouse	Whitefish	Seals
Waswanipi	72-3			3,451	554	198	0				0
	73-4	1,099		2,242	486	186	0				0
	74-5	580	3,248	2,681	393	198	0	2,132	1,991	22,964	0
	75-6	419	4,096	2,481	222	183	1	2,188	2,730	1,439	0
	76-7	318	2,728	2,472	188	230	0	1,951	2,618	993	0
	77-8	477	3,070	2,066	243	234	13	4,482	3,828	2,629	0
	78-9	538	2,350	1,858	332	248	5	5,694	3,338	2,119	0
	Mean	572	3,098	2,464	345	211	3	3,289	2,901	6,029	-
	StD	274	655	516	139	26	5	1,699	705	9,488	-
Wemindji	72-3			2,028	273	9	19				213
	73-4	12,226		1,935	195	14	0				250
	74-5	10,100	5,240	2,592	45	24	0	696	2,004	34,477	287
	75-6	9,220	3,963	1,751	39	3	21	1,825	1,588	23,410	67
	76-7	9,709	4,445	2,377	168	27	33	6,346	2,992	16,529	91
	77-8	6,974	4,063	2,592	169	13	10	11,453	3,162	22,530	83
	78-9	6,184	4,238	1,647	176	50	5	13,035	2,373	22,739	69
	Mean	9,069	4,390	2,132	152	20	13	6,671	2,424	23,937	151
	StD	2,199	509	390	83	16	12	5,538	661	6,513	95
Eastmain	72-3			962	114	24	10				17
	73-4	6,759		1,062	65	38	1				12
	74-5	4,684	1,915	1,085	53	12	6	443	417	9,042	7
	75-6	8,281	2,481	798	32	17	0	2,227	169	21,194	0
	76-7	6,616	1,830	1,332	98	41	4	4,238	1,775	8,593	11
	77-8	6,082	2,032	1,238	96	9	4	8,314	1,810	5,862	13
	78-9	4,504	1,241	1,054	113	32	0	7,016	705	11,774	2
	Mean	6,154	1,900	1,076	82	25	4	4,448	975	11,293	9
	StD	1,414	446	175	32	13	4	3,262	770	5,918	6

Table 4.42. Estimated Annual Harvests by Cree Hunters, by Community and Year, 1972-3 to 1978-9 (From JBNQNHRC, 1982).

Communities	Year	C.Geese	Ducks	Beaver	Mink	Moose	Caribou	Hare	Grouse	Whitefish	Seals
Whapmagoostui	72-3			155	40	0	128				120
	73-4	4,019		77	0	0	170				101
	74-5	3,169	1,608	85	5	0	232	488	367	11,968	59
	75-6	7,379	5,991	295	24	0	333	202	1,142	16,721	224
	76-7	4,953	3,021	654	138	0	118	124	1,949	10,697	175
	77-8	5,451	3,595	447	177	0	156	219	2,361	9,116	130
	78-9	5,269	2,565	624	106	1	101	446	2,123	10,403	50
	Mean	5,040	3,356	334	70	0	177	296	1,588	11,781	123
		1,431	1,643	245	70	-	81	161	822	2,942	62
Nemaska	72-3			712	73	40	8				0
	73-4	204		608	98	38	22				0
	74-5	283	524	674	39	30	14	271	434	2,111	0
	75-6	278	307	293	30	5	3	421	393	527	0
	76-7	782	1,003	783	45	107	34	1,117	1,061	794	0
	77-8	470	917	561	70	43	11	2,287	859	943	0
	78-9	549	1,090	490	72	70	19	5,337	705	1,316	0
	Mean	428	768	589	61	48	16	1,887	690	1,138	-
	StD	217	337	163	24	32	10	2,087	283	614	-
All	72-3			19,280	3,082	856	757				986
	73-4	73,127		16,556	2,231	812	602				968
	74-5	52,982	53,082	17,048	1,741	800	729	11,171	16,296	187,606	850
	75-6	72,296	51,974	14,603	1,124	880	869	20,083	17,869	132,214	545
	76-7	65,894	46,686	18,339	2,365	1,379	1,204	35,527	30,039	81,865	490
	77-8	57,829	42,540	17,037	3,080	954	587	60,911	31,330	87,003	483
	78-9	56,682	44,299	13,991	2,494	857	617	81,903	25,422	131,083	277
	Mean	63,136	47,716	16,694	2,302	934	768	41,920	24,191	123,954	657
	StD	8,535	4,649	1,886	703	203	218	29,251	6,873	42,742	276

Table 4.43: Statistical t-Test Results of Pre-ISP and Post-ISP Harvests by James Bay Cree, 1972-6 and 1976-9.

Species	No. of Years Pre/Post	Significant t-Tests, by Community (1) 1	2	3	4	5	7	8	ALL
Canada Geese	3/3								
Ducks	2/3								.05
Beaver	4/3	.05	.05		.10				
Mink	4/3	.05				.05			
Moose	4/3	N(2)						.05	
Caribou	4/3								
Hare	2/3			.05	.10	.05			.10
Grouse	2/3	.05	.05	.10	.10				.05
Whitefish	2/3								
Seal	4/3		.05	.10		.10	N	N	.05

Note (1): The estimates of annual harvests used for tests are from JBNQNHRC, 1982. Communities numbers are Whapmagoostui (1), Chisasibi (2), Wemindji (3), Eastmain (4), Waskaganish (5), Mistassini (7), Waswanipi (8). "All" includes Nemasaka (6), which is not listed separately because its changing membership affected statistical results.

Note (2): An "N" indicates that the data did not warrant calculations. A blank space indicates that the results were not statistically significant.

Table 4.44: Statistical F-Test Results on Pre-ISP and Post-ISP Harvests by James Bay Cree, 1972-6 and 1976-9.

Species	No. of Years Pre/Post	Significant F-Tests, by Community (1) 1	2	3	4	5	7	8	ALL
Canada Geese	3/3	.05							
Ducks	2/3	.05		.05					
Beaver	4/3								
Mink	4/3			.01					
Moose	4/3	N(2)					.05		.01
Caribou	4/3						.01	.01	.05
Hare	2/3							.05	
Grouse	2/3								
Whitefish	2/3						.01	.01	
Seal	4/3			.05		.01	N	N	

Note (1): The estimates of annual harvests used for tests are from JBNQNHRC, 1982. Communities numbers are Whapmagoostui (1), Chisasibi (2), Wemindji (3), Eastmain (4), Waskaganish (5), Mistassini (7), Waswanipi (8). "All" includes Nemasaka (6), which is not listed separately because its changing membership affected statistical results.

Note (2): An "N" indicates that the data did not warrant calculations. A blank space indicates that the results were not statistically significant.

Table 4.45: Summary of Statistical Test Results of Pre-ISP and Post-ISP Harvests by James Bay Cree

	No. of Communities Not Testable	No. of Significant t-Test Differences								No. of Significant F-Test Differences							
		Regional Level				Community Level				Regional Level				Community Level			
		0.05(1)		0.10		0.05		0.10		0.01		0.05		0.01		0.05	
SPECIES		+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Canada Geese	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Ducks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Beaver	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
Mink	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
Moose	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0
Caribou	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0
Hare	0	0	0	1	0	2	0	1	0	0	0	0	0	0	0	1	0
Grouse	0	1	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
Whitefish	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Seal	3	0	1	0	0	0	1	0	2	0	0	0	0	0	1	0	1

NOTE (1): If the mean increased between 1972-6 and1976-9 the test is tabulated under the + sign, if it declined then under the - (minus) sign.

Table 4.46. Percentage of Harvests of Beaver and Mink Taken in the "Away" Zone, 1972-2 to 1978-9 (1).

Species and Community	72-3	73-4	74-5	75-6	76-7	77-8	78-9	Mean
BEAVER								
Mistassini	-	-	-	89	80	80	55	76
Chisasibi	-	-	-	58	59	61	73	63
Waskaganish	-	-	-	11	8	83	90	48
Waswanipi	-	-	-	36	53	54	48	48
Wemindji	-	-	-	98	89	92	99	95
Eastmain	-	-	-	74	68	68	70	70
Whapmagoostui	-	-	-	26	89	84	95	73
Nemaska	-	-	-	86	86	99	85	89
All	-	-	-	62	66	74	72	69
MINK								
Mistassini	75	80	80	80	88	85	54	77
Chisasibi	47	48	53	27	27	27	57	41
Waskaganish	100	52	65	0	0	52	95	52
Waswanipi	42	13	19	21	45	41	46	32
Wemindji	79	52	36	86	69	83	99	72
Eastmain	34	37	42	38	53	56	22	40
Whapmagoostui	79	-	80	9	80	79	92	70
Nemaska	100	100	90	77	89	100	94	93
All	66	59	61	42	64	69	62	60

Note (1): From JBNQNHRC, 1982: 775-6 (Table A25-2). No data were collected for beaver for 1972-3 to 1974-5. For definition of "Away" zone see text.

Table 4.47. Percentage of Harvests of Hare and Grouse Taken in the "Away" Zone, 1974-5 to 1978-9 (1).

Species and Community	74-5	75-6	76-7	77-8	78-9	Mean
HARE						
Mistassini	61	84	83	81	60	74
Chisasibi	13	27	36	47	45	34
Waskaganish	74	7	9	65	80	47
Waswanipi	29	40	55	63	50	47
Wemindji	38	66	61	61	88	63
Eastmain	41	27	48	29	42	37
Whapmagoostui	0	4	52	39	55	30
Nemaska	55	75	82	97	70	76
All	38	36	43	57	60	47
GROUSE						
Mistassini	76	74	76	75	55	71
Chisasibi	43	35	43	51	51	45
Waskaganish	30	1	4	53	66	31
Waswanipi	24	30	52	43	43	38
Wemindji	41	62	71	61	79	63
Eastmain	70	99	96	47	34	69
Whapmagoostui	39	17	51	43	62	42
Nemaska	82	68	91	96	83	84
All	55	44	56	58	57	54

Note (1): Calculated from JBNQNHRC, 1982: 780 (Table A25-5).
For definition of "Away" zone see text.

Table 4.48. Available Weight of Food from All Harvests, 1974-5 to 1978-9, to Nearest 100 kg (1).

Community	1974-5	1975-6	1976-7	1977-8	1978-9	Mean
Mistassini	329,800	216,000	295,000	222,100	186,500	231,700
Chisasibi	220,100	185,800	178,400	181,100	232,600	191,000
Waskaganish	44,500	112,600	115,700	89,300	99,100	96,900
Waswanipi	108,000	70,700	74,800	80,000	79,900	81,300
Wemindji	92,200	61,800	74,900	74,500	80,400	71,800
Eastmain	34,000	47,600	47,700	42,900	44,000	43,200
Whapmagoostui	41,600	82,600	54,500	55,000	55,600	57,300
Nemaska	17,400	6,700	36,000	22,000	31,200	30,200
All	906,200	785,700	875,900	767,000	809,200	803,300

Note (1): Calculated from JBNQNHRC, 1982: 226 (Table 3-59).

Table 4.49. Mean Annual Food Available from Harvests of Each Species Group as a Percentage of Total Food Available to Each Community, 1974-5 to 1978-9 (1).

Community	Waterfowl	Fur Mammals	Big Game	Small Game	Fish	Sea Mammals
Mistassini	10	15	61	4	10	0
Chisasibi	44	13	6	13	21	3
Waskaganish	39	17	27	7	9	1
Waswanipi	4	20	56	6	15	0
Wemindji	29	26	10	13	18	4
Eastmain	37	22	15	13	12	1
Whapmagoostui	31	7	21	13	23	5
Nemaska	6	16	65	7	7	0
All	25	16	33	9	15	2

Note (1): Calculated from JBNQNHRC, 1982: 229 (Table 3-62).

Table 4.50. Mean Foodweight Available per Person Year and Day, for 1974-5 to 1978-9 (1).

Community	Mean Annual Available Food from Harvests (Kg)	Kilograms/ Individual/ Year	Kilograms/ Individual/ Day
Mistassini	231,700	132	0.36
Chisasibi	191,000	119	0.33
Waskaganish	96,900	97	0.26
Waswanipi	81,300	107	0.29
Wemindji	71,800	108	0.30
Eastmain	43,200	135	0.37
Whapmagoostui	57,300	154	0.42
Nemaska	30,200	173	0.47
All	803,300	121	0.33

Note (1): Calculated from JBNQNHRC, 1982: 232 (Table 3-65).

Table 4.51. Foodweight Available per Adult Comsuption Unit per Day, 1974-5 to 1978-9 (1) (2).

Community	1974-5	1975-6	1976-7	1977-8	1978-9
Mistassini	0.67	0.42	0.57	0.42	0.35
Chisasibi	0.50	0.40	0.37	0.38	0.47
Waskaganish	0.16	0.37	0.39	0.30	0.32
Waswanipi	0.59	0.32	0.33	0.35	0.34
Wemindji	0.50	0.32	0.38	0.37	0.39
Eastmain	0.38	0.51	0.49	0.43	0.43
Whapmagoostui	0.40	0.75	0.49	0.49	0.48
Nemaska	0.48	0.41	0.61	0.30	0.41
All	0.49	0.41	0.44	0.38	0.39

Note (1): Calculated from JBNQNHRC, 1982: 318 (Table 4-34).
Note (2): An adult consumption unit is calculated by multiplying the number of peoplein each age/sex group by the recommended daily caloric requirements for that age and sex, and dividing by the mean of the caloric requirements of males and females between ages 20 and 65.

Table 4.52. Available Weight of Food from All Harvests by ISP Hunters, 1975-6 to 1978-9 (1).

Community	1975-6	1976-7	1977-8	1978-9	Mean 1976-9
Mistassini	184,020	297,410	202,139	161,033	220,194
Chisasibi	104,708	127,244	106,007	144,517	125,923
Waskaganish	96,458	113,305	64,718	71,359	83,127
Waswanipi	52,656	70,269	72,816	75,340	72,808
Wemindji	43,465	61,346	61,622	67,222	63,397
Eastmain	32,733	45,043	36,216	41,113	40,791
Whapmagoostui	50,266	41,031	28,692	28,102	32,608
Nemaska	-	-	20,383	22,132	21,258
All	570,431	779,790	592,593	611,202	661,195

Note (1): Calculated from JBNQNHRC, 1978, 1979, 1980, 1982.

Table 4.53. Percentage of Weight of Food from All Harvests by ISP Hunters, 1974-5 to 1978-9 (1).

Community	1975-6	1976-7	1977-8	1978-9	Mean 1976-9
Mistassini	84	93	91	86	91
Chisasibi	56	71	59	62	64
Waskaganish	81	90	72	72	79
Waswanipi	74	94	91	94	93
Wemindji	70	82	83	84	83
Eastmain	69	94	84	93	91
Whapmagoostui	61	75	52	51	59
Nemaska (2)	-	-	93	71	80
All	73	89	77	76	81

Note (1): Calculated from JBNQNHRC, 1978, 1979, 1980, 1982.
Note (2): Based on 1977-8 and 1978-9 only.

Table 4.54. Foodweight Harvested per ISP Hunter per Year, and per ISP Beneficiary, Kilograms, 1975-6 to 1978-9 (1).

Community	1975-6	1976-7	1977-8	1978-9
Mistassini	969	1,040	839	682
Chisasibi	698	621	589	785
Waskaganish	885	952	830	892
Waswanipi	763	808	857	837
Wemindji	612	653	656	708
Eastmain	885	901	842	1,054
Whapmagoostui	1,257	1,140	989	969
Nemaska	-	-	510	598
All	857	889	750	774

	Mean Annual Available Food from Harvests (2)	Mean Foodweight/ ISP Hunter/ Year (2)	Mean Kilograms/ Beneficiary/ Year (2)	Mean Kilograms/ Beneficiary/ Day (2)
Mistassini	220,194	873	165	0.45
Chisasibi	125,923	664	157	0.43
Waskaganish	83,127	881	169	0.46
Waswanipi	72,808	834	188	0.52
Wemindji	63,397	672	181	0.50
Eastmain	40,791	927	231	0.63
Whapmagoostui	32,608	1041	219	0.60
Nemaska (3)	21,258	552	-	-
All	661,195	807	176	0.48

Note (1): Foodweights calculated from JBNQNHRC, 1978, 1979, 1980, 1982. ISP beneficiaries from present research and ISP Board data.
Note (2): Post-ISP means, 1976-7 to 1978-9.
Note (3): Foodweight per hunter per year for Nemaska is based on 1977-8 and 1978-9 data only, as ISP hunters' harvests for other years were not published by NHRC. No data is calculated per ISP beneficiary as ISP Board did not start publishing these data for Nemaska until 1978-9.

Table 4.55: Comparison of Bush Food Production in Waswanipi Hunting Groups, 1968-9 and 1981-2 (1).

	1968-9	1981-2
No. of Hunting Groups	18	34
No. in Roadside Camps	0	9
Percentage of Groups Producing More Than:		
-1300 kcal./adult-day (2)	100	100
-2500 kcal./dault-day	83	55
Kcal./adult-day from Moose and Beaver Taken From:		
-Bush Camps	4,351	3,040
-Roadside Camps	-	1,008

Note (1): From Feit, 1991.
Note (2): An adult/day ofsubsistence demand is calculated by counting children 0 to 6 years of age as one-third of an adult daily caloric requirement, and children 7 to 17 plus elders over 65 as two-thirds of a daily adult caloric requirement.

Table 4.56. Mean Percentage of ISP and of Non-ISP Hunters Who Reported Harvesting Various Species, 1976-7 to 1978-9 (1).

Community	Canada Geese Summer/Fall		Canada Geese Spring		Ducks Summer/Fall		Ducks Spring		Beaver	
	ISP	NISP	ISP	NISP	ISP	NISP	ISP	NISP	ISP	NISP
Mistassini	28	17	82	84	60	32	93	93	96	28
Chisasibi	92	87	95	94	83	78	85	85	68	26
Waskaganish	36	27	96	83	73	67	80	58	74	13
Waswanipi	31	10	62	34	63	37	80	64	98	77
Wemindji	89	88	98	92	83	76	86	82	88	19
Eastmain	77	69	96	91	85	75	69	55	91	25
Whapmagoostui	78	90	85	89	68	78	77	78	83	28
Nemaska	32	18	79	56	51	38	79	54	93	27
All	54	54	87	85	70	62	86	78	86	25

Community	Mink		Moose		Caribou		Hare		Grouse	
	ISP	NISP	ISP	NISP	ISP	NISP	ISP	NISP	ISP	NISP
Mistassini	74	19	67	18	33	8	79	40	92	69
Chisasibi	44	19	4	2	3	3	94	81	87	81
Waskaganish	51	7	40	5	18	3	86	45	78	48
Waswanipi	72	40	72	28	2	0	94	72	94	90
Wemindji	52	14	16	1	5	2	96	70	94	68
Eastmain	64	27	34	6	3	3	96	90	90	84
Whapmagoostui	65	17	1	0	30	12	64	43	94	81
	51	10	59	38	14	11	93	63	86	65
All	60	18	41	8	17	5	88	59	90	70

Note (1): Calculated from JBNQNHRC, 1982: 745-50 (Tables A21-1 to A21-4).

Table 4.57: Mean Number of Person-days per Year Reported by ISP and Non-ISP Hunters for Various Harvesting Activities, 1976-7 to 1978-9 (1).

Community (2)	Fall Goose		Winter Trapping		Spring Goose	
	ISP	NISP	ISP	NISP	ISP	NISP
Mistassini	8	6	208	127	20	16
Chisasibi	36	22	134	92	38	26
Waskaganish	23	16	98	66	38	23
Waswanipi	7	6	188	83	13	14
Wemindji	21	17	109	68	34	24
Eastmain	11	12	94	44	34	27
Whapmagoostui	20	16	95	76	34	16
All (3)	18	16	154	87	29	22

Note (1): Based on data published by the JBNQNHRC, 1979, 1980.
Note (2): No data for Nemaska were published by NHR for 1976-7, and therefore no mean is calculated.
Note (3): "All" includes Nemaska.

Table 4.58. Mean Harvest Per ISP and Per Non-ISP Hunter Who Reported Harvesting Various Species, 1976-7 to 1978-9 (1).

Community	Canada Geese Summer/Fall		Canada Geese Spring		Ducks Summer/Fall		Ducks Spring		Beaver	
	ISP	NISP	ISP	NISP	ISP	NISP	ISP	NISP	ISP	NISP
Mistassini	5	7	12	9	15	15	41	34	18	9
Chisasibi	55	43	42	30	24	18	24	19	18	17
Waskaganish	9	7	51	25	14	10	14	10	28	15
Waswanipi	2	3	6	3	11	8	24	24	23	9
Wemindji	28	24	36	22	18	20	18	17	24	19
Eastmain	12	10	99	53	23	26	10	7	30	6
Whapmagoostui	31	36	56	34	29	20	30	26	16	12
Nemaska	6	3	12	16	9	17	18	20	16	11
All	29	31	32	25	18	17	28	21	21	13

Community	Mink		Moose		Caribou		Hare		Grouse	
	ISP	NISP	ISP	NISP	ISP	NISP	ISP	NISP	ISP	NISP
Mistassini	7	5	3	2	5	6	83	13	31	18
Chisasibi	3	2	2	1	3	2	65	46	30	20
Waskaganish	4	3	3	1	3	3	104	34	19	11
Waswanipi	4	3	4	2	5	-	43	32	33	27
Wemindji	3	3	2	1	3	4	95	48	26	17
Eastmain	3	3	2	1	1	1	141	43	31	9
Whapmagoostui	5	4	1	0	8	9	7	5	43	24
Nemaska	3	2	3	2	2	4	71	27	22	14
All	5	3	3	2	5	5	63	35	30	18

Note (1): Calculated from JBNQNHRC, 1982: 755-60 (Tables A22-1 to A22-4).

Table 4.59: Mean Foodweight Harvested per ISP and Non-ISP Hunter per Year, 1976-7 to 1978-9 (1).

Community	Foodweight (kg.) Per ISP Hunter	Foodweight (kg.) Per Non-ISP Hunter	Non-ISP/ ISP
Mistassini	873	201	0.23
Chisasibi	664	377	0.57
Waskaganish	881	193	0.22
Waswanipi	834	233	0.28
Wemindji	672	283	0.42
Eastmain	927	197	0.21
Whapmagoostui	1041	474	0.46
Nemaska (2)	552	305	0.55
All	807	277	0.34

Note (1): From NHR and ISP data.
Note (2): Nemaska data based on 1977-8 and 1978-9 only.

Table 4.60. Percentage of Non-ISP Hunters Who Reported Harvesting Various Species, 1975-76 to 1978-79 (1).

Species	1975-76	1976-77	1977-78	1978-79	Mean
Canada Geese- Fall	58	59	53	49	55
Canada Geese- Spring	83	86	85	85	85
Ducks- Summer/Fall	69	64	62	61	64
Ducks- Spring	86	78	79	76	80
Beaver	30	28	27	20	26
Mink	17	18	20	15	17
Moose	11	8	8	7	9
Caribou	4	6	5	5	5
Hare	56	51	58	69	59
Grouse	65	69	73	67	69

Note (1): From JBNQNHRC, 1982: 743-50 (Tables A21-1 to A21-4).

Table 4.61. Harvest per Non-ISP Hunters Who Reported Harvesting Various Species, 1975-6 to 1978-9 (1).

Species	1975-6	1976-7	1977-8	1978-9	Mean
Canada Geese- Fall	32.6	29.0	28.3	34.4	31.1
Canada Geese- Spring	32.1	29.4	22.8	21.3	26.4
Ducks- Summer/Fall	19.1	17.0	15.1	17.7	17.2
Ducks- Spring	42.2	22.8	19.8	21.6	26.6
Beaver	10.0	11.3	15.2	12.3	12.2
Mink	2.6	2.7	3.5	4.4	3.3
Moose	2.0	2.0	2.0	1.9	2.0
Caribou	5.7	4.9	4.5	6.3	5.4
Hare	16.0	28.5	34.9	40.7	29.9
Grouse	15.8	18.3	19.5	17.0	17.7

Note (1): From JBNQNHRC, 1982: 755-60 (Tables A22-1 to A22-4).

Table 4.62: Person-days per Hunter per Year Reported by ISP and Non-ISP Hunters for Various Harvesting Activities, 1976-7 to 1978-9 (1).

Community	Year	Fall Goose		Winter Trapping		Spring Goose	
		ISP	NISP	ISP	NISP	ISP	NISP
Mistassini	1976-7	8	7	184	107	27	19
	1977-8	6	4	225	139	13	12
	1978-9	10	8	214	135	21	18
Chisasibi	1976-7	37	24	129	86	39	27
	1977-8	42	22	103	89	48	29
	1978-9	29	21	170	100	28	21
Waskaganish	1976-7	23	16	103	48	44	25
	1977-8	27	19	93	93	40	24
	1978-9	20	14	99	56	30	21
Waswanipi	1976-7	12	5	177	91	20	20
	1977-8	3	3	189	90	9	8
	1978-9	5	11	199	67	10	13
Wemindji	1976-7	22	20	101	62	35	27
	1977-8	22	19	111	67	41	26
	1978-9	20	13	116	74	27	19
Eastmain	1976-7	10	12	92	24	33	22
	1977-8	10	13	92	27	34	31
	1978-9	13	12	99	80	35	27
Whapmagoostui	1976-7	21	19	77	47	36	15
	1977-8	18	17	94	65	38	17
	1978-9	21	13	113	117	28	16
Nemaska (2)	1976-7	-	-	-	-	-	-
	1977-8	7	9	183	107	19	15
	1978-9	12	14	194	52	17	17
All	1976-7	19	17	141	74	33	24
	1977-8	18	16	153	93	29	23
	1978-9	17	14	168	95	24	20

Note (1): Based on data from JBNQNHRC, 1979, 1980.
Note (2): No data for Nemaska were published for 1976-7.

Table 5.1: Absolute and proportional contributions to non-ISP cash incomes of ISP beneficiary units of various income sources, for 1975-6 (701 "original" ISP B.U.'s) and 1976-7 (980 "original" and "secondary" ISP B.U.'s).

	1975-6 (Nov 11/75-June 30/76)		1976-7 (Jul 1/76-June 30/77)	
	$	%	$	%
Furs	256 640	14.80	469 068	20.03
Employment and Related (1)	711 949	41.06	1 431 289	61.12
Old Age Pension	61 617	3.55	175 377	7.49
Aide Sociale	191 005	11.01	102 192	4.36
Band Relief	513 042	29.58	163 911	7.00
Total	1 734 253	100.00	2 341 837	100.00

Note (1): In this category are included wage employment, self employment, manpower training allowance, unemployment insurance, and workmen's compensation.

Table 5.2: Percentage contribution of income from various sources to total non-ISP income for ISP "original" B.U.'s, by village - retroactive period (Nov. 11/75 - June 30/76).

Community	Furs %	Employment & Related %	Old Age Pension %	Aide Sociale %	Band Relief %
Mistassini	10.8	26.4	6.6	3.0	53.2
Chisasibi	6.3	57.8	2.3	6.7	26.8
Waskaganish	33.6	25.5	2.6	29.7	8.6
Waswapini	14.0	49.4	3.7	8.9	24.0
Wemindji	22.7	29.5	2.3	9.7	35.8
Eastmain	21.4	37.2	2.5	1.9	37.0
Whapmagoostui	0.7	71.7	2.9	23.4	1.3
All	14.8	41.1	3.6	11.0	29.6

Table 5.3: Percentage contribution of income from various sources to total non-ISP income for ISP B.U.'s, by community - 1976-7 (July 1, 1976 to June30, 1977).

Community	Furs	Employment & related	Old age pension	Aide sociale	Band relief
A. Original					
Mistassini	25.6	43.9	12.6	1.8	16.2
Chisasibi	10.6	75.8	6.4	6.9	0.3
Waskaganish	28.8	59.3	3.9	7.5	0.4
Waswanipi	29.1	50.1	9.2	5.0	6.6
Wemindji	44.9	38.4	4.9	4.3	7.6
Eastmain	38.2	45.5	3.1	--	13.2
Whapmagoostui	8.6	82.3	4.3	4.8	0.1
All	23.9	58.2	7.1	4.8	6.0
B. Secondary					
Mistassini	18.3	43.5	10.2	1.6	26.4
Chisasibi	5.9	84.6	5.1	4.5	--
Waskaganish	5.1	86.4	5.0	3.6	--
Waswanipi	15.2	71.6	--	4.1	9.1
Wemindji	14.1	62.1	18.5	3.0	2.4
Eastmain	10.4	62.8	8.7	1.0	17.1
Whapmagoostui	5.7	37.3	46.4	10.7	--
All	11.0	68.0	8.4	3.3	9.3
C. Total (A, B)					
Mistassini	23.1	43.8	11.8	1.7	19.6
Chisasibi	9.2	78.4	6.0	6.2	0.2
Waskaganish	21.5	67.7	4.3	6.3	0.3
Waswanipi	24.9	56.6	6.4	4.7	7.4
Wemindji	35.4	45.7	9.1	3.9	6.0
Eastmain	30.9	50.0	4.5	0.3	14.2
Whapmagoostui	8.2	76.3	9.9	5.5	0.1
All	20.0	61.1	7.5	4.4	7.0

Table 5.4: Mean net income from various sources, with means calculated as income by source over all B.U.'s (1), for ISP "original" B.U.'s, by community - retroactive period (Nov. 11/75 to June 30/76).

Community	Furs	Employment & related	Old age pension	Welfare - combined Aid Sociale and Band Relief	Total non-ISP income
Mistassini	185	452	112	964	1713
Chisasibi	197	1800	73	1044	3114
Waskaganish	995	775	77	1133	2960
Waswanipi	358	1264	95	840	2557
Wemindji	555	724	56	1117	2452
Eastmain	532	923	63	966	2484
Whapmagoostui	25	2460	100	846	3431
ALL	366	1016	88	1004	2474

Note (1): In this table and the next, means for the respective columns are calculated for all beneficiary units at each settlement, regardless of whether they had income from a given source. This contrasts with Tables 5.6 and 5.7, where means are presented for only those who actually had income, by source.

Table 5.5: Mean net income from various sources, with means calculated as income by source over all B.U.'s, for ISP B.U.'s, by community - 1976-7 (July 1, 1976 to June 31, 1977).

Community	Furs	Employment & related	Old age pension	Welfare - combined Aide Sociale and Band Relief	Total non-ISP income
A. Original					
Mistassini	408	669	200	286	1594
Chisasibi	308	2200	185	209	2902
Waskaganish	994	2046	136	273	3447
Waswanipi	603	1037	191	240	2071
Wemindji	828	708	90	218	1844
Eastmain	1232	1470	99	428	3229
Whapmagoostui	328	3131	163	185	3807
All	570	1384	169	258	2381
B. Secondary					
Mistassini	325	772	180	496	1773
Chisasibi	188	2680	160	142	3170
Waskaganish	217	3713	215	153	4298
Waswanipi	332	1568	-	290	2190
Wemindji	347	1529	455	131	2462
Eastmain	237	1428	198	412	2275
Whapmagoostui	103	677	843	193	1816
All	274	1697	211	314	2496
C. Total (A, B)					
Mistassini	382	722	194	352	1650
Chisasibi	274	2335	178	190	2977
Waskaganish	788	2487	157	241	3673
Waswanipi	523	1193	135	255	2106
Wemindji	708	913	181	196	1998
Eastmain	900	1457	132	422	2911
Whapmagoostui	273	2532	329	187	3321
All	484	1475	181	274	2414

Table 5.6: Total net income and mean net income from various sources for Income Security Program "Original" (1) beneficiary units (B.U.'s) by community - retroactive period (Nov. 11/75 to June 30/76).

		Furs		Employment & Related			Old Age Pension			Aide Sociale		
Community	Total $	# BU's	Mean $	Total $	# BU's	Mean $	Total $	# BU's	Mean $	Total $	# BU's	Mean $
Mistassini	44333	183	242	108065	115	940	26871	19	1414	12373	5	2475
Chisasibi	30758	107	287	280816	116	2421	11338	12	945	32732	54	606
Waskaganish	96487	82	1177	73228	52	1408	7448	6	1241	85269	54	1579
Waswanipi	23984	59	407	84666	56	1512	6384	5	1277	15244	11	1386
Wemindji	42205	70	603	55024	41	1342	4256	4	1064	18081	9	2009
Eastmain	18089	32	565	31386	23	1365	2128	2	1064	1632	1	1632
Whapmagoostui	784	8	98	78764	28	2813	3192	2	1596	25674	25	1027
GRAND TOTAL	256640	541	474	711949	431	1652	61617	50	1232	191005	159	1201

	Band Relief			Community Total		
Community	Total $	# BU's	Mean $	Total $	#(2) BU's	Mean $
Mistassini	217807	210	1037	409449	239	1713
Chisasibi	130162	112	1162	485806	156	3114
Waskaganish	24676	49	504	287108	97	2960
Waswanipi	41052	51	805	171330	67	2557
Wemindji	66757	64	1043	186323	76	2452
Eastmain	31204	28	1114	84439	34	2484
Whapmagoostui	1384	3	461	109798	32	3431
GRAND TOTAL	513042	517	992	1734253	701	2474

Note (1): 701 (of 994) of the B.U.'s that registered for 1976-7 received retroactive payments and therefore reported income from Nov. 11/75 to June 30/76. These 701 beneficiary units were classed as `original' or `characteristique 1' in Income Security Board printouts. For `secondary' or `characteristique 2' beneficiary units, i.e. those that did not receive a retroactive payment for 1975-6, but did receive regular ISP benefits in 1976-7, there are no 1975-76 data available.

Note (2): For this column only, means are calculated over all 701 b.u.'s that received retroactive payments. 1975-6 printouts do not include information for this column, and we have assumed that no beneficiary unit was without cash income from at least one of the sources mentioned. For 1976-7, note, there were 10/980 (or 1%) of beneficiary units, all from Chisasibi, that did not

have income from any of the above sources. This, however, would have been an unlikely situation prior to ISP payments, since all beneficiary units would have needed some cash income and should have received, minimally, welfare payments.

For all other columns, means are calculated in this table and the next as the community total divided by only those b.u.'s that actually received income from the source in question, in contrast to means calculated in the preceeding two tables.

Table 5.7: Total net income and mean net income from various sources for Income Security Program beneficiary units, by community - 1976-7 (July 1/76 to June 30/77).

	Furs			Employment & Related			Old Age Pension			Aide Sociale		
Community	Total $	BU's #	Mean $	Total $	BU's #	Mean $	Total $	BU's #	Mean $	Total $	BU's #	Mean $
A. Original												
Mistassini	97099	198	490	166468	145	1148	47703	23	2074	6718	9	746
Chisasibi	44969	115	391	321214	78	4118	26969	14	1926	29198	46	635
Waskaganish	93441	79	1183	192218	76	2529	12781	7	1826	24291	43	565
Waswanipi	42192	68	620	72602	59	1231	13355	7	1908	7261	6	1210
Wemindji	62135	72	863	53063	46	1154	6736	4	1684	5875	11	534
Eastmain	41883	32	1309	49993	29	1724	3368	2	1684	-	-	-
Whapmagoostui	10157	25	406	97073	28	3467	5052	2	2526	5610	10	561
TOTAL	391876	589	665	952631	461	2066	115964	59	1965	78953	125	632
B. Secondary												
Mistassini	35754	80	447	84902	66	1286	19808	11	1801	3188	3	1063
Chisasibi	10701	37	289	152779	43	3553	9133	5	1827	8082	12	674
Waskaganish	7393	15	493	126224	31	4072	7308	5	1462	5191	13	399
Waswanipi	9622	22	437	45476	24	1895	-	-	-	2626	6	438
Wemindji	8668	21	413	38226	16	2389	11376	7	1625	1822	4	456
Eastmain	4022	12	335	24278	12	2023	3368	1	3368	396	1	396
Whapmagoostui	1032	6	172	6773	6	1129	8420	4	2105	1934	4	484
TOTAL	77192	193	400	478658	198	2417	59413	33	1800	23239	43	540
C. Total (A, B)												
Mistassini	132853	278	478	251370	211	1191	67511	34	1986	9906	12	826
Chisasibi	55670	152	366	473993	121	3917	36102	19	1900	37280	58	643
Waskaganish	100834	94	1073	318442	107	2976	20089	12	1674	29482	56	526
Waswanipi	51814	90	576	118078	83	1423	13335	7	1908	9887	12	824
Wemindji	803	93	761	91289	62	1472	18112	11	1647	7697	15	513
Eastmain	45905	44	1043	74271	41	1811	6736	3	2245	396	1	396
Whapmagoostui	11189	31	361	103846	34	3054	13472	6	2245	7544	14	539
TOTAL	469068	782	600	1431298	659	654	175377	92	1906	102192	168	608

Continued...

Table 5.7 (Continued)

Community	Band Total $	Relief BU's #	Mean $	Community Total $	BU's #(1)	Mean $
A. Original						
Mistassini	61320	169	363	379308	238	1594
Chisasibi	1319	2	660	423669	146	2902
Waskaganish	1328	3	443	324059	94	3447
Waswanipi	9561	32	299	144971	70	2071
Wemindji	10490	30	350	138229	75	1844
Eastmain	14535	30	485	109779	34	3229
Whapmagoostui	117	1	117	118009	31	3807
TOTAL	98670	267	370	1638094	688	2381
B. Secondary						
Mistassini	51397	86	598	195049	110	1773
Chisasibi	-	-	-	180695	57	3170
Waskaganish	-	-	-	146116	34	4298
Waswanipi	5776	19	304	63500	29	2190
Wemindji	1458	8	182	61550	25	2462
Eastmain	6610	13	508	38674	17	2275
Whapmagoostui	-	-	-	18159	10	1816
TOTAL	65241	125	518	703743	282	2496
C. Total (A, B)						
Mistassini	112717	255	442	574357	348	1650
Chisasibi	1319	2	660	604364	203	2977
Waskaganish	1328	3	443	470175	128	3673
Waswanipi	15337	51	301	208471	99	2106
Wemindji	11948	38	314	199849	100	1998
Eastmain	21145	43	492	148453	51	2911
Whapmagoostui	117	1	117	136168	41	3321
TOTAL	163911	393	417	2341837	970	2414

Note (1): Numbers in this column indicate the total number of beneficiary units that reported income from one or more of the above sources. Except for 10 B.U.'s at Chisasibi (5 in the "original" group and 5 in the "secondary" group) these numbers are equal to the total number of B.U.'s for the respective communities in 1976-7.

Table 5.8: Percentage of beneficiary units receiving ISP retroactive payments who received other cash income from various sources, by community - retroactive period (Nov. 11/75 to June 30/76).

Community	Total No. B.U.'s on retroactive	Fur		Employment & Related		Old Age Pension		Aide Sociale		Band	Relief
		# b.u.'s	% Total	# b.u.'s	% Total	# b.u.'s	% Total	# b.u.'s	% Total	# b.u.'s	% Total
Mistassini	239	183	77	115	48	19	8	5	2	210	88
Chisasibi	156	107	69	116	74	12	8	54	35	112	72
Waskaganish	97	82	85	52	54	6	6	54	56	49	51
Waswanipi	67	59	88	56	84	5	7	11	16	51	76
Wemindji	76	70	92	41	54	4	5	9	12	64	84
Eastmain	34	32	94	23	68	2	6	1	3	28	82
Whapmagoostui	32	8	25	28	88	2	6	25	78	3	9
All	701	541	77	431	61	50	7	159	23	517	74

Table 5.9: Percentage of beneficiary units receiving ISP retroactive payments who received other cash income from various sources, by community, 1976-7.

Community	No of B.U.'s on ISP	Fur Income		Employment & Related		Old Age Pension		Aide Sociale		Band	Relief
		# b.u.'s	% Total	# b.u.'s	% Total	# b.u.'s	% Total	# b.u.'s	% Total	# b.u.'s	% Total
A. Original											
Mistassini	238	198	83	145	61	23	10	9	4	169	71
Chisasibi	151	115	76	78	52	14	9	46	30	2	1
Waskaganish	94	79	84	76	81	7	7	43	46	3	3
Waswanipi	70	68	97	59	84	7	10	6	9	32	46
Wemindji	75	72	96	46	61	4	5	11	15	30	40
Eastmain	34	32	94	29	85	2	6	-	18	30	88
Whapmagoostui	31	25	81	28	90	2	6	10	32	1	3
TOTAL	693	589	85	461	67	59	9	125	18	267	39
B. Secondary											
Mistassini	110	80	73	66	60	11	10	3	3	86	78
Chisasibi	62	37	60	43	69	5	8	12	19	-	-
Waskaganish	34	15	44	31	91	5	15	13	38	-	-
Waswanipi	29	22	76	24	83	-	-	6	21	19	66
Wemindji	25	21	84	16	64	7	28	4	16	8	32
Eastmain	17	12	71	12	71	1	6	1	6	13	76
Whapmagoostui	10	6	60	6	60	4	40	4	40	-	-
TOTAL	287	193	67	198	69	33	11	43	15	126	44
C. Total (A. B)											
Mistassini	348	278	80	211	61	34	10	12	3	255	73
Chisasibi	213	152	71	121	57	19	9	58	27	2	1
Waskaganish	128	94	73	107	84	12	9	56	44	3	2
Waswanipi	99	90	91	83	84	7	7	12	12	51	52
Wemindji	100	93	93	62	62	11	11	15	15	38	38
Eastmain	51	44	86	41	80	3	6	1	2	43	84
Whapmagoostui	41	31	76	34	83	6	15	14	34	1	2
TOTAL	980	782	80	659	67	92	9	168	17	393	40

Table 5.10: Numbers and percentages of beneficiary unit heads in different age categories, by `A' List and `B' List for all James Bay Cree communities, except Whapmagoostui and Eastmain (1).

Age	Male b.u. heads				Female b.u. heads			
	`A' List		`B' List		`A' List		`B' List	
	No.	%	No.	%	No.	%	No.	%
18-19	22	4.0	26	10.4	17	32.8	6	20.0
20-24	70	12.8	54	21.4	9	17.4	2	6.7
25-29	59	10.7	46	18.2	3	5.8	2	6.7
30-34	52	9.4	27	10.8	4	7.7	0	0
35-39	61	11.1	22	8.8	5	9.6	6	20.0
40-44	69	12.5	15	6.0	1	1.9	0	0
45-49	49	8.9	12	4.8	1	1.9	2	6.7
50-54	56	10.2	7	2.8	1	1.9	3	10.0
55-59	45	8.2	11	4.4	1	1.9	2	6.7
60-64	37	6.7	13	5.2	5	9.6	2	6.7
65-70	14	2.5	10	4.0	2	3.8	1	3.3
70-74	10	1.8	6	2.4	0	0	3	10.0
75-79	4	0.7	0	0.0	1	1.9	1	3.3
80+	3	0.5	2	0.8	2	3.8	0	0
TOTAL	551	100.0	251	100.0	52	100.0	30	100.0
% of all B.U. heads (884)		62.3		28.4		5.9		3.4

Note (1): Whapmagoostui and Eastmain B.U. heads are not included in these totals due to limitations in the data.

Table 5.11 Number of heads and consorts with non-ISP earned income, by activity and community, for 716 beneficiary units for part of 1975-6 (Nov 11/75 to June 30/76) (1)

Community	Total of heads & consorts in B.U.'s		No with wage employment		No with self employment		No in guiding outfitting & commerical fishing		No with manpower training allowance		Total no with one or more types of earned income	
GROUP 'A'	heads	consorts	heads	consorts	heads	consorts	heads	consorts	heads	consorts	heads	consorts
Mistassini	249	164	61	0	1	0	19	1	2	0	80	1
Chisasibi	138	91	48	13	1	0	1	0	3	0	51	13
Waskaganish	93	71	23	2	2	0	1	0	0	0	25	2
Waswanipi	72	53	39	0	0	0	4	0	3	2	43	2
Wemindji	99	53	45	0	0	0	0	0	5	0	46	0
Eastmain	36	24	3	1	0	0	0	0	11	3	12	4
Whapmagoostui	29	25	11	3	0	0	0	0	0	0	11	3
	716	481	230	19	4	0	25	1	24	5	268	25

Note (1) Our sample for the following series of tables is the 852 ISP beneficiary units still active on ISP as of June, 1978. It therefore does not include some B.U.'s active on the program who had received retroactive benefits for 1975-6 and/or had been active on the Program in 1976-7, but who had cancelled or inactive files by June, 1978 (approximately 150 benefi- units from both Group 'A' and 'B') Group 'A' included data from 716 B.U.'s which filed a data registration form for 1975-6 (as well as 1976-7) and which indicated harvesting days for 1975-6 This was intended to correspond, roughly, to the Income Security Board's computer printout category "characteristique 1" or "original" group. However, several B.U.'s apparently reported 1975-6 harvesting days who did not get a retroactive payment Perhaps as many as 100 of our 'Group A' sample are "secondary" beneficiary units Our 'Group B' includes data from 136 B.U.'s who did not have a 1975-6 data registration form on file, or who indicated no days in harvesting, for 1975-6 It therefore includes only a portion of "characteristique 2" or "secondary" B.U.'s of the Income Security Board Included in Group 'B', also, are probably some individuals who provided a 1975-6 data registration form, but who were not yet receiving ISP benefits for 1976-7, since they were qualifying for 1977-8

Table 5.12 Number of heads and consorts with non-ISP earned income by activity and community, for 852 ISP beneficiary units for all of 1976-7 (July 1/76 to June 30/77)

Community	Total of heads & consorts in b.u.'s		No. with wage employment		No with self employment		No in guiding outfitting & commercial fishing		No with manpower training allowance		Total no. with one or more types of earned income	
	heads	consorts	heads	consorts	heads	consorts	heads	consorts	heads	consorts	heads	consorts
GROUP 'A' (1)												
Mistassini	249	161	71	3	1	0	27	0	0	0	92	3
Chisasibi	138	92	46	9	0	0	7	0	1	1	54	10
Waskaganish	93	68	59	2	0	0	10	2	2	0	61	4
Waswanipi	72	53	45	1	0	0	2	0	0	0	47	1
Wemindji	99	55	46	0	0	0	6	0	11	0	52	0
Eastmain	36	24	23	1	0	0	2	0	3	0	24	1
Whapmagoostui	29	25	16	3	0	0	1	0	0	0	17	3
	716	478	306	19	1	0	55	2	17	1	347	22
GROUP 'B' (1)												
Mistassini	69	34	14	0	0	0	2	1	0	0	16	1
Chisasibi	29	11	13	0	0	0	1	1	1	0	13	1
Waskaganish	5	1	4	0	0	0	0	0	0	0	4	0
Waswanipi	14	6	6	0	0	0	1	0	1	0	6	0
Wemindji	14	0	4	0	0	0	1	0	0	0	5	0
Eastmain	4	2	2	1	0	0	0	0	0	0	2	1
Whapmagoostui	1	0	0	0	0	0	0	0	0	0	0	0
	136	54	43	1	0	0	5	2	2	0	46	3
TOTAL (A, B)												
Mistassini	318	195	85	3	1	0	29	1	0	0	108	4
Chisasibi	167	103	59	9	0	0	8	1	2	1	67	11
Waskaganish	98	69	63	2	0	0	10	2	2	0	65	4
Waswanipi	86	59	51	1	0	0	3	0	1	0	53	1
Wemindji	113	55	50	0	0	0	7	0	11	0	57	0
Eastmain	40	26	25	2	0	0	2	0	3	0	26	2
Whapmagoostui	30	25	16	3	0	0	1	0	0	0	17	3
	852	532	349	20	1	0	60	4	19	1	393	25

Note (1). See footnote, previous table.

Table 5.13: A comparison of the number of heads and consorts with wage employment and manpower training allowances for comparable periods of 1975-6 and 1976-7 (Nov. 11 to June 30 in each case) for 716 ISP beneficiary units (1).

Community	1975-6						1976-7					
	Total of heads & consorts		No. with wage employment		No. with manpower training allowance		Total of heads & consorts		No. with wage employment		No. with manpower training allowance	
Group 'A'	heads	consorts	heads	consorts	heads	consorts	heads	consorts	heads	consorts	heads	consorts
Mistassini	249	164	61	0	2	0	249	161	40	1	0	0
Chisasibi	138	91	48	13	3	0	138	92	30	5	1	1
Waskaganish	93	71	23	2	0	0	93	68	40	1	2	0
Waswanipi	72	53	39	0	3	2	72	53	23	0	0	0
Wemindji	99	53	45	0	5	0	99	55	33	0	4	0
Eastmain	36	24	3	1	11	3	36	24	17	1	1	0
Whapmagoostui	29	25	11	3	0	0	29	25	14	2	0	0
Total	716	481	230	19	24	5	716	478	197	10	8	1

Note (1): Self-employment and guiding for 1976-7 were not broken down from the yearly figures to the Nov. 11 - June 30 period in our data collection; the former because self-employment is a practically insignificant component of these hunting families' income, and the latter because, for most communities, the more important guiding and outfitting period falls between July 1 - Nov. 10, the period for which no data were available in 1975-6.

Table 5.14: Percentage of heads and consorts with non-ISP earned income, by activity and community, for 716 ISP beneficiary units for part of 1975-6 (Nov. 11/75 to June 30/76).

Community	Wage Employment		Self Employment		Guiding, Outfitting, Commercial Fishing		Manpower Training Program		One or More of the Previous	
	heads	consorts	heads	consorts	heads	consorts	heads	consorts	heads	consorts
Group 'A'										
Mistassini	24.5	0	0.4	0	7.6	0.6	0.8	0	32.1	0.6
Chisasibi	34.8	14.3	0.7	0	0.7	0	2.2	0	37	14.3
Waskaganish	24.7	2.8	2.2	0	1.1	0	0	0	26.9	2.8
Waswanipi	54.2	0	0	0	5.6	0	4.2	3.8	59.7	3.8
Wemindji	45.5	0	0	0	0	0	5.1	0	46.5	0
Eastmain	8.3	4.2	0	0	0	0	30.6	12.5	33.3	16.7
Whapmagoostui	37.9	12	0	0	0	0	0	0	37.9	12
TOTAL	32.1	4	0.1	0	3.5	0.2	3.4	1	37.4	5.2

Table 5.15: Percentage of heads and consorts with non-ISP earned income, by activity and community, for 852 ISP beneficiary units for all of 1976-7 (July 1/76 to June 30/77).

Community	Wage Employment		Self Employment		Guiding, Outfitting, Commercial Fishing		Manpower Training Program		One or more of the Previous	
	heads	consorts	heads	consorts	heads	consorts	heads	consorts	heads	consorts
Group 'A'										
Mistassini	28.5	1.9	0.4	0	10.8	0	0	0	36.9	1.9
Chisasibi	33.3	9.8	0	0	5.1	0	0.7	1.1	39.1	10.9
Waskaganish	63.4	2.9	0	0	10.8	2.9	2.2	0	65.6	5.9
Waswanipi	62.5	1.9	0	0	2.8	0	0	0	65.3	1.9
Wemindji	46.5	0	0	0	6.1	0	11.1	0	52.5	0
Eastmain	63.9	4.2	0	0	5.6	0	8.3	0	66.7	4.2
Whapmagoostui	55.2	12	0	0	3.4	0	0	0	58.6	12
TOTAL	42.7	4	0.1	0	7.7	0.4	2.4	0.2	48.5	4.6
Group 'B'										
Mistassini	20.3	0	0	0	2.9	2.9	0	0	23.2	2.9
Chisasibi	44.8	0	0	0	3.4	3.4	3.4	0	44.8	9.1
Waskaganish	80.0	0	0	0	0	0	0	0	80.0	0
Waswanipi	42.9	0	0	0	7.1	0	7.1	0	42.9	0
Wemindji	28.6	0	0	0	7.1	0	0	0	35.7	0
Eastmain	50	50	0	0	0	0	0	0	50	50
Whapmagoostui	0	0	0	0	0	0	0	0	0	0
TOTAL	31.6	1.9	0	0	3.8	3.7	1.5	0	33.8	5.6
Total (A, B)										
Mistassini	26.7	1.5	0.3	0	9.1	0.5	0	0	34	2.1
Chisasibi	35.3	8.7	0	0	4.8	1	1.2	1	40.1	10.7
Waskaganish	64.3	2.9	0	0	10.2	2.9	2	0	66.3	5.8
Waswanipi	59.3	1.7	0	0	3.5	0	1.2	0	61.6	1.7
Wemindji	44.2	0	0	0	6.2	0	9.7	0	50.4	0
Eastmain	62.5	7.7	0	0	5.0	0	7.5	0	65	7.7
Whapmagoostui	53.3	12	0	0	3.3	0	0	0	56.7	12
TOTAL	41	3.8	0.1	0	7	0.8	2.2	0.2	46.1	4.7

Table 5.16: A comparison of the percentages of heads and consorts with wage employment and manpower training allowances for comparable periods of 1975-6 and 1976-7 (Nov. 11 to June 30, in each case) for 716 ISP beneficiary units.

Community	1975-7				1976-7			
	% with wage employment		% with manpower training allowance		% with wage employment		% with manpower training allowance	
	heads	consorts	heads	consorts	heads	consorts	heads	consorts
Group 'A'								
Mistassini	24.5	0	0.8	0	16.1	0.6	0	0
Chisasibi	34.8	14.3	2.2	0	21.7	5.4	0.7	1.1
Waskaganish	24.7	2.8	0	0	43.0	1.5	2.2	0
Waswanipi	54.2	0	4.2	3.8	31.9	0	0	0
Wemindji	45.5	0	5.1	0	33.3	0	4	0
Eastmain	8.3	4.2	30.6	12.5	47.2	4.2	2.8	0
Whapmagoostui	37.9	12	0	0	48.3	8	0	0
All	32.1	4	3.4	1	27.5	2.1	1.1	0.2

Table 5.17: Person days, by non-ISP income-earning activity, head or consort, and by community for 716 ISP beneficiary units, for part of 1975-6 (Nov. 11/75 to June 30/76) (1).

Community	Wage Employment		Self Employment		Guiding, Commercial Fishing		Manpower Training		Total		GRAND TOTAL
	head	consort	head	consort	head	consort	head	consort	head	consort	
Group 'A'											
Mistassini	2400	-	60	-	547	57	300	-	3307	57	3364
Chisasibi	2175	1937	8	-	12	-	213	-	2408	1937	4345
Waskaganish	850	275	261	-	28	-	-	-	1139	275	1414
Waswanipi	1766	-	-	-	84	-	427	172	2277	172	2449
Wemindji	2156	-	-	-	-	-	351	-	2507	-	2507
Eastmain	278	210	-	-	-	-	1167	258	1445	468	1913
Whapmagoostui	850	155	-	-	-	-	-	-	850	155	1005
Total	10475	2577	329	-	671	57	2458	430	13933	3064	16997

Note (1): From this group, the person days of twelve heads in wage employment and one consort in manpower training were not available and not included in the above data.

Table 5 18 Person days, by non-ISP income-earning activity, head or consort, and by community for 852 (1) ISP beneficiary units, for all of 1976-7 (July 1/76 to June 30/77)

Community	Wage Employment		Self Employment		Guiding, Commercial Fishing		Manpower Training		Total		GRAND TOTAL
	head	consort	head	consort	head	consort	head	consort	head	consort	
Group 'A' (716 b u 's)											
Mistassini	2140	116	U	-	1365	-	-	-	3505	116	3621
Chisasibi	4388	1446	-	-	210	-	120	112	4718	1558	6276
Waskaganish	3540	45	-	-	256	64	83	-	3879	109	3988
Waswanipi	1831	35	-	-	113	-	-	-	1944	35	1979
Wemindji	2118	-	-	-	166	-	276	-	2560	-	2560
Eastmain	682	292	-	-	24	-	268	-	974	292	1266
Whapmagoostui	741	149	-	-	95	-	-	-	836	149	985
TOTAL	15440	2083	U	-	2229	64	747	112	18416	2259	20675
Group 'B' (136 b u 's)											
Mistassini	573	-	-	-	171	28	-	-	744	28	772
Chisasibi	950	-	-	-	29	29	39	-	1018	29	1047
Waskaganish	156	-	-	-	-	-	-	-	156	-	156
Waswanipi	357	-	-	-	10	-	120	-	487	-	487
Wemindji	399	-	-	-	27	-	-	-	426	-	426
Eastmain	133	62	-	-	-	-	-	-	133	62	195
Whapmagoostui	-	-	-	-	-	-	-	-	-	-	-
TOTAL	2568	62	-	-	237	57	159	-	2964	119	3083
Total (A, B) (852 b u 's)											
Mistassini	2713	116	U	-	1536	28	-	-	4249	144	4393
Chisasibi	5338	1446	-	-	239	29	159	112	5736	1587	7323
Waskaganish	3696	45	-	-	256	64	83	-	4035	109	4144
Waswanipi	2188	35	-	-	123	-	120	-	2431	35	2466
Wemindji	2517	-	-	-	193	-	276	-	2986	-	2986
Eastmain	815	354	-	-	24	-	268	-	1107	354	1461
Whapmagoostui	741	149	-	-	95	-	-	-	836	149	985
TOTAL	18008	2145	-	-	2466	121	906	112	21380	2378	23758

Naot (1) From this group, there were 22 heads and 3 consorts in wage employment, one head in self-employment, 2 heads in guiding, outfitting and commercial fishing, and 7 heads in manpower training courses whose person-days were not discernible and do not appear under the respective columns The person days of 20 heads and 3 consorts were not available for the Grand Total column, therefore, while for an additional 12 heads only partial data are included in the Grand Total column (i e data for one, but not both activities in which the individuals were engaged -- in no case did an individual for whom partial data were available engage in more than two wage earning activities)

Table 5.19: A comparison of person-days, wage employment and manpower training by head or consort, and by community for comparable periods of 1975-6 and 1976-7 (Nov. 11 to June 30 in each case) for 716 ISP beneficiary units (1).

Community	1975-6 Wage Employment		Manpower Training		1976-7 Wage Employment		Manpower Training	
Group 'A'	head	consort	head	consort	head	consort	head	consort
Mistassini	2400		300		960	46		
Chisasibi	2175	1937	213		2248	702	84	112
Waskaganish	850	275			1505	45		
Waswanipi	1766		427	172	495			
Wemindji	2156		351		1367		69	
Eastmain	278	210	1167	258	427	224	40	
Whapmagoostu	850	155			381	65		
Total	10475	2577	2458	430	7383	1082	193	112

Note (1): Of this group, the person-days here exclude figures for those heads and spouses for whom days in the above activities were not available. 12 heads with wage employment and 1 consort for manpower training in 1975-6, as well as 12 heads with wage employment and 2 heads for manpower training in 1976-7 are not included in the above table.

Table 5.20: Mean person days in non-ISP income earning activities of those persons engaged in those activities, by activity, head or consort, and by community for 716 ISP beneficiary units, for part of 1975-6 (Nov. 11/75 to June 30/76).

Community	Wage Employment				Self Employment				Guiding, Outfitting, Commercial Fishing				Manpower Training				Total			
	heads		consort		heads		consort		heads		consort		head		consort		head		consort	
	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days
Group 'A'																				
Mistassini	56	43			1	60			19	29	1	57	2	150			75	44	1	57
Chisasibi	45	48	13	149	1	8			1	12			3	71			48	50	13	149
Waskaganish	23	37	2	138	2	131			1	28							25	46	2	138
Waswanipi	38	46							4	21			3	142	2	86	42	54	2	86
Wemindji	42	51											5	70			43	58		
Eastmain	3	93	1	210									11	106	2	129	12	120	3	156
Whapmagoostui	11	77	3	52													11	77	3	52
Total	218	48	19	136	4	82			25	27	1	57	24	102	4	108	256	54	24	128

Table 5.21 Mean person days in non-ISP income earning activities of those persons engaged in those activities, by head or consort and by community for 716 ISP beneficiary units, for all of 1976-7 (July 1/76 to June 30/77)

Community	Wage Employment				Self Employment				Guiding, Outfitting Commercial Fishing				Manpower Training				Total(1)			
	heads		consort		heads		consort		heads		consort		heads		consort		heads		consort	
	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days
Group 'A'																				
Mistassini	63	34	3	39	1	U			26	53							83	42	3	39
Chisasibi	44	100	7	207					7	30			1	120	1	112	52	91	8	195
Waskaganish	58	61	1	45					9	28	2		2	42			59.5	65	3	36
Waswanipi	43	43	1	35					2	57							45	43	1	35
Wemindji	41	52							6	28			5	55			45	57		
Eastmain	22	31	1	292					2	12			2	134			22.5	43	1	292
Whapmagoostui	15	49	3	50					1	95							16	52	3	50
TOTAL	286	54	16	130	1	U			53	42	2		10	75	1	112	323.0	57	19	119
Group 'B'																				
Mistassini	13	44							2	86	1	28					15	50	1	28
Chisasibi	12	79							1	29	1	29	1	39			12	85	1	29
Waskaganish	4	39															4	39		
Waswanipi	6	60							1	10			1	120			6	81		
Wemindji	4	100							1	27							5	85		
Eastmain	2	67	1	62													2	67	1	62
Whapmagoostui																				
TOTAL	41	63	1	62					5	47	2	29	2	80			44	67	3	40

Continued

Table 5 21 (Continued)

Community	Wage Employment				Self Employment				Guiding, Outfitting Commercial Fishing				Manpower Training				Total(1)			
	heads		consort		heads		consort		heads		consort		heads		consort		heads		consort	
	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days
Total (A, B)																				
Mistassini	76	36	3	39					28	55	1	28					98	43	4	36
Chisasibi	56	95	7	207					8	30	1	29	2	80	1	112	64	90	9	176
Waskaganish	62	60	1	45					9	28	2	32	2	42			63 5	64	3	36
Waswanipi	49	45	1	35					3	41			1	120			51	48	1	35
Wemindji	45	56							7	28			5	55			50	60		
Eastmain	24	34	2	177					2	12			2	134			24 5	45	2	177
Whapmagoostui	15	49	3	50					1	95							16	52	3	50
TOTAL	327	55	17	126	1	U			58	43	4	30	12	76	1	112	367 0	58	22	108

Note (1) In twelve cases, heads' days were available for one activity but missing for a second one In these cases, we have assumed 1/2 person for purposes of calculating the mean

Table 5.22: A comparison of mean person days in wage employment and manpower training of those persons engaged in those activities by head or consort, and by community for 716 ISP beneficiary units, for comparable periods of 1975-6 and 1976-7 (Nov. 11 to June 30).

	1975-6								1976-7							
Community	Wage Employment				Manpower Training				Wage Employment				Manpower Training			
	heads		consorts		heads		consorts		heads		consorts		heads		consorts	
GROUP 'A'	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days	#	mean days
Mistassini	56	43			2	150			37	26	1	46				
Chisasibi	45	48	13	149	3	71			29	78	4	176	1	84	1	112
Waskaganish	23	37	2	138					39	39	1	45				
Waswanipi	38	46			3	142	2	86	22	23						
Wemindji	42	51			5	70			29	47			2	35		
Eastmain	3	93	1	210	11	106	2	129	16	27	1	224	1	40		
Whapmagoostui	11	77	3	52					13	29	2	33				
All	218	48	19	136	24	102	4	108	185	40	9	120	4	48	1	112

Table 5.23: Non-ISP earned income, by activity, head or consort, and by community, for 716 (1) ISP beneficiary units, Nov. 11/75 to June 30/76.

Community	Wage Employment		Self Employment		Guiding, Commercial Fishing	
	heads $	consorts $	heads $	consorts $	heads $	consorts $
Group 'A'						
Mistassini	77605	-	2333	-	19665	2649
Chisasibi	54003	25400	80	-	390	-
Waskaganish	32213	4730	4507	-	1020	-
Waswanipi	43758	-	-	-	2005	-
Wemindji	57760	-	-	-	-	-
Eastmain	5640	2784	-	-	-	-
Whapmagoostui	18875	3262	-	-	-	-
Total	289854	36176	6920	-	23080	2649

	Allowance, Manpower Training		Total		GRAND TOTAL
	heads $	consorts $	heads $	consorts $	$
Group 'A'					
Mistassini	2655	-	102258	2649	104907
Chisasibi	2313	-	56786	25400	82186
Waskaganish	-	-	37740	4730	42470
Waswanipi	6771	1904	52534	1904	54438
Wemindji	5425	-	63185	-	63185
Eastmain	14765	3536	20405	6320	26725
Whapmagoostui	-	-	18875	3262	22137
Total	31929	5440	351783	44265	396048

Note (1): From this group, the incomes of 10 heads and 1 consort in wage employment, 2 heads in guiding, outfitting or commercial fishing, and 1 head in manpower training were not available and not included in the above data.

Table 5 24 Non-ISP earned income, by activity, head or consort, and by community, for 852 (1) ISP beneficiary units, 1976-7 (July 1/76 to June 30/77)

Community	Wage Employment		Self Employment		Guiding, Commercial Fishing		Allowance, Manpower Training	
Group 'A' (716 b.u.'s)	heads $	consorts $	heads $	consorts $	heads $	consorts $	heads $	consorts $
Mistassini	61 673	2 761	456	-	34 426	-	-	-
Chisasibi	115 599	26 757	-	-	3 650	-	1 440	1 264
Waskaganish	124 021	600	-	-	7 470	200	1 326	-
Waswanipi	42 097	480	-	-	4 115	-	-	-
Wemindji	58 136	-	-	-	2 585	-	5 961	-
Eastmain	21 988	4 310	-	-	688	-	3 420	-
Whapmagoostui	31 286	6 719	-	-	2 100	-	-	-
TOTAL	454 800	41 627	456	-	55 034	200	12 147	1 264
Group 'B' (136 b.u.'s)								
Mistassini	10 552	-	-	-	1 891	935	-	-
Chisasibi	26 232	-	-	-	400	400	450	-
Waskaganish	4 387	-	-	-	-	-	-	-
Waswanipi	10 562	-	-	-	390	-	1 660	-
Wemindji	7 803	-	-	-	36	-	-	-
Eastmain	2 158	1 344	-	-	-	-	-	-
Whapmagoostui	-	-	-	-	-	-	-	-
TOTAL	61 694	1 344	-	-	2 717	1 335	2 110	-
Total (A, B) (852 b.u.'s)								
Mistassini	72 225	2 761	456	-	36 317	935	-	-
Chisasibi	141 831	26 757	-	-	4 050	400	1 890	1 264
Waskaganish	128 408	600	-	-	7 470	200	1 326	-
Waswanipi	52 659	480	-	-	4 505	-	1 660	-
Wemindji	65 939	-	-	-	2 621	-	5 961	-
Eastmain	24 146	5 654	-	-	688	-	3 420	-
Whapmagoostui	31 286	6 719	-	-	2 100	-	-	-
TOTAL	516 494	42 971	456	-	57 751	1 535	14 257	1 264

Continued

Table 5.24 (Continued)

Group 'A' (716 b.u.'s)	Total heads $	consorts $	GRAND TOTAL $
Mistassini	96 555	2 761	99 316
Chisasibi	120 689	28 021	148 710
Waskaganish	132 817	800	133 617
Waswanipi	46 212	480	46 692
Wemindji	66 682	-	66 682
Eastmain	26 096	4 310	30 406
Whapmagoostui	33 386	6 719	40 105
TOTAL	522 437	43 091	565 528
Group 'B' (136 b.u.'s)			
Mistassini	12 443	935	13 378
Chisasibi	27 082	400	27 482
Waskaganish	4 387	-	4 387
Waswanipi	12 612	-	12 612
Wemindji	7 839	-	7 839
Eastmain	2 158	1 344	3 502
Whapmagoostui	-	-	-
TOTAL	66 521	2 679	69 200
Total (A, B) (852 b.u.'s)			
Mistassini	108 998	3 696	112 694
Chisasibi	147 771	28 421	176 192
Waskaganish	137 204	800	138 004
Waswanipi	58 824	480	59 304
Wemindji	74 521	-	74 521
Eastmain	28 254	5 654	33 908
Whapmagoostui	33 386	6 719	40 105
TOTAL	588 958	45 770	634 728

Note (1): From this group, there were 16 heads and one consort in wage employment, and two heads in guiding, outfitting or commercial fishing whose incomes were not discernible and do not appear under the respective columns. The incomes of 19 heads and one consort were not available for the Grand Total column, therefore, while for an additional 6 heads only partial data are included in the Grand Total column (i.e. data for one or more, but not all activities in which the individuals we engaged)

Table 5.25: A comparison of income earned in wage employment and in manpower training by head or consort and by community for comparable periods of 1975-6 and 1976-7 (Nov. 11 to June 30 in each case) for 716 ISP beneficiary units (1).

	1975-6				1976-7			
Community	Wage Employment		Manpower Training		Wage Employment		Manpower Training	
	heads	consorts	heads	consorts	heads	consorts	heads	consorts
Group 'A'	$	$	$	$	$	$	$	$
Mistassini	77 605		2 655		30 399	1 044		
Chisasibi	54 003	25 400	2 313		50 788	10 094	900	1 264
Waskaganish	32 213	4 730			59 552	400		
Waswanipi	43 758		6 771	1 904	17 251			
Wemindji	57 760		5 425		37 290		1 884	
Eastmain	5 640	2 784	14 765	3 536	14 574	3 306	683	
Whapmagoostui	18 875	3 262			17 553	2 730		
Total	289 854	36 176	31 929	5 440	227 407	17 570	3 467	1 264

Note (1): The incomes of heads and spouses presented here exclude figures for those heads and spouses for whom income from the above activities was not discernible. Ten heads with wage employment and one consort with manpower training allowance in 1975-6, as well as 9 heads and one consort with wage employment in 1976-7, are not included in the above table.

Table 5 26 Mean non-ISP earned income for those persons engaged in those income-earning activities, by activity, head or consort, and by any community for 716 ISP beneficiary units, for part of 1975-6 (Nov 11/75 to June 30/76)

Community	Wage Employment				Self Employment				Outfitting, Commercial Fishing			
	Heads		Consorts		Heads		Consorts		Heads		Consorts	
Group 'A'	#	Mean Income $	#	Mean Income $	#	Mean Income $	#	Mean Income $	#	Mean Income $	#	Mean Income $
Mistassini	57	1361			1	2333			17	1157	1	2649
Chisasibi	48	1125	13	1954	1	80			1	390		
Waskaganish	23	1401	1	4730	2	2254			1	1020		
Waswanipi	37	1183							4	501		
Wemindji	41	1409										
Eastmain	3	1880	1	2784								
Whapmagoostui	11	1716	3	1087								
TOTAL	220	1318	18	2010	4	1730			23	1003	1	2649

Community	Manpower Training				TOTAL			
	Heads		Consorts		Heads		Consorts	
Group 'A'	#	Mean Income $	#	Mean Income $	#	Mean Income $	#	Mean Income $
Mistassini	2	1328			74	1382	1	2649
Chisasibi	3	771			51	1113	13	1954
Waskaganish					25	1510	1	4730
Waswanipi	3	2257	2	952	41	1281	2	952
Wemindji	4	1356			41	1541		
Eastmain	11	1342	3	1179	12	1700	4	1580
Whapmagoostui					11	1716	3	1087
TOTAL	23	1388	5	1088	255	1380	24	1844

Table 5 27 Mean non-ISP earned income, for those persons engaged in those income-earning activities, by activity, head or consort and by community for 852 ISP beneficiary units for all of 1976-7 (July 1/76 to June 30/77)(1)

Community	Wage Employment				Self Employment				Guiding, Outfitting, Commercial Fishing			
	Heads		Consorts		Heads		Consorts		Heads		Consorts	
Group 'A'	#	Mean Income $	#	Mean Income $	#	Mean Income $	#	Mean Income $	#	Mean Income $	#	Mean Income $
Mistassini	64	964	2	1381	1	456			26	1324		
Chisasibi	42	2752	9	2973					7	521		
Waskaganish	59	2102	2	300					10	747	2	100
Waswanipi	45	935	1	480					2	2058		
Wemindji	45	1292							6	431		
Eastmain	22	999	1	4310					2	344		
Whapmagoostui	16	1955	3	2240					1	2100		
TOTAL	293	1552	18	2313	1	456			54	1019	2	100
Group 'B'												
Mistassini	11	959							1	1891	1	935
Chisasibi	13	2018							1	400	1	400
Waskaganish	4	1097										
Waswanipi	6	1760							1	390		
Wemindji	4	1951							1	36		
Eastmain	2	1079	1	1344								
Whapmagoostui												
TOTAL	40	1542	1	1344					4	679	2	668
Total (A, B)												
Mistassini	75	963	2	1381	1	456			27	1345	1	935
Chisasibi	55	2579	9	2973					8	506	1	400
Waskaganish	63	2038	2	300					10	747	2	100
Waswanipi	51	1033	1	480					3	1502		
Wemindji	49	1346							7	374		
Eastmain	24	1006	2	2827					2	344		
Whapmagoostui	16	1955	3	2240					1	2100		
TOTAL	333	1551	19	2262	1	456			58	996	4	384

Continued

Table 5.27 (Continued)

Community	Manpower Training				TOTAL			
	Heads		Consorts		Heads		Consorts	
Group 'A'	#	Mean Income $	#	Mean Income $	#	Mean Income $	#	Mean Income $
Mistassini					83	1163	2	1381
Chisasibi	1	1440	1	1264	49.5	2438	10	2802
Waskaganish	2	663			61	2177	4	200
Waswanipi					46	1005	1	480
Wemindji	11	542			50	1334		
Eastmain	3	1140			23	1135	1	4310
Whapmagoostui					17	1964	3	2240
TOTAL	17	715	1	1264	329.5	1586	21	2052
Group 'B'								
Mistassini					12	1037	1	935
Chisasibi	1	450			13	2083	1	400
Waskaganish					4	1097		
Waswanipi	1	1660			6	2102		
Wemindji					5	1568		
Eastmain					1.5	1439	1	1344
Whapmagoostui								
TOTAL	2	1055			42	1584	3	893
Total (A, B)								
Mistassini					95	1147	3	1232
Chisasibi	2	945	1	1264	62.5	2364	11	2584
Waskaganish	2	663			65	2111	4	200
Waswanipi	1	1660			52	1131	1	480
Wemindji	11	542			55	1355		
Eastmain	3	1140			24.5	1153	2	2827
Whapmagoostui					17	1964	3	2240
TOTAL	19	750	1	1264	371	1587	24	1907

Note (1) In six cases, head's income was available for one activity but missing for another one. In these cases, we have assumed 1/2 person for purposes of calculating the mean.

Table 5.28: A comparison of mean income from wage employment and manpower training for those persons engaged in those income-earning activities, by activity, head or consort, and by community for 716 ISP beneficiary units, for comparable periods of 1975-6 and 1976-7 (Nov. 11 to June 30).

1975-76	Wage Employment				Manpower Training			
	Heads		Consorts		Heads		Consorts	
Community	#	Mean Income $	#	Mean Income $	#	Mean Income $	#	Mean Income $
Mistassini	57	1361			2	1328		
Chisasibi	48	1125	13	1954	3	771		
Waskaganish	23	1401	1	4730				
Waswanipi	37	1183			3	2257	2	952
Wemindji	41	1409			4	1356		
Eastmain	3	1880	1	2784	11	1342	3	1179
Whapmagoostui	11	1716	3	1087				
TOTAL	220	1318	18	2010	23	1388	5	1088

1976-77	Wage Employment				Manpower Training			
	Heads		Consorts		Heads		Consorts	
Community	#	Mean Income $	#	Mean Income $	#	Mean Income $	#	Mean Income $
Mistassini	35	869	1	1044			1	1264
Chisasibi	28	1814	5	2018	1	900		
Waskaganish	40	1489	1	400				
Waswanipi	23	750						
Wemindji	32	1165			4	471		
Eastmain	16	911	1	3306	1	683		
Whapmagoostui	14	1254	2	1365				
TOTAL	188	1210	10	1757	6	578	1	1264

Table 5.29: A comparison of mean weekly rates of pay for beneficiary unit heads in wage employment, by community, for comparable periods of 1975-6 and 1976-7, for 716 ISP beneficiary units.

Community	1975-6 $ per week	1976-7 $ per week
Mistassini	226	222
Chisasibi	174	158
Waskaganish	265	277
Waswanipi	173	244
Wemindji	188	191
Eastmain	142	239
Whapmagoostui	155	322
All	194	215

Table 6 1 Costs of winter hunting-trapping and major hunting equipment for a sample of 24 coastal hunters, by community, 1976-77, and five Mistassini hunters, 1976-7 and 1977-8 (1)

Community	No of hunters	Average wives/ hunter (in camp)	Average children/ hunter (in camp)	Av mi to camp/ hunter	Air charter costs (all)	Av air charter costs	Ground taxi costs (all)	Av ground taxi costs	Gas & oil (all)	Av gas & oil costs
Chisasibi	5	0.8	3 6	119 2	8578	1716	-	-	135	27
Waskaganish	6	0.83	2	73	4010	668	1353	226	1535	256
Wemindji	6	0 83	2	93 8	7252	1209	140	23	1057	176
Eastmain	1	1	1	100	1400	1400	-	-	87	87
Whapmagoostui	6	1	3 17	92	7148	1191	-	-	880	147
TOTAL	24	0 88	2 58	93 7	28388	1183	1493	62	3694	154
Supplementary Mistassini										
(1976-77)	1	1	0	322	4550	4550	-	-	690	690
(1977-78)	4	1	5 25	140 5	11846	2962	700	175	2154	539

Community	Groceries clothing ammunition misc dry goods	Av groc, cloth , ammo , misc dry goods	Total winter costs minus major equip	Average winter costs/ hunter	Total major equip	Average major equip
Chisasibi	4540	908	13253	2651	3149	630
Waskaganish	6369	1061	13267	2211	11374	1896
Wemindji	3300	550	11749	1958	11569	1928
Eastmain	1112	1112	2599	2599	U	U
Whapmagoostui	6475	1079	14503	2417	11839	1982
TOTAL	21796	908	55371	2307	37985	1583
Supplementary Mistassini						
(1976-77)	1744	1744	6984	6984	808	808
(1977-78)	12250	3063	26950	6738	9102	2275

Note (1) Hunters with wives and children, and hunters with more distant traplines appear to be over-represented in some communities Individual samples by community are not adequate for generalizing about community-level patterns. The mean figures for the total sample, however, are probably reasonably close to those of coastal hunters with the stated mean number of wives and children in camp Note, however, that Mistassini costs are not here averaged with costs in the coastal settlements Mistassini and Waswanipi hunters stay longer in the winter camps on average, since hunters in coastal communities tend to be involved in fall and spring goose hunts along the coasts for part of the period that hunters from the inland communities are in winter camps Hunters from inalnd communities would therefore be expected to have higher winter costs, on average The 1976-7 hunter in our supplementary Mistassini row of data, and two of the 1977-8 hunters, represent men with maximum distances to go from settlement to trapline, and probably represent maximal winter hunting costs.

Table 6 2 Air charter utilization for a sample of hunters, by community, 1976-7 winter hunt (1)

Community	Hunters responding	Those Using Air Charter				Total Air Miles by Type of Plane					
		No hunters	Av wives/ hunter	Av children/ hunter (under 18 yrs)	Av distance to camp/ hunter (miles)	Norse-Man	DC-3	Canso	Single Otter	Twin Otter	Beaver
Mistassini	3	3	U	U	190 7	-	-	-	1256	-	3320
Chisasibi	12	9	0 78	2.89	110 3	-	65	-	4384	-	2656
Waskaganish	4	3	1	1 67	86 7	420	-	-	448	-	1024
Wemindji	6	5	0.8	1 8	106 6	-	142	-	2886	-	436
Eastmain	5	4	1	0 75	89 3	-	-	-	1459	-	854
Whapmagoostui	7	7	1	2.86	84 4	-	256	534	680	156	512
GLOBAL	37(2)	31(2)	0 89	2 25	106 6	420	463	534	11113	156	8802

Community	Total air charter cost	Cost per hunter using air charter	Av cost all hunters responding
	$	$	$
Mistassini	9580	3193	3193
Chisasibi	15665	1741	1305
Waskaganish	2638	879	660
Wemindji	7252	1450	1209
Eastmain	4802	1201	960
Whapmagoostui	7588	1084	1084
GLOBAL	47525	1533	1285

Note (1) Because individual community samples are small, they cannot be regarded as necessarily representative of community-wide patterns of air charter utilization by ISP hunters At Mistassini, Wemindji, and possibly Chisasibi, hunters with more distant traplines may be over above sample

In addition, middle-aged hunters with families are over-represented in the above sample for all communities since we interviewed primarily tallymen and other mature hunters At Wemindji we found that in a sample of seven households containing twelve hunters, four of these hunters were single young men whose air charter costs were largely assumed by their fathers Not only are young unmarried men not represented

in the above table, then, but some of the costs in the above table are those paid by fathers for air charter also used by unmarried sons The above table must be taken as more typical of ISP hunters with families than ISP hunters at large with regard to mean air charter costs

Note (2) Six of the 37 responding hunters used skidoo and/or taxi service for travel between settlements and traplines Three of the 31 hunters who used air charter service also used taxi and/or skidoo for a portion of their transportation needs between settlements and traplines.

Table 6.3: A comparison of costs of winter gasoline and motor oil between hunters who used skidoo for travel between their trapline and the settlement, with those who did not, 1976-7 winter hunt.

	Community	No. of hunters	Average distance to traplines (mi.)	Total cost, gas/oil $	Average cost, gas/oil $	
A.						
hunters	Mistassini	1	322	690	690	
who used	Chisasibi	8	116	410	51	
air charter	Waskaganish	4	106.3	855	214	
and/or	Wemindji	5	89.3	797	159	
taxi only	Eastmain	2	112.5	202	101	
	Whapmagoostui	6	92	880	147	
	TOTAL	26	113.0	3834	147	
B.						
hunters	Chisasibi	3	28	1445	482	
who used	Waskaganish	1	32	330	330	
skidoo/	Wemindji	1	30	260	260	
canoe	Eastmain	1	6	78	78	
only						
	Sub-total	6	25.3	2113	352	
hunters who	Chisasibi	1	65	2000	2000	(very limited use
used skidoo/	Waskaganish	1	60	350	350	of aircraft,
canoe,	Eastmain	1	31(1)	994	994	frequent returns
but also						to settlement, rel-
used some	Sub-total	3	52	3344	1115	atively long distance
air charter						for ground travel)
and/or taxi						
	TOTAL (B)	9	34.2	5457	606	

Note (1): This hunter used skidoo for part of his travel between the settlement and a nearby trapline and also used aircraft because he moved to a more distant camp for half of the winter. In this case, we averaged the distance of the two camps (42 miles, the farther and 20 miles, the nearer).

Table 6.4: Costs of spring goose hunting for a sample of sixteen hunters from settlements, by community, 1976-7.

	Community	No. of hunters	Average wives/ hunter in camp	Average children/ hunter in camp	Gas & oil costs	Groceries, clothing, ammunition, misc. dry goods	Total spring hunting costs (minus major equip.)	Average spring hunting costs/ hunter
Camp-based:	Chisasibi	1	1	9	300	500	800	800
	Waskaganish	2	1	0.5	56	785	841	421
	Wemindji	1	1	5	150	292	442	442
	Eastmain	1	1	2	147	600	747	747
	Whapmagoostui	5	1	4.2	773	1850	2623	525
		---	---	---	---	---	---	---
		10	1	3.8	1426	4027	5453	545
Settlement-Based: (1)	Chisasibi	3	N.A.	N.A.	141	341	482	161
	Waskaganish	2	N.A.	N.A.	140	221	361	181
		---			---	---	---	---
		5			281	562(2)	843	169
Respondants who had No Hunting Costs During Spring: (1)	Chisasibi	0/4						
	Waskaganish	1/5						
	Wemindji	0/1						
	Eastmain	0/1						
	Whapmagoostui	0/5						

		1/16						

Note (1): Costs of the family living in the settlement not included in settlement-based group; while costs of family living in the camp are included in camp-based group.

Note (2): Costs of groceries of families who stayed in the settlement not included.

Table 6.5: Costs of summer fishing, hunting for a sample of fourteen hunters from coastal settlemements, by community, 1976-7.

	Community	No. of hunters	Average wives/ hunter in camp	Average children/ hunter in camp	Gas & oil cost	Groceries, clothing, ammunition, misc. dry goods	Total summer hunting costs (minus major equip.)	Average summer hunting costs/ hunter
Camp-based:	Chisasibi	1	1.0	0.0	135(1)	150	285	285
	Whapmagoostui	2	1.0	3.5	585(1)	594	1179	590
		3	1.0	2.3	720	744	1464	488
Settlement-based:	Chisasibi	3	N.A.	N.A.	963	-	963	321
	Wemindji	1	N.A.	N.A.	75	-	75	75
		4			1038		1038	260
Respondants who had no hunting costs during summer:	Chisasibi	0/4						
	Waskaganish	4/4						
	Wemindji	0/1						
	Eastmain	0/0						
	Whapmagoostui	3/5						
		7/14						

Note (1): Some of this gasoline also used in settlement-based summer hunting.

Table 6.6 Costs of fall goose hunting for a sample of seventeen hunters from coastal settlements, by community, 1976-7

	Community	No of hunters	Average wives/ hunter in camp	Average children/ hunter in camp	Gas & oil costs	Groceries, clothing, ammunition, misc dry goods	Total fall goose hunting costs (minus major equip)	Average fall goose hunting costs/ hunter
Camp-based	Chisasibi	1	1	6	120	240	360	360
	Waskaganish	1	1	1	84	300	384	384
		---	---	---	---	---	---	---
		2	1	3 5	204	540	744	372
Settlement-based.	Chisasibi	2	N A	N A.	83	610	693	347
	Waskaganish	1	N A	N.A	300	165	465	465
	Wemindji	1	N A	N A	68	71	139	139
		---			---	---	----	---
		4			451	846(2)	1297	324
Respondants who had no fall goose hunting costs	Chisasibi	2/5						
	Waskaganish	2/4						
	Wemindji	0/1						
	Eastmain	0/0						
	Whapmagoostui	7/7(1)						

		11/14						

Note (1) Two of the Whapmagoostui hunters said they did some goose hunting from locations for the winter hunt, where their fall expenses are already included

Note (2) Costs of groceries for families who stayed in the settlement not included

Table 6.7: Weekly grocery costs per consumption unit in settlements (based on seventeen family heads' estimates of weekly settlement grocery costs), 1976-7.

Community	No. of adults	Children under 18 yrs of age	No. of consumption units	Total grocery costs/week $	Weekly grocery costs per consumption unit $
Mistassini	6	6	9	210	23.33
Chisasibi	8	19	17.5	680	38.86
Waskaganish	4	4	6	180	30.00
Eastmain	5	12	11	320	29.09
Whapmagoostu	11	18	20	725	36.25
Total	34	59	63.5	2115	33.31/c.u.-week

Table 6.8: Weekly grocery costs per consumption unit in camps (based on fourteen family heads' statements of the cost of groceries purchased for camps and time actually spent in camps), 1976-7.

Community	No. of adults	Children under 18 years of age	No. of consumption unit weeks in camp(1)	Total grocery costs $	Weekly grocery costs per consumption unit $
a. Winter Camps:					
Mistassini	2	0	72	1000	13.80
Chisasibi	6	9	196	1080	5.50
Waskaganish	6	11	201	2455	12.21
Eastmain	2	1	60	800	13.33
Whapmagoostui	6	8	244	1895	7.77
Sub-total	22	29	773	7230	9.35
b. Spring, Summer, Fall Camps:					
Chisasibi	2	9	55	450	8.18
Waskaganish	2	1	20	450	22.50
Wemindji	2	5	26	200	7.69
Whapmagoostui	2	8	42	375	8.93
Sub-total	8	23	143	1475	10.31
ALL CAMPS			916	8705	9.50/ c.u. week

Note (1): Calculated at 1 consumption unit for each adult and 1/2 consumption unit per child under 18 yrs. of age.

Table 6.9: Summary of mean annual bush costs by category and season for coastal settlements samples of hunters.

	No. of respondants	Charter aircraft $	Road taxi $	Gas & oil $	Groceries, clothing, ammunition, misc. dry goods $	Major equipment	Total $
Winter	24	1183	62	154	908		2307
Spring Goose Hunting	16	-	-	107	287		394
Summer Fishing-Hunting	14	-	-	126	53		179
Fall Goose Hunting	17	-	-	39	81		120
Major Equipment	24					1583	1583
TOTAL		1183	62	426	1329	1583	4583

Table 6 10 Annual budgets for a sample of Cree families

	Chisasibi			Waskaganish			Whapmagoostui			Total		
No of hunters, B U heads		3			4			4			11	
No of wives in B U 's		3			4			4			11	
No of children in B U 's		18			14			16			48	
	mean per hunter	% of bush costs	% of all cash costs	mean per hunter	% of bush costs	% of all cash costs	mean per hunter	% of bush costs	% of all cash costs	mean per hunter	% of bush costs	% of all cash costs
WINTER HUNTING COSTS												
Wives in camps	1			1			1			1		
Children in camps	4 3			3			3.8			3 6		
C U weeks in camps (1)	99			65 5			88 5			83		
Distance to camp (miles)	102			80		data	123			101		data
Air charter ($)	1650	39 3		1044	19 9		1440	27		1353	27 1	
Ground taxi	0			381	7 3	incom-	0			138	2 8	incom-
Gas & oil ($)	45	1.1		214	4 1		107	2		129	2 6	
Groceries, clothing,						plete						plete
ammunition, dry foods	1138	27.1		1239	23 6		1136	21 3		1174	23.5	
TOTAL WINTER HUNT	2833	67 4	30 7	2878	54 8		2683	50.4	28 9	2794	56	
SPRING GOOSE HUNTING COSTS												
Wives in camp	0 3			0 3			1			0 6		
Children in camp	3			0 3			4 3			2 5		
C u weeks in camp	13			5			17 3			11 6		
Gas & oil ($)	47	1 1		74	1 4		161	3		98	2	
Groceries, clothing,												
ammunition, dry foods	338	8		130	2 5		312	5 9		253	5 1	
TOTAL SPRING HUNT	385	9.2	4 2	204	3 9		473	8 9	5 1	351	7	
SUMMER HUNTING/FISHING												
Wives in camp	0 3			0			0.5			0 3		
Children in camp	0			0			1.8			0 6		
C u weeks in camp	2 7			0			6 3			3		
Gas & oil ($)	330	7 9		0			146	2 7		143	2 9	
Groceries, clothing,												
ammunition, dry foods	50	1 2		0			149	2 8		68	1 4	
TOTAL SUMMER	380	9	4 1	0			295	5 5	3 2	211	4 2	

Continued

Table 6 10 (Continued - 2)

	Chisasibi			Waskaganish			Whapmagoostui			Total		
	mean per hunter	% of bush costs	% of all cash costs	mean per hunter	% of bush costs	% of all cash costs	mean per hunter	% of bush costs	% of all cash costs	mean per hunter	% of bush costs	% of all cash costs
FALL GOOSE-HUNTING COSTS												
Wives in camp	0 3			0 3			0			0 2		
Children in camp	2			0 3			0			0 6		
C u weeks in camp	1 7			2 5			0			1 4		
Gas & oil ($)	40	1		96	1 8		0			46	1	
Groceries, clothing, ammunition, dry foods	80	1.9		116	2 2		0			64	1 3	
TOTAL FALL HUNT	120	2.9	1 3	212	4		0			110	2 2	
MAJOR HUNTING EQUIPMENT												
Skidoos	0			1086			932	17 5		734	14 7	
Canoes	183	4.4		325			264	5		264	5 3	
Outboard motors	200	4.8		178			238	4 5		205	4 1	
Guns	0			187			225	4 2		150	3	
Traps	0			25			20	0 4		16	0 3	
Tents, canvass	0			155			185	3 5		124	2 5	
Miscellaneous	100	2 4		0			10	0 2		31	0 6	
TOTAL EQUIPMENT	483	11 5	5 3	1956			1874	35 2	20 2	1524	30 5	
ALL BUSH COSTS	4201	100.0	46 5	5250			5325	100 0	57 4	4990	100 0	
SETTLEMENT COSTS												
Groceries (hunters' est)	3172		34 4				2050		22 1			
Clothing (hunters' est)	555		6		data		444		4 8	data		
House payments	700		7 6				888		9 6			
Utilities	57		0 6		incom-		110		1 2	incom-		
Appliances	242		2 6				462		5			
Furniture	90		1		plete		0			plete		
Home maintenance, improvement	200		2 2				0					
TOTAL SETTLEMENT	5016		54 4				3954		42 6			
ALL CASH COSTS (2)	9217		100 0				9279		100 0			

Continued

Table 6.10 (Continued - 3)

	Chisasibi			Waskaganish			Whapmagoostui			Total		
	mean per hunter	% of bush costs	% of all cash costs	mean per hunter	% of bush costs	% of all cash costs	mean per hunter	% of bush costs	% of all cash costs	mean per hunter	% of bush costs	% of all cash costs
CASH INCOME												
ISP benefits	7533						4710					
Employment	800						2371					
Fur income	300						291					
Family allowance	2835						1635					
TOTAL CASH INCOME 1	1468						9007					

Note (1) For this calculation, adults 18 years of age and older are 1 comsumption unit (c u), and children under 18 years of age are 1/2 c u

Note (2) For Chisasibi, payments on road vehicles, if any, are not included in the total

Table 6.11: Mean distance travelled by Mistassini hunters to winter hunting locations, 1976-7 and 1977-8 (1).

	1976-7	1977-8
No. of hunters	262	264
Mean distance (mi.)	108.1	100.3
No. of camps	78	74
Mean distance to camps (mi.)	109.1	102.9

Note (1): 3 camps in 1976-7 and as many as 5 camps in 1977-8 are excluded from these data because locations were not indicated. The number of hunters includes some adolescent "nearly adult" males who were active hunters and were included on the lists provided us by the Mistassini band council.

Table 6.12: Numbers and percentages of Mistassini winter hunters and winter camps at various ranges from Mistassini 1976-7 (1).

Camp Distance From Settlement (Miles)	No. of hunters	% of total hunters	No. of camps	% of total camps
0-29	24	9.2	7	9
30-59	40	15.3	13	16.7
60-89	58	22.2	17	21.7
90-119	49	18.7	13	16.7
120-149	31	11.8	9	11.5
150-179	24	9.2	8	10.3
180-209	15	5.7	4	5.1
210-239	14	5.3	4	5.1
240-269	4	1.5	2	2.6
270-299	-	-	-	-
300-329	3	1.1	1	1.3
	262	100.0	78	100.0

Note (1): 3 camps are excluded from this table because locations were not indicated. These figures include "nearly adult" adolescents who were active hunters, according to lists compiled at the Mistassini band office.

Table 6.13: Numbers and percentages of Mistassini winter hunters and winter camps at various ranges from Mistassini, 1977-8 (1).

Camp Distance From Settlement	No. of Hunters	% of Total Hunters	No. of Camps	% of Total Camps
0-29	19	7.2	7	9.4
30-59	57	21.6	14	18.8
60-89	74	28	19	25.6
90-119	32	12.1	10	13.4
120-149	20	7.6	5	6.8
150-179	28	10.6	9	12.1
180-209	11	4.2	3	4.1
210-239	13	4.9	3	4.1
240-269	2	0.8	1	1.6
270-299	8	3	3	4.1
300-329	-	-	-	-
	264	100.0	74	100.0

Note (1): Hunters in as many as 5 camps are excluded from this table because locations were not indicated. These figures include "nearly adult" adolescents who were active hunters, according to lists compiled at the Mistassini band office.

Appendix 1

ISP - Twelve Years of Tabulated Data

Notes:

1. These tables have been compiled, and calculated, from data in the Cree Hunters and Trappers Income Security Board Annual Reports for 1978-9 to 1986-7.

TABLE A1-1: NUMBER OF ISP BENEFICIARY UNITS BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		695
76-77	comparable data not available			comparable data not available			comparable data not avai		979
77-78	327	188	99	90	106	45	32		887
78-79	296	192	85	95	109	43	32	49	901
79-80	284	137	81	105	106	40	29	56	838
80-81	285	141	99	117	97	48	32	55	874
81-82	308	173	107	119	93	41	33	55	929
82-83	349	281	114	139	94	42	44	59	1,122
83-84	359	329	113	144	105	44	51	60	1,205
84-85	356	348	113	144	95	36	56	57	1,205
85-86	339	333	117	145	102	33	52	55	1,176
86-87	343	331	119	140	110	33	54	50	1,180

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-2: ISP BENEFICIARY POPULATION BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not available		
76-77	1,358	924	610	399	338	193	224		4,046
77-78	1,369	769	474	390	349	182	139		3,672
78-79	1,225	739	421	351	365	161	128	174	3,564
79-80	1,136	423	398	365	362	146	115	166	3,111
80-81	1,109	354	411	393	332	151	125	168	3,043
81-82	1,130	458	413	402	323	131	106	171	3,134
82-83	1,225	819	382	429	323	124	136	185	3,623
83-84	1,221	905	389	392	345	135	156	197	3,740
84-85	1,206	959	389	398	273	117	169	199	3,710
85-86	1,167	887	383	389	289	103	187	181	3,586
86-87	1,165	853	355	370	297	103	157	174	3,474

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-3: PERCENTAGE INCREASE/DECREASE FROM PREVIOUS YEAR IN NUMBER OF BENEFICIARY UNITS, BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	40.86%
77-78	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-9.40%
78-79	-9.48%	2.13%	-14.14%	5.56%	2.83%	-4.44%	0.00%	ERR	1.58%
79-80	-4.05%	-28.65%	-4.71%	10.53%	-2.75%	-6.98%	-9.38%	14.29%	-6.99%
80-81	0.35%	2.92%	22.22%	11.43%	-8.49%	20.00%	10.34%	-1.79%	4.30%
81-82	8.07%	22.70%	8.08%	1.71%	-4.12%	-14.58%	3.13%	0.00%	6.29%
82-83	13.31%	62.43%	6.54%	16.81%	1.08%	2.44%	33.33%	7.27%	20.78%
83-84	2.87%	17.08%	-0.88%	3.60%	11.70%	4.76%	15.91%	1.69%	7.40%
84-85	-0.84%	5.78%	0.00%	0.00%	-9.52%	-18.18%	9.80%	-5.00%	0.00%
85-86	-4.78%	-4.31%	3.54%	0.69%	7.37%	-8.33%	-7.14%	-3.51%	-2.41%
86-87	1.18%	-0.60%	1.71%	-3.45%	7.84%	0.00%	3.85%	-9.09%	0.34%

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-4: PERCENTAGE INCREASE/DECREASE FROM PREVIOUS YEAR IN ISP BENEFICIARY POPULATION BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
77-78	0.81%	-16.77%	-22.30%	-2.26%	3.25%	-5.70%	-37.95%	ERR	-9.24%
78-79	-10.52%	-3.90%	-11.18%	-10.00%	4.58%	-11.54%	-7.91%	ERR	-2.94%
79-80	-7.27%	-42.76%	-5.46%	3.99%	-0.82%	-9.32%	-10.16%	-4.60%	-12.71%
80-81	-2.38%	-16.31%	3.27%	7.67%	-8.29%	3.42%	8.70%	1.20%	-2.19%
81-82	1.89%	29.38%	0.49%	2.29%	-2.71%	-13.25%	-15.20%	1.79%	2.99%
82-83	8.41%	78.82%	-7.51%	6.72%	0.00%	-5.34%	28.30%	8.19%	15.60%
83-84	-0.33%	10.50%	1.83%	-8.62%	6.81%	8.87%	14.71%	6.49%	3.23%
84-85	-1.23%	5.97%	0.00%	1.53%	-20.87%	-13.33%	8.33%	1.02%	-0.80%
85-86	-3.23%	-7.51%	-1.54%	-2.26%	5.86%	-11.97%	10.65%	-9.05%	-3.34%
86-87	-0.17%	-3.83%	-7.31%	-4.88%	2.77%	0.00%	-16.04%	-3.87%	-3.12%

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-5: TOTAL CREE POPULATION, RESIDENT AND NON-RESIDENT IN JAMES BAY TERRITORY, QUEBEC, BY YEAR AND HOME COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not available		
76-77	1,788	1,576	950	722	647	301	364		6,348
77-78	1,971	1,778	1,094	819	670	333	381		7,046
78-79	1,809	1,778	1,004	811	670	333	381	250	7,036
79-80	1,932	1,868	1,043	822	736	345	394	250	7,390
80-81	2,044	1,889	1,107	869	766	366	393	250	7,684
81-82	2,153	1,893	1,277	908	807	367	405	250	8,060
82-83	2,217	2,035	1,556	985	870	381	420	300	8,764
83-84	2,255	2,063	1,608	1,005	895	381	421	400	9,028
84-85	2,316	2,095	1,694	1,064	929	393	421	424	9,336
85-86	2,403	2,285	1,792	1,111	958	392	440	447	9,828
86-87	2,423	2,307	1,717	1,122	913	394	441	460	9,777

Source: Cree Hunters and Trappers Income Security Board Annual Reports. Slight discrepancies between this table and the Annual Reports figures for Nemiscau, Mistassini, and Waskaganish between 1979-80 and 1982-83 result from the fact that several people from the relocated community of Nemiscau continued to appear on JBNQA Enrollment Commission lists at Mistassini and Waskaganish. Estimates of Nemiscau population have been entered, with corresponding adjustments to Mistassini and Waskaganish figures, for purposes of calculating percentages in subsequent tables. Our thanks to Ignatius La Rusic for these adjustments.

TABLE A1-6: ISP BENEFICIARY POPULATION AS PERCENTAGE OF TOTAL CREE POPULATION

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	76.0%	58.6%	64.2%	55.3%	52.2%	64.1%	61.5%	ERR	63.7%
77-78	69.5%	43.3%	43.3%	47.6%	52.1%	54.7%	36.5%	ERR	52.1%
78-79	67.7%	41.6%	41.9%	43.3%	54.5%	48.3%	33.6%	69.6%	50.7%
79-80	58.8%	22.6%	38.2%	44.4%	49.2%	42.3%	29.2%	66.4%	42.1%
80-81	54.3%	18.7%	37.1%	45.2%	43.3%	41.3%	31.8%	67.2%	39.6%
81-82	52.5%	24.2%	32.3%	44.3%	40.0%	35.7%	26.2%	68.4%	38.9%
82-83	55.3%	40.2%	24.6%	43.6%	37.1%	32.5%	32.4%	61.7%	41.3%
83-84	54.1%	43.9%	24.2%	39.0%	38.5%	35.4%	37.1%	49.3%	41.4%
84-85	52.1%	45.8%	23.0%	37.4%	29.4%	29.8%	40.1%	46.9%	39.7%
85-86	48.6%	38.8%	21.4%	35.0%	30.2%	26.3%	42.5%	40.5%	36.5%
86-87	48.1%	37.0%	20.7%	33.0%	32.5%	26.1%	35.6%	37.8%	35.5%

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-7: RESIDENTS OF THE JAMES BAY CREE TERRITORY BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
84-85	2,293	2,074	1,155	1,005	791	346	421	357	8,442
85-86	2,373	2,264	1,224	1,051	819	346	440	368	8,885
86-87	2,400	2,298	1,248	1,061	812	379	441	380	9,019

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-8: ISP BENEFICIARY POPULATION AS PERCENTAGE OF RESIDENT POPULATION

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
84-85	52.6%	46.2%	33.7%	39.6%	34.5%	33.8%	40.1%	55.7%	43.9%
85-86	49.2%	39.2%	31.3%	37.0%	35.3%	29.8%	42.5%	49.2%	40.4%
86-87	48.5%	37.1%	28.4%	34.9%	36.6%	27.2%	35.6%	45.8%	38.5%

Source: Cree Hunters and Trappers Income Security Board Annual Reports.

TABLE A1-9: ADULTS BENEFITING FROM THE PROGRAM BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not available		
76-77	comparable data not available			comparable data not available			comparable data not available		
77-78	532	323	169	155	167	78	58		1,482
78-79	476	319	148	156	171	72	55	81	1,478
79-80	450	224	140	168	171	66	52	82	1,353
80-81	446	193	157	185	156	74	57	80	1,348
81-82	483	258	166	184	152	63	54	83	1,443
82-83	542	427	167	213	154	64	75	88	1,730
83-84	565	493	170	211	172	72	84	93	1,860
84-85	557	526	174	217	147	61	94	98	1,874
85-86	543	490	177	220	164	55	106	88	1,843
86-87	548	493	180	218	172	56	89	83	1,839

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-10: CHILDREN BENEFITING FROM THE PROGRAM BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not available		
76-77	comparable data not available			comparable data not available			comparable data not avai		2,400
77-78	837	446	305	235	182	104	81		2,190
78-79	749	420	273	195	194	89	73	93	2,086
79-80	686	199	258	197	191	80	63	84	1,758
80-81	663	161	254	208	176	77	68	88	1,695
81-82	647	200	247	218	171	68	52	88	1,691
82-83	683	392	215	216	169	60	61	97	1,893
83-84	656	412	219	181	173	63	72	104	1,880
84-85	649	433	215	181	126	56	75	101	1,836
85-86	624	397	206	169	125	48	81	93	1,743
86-87	617	360	175	152	125	47	68	91	1,635

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-11: COMPOSITION OF BENEFICIARY UNITS FOR CREE REGION BY YEAR [1]

Beneficiary Units with One Adult

No. of Children	1976-7	1979-80	No. of Children	1981-82	1982-83	1983-84
0	327	296	0	357	449	501
1	27	26	1	29	31	27
2	12	11	2	7	6	7
3+	16	8	3	1	4	5
			4	1	3	4
			5	2	4	1
			6	2		0
			7			0
			8		1	1
			9			0
			10+			0
Totals	382	341		399	498	546

Beneficiary Units with Two Adults

No. of Children	1976-7	1979-80	No. of Children	1981-82	1982-83	1983-84
0	64	75	0	92	104	134
1	97	84	1	93	135	139
2	90	74	2	71	83	88
3	93	60	3	60	74	76
4	74	47	4	57	58	70
5	62	54	5	41	49	41
6	57	45	6	37	41	44
7+	102	67	7	38	42	35
			8	19	17	17
			9	9	8	8
			10+	9	5	5
Totals	639	506		526	616	657

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TABLE A1-12: COMPOSITION OF BENEFICIARY UNITS FOR CREE REGION BY YEAR AS PERCENTAGES OF TOTALS

Beneficiary Units with One Adult

No. of Children	1976-7	1979-80	No. of Children	1981-82	1982-83	1983-84
0	85.6%	86.8%	0	89.5%	90.2%	91.8%
1	7.1%	7.6%	1	7.3%	6.2%	4.9%
2	3.1%	3.2%	2	1.8%	1.2%	1.3%
3+	4.2%	2.3%	3	0.3%	0.8%	0.9%
			4	0.3%	0.6%	0.7%
			5	0.5%	0.8%	0.2%
			6	0.5%	0.0%	0.0%
			7	0.0%	0.0%	0.0%
			8	0.0%	0.2%	0.2%
			9	0.0%	0.0%	0.0%
			10+	0.0%	0.0%	0.0%
Totals	100.0%	100.0%		100.0%	100.0%	100.0%

Beneficiary Units with Two Adults

No. of Children	1976-7	1979-80	No. of Children	1981-82	1982-83	1983-84
0	10.0%	14.8%	0	17.5%	16.9%	20.4%
1	15.2%	16.6%	1	17.7%	21.9%	21.2%
2	14.1%	14.6%	2	13.5%	13.5%	13.4%
3	14.6%	11.9%	3	11.4%	12.0%	11.6%
4	11.6%	9.3%	4	10.8%	9.4%	10.7%
5	9.7%	10.7%	5	7.8%	8.0%	6.2%
6	8.9%	8.9%	6	7.0%	6.7%	6.7%
7+	16.0%	13.2%	7	7.2%	6.8%	5.3%
			8	3.6%	2.8%	2.6%
			9	1.7%	1.3%	1.2%
			10+	1.7%	0.8%	0.8%
Totals	100.0%	100.0%		100.0%	100.0%	100.0%

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TABLE A1-11 (cont'd)

All Beneficiary Units

No. of Children	1976-7	1979-80	No. of Children	1981-82	1982-83	1983-84
0	391	371	0	449	553	635
1	124	110	1	122	166	166
2	102	85	2	78	89	95
3	109	68	3	61	78	81
4	74	47	4	58	61	74
5	62	54	5	43	53	42
6	57	45	6	39	41	44
7+	102	67	7	38	42	35
			8	19	18	18
			9	9	8	8
			10+	9	5	5
Totals	1,021	847		925	1,114	1,203

TABLE A1-12 (cont'd)

All Beneficiary Units

No. of Children	1976-7	1979-80	No. of Children	1981-82	1982-83	1983-84
0	38.3%	43.8%	0	48.5%	49.6%	52.8%
1	12.1%	13.0%	1	13.2%	14.9%	13.8%
2	10.0%	10.0%	2	8.4%	8.0%	7.9%
3	10.7%	8.0%	3	6.6%	7.0%	6.7%
4	7.2%	5.5%	4	6.3%	5.5%	6.2%
5	6.1%	6.4%	5	4.6%	4.8%	3.5%
6	5.6%	5.3%	6	4.2%	3.7%	3.7%
7+	10.0%	7.9%	7	4.1%	3.8%	2.9%
			8	2.1%	1.6%	1.5%
			9	1.0%	0.7%	0.7%
			10+	1.0%	0.4%	0.4%
Totals	100.0%	100.0%		100.0%	100.0%	100.0%

[1] The data are available once a year in June, which accounts for some differences with totals shown in other Tables.

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-13: AGE GROUPS OF HEADS OF BENEFICIARY UNITS BY YEAR

AGE GROUPS	1980-81 MALE	FEMALE	TOTAL	PERCENT OF TOTAL	1981-82 MALE	FEMALE	TOTAL	PERCENT OF TOTAL
18-21	39	22	61	7.3%	68	47	115	13.1%
22-26	96	41	137	16.5%	93	37	130	14.8%
27-31	58	7	65	7.8%	60	5	65	7.4%
32-36	57	3	60	7.2%	57	4	61	7.0%
37-41	59	7	66	7.9%	57	6	63	7.2%
42-46	66	4	70	8.4%	64	3	67	7.6%
47-51	68	4	72	8.7%	76	2	78	8.9%
52-56	63	3	66	7.9%	56	3	59	6.7%
57-61	56	4	60	7.2%	59	4	63	7.2%
62-66	52	7	59	7.1%	51	6	57	6.5%
67-71	42	8	50	6.0%	47	7	54	6.2%
72-76	28	6	34	4.1%	30	5	35	4.0%
77+	22	9	31	3.7%	20	10	30	3.4%
Total	706	125	831	100.0%	738	139	877	100.0%

AGE GROUPS	1982-83 MALE	FEMALE	TOTAL	PERCENT OF TOTAL	1983-84 MALE	FEMALE	TOTAL	PERCENT OF TOTAL
18-19	42	24	66	6.0%	27	13	40	3.4%
20-24	174	58	232	21.0%	203	80	283	23.8%
25-29	98	37	135	12.2%	119	30	149	12.5%
30-34	63	5	68	6.1%	70	6	76	6.4%
35-39	70	5	75	6.8%	71	5	76	6.4%
40-44	69	6	75	6.8%	61	5	66	5.5%
45-49	82	3	85	7.7%	82	3	85	7.1%
50-54	71	5	76	6.9%	75	4	79	6.6%
55-59	61	4	65	5.9%	70	7	77	6.5%
60-64	61	8	69	6.2%	53	5	58	4.9%
65+	128	32	160	14.5%	167	34	201	16.9%
Total	919	187	1,106	100.0%	998	192	1,190	100.0%

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-14: PAYABLE PERSON-DAYS IN HARVESTING OF ISP BENEFICIARIES BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not available		
76-77	comparable data not available			comparable data not available			comparable data not avai		261,715
77-78	comparable data not available			comparable data not available			comparable data not avai		261,285
78-79	comparable data not available			comparable data not available			comparable data not avai		265,835
79-80	94,462	35,843	23,448	33,302	24,336	10,078	9,476	14,003	244,948
80-81	104,182	36,110	27,418	42,086	24,784	11,171	10,381	14,916	271,048
81-82	103,222	49,474	29,161	40,798	28,183	9,136	9,811	14,940	284,725
82-83	118,212	77,281	31,691	47,543	23,035	9,608	13,553	17,094	338,017
83-84	116,336	93,833	29,129	45,059	26,028	7,825	15,047	18,099	351,356
84-85	113,439	95,437	30,013	46,460	24,592	8,284	14,592	16,761	349,578
85-86	107,898	93,131	32,100	45,957	26,957	8,424	14,497	16,628	345,592
86-87	106,736	90,958	33,365	44,527	30,660	8,332	14,741	14,475	343,794

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-15: PERCENTAGE INCREASE/DECREASE FROM PREVIOUS YEAR IN PAYABLE PERSON-DAYS IN HARVESTING OF ISP BENEFICIARIES BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
77-78	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-0.16%
78-79	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	1.74%
79-80	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-7.86%
80-81	10.29%	0.74%	16.93%	26.38%	1.84%	10.85%	9.55%	6.52%	10.66%
81-82	-0.92%	37.01%	6.36%	-3.06%	13.71%	-18.22%	-5.49%	0.16%	5.05%
82-83	14.52%	56.21%	8.68%	16.53%	-18.27%	5.17%	38.14%	14.42%	18.72%
83-84	-1.59%	21.42%	-8.08%	-5.22%	12.99%	-18.56%	11.02%	5.88%	3.95%
84-85	-2.49%	1.71%	3.03%	3.11%	-5.52%	5.87%	-3.02%	-7.39%	-0.51%
85-86	-4.88%	-2.42%	6.95%	-1.08%	9.62%	1.69%	-0.65%	-0.79%	-1.14%
86-87	-1.08%	-2.33%	3.94%	-3.11%	13.74%	-1.09%	1.68%	-12.95%	-0.52%

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-16: AVERAGE PAID PERSON-DAYS IN HARVESTING PER ISP BENEFICIARY UNIT BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not available		
76-77	comparable data not available			comparable data not available			comparable data not avai		267
77-78	comparable data not available			comparable data not available			comparable data not avai		295
78-79	comparable data not available			comparable data not available			comparable data not avai		295
79-80	333	262	289	317	230	252	327	250	292
80-81	366	256	277	360	256	233	324	271	310
81-82	335	286	273	343	303	223	297	272	306
82-83	339	275	278	342	245	229	308	290	301
83-84	324	285	258	313	248	178	295	302	292
84-85	319	274	266	323	259	230	261	294	290
85-86	318	280	274	317	264	255	279	302	294
86-87	311	275	280	318	279	252	273	290	291

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-17: AVERAGE PAID PERSON-DAYS IN HARVESTING PER ADULT ON ISP BY YEAR AND COMMUNITY

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not available		
76-77	comparable data not available			comparable data not available			comparable data not available		
77-78	comparable data not available			comparable data not available			comparable data not avai		176
78-79	comparable data not available			comparable data not available			comparable data not avai		180
79-80	210	160	167	198	142	153	182	171	181
80-81	234	187	175	227	159	151	182	186	201
81-82	214	192	176	222	185	145	182	180	197
82-83	218	181	190	223	150	150	181	194	195
83-84	206	190	171	214	151	109	179	195	189
84-85	204	181	172	214	167	136	155	171	187
85-86	199	190	181	209	164	153	137	189	188
86-87	195	184	185	204	178	149	166	174	187

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-18: PERCENTAGE INCREASE/DECREASE FROM PREVIOUS YEAR IN AVERAGE PAID PERSON-DAYS IN HARVESTING PER ISP BENEFICIARY UNIT

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
77-78	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	10.19%
78-79	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	0.16%
79-80	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-0.93%
80-81	9.90%	-2.11%	-4.33%	13.42%	11.29%	-7.63%	-0.72%	8.46%	6.10%
81-82	-8.32%	11.67%	-1.59%	-4.69%	18.61%	-4.25%	-8.35%	0.16%	-1.17%
82-83	1.07%	-3.83%	2.00%	-0.23%	-19.14%	2.66%	3.61%	6.66%	-1.70%
83-84	-4.33%	3.70%	-7.27%	-8.52%	1.16%	-22.26%	-4.22%	4.11%	-3.21%
84-85	-1.67%	-3.84%	3.03%	3.11%	4.43%	29.39%	-11.68%	-2.52%	-0.51%
85-86	-0.11%	1.98%	3.30%	-1.76%	2.09%	10.93%	6.99%	2.81%	1.30%
86-87	-2.23%	-1.74%	2.19%	0.35%	5.46%	-1.09%	-2.08%	-4.24%	-0.86%

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-19: PERCENTAGE INCREASE/DECREASE FROM PREVIOUS YEAR IN AVERAGE PAID PERSON-DAYS IN HARVESTING PER ADULT ON ISP

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
77-78	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
78-79	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	2.02%
79-80	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	0.66%
80-81	11.28%	16.93%	4.27%	14.76%	11.63%	-1.14%	-0.06%	9.18%	11.07%
81-82	-8.51%	2.49%	0.59%	-2.53%	16.71%	-3.94%	-0.24%	-3.46%	-1.87%
82-83	2.06%	-5.62%	8.03%	0.67%	-19.33%	3.52%	-0.54%	7.92%	-0.98%
83-84	-5.59%	5.16%	-9.71%	-4.33%	1.17%	-27.61%	-0.87%	0.19%	-3.32%
84-85	-1.09%	-4.67%	0.67%	0.26%	10.55%	24.96%	-13.34%	-12.12%	-1.25%
85-86	-2.43%	4.75%	5.14%	-2.43%	-1.75%	12.78%	-11.90%	10.48%	0.52%
86-87	-1.98%	-2.93%	2.21%	-2.22%	8.45%	-2.86%	21.11%	-7.70%	-0.30%

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-20: TOTAL BENEFITS PAYABLE BY YEAR AND COMMUNITY UNDER ISP [1]

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		1,965,716
76-77	comparable data not available			comparable data not available			comparable data not avai		4,887,720
77-78	comparable data not available			comparable data not available			comparable data not avai		4,931,577
78-79	comparable data not available			comparable data not available			comparable data not avai		5,271,449
79-80	1,987,878	721,029	516,812	674,432	501,961	216,225	214,912	287,438	5,120,687
80-81	2,193,167	807,181	685,006	844,449	622,076	242,976	249,606	368,615	6,013,076
81-82	2,640,551	1,215,450	799,121	1,035,015	742,274	248,638	268,485	391,742	7,341,276
82-83	3,324,796	2,153,124	919,686	1,326,481	639,016	285,513	392,396	481,073	9,522,085
83-84	3,565,748	2,842,775	941,245	1,372,473	785,472	264,383	482,579	566,369	10,821,044
84-85	3,704,446	3,072,834	1,043,476	1,479,052	805,753	294,517	472,327	564,255	11,436,660
85-86	3,629,706	3,088,531	1,127,360	1,496,077	852,712	309,615	491,681	578,621	11,574,303
86-87	3,659,896	3,097,853	1,146,662	1,488,250	1,002,763	293,735	496,269	517,745	11,703,173

[1] The figures represent amounts payable before welfare has been deducted

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-21: TOTAL BENEFITS PAYABLE BY YEAR AND COMMUNITY UNDER ISP, IN 1975 CONSTANT DOLLARS [1]

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		1,896,963
76-77	comparable data not available			comparable data not available			comparable data not avai		4,378,441
77-78	comparable data not available			comparable data not available			comparable data not avai		4,076,371
78-79	comparable data not available			comparable data not available			comparable data not avai		3,997,122
79-80	1,374,568	498,573	357,363	466,353	347,093	149,514	148,606	198,756	3,540,827
80-81	1,363,100	501,680	425,746	524,843	386,634	151,015	155,135	229,102	3,737,255
81-82	1,469,438	676,385	444,702	575,975	413,067	138,364	149,409	218,000	4,085,341
82-83	1,707,491	1,105,764	472,316	681,231	328,175	146,629	201,520	247,061	4,890,186
83-84	1,742,721	1,389,376	460,023	670,782	383,891	129,214	235,855	276,807	5,288,670
84-85	1,737,825	1,441,524	489,514	693,851	377,994	138,163	221,577	264,703	5,365,152
85-86	1,636,541	1,392,539	508,298	674,543	384,466	139,597	221,686	260,885	5,218,556
86-87	1,583,166	1,340,042	496,013	643,774	433,766	127,061	214,672	223,962	5,062,456

[1] The figures represent amounts payable before welfare has been deducted

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-22: PERCENTAGE INCREASE/DECREASE FROM PREVIOUS YEAR IN TOTAL BENEFITS PAYABLE BY YEAR AND COMMUNITY (CONSTANT DOLLARS) [1]

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	130.8%
77-78	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-6.9%
78-79	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-1.9%
79-80	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-11.4%
80-81	-0.8%	0.6%	19.1%	12.5%	11.4%	1.0%	4.4%	15.3%	5.5%
81-82	7.8%	34.8%	4.5%	9.7%	6.8%	-8.4%	-3.7%	-4.8%	9.3%
82-83	16.2%	63.5%	6.2%	18.3%	-20.6%	6.0%	34.9%	13.3%	19.7%
83-84	2.1%	25.6%	-2.6%	-1.5%	17.0%	-11.9%	17.0%	12.0%	8.1%
84-85	-0.3%	3.8%	6.4%	3.4%	-1.5%	6.9%	-6.1%	-4.4%	1.4%
85-86	-5.8%	-3.4%	3.8%	-2.8%	1.7%	1.0%	0.0%	-1.4%	-2.7%
86-87	-3.3%	-3.8%	-2.4%	-4.6%	12.8%	-9.0%	-3.2%	-14.2%	-3.0%

[1] The figures represent amounts payable before very minor amounts in welfare has been deducted (compare Tables A1-25 and A1-28)

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-23: "GUARANTEED AMOUNTS" PAYABLE BY YEAR AND COMMUNITY UNDER ISP

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		629,552
76-77	comparable data not available			comparable data not available			comparable data not avai		1,171,364
77-78	comparable data not available			comparable data not available			comparable data not avai		1,084,758
78-79	comparable data not available			comparable data not available			comparable data not avai		1,033,789
79-80	350,260	98,111	111,333	108,414	81,987	41,168	50,756	44,494	886,523
80-81	399,807	106,559	135,274	156,465	124,912	51,496	48,497	59,103	1,082,113
81-82	455,338	168,079	181,772	171,321	145,638	55,228	60,784	75,463	1,313,623
82-83	530,267	326,204	170,521	202,559	94,460	58,379	71,993	76,960	1,531,343
83-84	572,424	428,435	191,760	213,107	115,777	63,045	95,424	100,682	1,780,654
84-85	624,587	481,713	228,622	217,647	138,083	69,607	76,153	109,198	1,945,610
85-86	577,285	453,865	219,237	195,966	90,080	71,299	81,553	108,212	1,797,497
86-87	517,577	420,047	164,410	177,362	100,143	48,438	62,307	91,600	1,581,884

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-24: PER DIEM AMOUNTS PAYABLE BY YEAR AND COMMUNITY UNDER ISP

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		1,336,164
76-77	comparable data not available			comparable data not available			comparable data not avai		3,716,356
77-78	comparable data not available			comparable data not available			comparable data not avai		3,846,189
78-79	comparable data not available			comparable data not available			comparable data not avai		4,237,660
79-80	1,637,617	622,918	405,479	566,018	419,974	175,057	164,156	242,944	4,234,163
80-81	1,793,360	700,622	549,732	687,984	497,164	191,480	201,109	309,512	4,930,963
81-82	2,185,213	1,047,371	617,349	863,694	596,636	193,410	207,701	316,279	6,027,653
82-83	2,794,529	1,826,920	749,165	1,123,922	544,556	227,134	320,403	404,113	7,990,742
83-84	2,993,324	2,414,340	749,485	1,159,366	669,695	201,338	387,155	465,687	9,040,390
84-85	3,079,859	2,591,121	814,854	1,261,405	667,670	224,910	396,174	455,057	9,491,050
85-86	3,052,421	2,634,666	908,123	1,300,111	762,632	238,316	410,128	470,409	9,776,806
86-87	3,142,319	2,677,806	982,252	1,310,888	902,620	245,297	433,962	426,145	10,121,289

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-25: AVERAGE TOTAL ISP BENEFITS PAYABLE PER BENEFICIARY UNIT BY YEAR AND COMMUNITY [1]

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		2,828
76-77	comparable data not available			comparable data not available			comparable data not avai		4,993
77-78	comparable data not available			comparable data not available			comparable data not avai		5,560
78-79	comparable data not available			comparable data not available			comparable data not avai		5,851
79-80	7,000	5,263	6,380	6,423	4,735	5,406	7,411	5,133	6,111
80-81	7,695	5,725	6,919	7,218	6,413	5,062	7,800	6,702	6,880
81-82	8,573	7,026	7,468	8,698	7,981	6,064	8,136	7,123	7,902
82-83	9,527	7,662	8,067	9,543	6,798	6,798	8,918	8,154	8,487
83-84	9,932	8,641	8,330	9,531	7,481	6,009	9,462	9,439	8,980
84-85	10,406	8,830	9,234	10,271	8,482	8,181	8,434	9,899	9,491
85-86	10,707	9,275	9,636	10,318	8,360	9,382	9,455	10,520	9,842
86-87	10,670	9,359	9,636	10,630	9,116	8,901	9,190	10,355	9,918

[1] The figures represent amounts payable before welfare has been deducted

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-26: AVERAGE TOTAL ISP BENEFITS PAYABLE PER BENEFICIARY UNIT BY YEAR AND COMMUNITY IN 1975 CONSTANT DOLLARS [1]

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		2,729
76-77	comparable data not available			comparable data not available			comparable data not avai		4,472
77-78	comparable data not available			comparable data not available			comparable data not avai		4,596
78-79	comparable data not available			comparable data not available			comparable data not avai		4,436
79-80	4,840	3,639	4,412	4,441	3,274	3,738	5,124	3,549	4,225
80-81	4,783	3,558	4,300	4,486	3,986	3,146	4,848	4,165	4,276
81-82	4,771	3,910	4,156	4,840	4,442	3,375	4,528	3,964	4,398
82-83	4,893	3,935	4,143	4,901	3,491	3,491	4,580	4,187	4,358
83-84	4,854	4,223	4,071	4,658	3,656	2,937	4,625	4,613	4,389
84-85	4,882	4,142	4,332	4,818	3,979	3,838	3,957	4,644	4,452
85-86	4,828	4,182	4,344	4,652	3,769	4,230	4,263	4,743	4,438
86-87	4,616	4,048	4,168	4,598	3,943	3,850	3,975	4,479	4,290

[1] The figures represent amounts payable before welfare has been deducted

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-27: PERCENTAGE INCREASE/DECREASE FROM PREVIOUS YEAR IN AVERAGE TOTAL ISP BENEFITS PAYABLE PER BENEFICIARY UNIT IN 1975 CONSTANT DOLLARS BY YEAR AND COMMUNITY [1]

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	63.9%
77-78	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	2.8%
78-79	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-3.5%
79-80	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-4.8%
80-81	-1.2%	-2.2%	-2.5%	1.0%	21.7%	-15.8%	-5.4%	17.4%	1.2%
81-82	-0.2%	9.9%	-3.4%	7.9%	11.4%	7.3%	-6.6%	-4.8%	2.8%
82-83	2.5%	0.6%	-0.3%	1.3%	-21.4%	3.4%	1.2%	5.6%	-0.9%
83-84	-0.8%	7.3%	-1.7%	-5.0%	4.7%	-15.9%	1.0%	10.2%	0.7%
84-85	0.6%	-1.9%	6.4%	3.4%	8.8%	30.7%	-14.4%	0.7%	1.4%
85-86	-1.1%	1.0%	0.3%	-3.5%	-5.3%	10.2%	7.7%	2.1%	-0.3%
86-87	-4.4%	-3.2%	-4.1%	-1.2%	4.6%	-9.0%	-6.8%	-5.6%	-3.3%

[1] The figures represent amounts payable before welfare has been deducted

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-28: AVERAGE TOTAL ISP BENEFITS PAID PER BENEFICIARY UNIT BY YEAR AND COMMUNITY AFTER DEDUCTIONS FOR WELFARE BENEFITS

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not available		
76-77	comparable data not available			comparable data not available			comparable data not available		
77-78	comparable data not available			comparable data not available			comparable data not available		
78-79	comparable data not available			comparable data not available			comparable data not available		
79-80	7,000	5,263	6,380	6,423	4,733	5,406	7,411	5,133	6,111
80-81	7,695	5,725	6,919	7,218	6,413	5,062	7,800	6,702	6,880
81-82	8,537	6,986	7,452	8,606	7,960	6,064	8,136	7,123	7,867
82-83	9,506	7,630	8,058	9,519	6,795	6,791	8,818	8,154	8,464
83-84	9,926	8,551	8,301	9,508	7,460	5,873	9,381	9,436	8,938
84-85	10,401	8,803	9,232	10,146	8,475	8,172	8,390	9,870	9,462
85-86	10,707	9,269	9,585	10,301	8,349	9,382	9,455	10,520	9,832
86-87	10,649	9,316	9,605	10,564	9,113	8,901	9,190	10,320	9,887

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-29: AVERAGE TOTAL ISP BENEFITS PAID PER ADULT IN A BENEFICIARY UNIT BY YEAR AND COMMUNITY [1]

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not available		
76-77	comparable data not available			comparable data not available			comparable data not available		
77-78	comparable data not available			comparable data not available			comparable data not avai		3,328
78-79	comparable data not available			comparable data not available			comparable data not avai		3,567
79-80	4,418	3,219	3,692	4,014	2,935	3,276	4,133	3,505	3,785
80-81	4,917	4,182	4,363	4,565	3,988	3,283	4,379	4,608	4,461
81-82	5,467	4,711	4,814	5,625	4,883	3,947	4,972	4,720	5,088
82-83	6,134	5,042	5,507	6,228	4,149	4,461	5,232	5,467	5,504
83-84	6,311	5,766	5,537	6,505	4,567	3,672	5,745	6,090	5,818
84-85	6,651	5,842	5,997	6,816	5,481	4,828	5,025	5,758	6,103
85-86	6,685	6,303	6,369	6,800	5,199	5,629	4,639	6,575	6,280
86-87	6,679	6,284	6,370	6,827	5,830	5,245	5,576	6,238	6,364

[1] The figures represent amounts payable before welfare has been deducted

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-30: AVERAGE TOTAL ISP BENEFITS PAID PER ADULT IN A BENEFICIARY UNIT BY YEAR AND COMMUNITY IN 1975 CONSTANT DOLLARS [1]

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not available		
76-77	comparable data not available			comparable data not available			comparable data not available		
77-78	comparable data not available			comparable data not available			comparable data not avai		2,751
78-79	comparable data not available			comparable data not available			comparable data not avai		2,704
79-80	3,055	2,226	2,553	2,776	2,030	2,265	2,858	2,424	2,617
80-81	3,056	2,599	2,712	2,837	2,478	2,041	2,722	2,864	2,772
81-82	3,042	2,622	2,679	3,130	2,718	2,196	2,767	2,627	2,831
82-83	3,150	2,590	2,828	3,198	2,131	2,291	2,687	2,808	2,827
83-84	3,084	2,818	2,706	3,179	2,232	1,795	2,808	2,976	2,843
84-85	3,120	2,741	2,813	3,197	2,571	2,265	2,357	2,701	2,863
85-86	3,014	2,842	2,872	3,066	2,344	2,538	2,091	2,965	2,832
86-87	2,889	2,718	2,756	2,953	2,522	2,269	2,412	2,698	2,753

[1] The figures represent amounts payable before welfare has been deducted

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-31: PERCENTAGE INCREASE/DECREASE FROM PREVIOUS YEAR IN AVERAGE TOTAL ISP BENEFITS PAID PER ADULT IN A BENEFICIARY UNIT IN 1975 CONSTANT DOLLARS, BY YEAR AND COMMUNITY [1]

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
77-78	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
78-79	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-1.7%
79-80	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-3.2%
80-81	0.1%	16.8%	6.2%	2.2%	22.1%	-9.9%	-4.8%	18.1%	5.9%
81-82	-0.5%	0.9%	-1.2%	10.3%	9.6%	7.6%	1.7%	-8.3%	2.1%
82-83	3.6%	-1.2%	5.6%	2.2%	-21.6%	4.3%	-2.9%	6.9%	-0.2%
83-84	-2.1%	8.8%	-4.3%	-0.6%	4.7%	-21.7%	4.5%	6.0%	0.6%
84-85	1.2%	-2.8%	4.0%	0.6%	15.2%	26.2%	-16.0%	-9.3%	0.7%
85-86	-3.4%	3.7%	2.1%	-4.1%	-8.8%	12.1%	-11.3%	9.8%	-1.1%
86-87	-4.1%	-4.4%	-4.0%	-3.7%	7.6%	-10.6%	15.3%	-9.0%	-2.8%

[1] The figures represent amounts payable before welfare has been deducted

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-32: OTHER INCOME DECLARED BY PROGRAM BENEFICIARIES BY YEAR AND COMMUNITY
(including wage labour, fur sales, handicrafts, honoraria, etc.)

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		847,050
76-77	comparable data not available			comparable data not available			comparable data not avai		2,169,596
77-78	comparable data not available			comparable data not available			comparable data not avai		2,215,391
78-79	comparable data not available			comparable data not available			comparable data not avai		2,489,356
79-80	comparable data not available			comparable data not available			comparable data not avai		2,608,296
80-81	comparable data not available			comparable data not available			comparable data not available		
81-82	392,058	291,493	319,704	129,606	175,074	129,333	10,130	124,679	1,572,077
82-83	502,951	833,077	362,646	119,660	571,159	129,579	60,457	145,498	2,725,027
83-84	comparable data not available			comparable data not available			comparable data not available		
84-85	comparable data not available			comparable data not available			comparable data not available		
85-86	comparable data not available			comparable data not available			comparable data not available		
86-87	comparable data not available			comparable data not available			comparable data not available		

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-33: OTHER INCOME DECLARED BY PROGRAM BENEFICIARIES IN 1975 CONSTANT DOLLARS BY YEAR AND COMMUNITY
(including wage labour, fur sales, handicrafts, honoraria, etc.)

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		817,423
76-77	comparable data not available			comparable data not available			comparable data not avai		1,943,534
77-78	comparable data not available			comparable data not available			comparable data not avai		1,831,211
78-79	comparable data not available			comparable data not available			comparable data not avai		1,887,576
79-80	comparable data not available			comparable data not available			comparable data not avai		1,803,571
80-81	comparable data not available			comparable data not available			comparable data not available		
81-82	218,176	162,213	177,912	72,124	97,427	71,972	5,637	69,383	874,844
82-83	258,297	427,837	186,241	61,453	293,326	66,547	31,048	74,722	1,399,472
83-84	comparable data not available			comparable data not available			comparable data not available		
84-85	comparable data not available			comparable data not available			comparable data not available		
85-86	comparable data not available			comparable data not available			comparable data not available		
86-87	comparable data not available			comparable data not available			comparable data not available		

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-34: PERCENTAGE INCREASE/DECREASE FROM PREVIOUS YEAR IN OTHER INCOME DECLARED BY PROGRAM BENEFICIARIES IN IN 1975 CONSTANT DOLLARS BY YEAR AND COMMUNITY (including wage labour, fur sales, handicrafts, honoraria, etc.)

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	137.8%
77-78	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-5.8%
78-79	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	3.1%
79-80	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	-4.5%
80-81	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
81-82	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
82-83	18.4%	163.8%	4.7%	-14.8%	201.1%	-7.5%	450.8%	7.7%	60.0%
83-84	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
84-85	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
85-86	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
86-87	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-35: AVERAGE OTHER INCOME DECLARED PER BENEFICIARY UNIT BY YEAR AND COMMUNITY
(including wage labour, fur sales, handicrafts, honoraria, etc.)

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		1,219
76-77	comparable data not available			comparable data not available			comparable data not avai		2,216
77-78	comparable data not available			comparable data not available			comparable data not avai		2,498
78-79	comparable data not available			comparable data not available			comparable data not avai		2,763
79-80	comparable data not available			comparable data not available			comparable data not avai		3,113
80-81	comparable data not available			comparable data not available			comparable data not available		
81-82	1,273	1,685	2,988	1,089	1,883	3,154	307	2,267	1,692
82-83	1,441	2,965	3,181	861	6,076	3,085	1,374	2,466	2,429
83-84	comparable data not available			comparable data not available			comparable data not available		
84-85	comparable data not available			comparable data not available			comparable data not available		
85-86	comparable data not available			comparable data not available			comparable data not available		
86-87	comparable data not available			comparable data not available			comparable data not available		

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-36: AVERAGE OTHER INCOME DECLARED PER BENEFICIARY UNIT IN 1975 CONSTANT DOLLARS BY YEAR AND COMMUNITY
(including wage labour, fur sales, handicrafts, honoraria, etc.)

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	comparable data not available			comparable data not available			comparable data not avai		1,176
76-77	comparable data not available			comparable data not available			comparable data not avai		1,985
77-78	comparable data not available			comparable data not available			comparable data not avai		2,064
78-79	comparable data not available			comparable data not available			comparable data not avai		2,095
79-80	comparable data not available			comparable data not available			comparable data not avai		2,152
80-81	comparable data not available			comparable data not available			comparable data not available		
81-82	708	938	1,663	606	1,048	1,755	171	1,262	942
82-83	740	1,523	1,634	442	3,120	1,584	706	1,266	1,247
83-84	comparable data not available			comparable data not available			comparable data not available		
84-85	comparable data not available			comparable data not available			comparable data not available		
85-86	comparable data not available			comparable data not available			comparable data not available		
86-87	comparable data not available			comparable data not available			comparable data not available		

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-37: PERCENTAGE INCREASE/DECREASE FROM PREVIOUS YEAR IN AVERAGE OTHER INCOME DECLARED PER BENEFICIARY UNIT IN IN 1975 CONSTANT DOLLARS (including wage labour, fur sales, handicrafts, honoraria, etc.)

YEAR	MISTASSINI	CHISASIBI	WASKAGANISH	WASWANIPI	WEMINDJI	EASTMAIN	WHAPMAGOOSTUI	NEMISCAU	CREE REGION
75-76	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
76-77	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	68.8%
77-78	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	4.0%
78-79	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	1.5%
79-80	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	2.7%
80-81	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
81-82	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
82-83	4.5%	62.4%	-1.7%	-27.1%	197.9%	-9.7%	313.1%	0.4%	32.5%
83-84	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
84-85	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
85-86	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
86-87	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-38: INDEXATION OF AMOUNTS PAYABLE AND EXEMPTIONS UNDER ISP FROM 1975-6 TO 1986-87

	PER DIEM	GUARANTEED AMOUNT			FUR DEDUCTION
		per adult	per child	per unit	
11/75-12/75	$12.00	$1,000	$400	$400	$250
01/76-06/76	$13.12	$1,112	$445	$445	$278
76-77	$13.66	$1,158	$463	$463	$290
77-78	$14.73	$1,248	$499	$499	$312
78-79	$15.96	$1,351	$540	$540	$339
79-80	$17.39	$1,472	$589	$589	$369
80-81	$19.04	$1,612	$645	$645	$404
81-82	$21.17	$1,792	$718	$718	$449
82-83	$23.64	$2,002	$802	$802	$502
83-84	$25.73	$2,179	$872	$872	$546
84-85	$27.15	$2,298	$921	$921	$575
85-86	$28.29	$2,395	$960	$960	$600
86-87	$29.44	$2,492	$999	$999	$625

Source: Cree Hunters and Trappers Income Security Board Annual Reports

TABLE A1-39: COST OF LIVING DATA USED TO CALCULATE PROGRAM BENEFITS IN 1975 CONSTANT DOLLARS

YEAR	INDEX	PURCHASING POWER OF 1975 DOLLAR	CONVERSION FACTOR
1975	58.5	$1.00	1.0000000
1976	62.9	$0.93	0.9300477
1977	67.9	$0.86	0.8615611
1978	73.9	$0.79	0.7916103
1979	80.7	$0.72	0.7249071
1980	88.9	$0.66	0.6580427
1981	100.0	$0.59	0.5850000
1982	110.8	$0.53	0.5279783
1983	117.2	$0.50	0.4991468
1984	122.3	$0.48	0.4783320
1985	127.2	$0.46	0.4599057
1986	132.4	$0.44	0.4418429
1987	138.2	$0.42	0.4232996

Source: Table 2. Consumer Price Index for Canada, All-items (Not Seasonally Adjusted), Annual Averages, The Consumer Price Index, Statistics Canada, December 1987.

Appendix 2

The James Bay and Northern Quebec Agreement, Section 30: Income Security Program for Cree Hunters and Trappers

Agreement between:
The Government of Quebec
The Société d'énergie de la Baie James
The Société de développement de la Baie James
The Commission hydroélectrique de Québec (Hydro-Québec)
and
The Grand Council of the Crees (of Quebec)
The Northern Quebec Inuit Association
and
The Government of Canada
(1975)

30.1 General Provisions

30.1.1 An income security program (hereinafter referred to as "the program") to provide an income guarantee and benefits and other incentives for Cree people who wish to pursue harvesting activities as a way of life is established.

30.1.2 The funding of the program established by and in accordance with this Section shall be the responsibility of the Province of Québec which shall ensure at all times that the necessary funds are provided to give full effect to the program.

30.1.3 Subject and in accordance with the provisions of Sub-Section 30.7, the program shall be at least as generous as any guaranteed annual income program of general application that may be established or exist from time to time in the Province of Québec whether such program is established or funded by Canada or Québec.

30.1.4 Notwithstanding anything in this Section, every Cree person shall have the right to benefit, if eligible under such programs, from any transfer payment, workmen's compensation, unemployment insurance programs, Canada and Québec Pension Plansand other social insurance programs existing from time to time in the Province of Québec, whether established and funded by Québec or Canada.

30.1.5 A person benefiting from the program shall not be entitled to combine the benefits from the program with benefits from social aid, social assistance for Indians or Inuit or guaranteed annual income programs of general application existing from time to time in the Province of Québec provided that such person, if eligible, may elect from time to time to benefit from such programs in place of the program.

30.1.6 The payments made pursuant to Sub-Section 30.3 shall be offset against benefits payable for the same period under any social aid, social assistance for Indians or Inuit, guaranteed income supplement for the aged or guaranteed annual income programs of general application existing from time to time in the Province of Québec.

30.1.7 Payments under the program shall be made to beneficiary units and established on the basis of such beneficiary units.

30.1.8 The program shall ensure that hunting, fishing and trapping shall constitute a viable way of life for the Cree people, and that individual Crees who elect to pursue such way of life shall be guaranteed a measure of economic security consistent with conditions prevailing from time to time.

30.1.9 The program shall ensure that as an alternative to transfer payment or guaranteed annual income programs existing from time to time there exists through the program effective incentive to pursue harvesting as a way of life for the Cree people.

30.1.10 The establishment whether by Canada or Québec of guaranteed annual income programs of general application shall not prejudice the rights and guarantees under the program in favour of the Crees established by and in accordance with this Section. However, beneficiaries under the program shall not be entitled to benefit from more than one such program at the same time at their option.

30.2 The Rights to Benefit and Eligibility

30.2.1 Every Cree person eligible pursuant to Section 3 of the Agreement and ordinarily resident in Québec shall have the right to benefit under the program provided such person is eligible in accordance with the terms and conditions set forth in this Section.

30.2.2 Eligibility to benefit under the program shall be determined in the manner provided for in this paragraph. The following beneficiary units shall be eligible:

a) any beneficiary unit the head of which in the preceding year spent more time conducting harvesting and related activities than time spent in salary or wage employment, excluding, both in the case of harvesting and related activities and salary and wage employment, time spent in guiding, outfitting or commercial fishing or in receipt of unemployment insurance, workmen's compensation, or manpower training allowances, provided that the head of such beneficiary unit spent at least one hundred and twenty (120) days conducting harvesting and related activities of which at least ninety (90) days were spent away from the settlement conducting such activities, or

b) any beneficiary unit which in the preceding year derived the greater part of its earnings, excluding earnings from guiding outfitting or commercial fishing, from harvesting and related activities, or

c) any beneficiary unit which in the preceding year was eligible under a), or b) and a member of which in the preceding year was the victim of an accident during the exercise of harvesting and related activities which resulted in such beneficiary unit not being eligible under a), or b), or

d) any beneficiary unit which in the preceding year was eligible under a), or b) and a member of which in the preceding year was the victim of an accident during seasonal employment as a result of which he became eligible for workmen's compensation and which also resulted in such beneficiary unit not being eligible under a), or b), or

e) any beneficiary unit which in the preceding year was eligible under a), or b) and the head of which in the preceding year was forced to abandon or diminish his harvesting and related activities in order to allow animal populations to increase to a harvestable level, which resulted in such beneficiary unit not being eligible under a), or b), or

f) any beneficiary unit which in the preceding year was eligible under a), or b) and which in the current year is not eligible under a), or b) as a result of the head of such beneficiary unit having been engaged in a manpower, upgrading, training or other self-improvement program in the preceding year, or

g) any beneficiary unit which in the preceding year was eligible under a), or b) and which in the current yearis not eligible under a), or b) as a result the head of such beneficiary unit having been engaged in temporary employment on a community improvement program or project during the preceding year.

30.2.3 In the case of beneficiary units eligible under c), d), e), f) or g) of paragraph 30. 2. 2 such beneficiary units shall be considered eligible and shall have the right to receive the benefits under the program in the current year and subsequent year and notwithstanding paragraph 30.1.5 the members of such beneficiary units shall have the right to receive any other transfer payments, workmen's compensation or unemployment insurance benefits, Canada Pension Plan or Québec Pension Plan benefits for which they may be eligible during such period.

30.2.4 If for any reason not expressly stipulated in paragraph 30.2.2 a person believes that consistent with the purpose of the program he should be considered eligible and should receive benefits under the program, the Board may upon request from such person review the case and determine if such person shall be considered eligible and benefit under the program. An appeal shall lie from the decision of the Board to the Commission of Social Affairs.

30.3 Calculation of Benefits

30.3.1 The benefits of the Cree income security payment shall be calculated as provided for in this Sub-Section taking into consideration:

a) the composition and size of the beneficiary unit eligible to benefit under the program, and

b) the extent of harvesting and related activities of such beneficiary unit, and

c) the amount of other income.

30.3.2 Any beneficiary unit eligible to benefit under the program shall be guaranteed a basic amount calculated as the sum of:

a) an amount of $1,000.00 for the head of the beneficiary unit and $1,000.00 for his consort, if any, and

b) an amount of $400.00 for each family and for each unattached individual not living with his parent, grandparent or child, and

c) an amount of $400.00 for each dependent child provided such dependent child is less than 18 years of age and is not a head of a family.

30.3.3 Each beneficiary unit shall receive a sum based on the extent of harvesting and related activities of each adult member calculated as the sum of:

a) an amount of $10.00 a day for each adult in the beneficiary unit computed for every day spent in the bush by each adult in the beneficiary unit in the exercise of harvesting and related activities provided that days for which the head of such beneficiary unit or his consort receives salary for such activities or workmen's compensation, unemployment insurance or manpower training allowances are not included in such calculations and provided further that the total amount payable for such time in the bush does not exceed $2,400.00 per year for each adult, and

b) an amount of $2.00 per day for each adult in the beneficiary unit calculated for every day not spent in the bush by such adult provided that days for which he or his consort received salary or was engaged in remunerative self employment, Saturdays and Sundays of weeks during which he or his consort received salary or was engaged in remunerative self-employment during the balance of such weeks, and days for which he or his consort received workmen's compensation, unemployment insurance or manpower training allowances are not included in such calculation.

30.3.4 For the purposes of this Sub-Section other income shall mean an amount equal to the sum of:

a) any income of the beneficiary unit from the sale of furs in excess of $250.00 per adult in the beneficiary unit, and

b) the payments made pursuant to paragraph 30.3.3, and

c) all net income earned in harvesting and related activities, excluding income derived from the sale of furs; as well as all net income from guiding, outfitting and commercial fishing and from all other sources and all incomes otherwise received, excluding benefits from family and youth allowances, old age security pensions, social aid, social assistance for Indians or Inuit, guaranteed income supplement for the aged and other guaranteed annual income programs existing from time to time in the province of Québec.

30.3.5 Each beneficiary unit eligible to benefit under the program shall receive a sum equal to the amount determined pursuant to paragraph 30.3.2 less an amount equal to the sum of old age security pension payments received by the beneficiary unit and 40 percent of all other income.

30.3.6 Subject to paragraph 30.7.8 the dollar amounts provided for in this Sub-Section shall be indexed annually according to the increase in the cost of living in Québec. Such indexation shall occur at the same time as does indexation under any social aid or guaranteed annual income program of general application in the Province of Québec in the event that such programs of general application are indexed in any given year. If a cost of living index for the Territory computed on a basis similar to that available in Québec at the present time becomes available, the Board may unanimously choose to use this index. Once made, this choice would apply in all future years.

30.4 Administration of the Program

30.4.1 There is established a Cree Hunters and Trappers Income Security Board (hereinafter referred to as "the Board").

30.4.2 The Board shall have 6 members. The Cree Regional Authority and Québec shall each appoint three (3) members and shall pay the remuneration and expenses of their respective members.

30.4.3 Four (4) members shall constitute a quorum provided two (2) members appointed by each party are present.

30.4.4 The members of the Board shall each have one (1) vote.

30.4.5 The respective parties shall appoint a Chairman and Vice-Chairman of the Board who shall hold office for one (1) year from among their appointees in the following manner:

a) in the first year of the operation of the Board, the Chairman shall be appointed by the Province of Québec and the Vice-chairman shall be appointed by the Cree Regional Authority;

b) in the second year of the operation of the Board, the Chairman shall be appointed by the Cree Regional Authority and the Vice-Chairman shall be appointed by the Province of Québec;

c) in subsequent years the appointment of the Chairman and Vice-Chairman of the Board shall take place in the sequence set forth in sub-paragraphs a) and b) of this paragraph.

30.4.6 In the absence of the Chairman, the Vice-Chairman shall act as Chairman.

30.4.7 The Chairman of the Board shall have a second and deciding vote.

30.4.8 The Board shall:

a) review the eligibility lists prepared annually by the local administrator and finalize such lists;

b) review all protests and claims resulting from the operation of the program or the procedures established for the program or any other matter contemplated in this Section;

c) review the operation of the program and procedures established for the program and participate at the request of the responsible Minister in the evaluation of the results of the program;

d) supervise the administration of the program and procedures established for the program;

e) establish pursuant to paragraph 30.3.6 the annual adjustment of the dollar amounts provided for in this Section and where appropriate the cost of living rate to which the payments under the plan established by this Section shall be indexed;

f) establish the administrative procedures and criteria, consistent with the terms of this Section, necessary to implement the program and modify such procedures and criteria from time to time on the basis of experience with the operation of the program;

g) consult the appropriate local administrator or administrators in all matters respecting the operation of the program in any community or communities;

h) prepare an estimate of the annual costs of the program for each community, including an amount for each beneficiary unit eligible and obtain from Québec the funds necessary to cover such costs;

i) prepare a budget for its own operations and obtain from Québec the funds necessary to cover such costs;

j) recommend or determine, as the case may be, when and how revisions to the program should be made as provided in Sub-Sections 30.7 and 30.8.

30.4.9 The Board shall from time to time appoint from among at least three (3) persons recommended by the local government of each Cree community a local administrator for each community who shall be an employee of the Board and who shall have an office in the community.

30.4.10 The administrator shall:

a) prepare with the assistance of the local government the annual eligibility list for his community;

b) see to the proper functioning of the program and the procedures provided for and in accordance with this Section at the community level;

c) see to the distribution and payment to heads of beneficiary units of sums due in accordance with the provisions of this Section;

d) keep accurate and verifiable records of all payments made to heads of beneficiary units and costs incurred in administration under this program, in accordance with the procedures and criteria established by the Board;

e) assist members of beneficiary units to apply for and prepare all necessary documentation respecting eligibility and benefit forms under the program, and other relevant information;

f) collect and preserve all necessary documentation respecting eligibility and benefits under the program, according to the procedures and criteria established by the Board.

30.5 Procedures

30.5.1 For the purpose of the program, the annual period shall commence on July 1 of each year.

30.5.2 Each applicant for benefits under the program shall submit a benefit form between July 1 and July 31 each year, unless prevented from doing so by harvesting or related activities, training, education or employment away from the settlement, sickness, accident or other similar circumstances.

30.5.3 On or before August 1 of each year, the local administrator shall transmit to the Board the eligibility lists for the current year, together with all individual benefit forms.

30.5.4 The Board shall review the lists and forms referred to in paragraph 30.5.3 and shall calculate the required funds for each community for the operation of the program during the current year including administration costs of the program for the current year and shall take into account in the estimated total costs any surplus or deficit resulting from the operation of the program in the preceding year.

30.5.5 The Board shall, on the basis of the calculation referred to at paragraph 30.5.4, submit to the Minister a request for the necessary funds for a given period to be determined from time to time by the Board and the Minister

shall transfer to the Board within thirty (30) days of the receipt of such request the necessary funds to cover the costs of the program including administrative costs for such period.

30.5.6 On or before August 31 of each year, the Board shall transfer to the local administrator amounts determined from time to time by the Board sufficient to cover the special payments referred to at paragraph 30.5.9 provided that the amount available to each local administrator is at least equal to 25% of the total amount paid to beneficiary units in his community in the preceding year.

30.5.7 All funds transferred by the Board to the respective local administrator shall be held by such local administrator in segregated trust accounts for the specific purpose of payments to heads of beneficiary units in accordance with the provisions of this Section and administration costs incurred by the said local administrators in connection therewith.

30.5.8 The Board shall distribute payments to heads of beneficiary units through the office of the local administrator in accordance with the following provisions:

a) heads of beneficiary units shall receive four (4) payments annually on or about September 1, January 2, and April 1 and within fifteen days of the date of filing of his benefits form save as otherwise provided herein;

b) the payments on or about September 1, January 2 and April 1 referred to in a) shall each consist of an amount equal to one quarter (¼) of the estimated total annual payment;

c) the payment within fifteen (15) days of the date of filing of the benefits form referred to in a) shall consists of an amount equal to the balance actually due to the beneficiary unit in accordance with the information contained in the said benefits form;

d) in the event of overpayment resulting from the payments referred to in a) the amount of such overpayment shall become due on September 1 of the year in which a benefits form must be filed;

e) a person who fails to remit to the Board the amount of overpayment referred to in d) shall not have the right to receive benefits under the program until such amount of overpayment is so remitted;

f) in the case of heads of beneficiary units who intend to be absent from the community beyond January 2, such persons shall receive on September 1 a payment equal to one half (½) of the amount estimated due to them for the current year.

30.5.9 Notwithstanding paragraph 30.5.8, the administrator may issue payments to heads of beneficiary units in the following cases:

a) a head of a beneficiary unit who intends to be absent from the community for a period of ten (10) consecutive days or more for the purpose of conducting harvesting and related activities and who has not received the special payment under sub-paragraph 30.5.8 f) for the said period shall be entitled to receive from the administrator an advance upon his next regular payment in the amount of $100.00 per eligible adult in the beneficiary unit;

b) in the event that a head of a beneficiary unit referred to in sub-paragraphs 30.5.8 a) or f) does not receive from the Board the payment due to him pursuant to sub-paragraphs 30.5.8 a) or f), the administrator may issue such payment from the funds held by him.

30.5.10 Every head of a beneficiary unit shall be required to provide the administrator with a benefits from with information for the year just ended and with estimated information for the year just commencing respecting the following:

a) information respecting his family necessary for the calculation referred to in paragraphs 30.3.2 and 30.3.3;

b) the amount of time spent conducting harvesting and related activities;

c) the amount of time spent in wage employment;

d) the revenue derived from such harvesting and related activities and such wage employment;

e) any pertinent information respecting other income referred to in paragraph 30.3.4.

30.5.11 The information and material referred to in paragraph 30.5.10 may be provided in the form appropriate to local circumstances, including in the form of diaries or affidavits.

30.5.12 The administrator shall collect such material and information and forward it to the Board.

30.5.13 Québec and the Board shall have the right to verify or audit all procedures, books and documents provided for in this Section and shall have the right to withhold or reclaim funds or adjust allocations of funds in the event of overpayment or abuse.

30.6 Establishment of Program

30.6.1 The Board shall meet no later than two (2) months following the date of the execution of the Agreement.

30.6.2 The Board shall forthwith establish the administrative costs of implementing the program and shall inform Québec of the required amounts. Québec shall transfer to the Board the required amounts.

30.6.3 The Board shall also forthwith establish enrollment and benefit procedures and criteria consistent with the provisions of this Section and communicate such procedures and criteria to the respective local administrators.

30.6.4 Each local Cree government shall forthwith propose a minimum of three (3) persons for the position of local administrator and the Board shall appoint such local administrators.

30.6.5 In the first year of operation of the program, the local administrators for each Cree community with the assistance and approval of their respective local governments shall prepare lists of persons in their respective communities who in their opinion should be eligible to benefit from the said program in accordance with paragraph 30 6.6.

30.6.6 Notwithstanding paragraph 30.2.2, every person shall be eligible to benefit in the first year of the operation of the program who is a head of a family or 18 years of age or over, and:

a) exercises harvesting activities as a way of life, or

b) intends to exercise such activities as a way of life.

30.6.7 The local administrators shall transmit to the Board the lists of eligible persons referred to in paragraph 30.6.5 no later than April 1, 1976. The Board shall decide upon such lists.

30.6.8 Every person whose name appears on the lists approved by the Board shall have the right to benefit under the program established by and in accordance with this Section during the first year of operation of the said program.

30.6.9 On the basis of the said lists, the Board shall require from Québec the funds necessary for the implementation of the program.

30.6.10 The program shall be deemed to come into effect on the execution of the Agreement. The first year of operation of the program shall be computed from July 1, 1976 to June 30, 1977. The payment due heads of beneficiary units on September 1, 1976 pursuant to paragraph 30.5.8 shall be aug-

mented for persons eligible under sub-paragraph 30.6.6 a) by a payment retroactive to the date of the execution of the Agreement unless in the opinion of the Minister a payment or payments to cover the amounts due to heads of beneficiary units computed retroactively to the date of the execution of the Agreement is feasible before September 1, 1976 in which case he may cause such payment or payments to be made.

30.6.11 For the period between the execution of the Agreement and July 1, 1976 the provisions of Sub-Sections 30.2 and 30.3 shall, where appropriate, be adjusted to take into account the number of days within such period.

30.7 Review

30.7.1 Québec and the Cree Regional Authority shall from time to time review the operation of the program, procedures and benefits established by and in accordance with this Section and may by mutual consent make any adjustments necessary for the proper functioning of or to give effect to the program, procedures and benefits provided for in this Section including more particularly the provisions of paragraphs 30.1.3, 30.1.8 and 30.1.9.

30.7.2

a) In the event that the basic guarantee for families without other income under any social aid, social assistance for Indians or Inuit, or guaranteed annual income program of general application existing in the Province of Québec is increased, the program shall be modified by the Board so as to assure that, on the basis of a family of two (2) adults, the present ratio between the basic guarantee under such programs and the basic guarantee under the program is maintained by increasing proportionally each of the amounts provided for at sub-paragraphs 30.2.2 a) and b).

b) If a guaranteed annual income program of general application is introduced which includes basic guarantees for persons with earned incomes distinct from basic guarantees for persons with no income, the program shall be modified by the Board so as to assure that on the basis of a family of two (2) adults, the basic guarantee under the program and such basic guarantee for persons with earned income under the guaranteed annual income program of general application are equal by increasing proportionally each of the amounts provided for at sub-paragraphs 30.3.2 a) and b). In no case shall such revision reduce the amounts provided for at sub-paragraphs 30.3.2 a) or b).

c) The provisions of sub-paragraph 30.7.2 a) shall apply unless the Board unanimously decides to apply the provisions of sub-paragraph 30.7.2 b) in which case sub-paragraph 30.7.2 a) and paragraph 30.7.5 shall not apply for such time as the guaranteed annual income program structure contemplated in sub-paragraph 30.7.2 b) exists.

30.7.3 In the event that the weighted average benefits per child under sub-paragraph 30.3.2 c) and under family and youth allowances due to families eligible under the program is less than equal to the weighted average benefits per child that would be due under the basic guarantee in virtue of any social aid, transfer payment or guaranteed annual income program in Québec and family and youth allowances to the same families if they were eligible under such programs, the program shall be modified by the Board by increasing the amount provided for at sub-paragraph 30.3.2 c) by the amount of the difference between the two (2) weighted averages.

30.7.4 Subject to paragraph 30.7.3, in the event that family allowances provided to citizens of Québec at the date of the execution of the Agreement are increased over and above the increase due to indexation, the dollar amount provided for at sub-paragraph 30.3.2 c) shall not be indexed by the Board pursuant to paragraph 30.3.6 until such time as the cumulative increase which would have resulted from the indexing of the amounts provided for at sub-paragraph 30.3.2 c) equals the amount indexed on the same basis, of such increase in family allowances.

30.7.5 In the event that any social aid, social assistance for Indians or Inuit or guaranteed income program of general application which exists in the Province of Québec is revised, including increases due to indexation, the program will be modified, in accordance with the provisions of paragraph 30.7.7, if the break-even point for a family of two adults in the program is less than the break-even point for the same family size in such program of general application in the Province of Québec. Such modification will never reduce the break-even point in the program.

30.7.6 In the event that any social aid program existing from time to time in the Province of Québec is modified or a guaranteed annual income program of general application is established or modified, the Board may request a review of the program if in its opinion it would have been more expensive for Québec, during any period of one (1) year running from July 1 to June 30, to enroll all beneficiaries of the program in such social aid program or such guaranteed income program of general application and in such case the program shall be modified in accordance with the provisions of paragraphs 30.7.7 and 30.7.9.

30.7.7 In the case of modifications to the program effected pursuant to and in accordance with paragraphs 30.7.5 and 30 7.6 Québec shall effect such modifications only after prior consultation with and upon recommendations of the Board. Such modifications to the program not contemplated by paragraphs 30.7.2 and 30.7.3 shall assure that the basic guarantee established by and in accordance with paragraph 30.3.2 for the program shall not be reduced and the reduction rate and the exemption established by and in accordance with paragraphs 30.3.5 and 30.3.4 for the program shall not be modified unless unanimously agreed to by the members of the Board provided that all members of the Board appointed by the Cree Native party were present and voted.

30.7.8 In the event that the benefits of any social aid or guaranteed annual income program of general application existing from time to time in the Province of Québec are indexed to an index other than the cost of living index in Québec, the program shall be adjusted by the Board to provide that such index is applied to the dollar amounts provided for at paragraph 30.3.2 and that the index applied to other dollar amounts provided for in the program shall be comparable to the index applied to comparable benefits in such program of general application if same would result in a better maintenance of the relative benefits of the program over the years than would the index currently in use in the program.

30.7.9

a) Subject to the provisions of this Sub-Section in the event that any other guaranteed annual income, transfer payment, or income security programs of general application are established, or are significantly modified from time to time in the Province of Québec, whether such programs are established or funded by Canada or Québec, Québec and the Cree Regional Authority shall review the program and shall by mutual consent make any adjustments necessary to ensure the continued existence of the program and the maintenance of the purpose and principles of the program.

b) A lack of agreement between Québec and the Cree Regional Authority on a matter contemplated in sub-paragraph 30.7.9 a) shall not prejudice the rights of beneficiaries under the program including those set forth in paragraphs 30.1.3, 30.1.8 and 30.1.9 and failing such agreement the necessary adjustments shall be affected through binding arbitration in accordance with the laws of the Province of Québec and upon the basis of the principles set forth in this Section. For the purposes of such arbitration, Québec and the Cree Regional Authority shall each appoint one arbitrator. The arbitrators so appointed shall together appoint a third arbitrator.

30.8 Final Provisions

30.8.1 Subject to modification by the mutual consent of Québec and the Cree Regional Authority, the total number of remunerated man-days contemplated in sub-paragraph 30.3.3 a) in each year after the second year of the operation of the program shall not exceed one hundred and fifty thousand (150,000) man-days.

30.8.2 In the event that, at the commencement of the second and successive years of operation of the program, the Board determines that the estimated total man-days exceeds one hundred and fifty thousand (150,000)

man-days, it shall review the operation of the program and recommend appropriate measures to be implemented in succeeding years in order to give effect to the provisions of paragraph 30.8.1 or any modification pursuant thereto.

30.8.3 In the event that the Minister does not receive the recommendation referred to at paragraph 30.8.2 before December 31 of any given year or if he has cause to believe that such recommendations will not give proper effect to the provisions of paragraph 30.8.1 he may, after further consultation with the Board, effect such modifications as are necessary to give proper effect to the provisions of the said paragraph.

30.8.4 Notwithstanding any other Act, the Board may when appropriate obtain from any government department or body any information that it considers necessary respecting the benefits of any kind which such department or body has paid, is paying or would be authorized to pay to any person who receives or applies for benefits under the program.

30.8.5 Subject to the provisions of this Section the Minister may after consultation with the Board establish such further administrative procedures including requirements for verification of information and prescribe such penalties as may be necessary to give full force and effect to this Section.

30.9 Transitional Period

30.9.1 Québec and the Grand Council of the Crees (of Québec) or its nominee shall forthwith upon the execution of the Agreement take all reasonable measures to implement the provisions of this Section save that until the coming into force of the Agreement the Board shall have advisory functions only and shall not infringe upon the functions, powers or responsibilities of the Minister.

30.9.2 During the transitional period referred to in Section 2 of the Agreement, the provisions and criteria contained in the Social Aid Act (L.Q., 1969, c, 63 as amended) shall apply, provided that in the determination of eligibility during such transitional period the property exemption shall equal the sum of $25,000.00 exclusive of the value of the tools or equipment necessary for harvesting and related activities.

The provisions of this Section can only be amended with the consent of Québec and the interested Native party.

30.10 Legislation

30.10.1 Legislation enacted to give effect to the provisions of this Section may be amended from time to time by the National Assembly of Québec.

Section 30 Appendix 1

Definitions and Instructions for Calculation

1. "Harvesting activities" shall mean:
All activities involved in the exercise of the right to harvest as provided in Section 24 excluding commercial fishing.
2. "Activities related to harvesting" shall mean:
a) The women's activities associated with harvesting activities, and
b) Activities commonly practiced by those who also practice harvesting activities, including, inter alia:
1) making or repairing equipment used in hunting, fishing and trapping activity;
2) preparation of food supplies, clothing, habitations, materials, equipment and land improvements necessary for harvesting activities;
3) processing, transportation and marketing of the products of harvesting activities;
4) making of handicrafts from products of harvesting within the household;
5) remedial works, protection and enhancement of wildlife;
6) surveys or management of wildlife to assist harvesting activity;
7) transportation to and from bush camps and harvesting sites.
3. "Transfer payment programs" shall mean:
Family and youth allowances, government old age security pensions, veterans' pensions and allowances, social aid, mother's allowances, manpower training allowances, payments to the blind or disabled, guaranteed income supplement for the aged, social assistance for Indians or Inuit and other such programs as may exist from time to time.
4. "Time conducting harvesting and related activities" shall mean:
A number of days calculated as the total of:
a) the total number of days spent away from permanently occupied settlements conducting harvesting and related activities computed so as to include the number of days from each date of departure from such settlement to each date of return to such settlement, inclusive, and including single days a major portion of the daylight part of which was spent away from permanently occupied settlements conducting harvesting and related activities.
b) the number of days spent in such settlement and actually spent in the conduct of harvesting and related activities.
5. "Time spent in salary or wage employment" shall mean:
The number of days spent in work that is not a harvesting or related activity and for which the individual received salary or wage.
6. "Community improvement program" shall mean:
A project authorized by the local government designed to improve the living conditions in the community and funded by government programs or community funds.
7. "Beneficiary unit" shall mean:
A family or an unattached individual over 18 years of age.
8. "Family" shall mean:
Consorts, with or without a dependent child or an adult with one or more

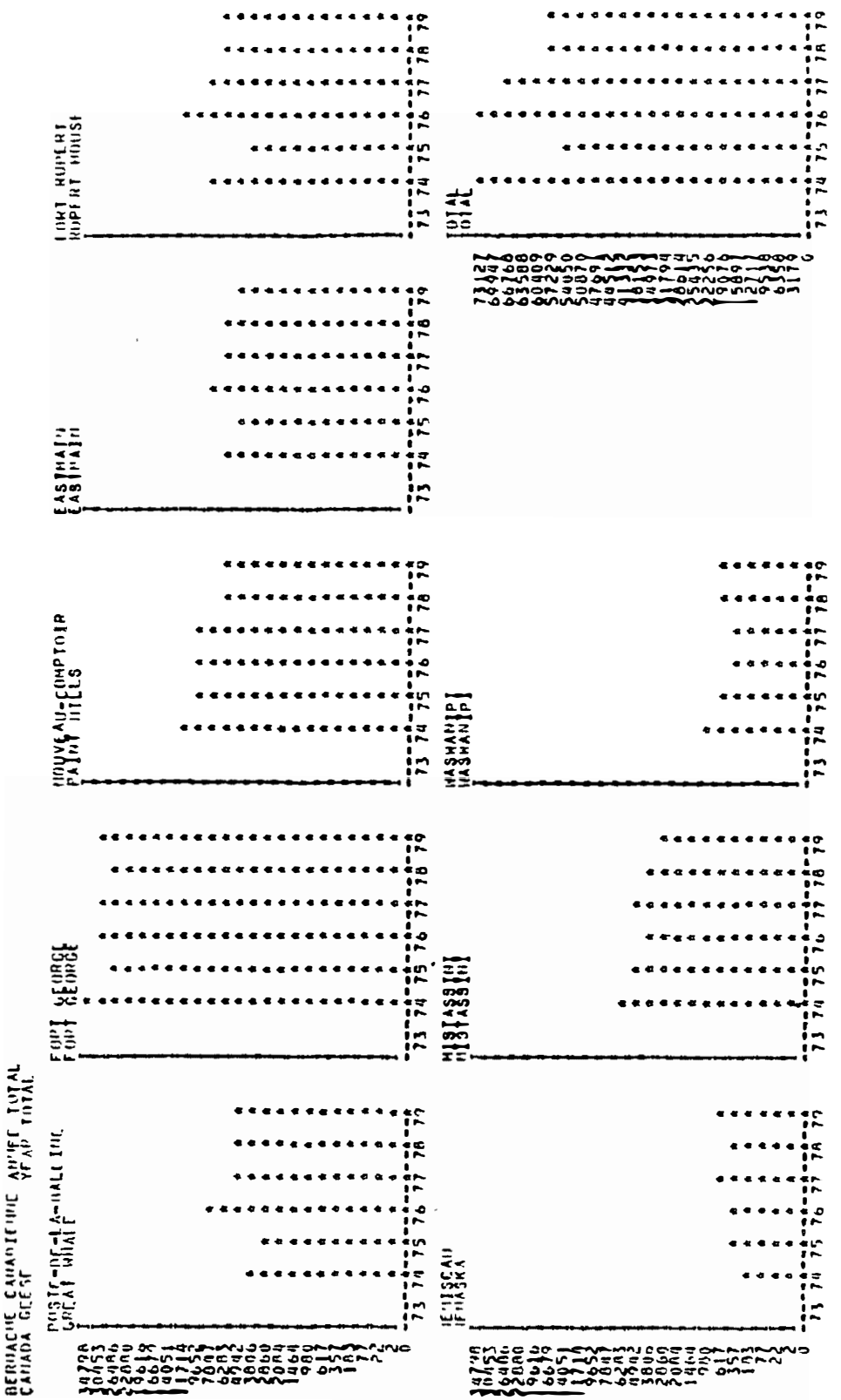
dependent children taking into account established Cree custom.
9. "Dependent child" shall mean:
An unmarried child, whatever his filiation and taking into account established Cree custom, who is less than eighteen (18) years of age, and depends for his support upon the head of family for the greater part of the year or while in the bush.
10. "Head of family" shall mean:
The member of a family who habitually is the chief provider for the needs of such family, taking into account established Cree custom.
11. "Consorts" shall mean:
A man and a woman who are married and generally cohabit, or who generally live together as husband and wife, taking into account Cree custom.
12. "Head of beneficiary unit" shall mean:
A head of family or an unattached individual.
13. "The basic guarantee under social aid" shall mean:
An amount equal to the benefits available to a beneficiary unit in receipt of social aid which has no other source of income.
14. "The basic guarantee under the program" shall mean:
The sum of the benefits provided to a beneficiary unit referred to in paragraph 30.3.2.
15. "The break-even point in the program" shall mean:
The minimum level of income which taking into account only the sum of the benefits provided for in paragraph 30.3.2 and the reduction rate provided for in paragraph 30.3.5 would leave a beneficiary unit in receipt of no such benefits.
16. "The break-even point under social aid" shall mean:
The minimum level of income which would make any beneficiary unit ineligible to receive social aid benefits.

Appendix 3

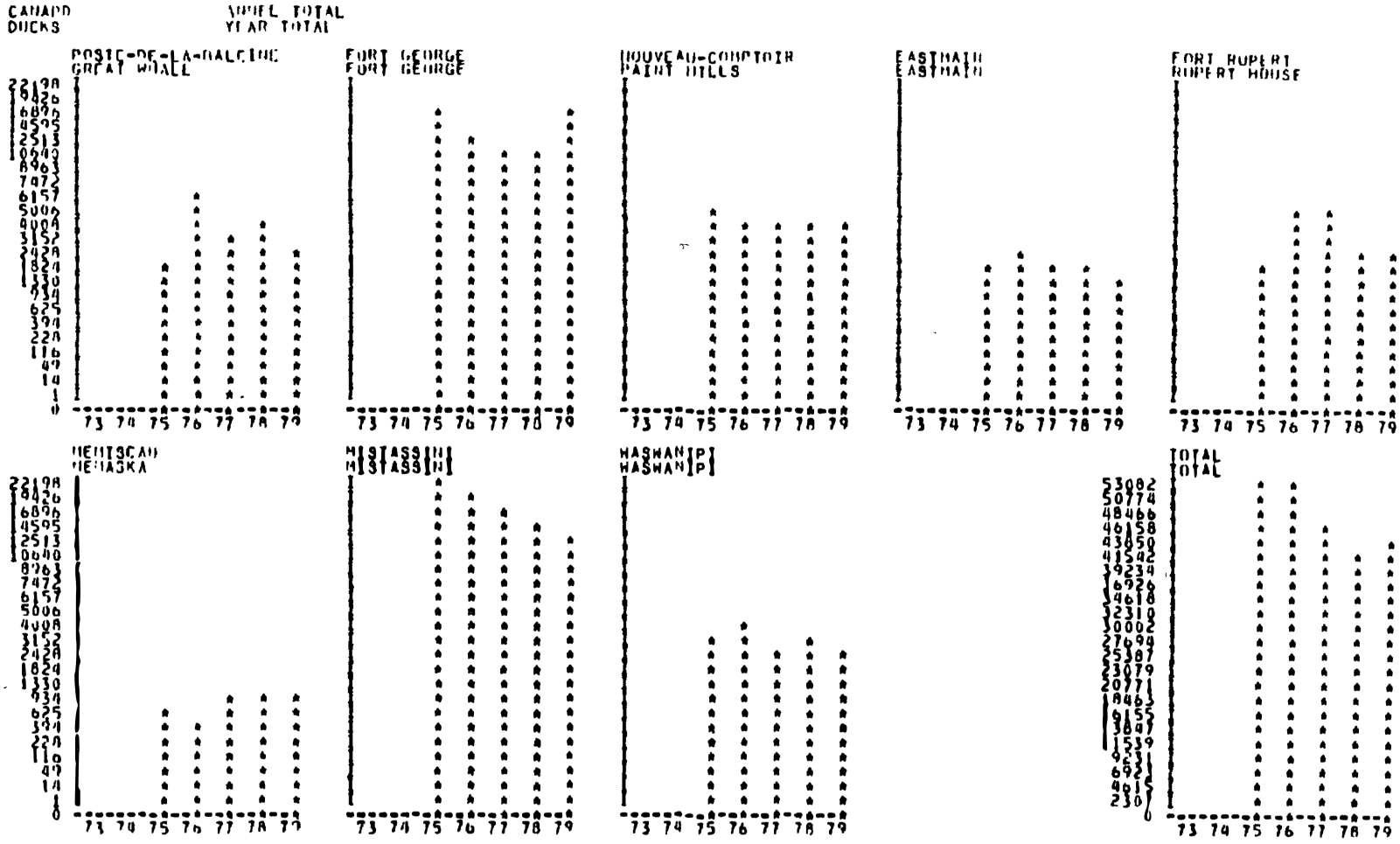
Statistical Analysis of Pre-ISP and Post-ISP Harvests

Notes:

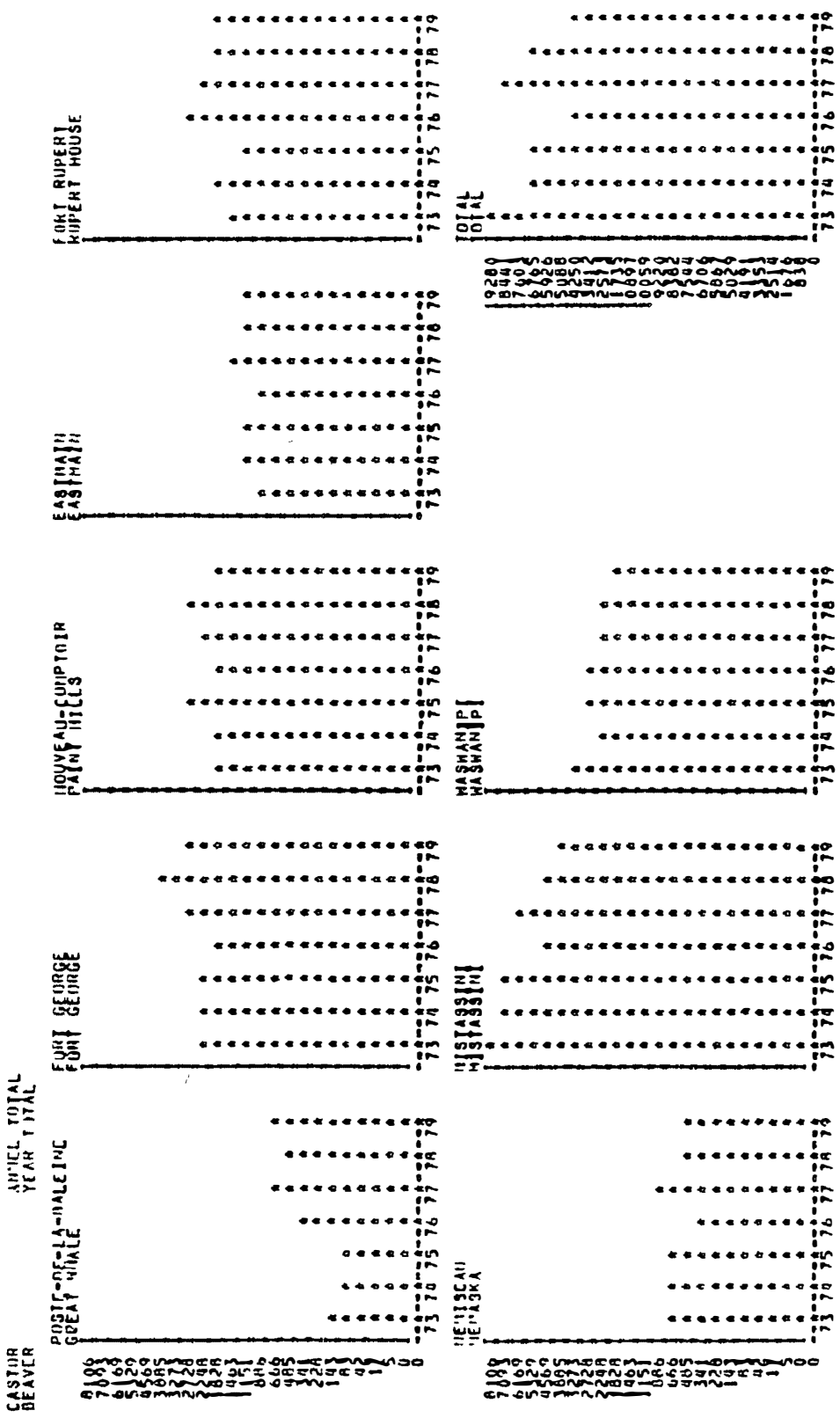
1. Harvest data and graphs from JBNQNHRC, 1982.
2. On the graphs the older names of Cree communities appear. The changes are: Great Whale = Whapmagoostui; Fort George = Chisasibi; Paint Hills = Wemindji; Rupert House = Waskaganish.
3. To have a uniform scale for community graphs a non-linear scale was adopted, the r-th root transformation where r = 3 (see JBNQNHRC, 1982).
4. If a community is not listed on the tables, data were not appropriate for analysis.
5. On the tables, NS = Not Significant.



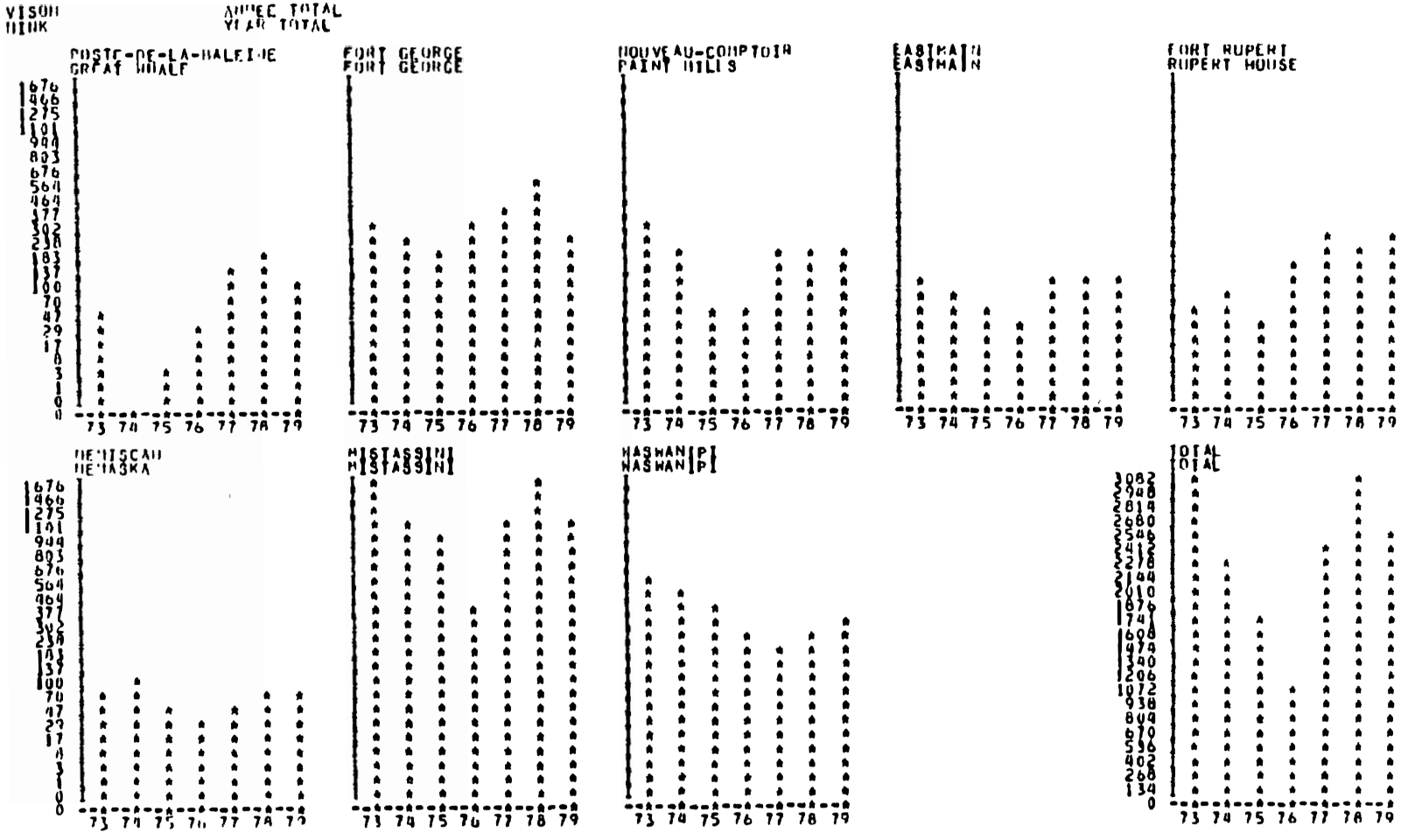
Graph A3-1: Yearly Harvest of Canada Geese for 1973-4 to 1978-9, by Community.



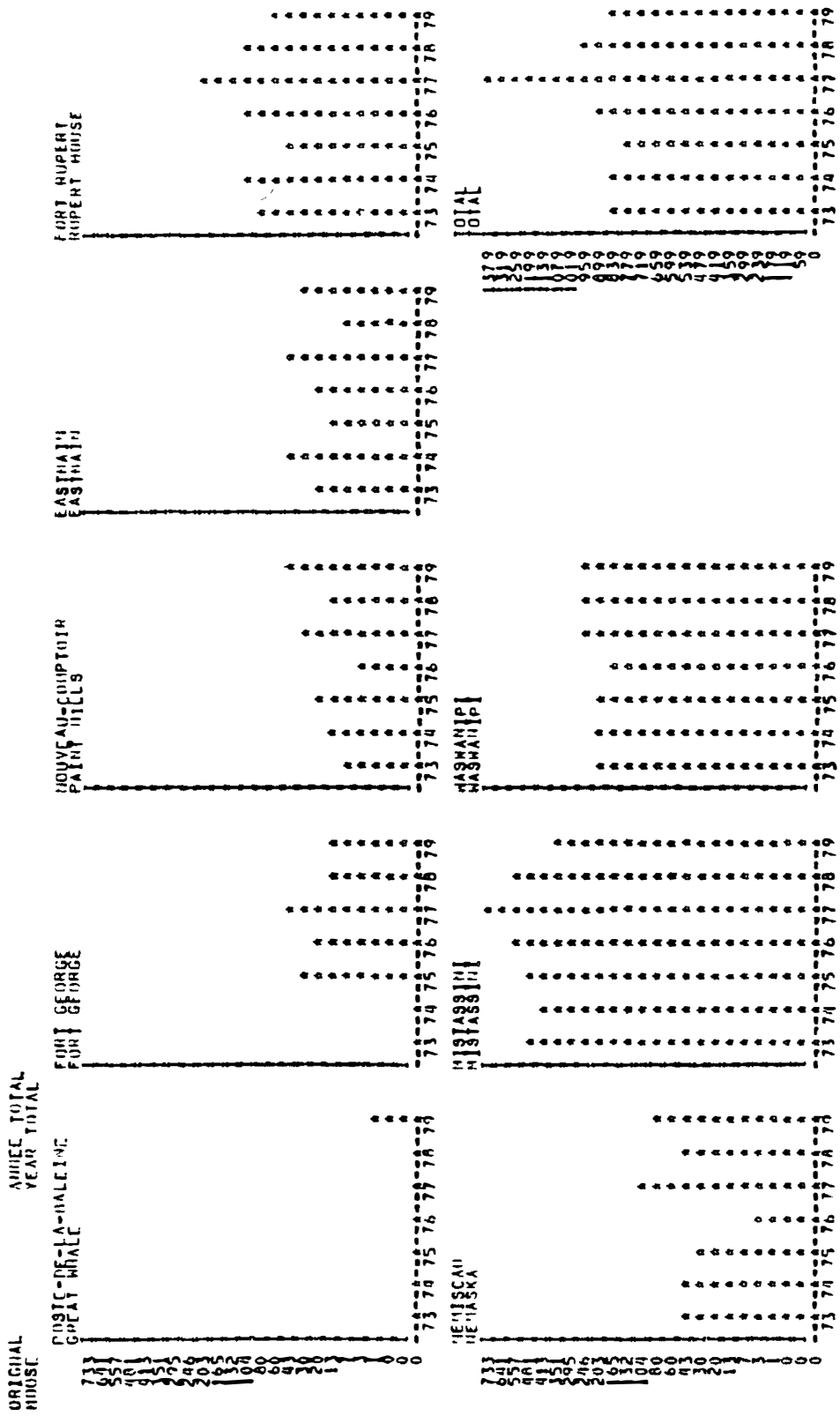
Graph A3-2: Yearly Harvest of Ducks for 1974-5 to 1978-9, by Community.



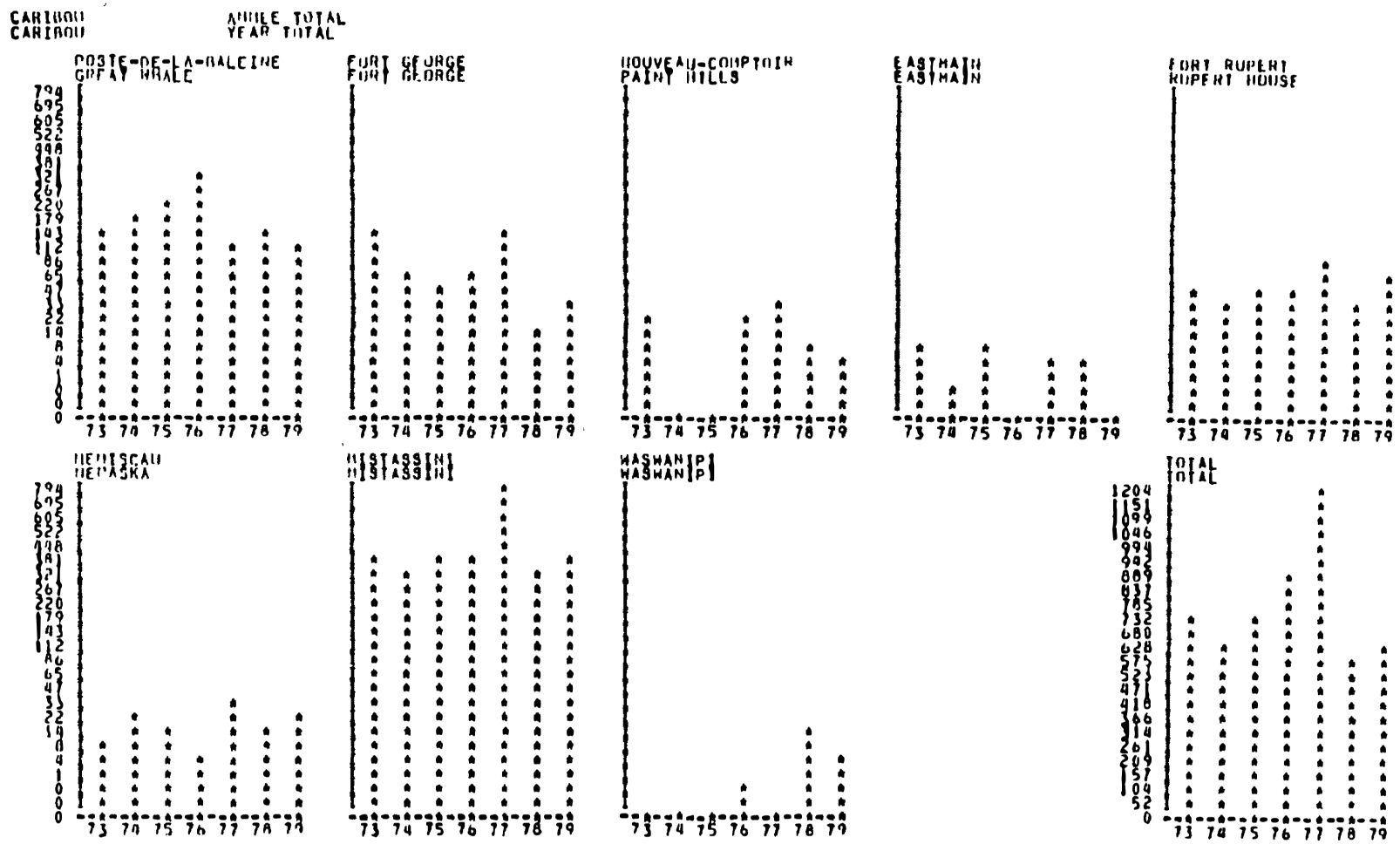
Graph A3-3: Yearly Harvest of Beaver for 1972-3 to 1978-9, by Community.



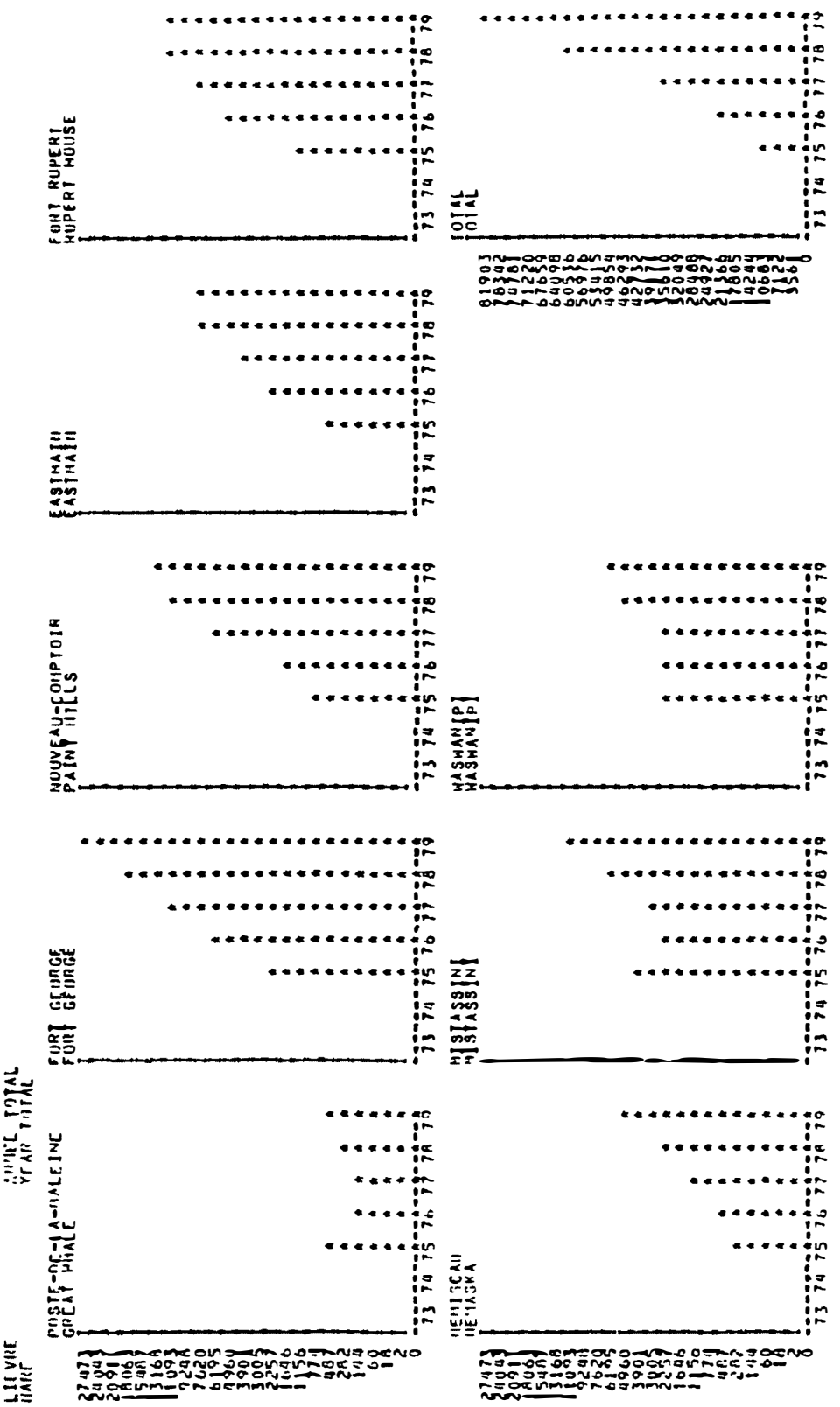
Graph A3-4: Yearly Harvest of Mink for 1972-3 to 1978-9, by Community.



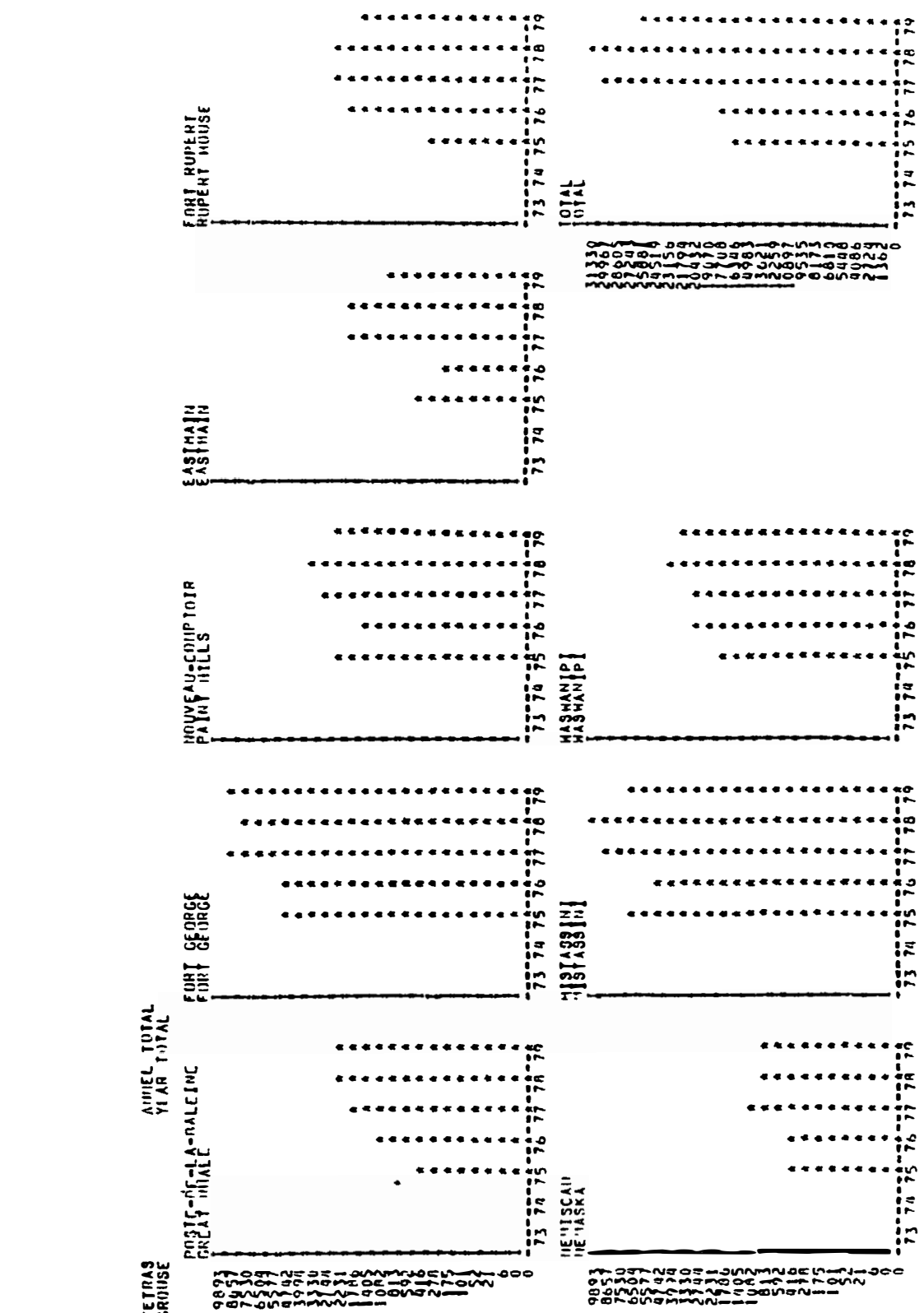
Graph A3-5: Yearly Harvest of Moose for 1972-3 to 1978-9, by Community.



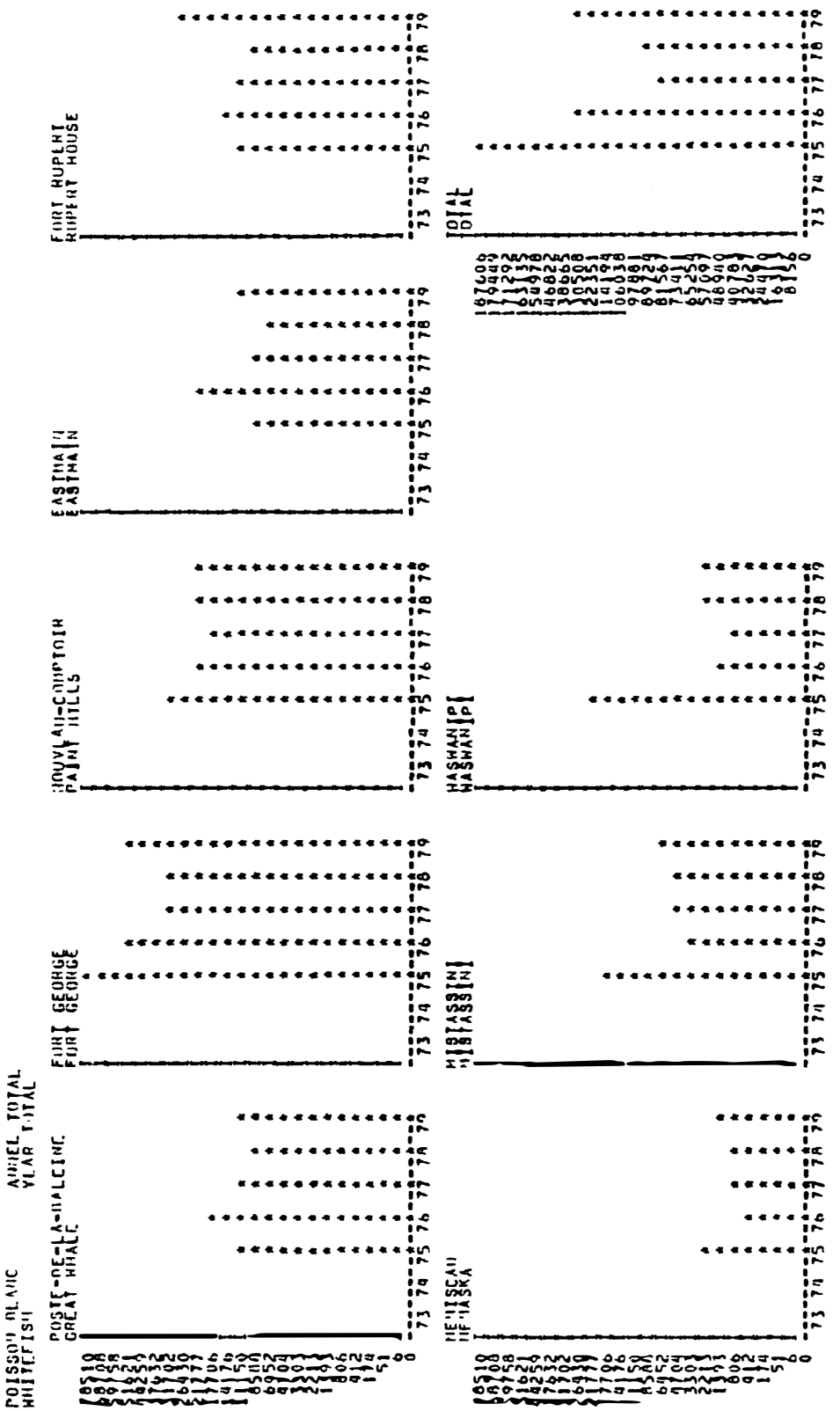
Graph A3-6: Yearly Harvest of Caribou for 1972-3 to 1978-9, by Community.



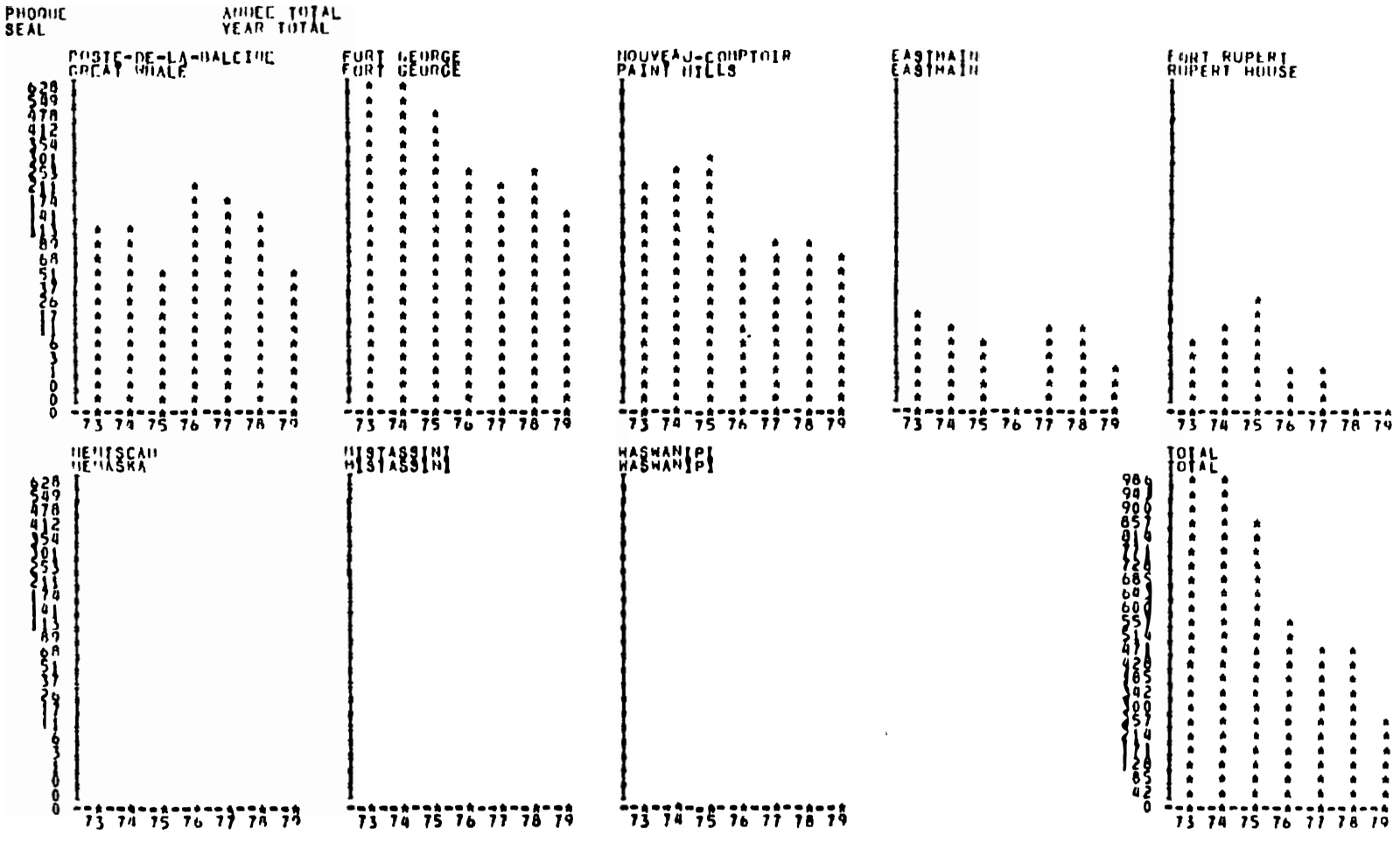
Graph A3-7: Yearly Harvest of Hare for 1974-5 to 1978-9, by Community.



Graph A3-8: Yearly Harvest of Grouse for 1974-5 to 1978-9, by Community.



Graph A3-9: Yearly Harvest of Whitefish for 1974-5 to 1978-9, by Community.



Graph A3-10: Yearly Harvest of Seal for 1972-3 to 1978-9, by Community.

Table A3-1: Statistical Comparison of Pre-ISP (1) and Post-ISP (2) Harvests of Can. Geese, 1973-4 to 1978-9.

Community	Period	Mean Harvest	Standard Deviation	No. of years	t-Test	Significant	F-Test	Significant
Whapmagoostui	1	4856	2226	3				
	2	5224	252	3				
					-0.29	NS		
							78.05	0.05
Chisasibi	1	30213	4560	3				
	2	29599	1208	3				
					0.23	NS		
							14.24	NS
Wemindji	1	10515	1545	3				
	2	7622	1850	3				
					2.08	NS		
							1.43	NS
Eastmain	1	6575	1806	3				
	2	5734	1098	3				
					0.69	NS		
							2.70	NS
Waskaganish	1	7810	4350	3				
	2	7207	1328	3				
					0.23	NS		
							10.72	NS
Nemaska	1	255	44	3				
	2	600	162	3				
					-3.56	0.05		
							13.45	NS
Mistassini	1	5212	1449	3				
	2	3704	1103	3				
					1.43	NS		
							1.72	NS
Waswanipi	1	699	355	3				
	2	444	114	3				
					1.18	NS		
							9.79	NS
All	1	66135	11398	3				
	2	60135	5020	3				
					0.83	NS		
							5.15	NS

Table A3-2: Statistical Comparison of Pre-ISP (1) and Post-ISP (2) Harvests of Ducks, 1974-5 to 1978-9.

Community	Period	Mean Harvest	Standard Deviation	No. of years	t-Test	Significant	F-Test	Significant
Whapmagoostui	1	3799	3099	2				
	2	3060	516	3				
					0.44	NS		
							36.06	0.05
Chisasibi	1	14286	2843	2				
	2	13197	3329	3				
					0.38	NS		
							1.37	NS
Wemindji	1	4602	903	2				
	2	4249	191	3				
					0.71	NS		
							22.30	0.05
Eastmain	1	2198	400	2				
	2	1701	411	3				
					1.34	NS		
							1.05	NS
Waskaganish	1	3377	1872	2				
	2	3285	1425	3				
					0.06	NS		
							1.73	NS
Nemaska	1	416	153	2				
	2	1003	87	3				
					-5.68	0.05		
							3.15	NS
Mistassini	1	20179	2855	2				
	2	15297	2196	3				
					2.20	NS		
							1.69	NS
Waswanipi	1	3672	600	2				
	2	2716	360	3				
					2.31	NS		
							2.77	NS
All	1	52528	783	2				
	2	44508	2081	3				
					5.00	0.05		
							7.05	NS

Table A3-3: Statistical Comparison of Pre-ISP (1) and Post-ISP (2) Harvests of Beaver, 1972-3 to 1978-9.

Community	Period	Mean Harvest	Standard Deviation	No. of years	t-Test	Significant	F-Test	Significant
Whapmagoostui	1	153	101	4				
	2	575	112	3				
					-5.24	0.05		
							1.23	NS
Chisasibi	1	2096	237	4				
	2	3119	628	3				
					-3.06	0.05		
							6.99	NS
Wemindji	1	2076	362	4				
	2	2205	495	3				
					-0.40	NS		
							1.87	NS
Eastmain	1	977	131	4				
	2	1208	141	3				
					-2.24	0.10		
							1.17	NS
Waskaganish	1	1795	639	4				
	2	1982	214	3				
					-0.48	NS		
							8.89	NS
Nemaska	1	572	191	4				
	2	611	153	3				
					-0.29	NS		
							1.56	NS
Mistassini	1	6489	1469	4				
	2	4623	1111	3				
					1.83	NS		
							1.75	NS
Waswanipi	1	2714	523	4				
	2	2132	312	3				
					1.69	NS		
							2.81	NS
All	1	16872	1922	4				
	2	16456	2232	3				
					0.27	NS		
							1.35	NS

Table A3-4: Statistical Comparison of Pre-ISP (1) and Post-ISP (2) Harvests of Mink, 1972-3 to 1978-9.

Community	Period	Mean Harvest	Standard Deviation	No. of years	t-Test	Significant	F-Test	Significant
Whapmagoostui	1	17	18	4				
	2	140	36	3				
					-6.06	0.05		
							3.75	NS
Chisasibi	1	239	66	4				
	2	386	129	3				
					-2.00	NS		
							3.91	NS
Wemindji	1	138	115	4				
	2	171	4	3				
					-0.48	NS		
							700.42	0.01
Eastmain	1	66	35	4				
	2	102	9	3				
					-1.72	NS		
							14.02	NS
Waskaganish	1	73	50	4				
	2	211	45	3				
					-3.75	0.05		
							1.29	NS
Nemaska	1	60	31	4				
	2	62	15	3				
					-0.12	NS		
							4.35	NS
Mistassini	1	1037	543	4				
	2	1319	274	3				
					-0.81	NS		
							3.93	NS
Waswanipi	1	414	144	4				
	2	254	73	3				
					1.73	NS		
							3.92	NS
All	1	2045	827	4				
	2	2646	381	3				
					-1.15	NS		
							4.71	NS

Table A3-5: Statistical Comparison of Pre-ISP (1) and Post-ISP (2) Harvests of Moose, 1972-3 to 1978-9.

Community	Period	Mean Harvest	Standard Deviation	No. of years	t-Test	Significant	F-Test	Significant
Chisasibi	1	12	14	4				
	2	23	14	3				
					-1.03	NS		
							1.06	NS
Wemindji	1	13	9	4				
	2	30	19	3				
					-1.68	NS		
							4.42	NS
Eastmain	1	23	11	4				
	2	27	17	3				
					-0.44	NS		
							2.13	NS
Waskaganish	1	83	24	4				
	2	120	73	3				
					-0.97	NS		
							9.16	NS
Nemaska	1	28	16	4				
	2	73	32	3				
					-2.48	0.10		
							3.99	NS
Mistassini	1	488	47	4				
	2	553	177	3				
					-0.72	NS		
							14.35	0.05
Waswanipi	1	191	8	4				
	2	237	9	3				
					-7.06	0.05		
							1.44	NS
All	1	837	37	4				
	2	1063	278	3				
					-1.67	NS		
							55.01	0.01

Table A3-6: Statistical Comparison of Pre-ISP (1) and Post-ISP (2) Harvests of Caribou, 1972-3 to 1978-9.

Community	Period	Mean Harvest	Standard Deviation	No. of years	t-Test	Significant	F-Test	Significant
Whapmagoostui	1	216	89	4				
	2	125	28	3				
					1.67	NS		
							10.01	NS
Chisasibi	1	82	46	4				
	2	63	67	3				
					0.45	NS		
							2.11	NS
Wemindji	1	10	12	4				
	2	16	15	3				
					-0.60	NS		
							1.66	NS
Eastmain	1	4	5	4				
	2	3	2	3				
					0.53	NS		
							4.05	NS
Waskaganish	1	42	10	4				
	2	64	24	3				
					-1.71	NS		
							6.38	NS
Nemaska	1	12	8	4				
	2	21	12	3				
					-1.29	NS		
							2.04	NS
Mistassini	1	374	41	4				
	2	505	252	3				
					-1.06	NS		
							37.40	0.01
Waswanipi	1	0	1	4				
	2	6	7	3				
					-1.81	NS		
							172.00	0.01
All	1	739	110	4				
	2	803	348	3				
					-0.35	NS		
							10.06	0.05

Table A3-7: Statistical Comparison of Pre-ISP (1) and Post-ISP (2) Harvests of Hare, 1974-5 to 1978-9.

Community	Period	Mean Harvest	Standard Deviation	No. of years	t-Test	Significant	F-Test	Significant
Whapmagoostui	1	345	202	2				
	2	263	165	3				
					0.50	NS		
							1.49	NS
Chisasibi	1	4276	2739	2				
	2	18877	8177	3				
					-2.33	NS		
							8.92	NS
Wemindji	1	1260	798	2				
	2	10278	3496	3				
					-3.42	0.05		
							19.18	NS
Eastmain	1	1335	1261	2				
	2	6523	2082	3				
					-3.07	0.10		
							2.72	NS
Waskaganish	1	2977	2483	2				
	2	9487	1749	3				
					-3.52	0.05		
							2.02	NS
Nemaska	1	346	106	2				
	2	2914	2179	3				
					-1.58	NS		
							421.92	0.05
Mistassini	1	2927	923	2				
	2	7064	4608	3				
					-1.19	NS		
							24.89	NS
Waswanipi	1	2160	40	2				
	2	4042	1910	3				
					-1.32	NS		
							2326.21	0.05
All	1	15627	6302	2				
	2	59447	23223	3				
					-2.49	0.10		
							13.58	NS

Table A3-8: Statistical Comparison of Pre-ISP (1) and Post-ISP (2) Harvests of Grouse, 1974-5 to 1978-9.

Community	Period	Mean Harvest	Standard Deviation	No. of years	t-Test	Significant	F-Test	Significant
Whapmagoostui	1	755	548	2				
	2	2144	207	3				
					-4.25	0.05		
							7.02	NS
Chisasibi	1	4646	407	2				
	2	8082	725	3				
					-5.91	0.05		
							3.18	NS
Wemindji	1	1796	294	2				
	2	2842	415	3				
					-3.02	0.10		
							1.99	NS
Eastmain	1	293	175	2				
	2	1430	628	3				
					-2.38	0.10		
							12.83	NS
Waskaganish	1	1048	1066	2				
	2	1898	472	3				
					-1.28	NS		
							5.10	NS
Nemaska	1	414	29	2				
	2	875	179	3				
					-3.45	0.05		
							37.93	NS
Mistassini	1	5771	933	2				
	2	8398	1988	3				
					-1.68	NS		
							4.54	NS
Waswanipi	1	2361	523	2				
	2	3261	609	3				
					-1.70	NS		
							1.36	NS
All	1	17083	1112	2				
	2	28930	3106	3				
					-4.96	0.05		
							7.80	NS

Table A3-9: Statistical Comparison of Pre-ISP (1) and Post-ISP (2) Harvests of Whitefish, 1974-5 to 1978-9.

Community	Period	Mean Harvest	Standard Deviation	No. of years	t-Test	Significant	F-Test	Significant
Whapmagoostui	1	14345	3361	2				
	2	10072	841	3				
					2.27	NS		
							15.98	NS
Chisasibi	1	65350	18611	2				
	2	37779	12580	3				
					2.03	NS		
							2.19	NS
Wemindji	1	28944	7826	2				
	2	20599	3527	3				
					1.71	NS		
							4.92	NS
Eastmain	1	15118	8593	2				
	2	8743	2959	3				
					1.27	NS		
							8.43	NS
Waskaganish	1	12597	1441	2				
	2	14815	8749	3				
					-0.34	NS		
							36.86	NS
Nemaska	1	1319	1120	2				
	2	1018	269	3				
					0.48	NS		
							17.35	NS
Mistassini	1	10037	9786	2				
	2	5045	448	3				
					0.97	NS		
							477.36	0.01
Waswanipi	1	12202	15220	2				
	2	1914	837	3				
					1.28	NS		
							330.59	0.01
All	1	159910	39168	2				
	2	99984	27055	3				
					2.08	NS		
							2.10	NS

Table A3-10: Statistical Comparison of Pre-ISP (1) and Post-ISP (2) Harvests of Seals, 1972-3 to 1978-9.

Community	Period	Mean Harvest	Standard Deviation	No. of years	t-Test	Significant	F-Test	Significant
Whapmagoostui	1	126	70	4				
	2	118	63	3				
					0.15	NS		
							1.23	NS
Chisasibi	1	486	169	4				
	2	208	51	3				
					2.69	0.05		
							11.21	NS
Wemindji	1	204	96	4				
	2	81	11	3				
					2.15	0.10		
							74.88	0.05
Eastmain	1	9	7	4				
	2	9	6	3				
					0.06	NS		
							1.53	NS
Waskaganish	1	12	9	4				
	2	0	1	3				
					2.10	0.10		
							264.00	0.01
All	1	837	204	4				
	2	417	121	3				
					3.14	0.05		
							2.84	NS

Appendix 4

Estimated Harvests By ISP Hunters, 1975-6 to 1978-9

Notes:

1. From JBNQNHRC 1978, 1979, 1980, 1982.
2. Species abbreviations are: C. Geese - Canada Geese; S. Geese - Lesser Snow Geese; B. Bear - Black Bear; S. Trout - Speckled Trout; L. Trout - Lake Trout.
3. Separate projections for ISP hunters from Nemaska were not provided in NHR publications for 1975-6 and 1976-7.
4. Polar bear harvests, three in 1975-6 and two in 1976-7 and one in 1977-8, are not included because harvests by ISP hunters could not be separated from harvests by non-ISP hunters.

Table A4.1 ISP Harvest Estimates, by Community and Year, 1975-6 to 1978-9.

Communities	Year	C.Geese	Ducks	Beaver	Mink	Moose	Caribou
Mistassini	75-6	2,523	10,126	4,120	282	482	383
	76-7	4,291	14,668	6,087	1,099	771	765
	77-8	2,514	10,828	4,182	1,510	505	313
	78-9	1,653	9,178	3,316	1,025	348	312
Chisasibi	75-6	14,949	5,701	1,396	205	16	43
	76-7	18,621	7,114	2,203	292	37	115
	77-8	16,847	7,118	2,009	371	7	2
	78-9	16,012	8,673	2,384	226	11	26
Waskaganish	75-6	9,664	3,449	2,723	127	105	56
	76-7	6,795	3,572	2,225	219	217	72
	77-8	3,645	1,396	1,632	146	79	34
	78-9	3,585	1,196	1,638	202	56	45
Waswanipi	75-6	303	2,861	2,012	177	137	1
	76-7	282	2,234	2,293	159	216	0
	77-8	429	2,548	1,928	219	218	13
	78-9	524	2,111	1,708	306	241	5
Wemindji	75-6	5,663	2,252	1,661	38	3	20
	76-7	7,242	3,128	2,164	150	27	24
	77-8	4,919	2,704	2,476	156	12	10
	78-9	4,841	2,887	1,517	143	50	5
Eastmain	75-6	4,030	1,469	675	22	17	0
	76-7	5,204	1,123	1,283	76	37	4
	77-8	4,521	1,353	1,208	91	9	2
	78-9	3,967	1,064	1,039	99	31	0
Whapmagoostui	75-6	2,284	3,721	243	11	0	261
	76-7	2,747	1,611	521	120	0	91
	77-8	2,167	1,516	351	116	0	95
	78-9	1,856	935	427	53	1	34
Nemaska	77-8	445	760	544	67	38	11
	78-9	320	600	450	69	44	7
All	75-6	42,677	29,579	12,830	862	760	764
	76-7	45,182	33,450	16,776	2,115	1,305	1,071
	77-8	35,487	28,223	14,330	2,676	868	480
	78-9	33,091	26,644	12,479	2,123	782	434

Table A4.1 ISP Harvest

Communities	Year	Hare	Grouse	Whitefish	Seals	S. Geese	Brant	Loon
Mistassini	75-6	2,106	3,629	2,547	0	45	91	443
	76-7	3,085	8,410	4,153	0	14	30	421
	77-8	5,710	8,262	4,585	0	4	1	232
	78-9	11,190	5,086	4,909	0	20	0	253
Chisasibi	75-6	3,371	2,607	31,113	139	2,246	2,588	596
	76-7	7,248	5,670	24,034	162	1,873	1,957	559
	77-8	10,278	3,625	22,377	229	1,118	1,788	1,360
	78-9	16,982	5,521	37,238	82	2,906	1,633	870
Waskaganish	75-6	4,195	1,499	8,682	2	10,556	204	41
	76-7	7,093	2,126	8,754	1	6,113	69	15
	77-8	8,368	1,409	7,289	0	5,799	56	22
	78-9	8,014	819	19,612	0	3,733	9	14
Waswanipi	75-6	1,453	1,926	846	0	7	151	116
	76-7	1,796	2,226	965	0	15	6	34
	77-8	3,817	3,252	2,008	0	0	0	95
	78-9	4,950	2,712	1,323	0	0	0	45
Wemindji	75-6	1,440	1,162	12,336	40	603	1,041	596
	76-7	5,405	2,655	12,049	67	545	683	434
	77-8	9,663	2,519	18,139	65	331	648	1,188
	78-9	10,951	1,767	17,817	53	203	271	273
Eastmain	75-6	1,795	151	16,975	0	1,026	90	280
	76-7	3,609	1,546	7,284	5	321	6	39
	77-8	7,241	1,640	4,740	6	511	0	185
	78-9	6,429	626	11,536	2	197	0	6
Whapmagoostui	75-6	123	710	8,745	154	3,159	155	438
	76-7	91	1,262	7,575	102	371	21	230
	77-8	116	1,346	5,747	43	376	4	250
	78-9	250	1,097	6,675	16	198	1	129
Nemaska	77-8	2,127	783	936	0	60	0	44
	78-9	4,597	544	1,073	0	30	10	18
All	75-6	14,483	11,684	81,224	335	17,642	4,320	1,935
	76-7	28,327	23,895	64,814	337	9,252	2,772	1,732
	77-8	47,320	22,836	65,821	343	8,199	2,497	3,376
	78-9	63,363	18,172	100,183	153	7,287	1,924	1,608

Table A4.1 ISP Harvest

Communities	Year	Otter	Lynx	Muskrat	B. Bear	Porcupine	Ptarmigan	Pike
Mistassini	75-6	639	79	1,316	47	276	393	1,059
	76-7	772	128	2,014	82	248	2,227	1,949
	77-8	670	80	3,033	93	99	2,769	2,267
	78-9	408	103	3,266	52	69	6,167	2,252
Chisasibi	75-6	203	93	2,020	24	550	7,928	3,642
	76-7	219	110	4,636	21	250	10,983	2,472
	77-8	127	113	4,491	27	108	10,662	1,493
	78-9	127	232	4,289	23	77	28,488	3,227
Waskaganish	75-6	115	35	1,063	12	16	171	284
	76-7	116	46	988	35	5	46	865
	77-8	78	69	889	22	1	186	513
	78-9	61	104	1,195	59	2	2,835	758
Waswanipi	75-6	69	58	946	12	5	54	347
	76-7	89	11	1,281	9	3	17	295
	77-8	70	38	1,292	11	4	3	568
	78-9	66	44	1,219	10	18	92	795
Wemindji	75-6	82	11	730	10	125	613	1,153
	76-7	135	53	1,407	4	128	1,367	1,122
	77-8	119	59	1,440	13	68	1,912	1,060
	78-9	100	150	1,809	16	41	10,702	841
Eastmain	75-6	9	20	484	33	46	674	637
	76-7	57	52	600	15	46	370	542
	77-8	60	47	434	17	45	2,473	283
	78-9	32	160	423	29	12	7,574	164
Whapmagoostui	75-6	23	3	278	2	394	6,096	1,468
	76-7	40	4	702	8	101	8,610	472
	77-8	49	3	793	16	14	7,667	330
	78-9	41	1	371	10	12	8,409	896
Nemaska	77-8	43	30	303	20	6	117	334
	78-9	12	51	399	12	3	482	438
All	75-6	1,140	299	6,837	140	1,412	15,929	8,590
	76-7	1,428	404	11,628	174	781	23,620	7,717
	77-8	1,216	439	12,675	219	345	25,789	6,848
	78-9	847	845	12,971	211	234	64,749	9,371

Table A4.1 ISP Harvest

Communities	Year	S.Trout	L. Trout	Dore	Sturgeon	Sucker	Char	Burbot
Mistassini	75-6	349	1,173	878	184	1,698	0	920
	76-7	641	1,623	1,928	254	2,700	0	104
	77-8	861	2,503	2,686	454	4,303	0	308
	78-9	800	1,836	3,081	373	5,173	0	343
Chisasibi	75-6	11,575	3,180	1,367	550	12,503	441	1,679
	76-7	13,169	2,857	957	113	7,310	374	671
	77-8	9,196	1,862	369	290	4,477	205	572
	78-9	13,333	4,212	1,200	367	10,497	438	621
Waskaganish	75-6	698	0	593	119	1,774	0	105
	76-7	482	47	1,104	71	1,142	0	32
	77-8	280	188	870	235	1,243	0	14
	78-9	510	137	1,442	174	3,362	0	14
Waswanipi	75-6	40	59	580	402	315	0	57
	76-7	24	8	650	243	292	0	37
	77-8	165	165	894	389	1,172	0	22
	78-9	49	2	1,238	365	761	0	103
Wemindji	75-6	2,227	190	693	43	1,830	10	705
	76-7	1,990	486	375	50	783	0	71
	77-8	1,816	387	546	182	1,066	121	93
	78-9	1,384	131	432	172	1,078	0	124
Eastmain	75-6	1,631	235	94	7	149	0	322
	76-7	1,405	70	768	120	753	0	13
	77-8	1,116	114	118	75	549	0	8
	78-9	1,228	201	150	22	162	0	55
Whapmagoostui	75-6	4,840	3,205	0	1	4,463	181	404
	76-7	1,855	3,859	0	0	2,603	65	224
	77-8	881	2,348	0	0	1,486	71	132
	78-9	1,375	4,463	0	0	2,773	44	65
Nemaska	77-8	39	100	366	67	447	0	43
	78-9	47	67	589	99	820	0	12
All	75-6	21,360	8,042	4,205	1,306	22,732	632	4,192
	76-7	19,566	8,950	5,782	851	15,583	439	1,152
	77-8	14,354	7,667	5,849	1,692	14,743	397	1,192
	78-9	18,726	11,049	8,132	1,572	24,626	482	552