

A Wildlife-Based Tourism Development Strategy  
For Churchill, Manitoba.

by



Radene E. Pelesh

A Practicum Submitted in Partial Fulfillment  
of the Requirements for the Degree,  
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A WILDLIFE-BASED TOURISM DEVELOPMENT  
STRATEGY FOR CHURCHILL, MANITOBA

by

Radene E. Pelesh

A practicum submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements of the degree of Master of Natural Resources Management.

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## ABSTRACT

Churchill, Manitoba is a northern community with a shrinking economic base. In the past, Churchill was an active deep-sea port, military, satellite research, and airline base. Since 1963, the number of job opportunities and income from these sectors has declined leaving tourism as the primary economic stabilizer of the area.

Analysis of visitor surveys and entrepreneur interviews revealed that wildlife activities are the most important segment of Churchill's tourism industry. These activities are very seasonal in nature with polar bear watching in fall being most popular. There appears to be insufficient promotion of the industry and misleading information on the wildlife activities presently available in the area. Improvement of current wildlife opportunities (ie. greater accessibility) and the implementation of new activities are imperative if the present proportion of business attributed to tourism is to be maintained.

A wildlife-based tourism development strategy would enhance the tourist experience, thereby improving word-of-mouth advertising. Tourist activity must be compatible with the ecology of the area so that the long-term potential of tourism can be achieved.

Key aspects of the strategy include: i) creation of a Tourism Development Committee; ii) establishment of a "Tundra Information Booth"; iii) development of a "Northern Lights" ecology seminar

series; iv) provision of accurate advertising; v) enhancement of summer activities; vi) development of an "Ice Season"; vii) determination of the effects of tourism on beluga whales; viii) introduction of musk ox to the area; ix) establishment of "Churchill's Caribou Corral"; and x) examination of the possibilities of a "Tree Tops" type of tourist accommodation.

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## Chapter I

### INTRODUCTION

Until recently, Canada's North was considered an uninhabitable wasteland by most Canadians (Thomasson et al., 1979). With the discovery of hydro electric generating sites, oil and gold, as well as the identification of important wildlife breeding grounds in Canada's North, views of the region have changed dramatically. The Churchill area provides prime wildlife habitat for a great number of species including polar bears (Ursus maritimus), beluga whales (Delphinapterus leucas), and Ross' gulls (Rhodostethia rosea). Dacks (1981) stated that in the 1980's, Canadians no longer felt indifferent about the North. They were beginning to realize that the North can make economic, historic and environmental contributions to the rest of Canada.

#### 1.1 PROBLEM STATEMENT

In 1984, tourists<sup>1</sup> spent approximately \$639.4 million in Manitoba, (Winnipeg Free Press, 1984). In 1985 \$3.72 million was spent by tourists in Churchill (Marshall, 1986). The tourist industry in Churchill is growing rapidly (R. Bukowsky, pers. commun.). Bruemmer (1983) states that in 1982 the visitor total was about 8,000 and was increasing by 2,000 per year. Marshall (1986) puts the visitor total at

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<sup>1</sup> A tourist is any person visiting a region other than that in which he has his place of residence, for any reason other than following an occupation remunerated from within the region visited. (Murphy, 1983).

13,900 for 1985. This rate of visitation makes tourism a major contributor to the local economy of Churchill.

Wildlife is presumed to be the major draw to tourists who wish to visit the area. The majority of tourist activities are wildlife related and occur between May and October. These activities include birding, beluga whale and polar bear watching, as well as tundra tours. Some activities, caribou and ptarmigan hunting for example, go on during winter months (Kroeker, 1985).

Another question that should be asked is, "Can wildlife sustain an increase in tourist use?". It is beyond the scope of this study to determine the effects of increased tourism on each species in the area. This aspect has been left for future research.

## 1.2 OBJECTIVES

The main purpose of this study is to determine if the tourist industry can be made more beneficial to the community through increased use of wildlife. The specific objectives were:

- To identify the major components of Churchill's present economy, with specific reference to tourism.
- To determine the important species of wildlife for tourism at Churchill.
- To identify visitor and resident perceptions about the effects of tourism on the Churchill area.
- To examine if increased use could be made of the wildlife resource in future tourist development at Churchill.

- To recommend a wildlife-based tourism development strategy for Churchill, Manitoba.

### 1.3 GENERAL RESEARCH ASSUMPTIONS

- Tourism constitutes a major source of livelihood for Churchill's residents. During the summer or high tourist season, the resident population was approximately 1300 people (Webb, 1985). With the decline in tourist numbers in October and November, local businesses laid off personnel. These businesses included retailers that serve Churchill residents as well as owners of tourist-related businesses (Webb, 1985).
- Wildlife-related tourist activities benefit Churchill's economy. The tourist establishments of Churchill handled 13,900 visitors in 1985 (Marshall, 1986). Each tourist took part in one or more wildlife or historical tours, and souvenir shopping.
- The demand and subsequently the value of wildlife-related activities can be increased through intensified marketing. According to the 1982 Churchill Visitor Survey (Mager, 1982), 38% of the tourists had heard of Churchill through tourist advertising and only 5% of the 175 tourists surveyed had seen actual Churchill promotions. It is assumed that if more people see Churchill promotions more people will visit the area.

#### 1.4 LIMITATIONS

- Data from tourists were gathered through a voluntary questionnaire which was displayed by the transportation operators.
- This study did not include a detailed scientific report on each wildlife species present in the Churchill area.
- The economic activities in Churchill include the grain elevator, transportation, tourism, and government agencies but only wildlife related tourist activities were under study.
- The effects of increased tourism on environment and wildlife species were beyond the scope of this study.



Chapter II  
METHODOLOGY

2.1 VISITOR SURVEY

The survey (see Appendix A) was a voluntary questionnaire distributed to tourists who visited Churchill from August 15, 1985 to August 14, 1986. A total of 10,000 questionnaires and covering letters was distributed to VIA and PWA terminals in Churchill. The surveys were to be handed out and collected by personnel of both PWA Airlines and VIA Rail as visitors left Churchill. The collected surveys were then to be returned to the Natural Resources Institute for analysis. In addition 500 copies were given to hotel owners to place in rooms. Although a return rate of approximately 25% was desired, a minimum return of 100 surveys was required to meet the limits suggested by Costis (1972) and Snedecor and Cochran (1967).

Survey results were analyzed using the SPSS-X statistical package on the University of Manitoba AMDAHL computer system. Tables 7 to 16 were created by running frequencies on all variables of each survey question. The data shown in Tables 17 to 24 were the result of running cross-tabulations on the answers to questions 3,1,4,2 and 9 and then comparing them to the answers generated by question 7.

## 2.2 ENTREPRENEUR INTERVIEWS

Interviews were conducted with as many local entrepreneurs (hotel operators, shop owners and tour operators) who agreed to participate in the study. Interviews were completed between June 9 to 24, and October 16 to 24, 1986, using six informal questions (Appendix B). The format was time efficient, which was useful in arranging interviews. Entrepreneurs were able to spend 15 to 20 minutes to be interviewed rather than up to 1 hour.

## 2.3 "ON THE STREET" INTERVIEWS

A three question interview (Appendix B) was directed at random to local residents (not necessarily in the tourist industry). This pilot study was used to determine townspeople's insights on tourism as opposed to the tourist-related industry view. This questionnaire was developed during June 1986, and was intended to provide a base line example for future studies of resident views on tourism. It was also used on a few occasions during October 1986, but at that time, the six-question entrepreneur survey was modified to be used for people employed in all fields. This new entrepreneur interview reduced the use of the 'on the street' questionnaire, but the findings from those conducted were still important to the study.

#### 2.4 PERSONAL OBSERVATIONS

These observations were made during the two summer and fall field seasons. They included participation in organized tours and wildlife related activities. Observation of wildlife management techniques (eg. bear trapping, Ross' gull protection) were made. Views of wildlife managers about tourism uses and effects on wildlife (eg. bear baiting) were obtained. This information was necessary in order to interpret tourists and entrepreneurs views and recommendations.

Chapter III  
HISTORY OF CHURCHILL

3.1 INTRODUCTION

Churchill is a unique area owing to its easy accessibility and diversity of habitats (marine and terrestrial, as well as northern tundra and boreal forest). This geography accounts for the diversity of animal species found there (Mager, 1982). It is this diversity that made Churchill important first as a native hunting ground and now as a prime tourist attraction.

3.2 HISTORY

Churchill is located at the mouth of the Churchill River (latitude 58° 44" north and longitude 94° 04" west) (Lane and Chartier, 1983). The great diversity and abundance of wildlife (marine, terrestrial and avian) in the region have made this a natural hunting ground for native populations since prehistoric times.

Before 800 B.C. the Pre Dorset people inhabited the area. These people were forest and tundra dwellers who utilized the taiga as a hunting ground. They were replaced around 800 B.C. by the Dorset who evolved from the Pre Dorset culture. The major difference in the two societies is that the Dorset were more marine oriented, hunting seals and walrus to supplement caribou catches and living only in coastal areas (Thomasson et al., 1979).

The Thule people moved eastward from Alaska to replace the Dorset about 1000 A.D. Evidence of these people has been found in the Churchill area. It is from this culture that the modern Inuit have evolved (Thomasson et al., 1979). That these populations were all nomadic and returned seasonally to Churchill, indicates that the food supply of the area (the wildlife population) was important to these cultures.

The winter of 1619 was the first one in which Europeans inhabited the Churchill area. Jens Munck, a Norwegian explorer, and two crewmen were the only members of the expedition to survive (Lane and Chartier, 1983). The Hudson's Bay Company (HBC) established an outpost in 1717, to facilitate trade with the Dene, as well as increase trade with the Inuit and Cree people of the surrounding region (Thomasson et al., 1979). Construction of Fort Prince of Wales began in 1734. To this fort the natives brought wolf, fox, musk ox and other skins although the bulk of the trading was done at York Factory.

From Churchill there were extensive inland explorations by people such as Hearne, Franklin and Parry. When the HBC ceded its land to the Canadian government in 1869 the western coastal area of Hudson Bay lost importance in the historical development of Canada. However, construction of the Hudson Bay Railway changed that.

In 1910 the Hudson Bay Railway began a line which was originally to terminate at Port Nelson but, due to better natural harbour conditions, the line was rerouted to Churchill. The line was completed in 1929 and the first grain shipment out was in 1931 after the completion

of the grain elevators (Thomasson et al., 1979). From 1956-1985 the Port of Churchill averaged 573,000 tonnes of grain per year, with the largest movement occurring in 1977 with 755,200 tonnes. Since 1977 the annual amount of grain shipped through Churchill has decreased (Appendix C). Canada Grain Council (1981) feels, under optimal conditions with peak operating efficiency the port could handle 860 to 890,000 tonnes or 3% of the total Canadian grain export. Presently the utilization of this port is affected by both economic and physical factors including:

- domestic and international grain marketing considerations;
- relatively high marine cargo and hull insurance rates due to the short shipping season;
- the existing level of marine technology;
- a railway line to the port that is built in part over discontinuous permafrost which requires constant maintenance and precludes the use of the larger more efficient hopper cars.

(Canada Grains Council, 1981).

Further, savings to the Prairie producers due to the use of the port of Churchill are reduced by the costs of holding back grain stocks for the port, and the longer turnaround time of the boxcars (Canada Grain Council, 1981).

In the study "Port Churchill" done for Transport Canada and the Manitoba Department of Highways and Transportation by the IBI group in 1986, it was noted that the use of the port and rail line would be economically viable into the 1990s with the proper market conditions,

provided that 600,000 tonnes or more per year were moved through the port. This statement is based on the conclusion that

"grain exports to destinations served by Churchill are growing and are expected to continue to grow"

The port of Churchill once served to export grain, nickel, and sulphur. It also served successfully as a distribution centre for the Central Arctic Region via the Northern Transportation Company Ltd. (NTCL). This marine service was sold in late 1985 by the government of Canada to the Nunasi Corporation (IBI, 1986). Currently NTCL provides marine resupply from Churchill to six communities on northwestern Hudson Bay and there is a proposal to increase the area served by the corporation (IBI, 1986). Cargo is brought to Churchill by train and transferred by barge (Appendix C). Air resupply services are also carried out from Churchill by Keewatin Air, PWA, and Calm Air with some charter service by Nunasi Central Airlines (IBI, 1986),

During World War II Churchill was important as part of the North America-Great Britain aircraft ferry routes. Fort Churchill was established five miles from the town by the United States Army as a Strategic Air Command Base. It was later used as an Arctic training site by the Canadian Armed Forces. In 1957, a rocket research range was established within what is now the Cape Churchill Wildlife Management Area (Thomasson et al., 1979). At this time 1000 troops were being trained, with 443 military and 338 civilian personnel running the program. It was estimated that the population would reach 5,000 people. This was a boon for Churchill and due to this peak the town center built in 1972 was to accommodate this growth (Lane and Chartier, 1983).

Canadian military operations were cancelled in 1963, although the American forces continued to use the fort until the mid '70s. Since then the base has been under the direction of the National Research Council and used for atmospheric investigations (Thomasson et al., 1979) The last rockets were shipped to Sweden in June 1986, although satellites are still being tracked from the site (D. DeMeulles, pers. commun.). Part of the launch site is now the home of the Churchill Northern Studies Centre which serves the needs of the scientific community. There has recently been speculation that the Fort could be reopened as a satellite base for the airborne warning and control systems (AWACS) (Winnipeg Free Press, 1985) but this operation would not be as large as the original.

The most recent statistics on employment in Churchill indicate 19 industries employ about 750 people (Table 1). This includes full and part-time employees. The largest industry sectors in Churchill are Governmental (Federal, Provincial, Territorial and the LGD) (over 126 jobs), the Harbours Board (32 permanent + 110 seasonal jobs), and the transport industry (83 jobs).



TABLE 1

## Industries/Employers in Churchill, Manitoba.

Firm	Employees
Arctic Grain Ltd.	4
Calm Air International	65
Can Arctic Co-operative Federation	5
Canadian Ministry of Transport	40
Canadian National Railway	17
Churchill Health Centre	96
Churchill Lumber and Hardware	5
Churchill School District	42
Costa Cartage and Lumber	10
Government of the NWT	34
Health and Welfare Canada	12
Hudson Bay Department Store	22
Local Government District of Churchill	40
Manitoba Hydro	10
National Harbours Board	32 (+110 seasonal)
Pacific Western Airlines	3
Rand Expediting	5
S+M Supermarket	8
Others	190
<b>Total</b>	<b>750</b>

Source: Manitoba Department of Economic Development  
and Tourism. 1982.

Calm Air International, a large industry in Churchill within the transport sector, was incorporated in the early '80s and employed 65 people in 1982 (Manitoba Department of Economic Development and Tourism, 1982). The recent removal of this industry from Churchill has negated the temporary increase in the economic base caused by its creation. The firm cited high costs as the reason for basing its opera-

tions out of Thompson now (D. DeMeulles, pers. commun.). The airline still services the community.

Tourism, in Churchill, with the support of local business and the federal government, has become an important source of livelihood, especially since the closure of the National Defence Department facilities and the reduced use of the harbour (Winnipeg Free Press, 1981). Tourism now accounts for 40% of the local economy (Churchill Chamber of Commerce, no date). The tourist facilities in the area in 1986 include eight hotel/motels, six tour operators, restaurants, and gift shops (Kroeker, 1985) whereas in 1982 there were only five motels (Local Government District of Churchill, 1982). Jerry Storie, former Minister of Tourism for the province, sees tourism as the brightest spark in Churchill's economic development (Winnipeg Free Press, 1986). Tourism in the area is basically dependent on non-consumptive wildlife activities, such as sightseeing, and photography (of beluga whales, birds, and polar bears) which were by far the most popular tourist activities in 1982 (Mager, 1982).

The closure of the army base, the decreased use of the harbour and the removal of Calm Air International offices and employees have contributed to the slump period that the community has now entered. The present population of Churchill is approximately 1300 (Manitoba Dept. of Municipal Affairs, 1983). This is the same population size given in the community statistics by the Norman Regional Development Corporation in 1986. It would seem that the population has reached a stage of stability in the 80's which is lower than previous levels (Manitoba Department of Economic Development and Tourism, 1982). There is a

labour force of 865 with an unemployment rate of 15.6% or approximately 730 filled jobs in Churchill (Norman Regional Development Corporation, 1986).

It would seem that the opportunities for Churchill have come full circle back to the wildlife. The area became important first as a native hunting ground, and now residents feel that the future lies in wildlife tourism.

## Chapter IV

### WILDLIFE OF THE CHURCHILL AREA.

Churchill is one of the most accessible Arctic wildlife sanctuaries in the world, having year-round air and rail service. Churchill is unique in that its blend of tundra and taiga, as well as its salt and fresh water marshes serve to create niches which are exclusive to the Hudson Bay coast (Teillet, 1983). This highly specialized habitat supports several geographically different bird and mammal species. This mixture of landscapes and animals attracts thousands of visitors to the area every year and has led to the development of the Cape Churchill Wildlife Management Area (CCWMA) for public and industrial use.

The CCWMA was created in 1978 with several objectives (DNR, 1983). These were:

- to enhance the quality of life for all Manitobans by providing a diversity of wildlife-related outdoor recreational activities;
- to maintain present ecological diversity and promote restoration; and
- to provide economic benefits to Manitobans through use of the wildlife in the CCWMA.

The Community Wildlife Management Program was conducted between 1976 and 1981, to identify and develop opportunities for consumptive

and non-consumptive use of wildlife in Northern Manitoba in consultation with local people. It was known as the Wildlife Development Component and contained management programs for barren-ground caribou, woodland caribou, polar bear, the WMAs, the training of guides and the development of wildlife resources.

Each of the larger animal species in the Churchill area has been utilized by the human population. This usage has consisted of past and present subsistence hunting, trapping and now tourism. These species can be grouped as marine mammals, terrestrial mammals and upland game and migratory birds.

Churchill has a greater variety of wildlife species than the surrounding northern or southern areas. Among these species are those with great tourist viewing potential - polar bears, breeding birds, beluga whales and caribou. Other wildlife of the area - fur-bearers, ungulates, marine mammals, and carnivores have indirectly become important to the tourist industry.

#### 4.1 SPECIES IMPORTANT TO TOURISM

The prime tourist season in Churchill runs from June to mid-November. This season is further divided into three sub-seasons; June to early July is primarily for bird watching with as many as 200 different species present; July to September is the season for beluga whales as well as general and historic sightseeing; and October to mid-November is the best time to see polar bears as they make their way to Hudson Bay to await the ice. Polar bears have made the fall season the

most economically important. The spring season is the next most prominent season as birdwatchers from around the world come to view nesting behaviour of breeding birds. The summer season is the longest and draws the most visitors.

#### 4.1.1 Polar Bears

The polar bear is the largest of the arctic carnivores. The body shape of this animal is quite different from that of the average bear, being more streamlined and longer. The coat is creamy white in the winter and yellowish during the summer. The range of the polar bear is quite extensive. Evidence of this species has been found within two degrees of the north pole (Bruemmer, 1969) although it is the leading edge of the ice pack that they frequent in the winter (Nero, 1976). They summer in Cape Churchill and Cape Tatnum Wildlife Management Areas with some sightings occurring to the south near Moosonee, Ontario and Hannah Bay both at the southern tip of James Bay (Jonkel et al., 1979). Polar bears live on ice floes hunting seals, coming ashore only when the ice melts. During the summer when food is scarce the bears may dig pits in sand ridges or eskers and doze, utilizing very little energy. When the ice reforms in the fall the bears move out to sea to hunt (Nero, 1976). The occasional walrus or killer whale may attack a polar bear, but their major enemy is man (Banfield, 1974). Aggressive overhunting had so drastically reduced the population by 1965 that the Arctic Countries, Canada, Denmark, Norway, United States, and the USSR incorporated protective measures (Nero, 1976). In Canada white residents are no longer allowed to hunt polar bears

independently and there are major restrictions on the native harvest (Stirling et al., 1977). At present there is no hunting allowed in Manitoba although there is some interest in creating a sport hunting market to bring much needed revenue into the Churchill area. The present population in Manitoba is estimated at 1,000 animals (DNR, 1983).

#### 4.1.2 Birds

Both upland game birds and migratory birds are found in the Churchill region. These birds offer hunting and viewing opportunities in an area that is easily accessible. The coastal habitat around Churchill appears to be exceedingly important to bird production as over 200 species have been observed in the area (Thomasson et al., 1979). Lane and Chartier (1983) list 167 species that can be seen on a regular basis (refer to Appendix E for Scientific names).

The vegetation and geography of the land around Churchill varies and each unique area attracts different species. Hudson Bay itself attracts arctic terns, parasitic jaegers, scoters, red breasted mergansers and common goldeneyes after the thaw. The boulder strewn coastal mudflats which are visible at low tide are common feeding grounds for migrating shore birds. The shallow rivers which flow into La Perouse Bay provide deltas, which are necessary breeding sites for lesser snow geese, pintails, oldsquaws, common eiders and eagles. The wet regions of the tundra and pond margins are the most extensive habitat around Churchill and provide nesting for Canada geese and most of the shorebirds. Blackpoll and yellow warblers are common in the

tall willow scrub that is found along eskers, old beach ridges and tundra. The numerous tundra ponds are the nesting sites of Canada geese, arctic loons, whistling swans, and other waterfowl. Golden plovers, semipalmated plovers, horned larks, and other similar birds prefer the drier, less vegetated eskers and raised beach ridges. The boreal forest is essential for the survival of some species such as robins, rusty blackbirds, woodpeckers, blackpoll warblers, dowitchers, merlins and lesser yellowlegs. Red throated loons, scoters, and goldeneyes are river feeders, and are commonly found in the mouth of the Churchill River. Within the townsite, many common species such as house sparrows, starlings, swallows, gulls and crows are seen. Other species such as the willow ptarmigan do better away from human disturbance and are more commonly found in the Cape Churchill WMA. Many species sighted in the area are resting before continuing to breeding grounds further north. These species include red knots, snowy owls, and glaucous gulls (Cooke et al., 1975).

The Canada goose (Branta canadensis) is the most populous goose species in North America. Due to the geography of the country there are a great many subspecies (Godfrey, 1966), which vary in size and colour. All Canada geese have the distinctive black head and neck with a large white patch on each cheek. Canada geese start to arrive in Churchill in late April and early May. These birds form strong family ties and are very territorial and will only breed with birds from the same colony. A distinctive V-shaped flight pattern marks this species' migration.



The snow goose (Anser caerulescens) has two colour phases, white and blue. Birds of the white phase are mainly white but may have rust stains on the head, neck and underparts. The blue phase has a white head and neck (may also be rust stained) and grayish brown body. La Perouse Bay, just east of Churchill, is one of the major nesting grounds in Canada with upwards of 6,000 geese utilizing the area (Thomasson et al., 1979). The birds arrive in late May to early June.

There are two species of ptarmigan found in the Churchill region, willow (Lagopus mutus) and rock (Lagopus lagopus). Both species have the characteristic feathered toes and are similar in colouring. Male willow ptarmigan have more red on the neck and breast in the summer phase than male rock ptarmigan; during the winter stage male rock ptarmigan have a distinctive black stripe running through the eye which is never found in male willow ptarmigan. Female willow ptarmigan are larger and possess a heavier, broader beak. The plumage of both species varies with the season - white in winter and reddish-brown in the summer (Godfrey, 1966). Willow ptarmigan are year round residents of Churchill while rock ptarmigan only seem to frequent the area during the winter (Godfrey, 1966). Willow ptarmigan may make slight migrations but are mainly permanent residents of well-vegetated tundra and alpine regions. Rock ptarmigan prefer the higher drier areas of both the arctic and alpine habitats, although during migration both species may utilize the same feeding ground (Godfrey, 1966). Both species are important arctic game birds (Scott, 1974) and have been utilized by northern residents.

The other species of birds in the area are valuable to the present economy of the area as tourist attractions. Every year many visitors come to Churchill to view the great variety of birds. One of the most popular species is the Ross' gull.

Ross' gull is a very rare visitor to the Churchill area. It was first sighted in the area in the 1970's and first nested in 1980 (Canadian Wildlife Service, 1983). Due to its rarity to Canada, it has become a great tourist attraction for Churchill. The province created a special conservation area in 1982 to protect the vulnerable nesting habitat. The birds arrive in Churchill in mid June and start nesting by the end of the month. After the breeding season it is thought that the birds winter in the open waters of the north polar region (Canadian Wildlife Service, 1983). The distinctive feature of this bird is the wedge-shaped tail and the black collar around the neck (Godfrey, 1966). The coloration of the adults may range from rosy to white bodies with grey wing tips and blue grey wing lining.

#### 4.1.3 Beluga Whales

The belugas, or white whales, are frequent visitors to the Port of Churchill. The belugas are sociable creatures forming small groups of 2 or 3 or loose pods of 100 or more individuals. They are a migratory species, spending the summers in shallow bays and river mouths such as the Churchill River. The beluga is traditionally an important arctic resource. The skin is made into 'muktuk', an Inuit delicacy, as well as leather for boots, laces and umiaks (skin boats). The oil is used in lamps, margarine, and industry. The meat is good for human con-

sumption, but is mainly used as dog food and as feed for ranched furbearers. There was a commercial beluga processing plant in Churchill between 1949 and 1960, but now the hunting of these animals is restricted to the native population and live capture for zoos and aquariums (Banfield, 1974). Presently the major economic benefit from these whales stems from boat tours for visitors.

#### 4.1.4 Caribou

There are two subspecies of caribou which have inhabited the Churchill area in the past. The Barren-ground caribou (Rangifer tarandus groenlandicus) once migrated south from the Northwest Territories to the Churchill River to seek feed and shelter in the winter months (Soper, 1961), but have not recently been seen in the area in great numbers due to a reduction in the Kaminuriak herd size. The current herd size is estimated to be 38,000 (DNR, 1983). This decrease is mainly due to overhunting, with guns, by Inuit and white trappers to supply the traders and explorers. Presently the herd appears to be recovering. The other species is the woodland caribou (Rangifer tarandus caribou). It is found quite frequently in the upland coniferous forest of the Churchill area with a provincial population of 4,500 (DNR, 1983). There may be a hybrid population in the area but more biological data are required to validate this concept (Thomasson et al., 1979).

Caribou seem to be derived from the same ancestral species as the reindeer. They are well adapted to life in the arctic, with features such as a long, thick outer coat and large, rounded hooves and dew

claws for travelling over snow covered or boggy ground. The coat colour ranges from tawny brown to grayish white depending on the season (Wooding, 1982). Caribou have trouble coping with flying insects, especially the warble fly. Some animals are so infested with the larvae that their hides are useless for clothing or bedding (Wooding, 1982). Arctic caribou are gregarious, and are usually seen in bands of 10-50 individuals which combine to make up loose herds of 1000 or more animals. Each herd consists of different sex and age groups depending on the season. Some of these migration and rut herds may involve 10-50,000 animals. Some barren-ground caribou can migrate 1300 km between summer and winter ranges. Woodland caribou do not travel quite so far.

Caribou inhabit the arctic tundra, subarctic taiga and boreal coniferous forest where there is rich lichen growth. The main predators are man and wolves, although wolverines and lynx may also kill a few (Banfield, 1974). Before the arrival of Europeans, caribou was used extensively for human and dog food. The hide was used as clothing, bedding, boat covers and tents, with the sinews being used for sewing. Fat was burned for light and heat and the bones were used as needles, scrapers, fish hooks and a variety of weapons.

#### 4.2 FURBEARING SPECIES

All of the furbearing species in the Churchill area were essential in the establishment of Churchill as a trading post and later a permanent community. Presently some of the pelts of these animals are used in the souvenir trade. This category includes small mammals as well as carnivores.

#### 4.2.1 Small Mammals

The arctic hare (Lepus arcticus) is found north of the treeline. In Manitoba the population is limited due to the scarcity of suitable tundra environment which is found only along the coast from Churchill up to the Northwest Territories. It seems that the population's density increases with latitude, up to a certain carrying capacity. The coat of this mammal, a combination of two types of fur, a soft thick layer of underfur covered with an outer layer of long silky hairs (Wooding, 1982), allows it to survive in the most northerly climates. The arctic hare is an important part of the food chain and a source of food for native populations (Wooding, 1982).

The snowshoe hare (Lepus americanus) is a much studied species because of its population cycles. This hare is found throughout Canada, except for the most northerly portions of the arctic. During the peak of their cycle the females are capable of producing four litters a year. The cycles are caused by fluctuating food supplies and reproductive capacity. These hares are another important part of the arctic food chain.

The wolverine (Gulo gulo) is the largest member of the mustelidae or weasel family. They are capable of bringing down a bull moose in the winter. The wolverine's diet depends on what is available in each season but their main staple is carrion. Due to the wide range of food which may be spread over a great area these animals have large home ranges, and, as a result, this aspect of the animal contributes to its rare status. Excessive trapping and the decline in the wolf

population (main supplier of carrion) have reduced animal numbers (Savage and Savage, 1981). The current estimate of the population is 500 and increasing (DNR, 1982). The number of pelts on the market each year is not large, but the fur is so desirable that it commands a high price. Frost build-up on this fur caused by the breathing of the wearer can be brushed away thus leaving it dry and protective unlike other furs which become ice-covered as the breathing continues (Wooding, 1982).

Other furbearing species in the area include ermine (Mustela erminea richardsonii), marten (Martes americana), least weasel (Mustela nivalis rixosa), mink (Mustela vison lacustris), and muskrat (Ondatra zibethicus albus).

#### 4.2.2 Large Carnivores

Major carnivores of the arctic include polar bears, black bears (Ursus americanus), wolves (Canis lupus hudsonicus), red foxes (Vulpes vulpes regalis), arctic foxes (Alopex lagopus inuitus), and lynx (Lynx lynx canadensis).

Black bears appear in many colours throughout Canada (they are usually a cinnamon colour in the arctic regions). It is the most widespread of the bear species, ranging within all coniferous and deciduous forests of Canada. Recently the range of this animal has been extending northward. Bruemmer (1969) speaks of a number that were shot far north of the treeline at Nachvak Fiord, Labrador and Fort Chimo, Quebec. They are solitary animals. Black bears' only natural

enemies are man and polar bears. These animals are considered big game and hunting them is a popular sport. The provincial population is 25,000 (DNR, 1982) although there is not a large population in the Churchill area.

Another major arctic predator is the wolf. Wolves were found throughout Canada at one time, but now they are limited mainly to non-agricultural areas. An estimated 4,000 are found in Manitoba (DNR, 1982). The colours of the wolf range from white to black with shades of grey or cream. Wolves form close family packs, with an inherent social hierarchy. The dominant male is the strongest animal in the pack, and is followed by his mate, then young or senile adult males, other females, and the pups according to strength. The wolf occupies a home range which can be anywhere from 250 to 670 sq.km in size. The density of the population depends on the density of big game. Wolves will migrate with the game; arctic wolves have been known to follow caribou 800 or more kilometers from the tundra to the boreal forest. The main sources of food in the arctic are caribou, moose and musk oxen. They also eat small game such as rabbits, hares, lemmings, and fish. They are not as fast as their prey thus they have to out-wit it usually preying upon the less able individuals - the young, old, or sick. The wolf population is controlled naturally by starvation, disease, and low reproductive rates (Banfield, 1974).

Foxes are another carnivorous and furbearing animal of the arctic. There are two species present, each with varying colour types. These species are the arctic and red foxes.

The arctic fox inhabits the arctic tundra in the summer and the boreal forest during the winter months although has been known to follow polar bears out onto the ice. The summer coat is short and brownish while there are two types of the longer winter coats, white or blue black. The colour seems to depend on the feeding habits. The winter coats, short legs, and furred foot pads enable this animal to endure the harsh arctic winters (Wooding, 1982). Arctic foxes are basically solitary animals except during the breeding season when both parents look after the young. The population runs in a 3 to 5 year cycle with collapses occurring in years following lemming collapses. Wolves are the major predator of arctic foxes but polar bears and man are also capable of preying on them. The trapping of these animals for their winter pelts is still an important source of income for northerners (Wooding, 1982). At one time they were a source of food (Eltringham, 1984). There is an increasing population of 8,000 arctic foxes in Manitoba (DNR, 1982).

The red fox is similar to the arctic fox. The colour of the coat varies from a red body to a grayish brown body with a dark dorsal cross to black body hair with silver tips (commonly called cross and silver foxes). They prefer open habitats across Canada such as agricultural and tundra areas. These animals are only sociable during the mating and breeding seasons. The population of these foxes peaks every 8 to 10 years, currently in Manitoba the population is stable to increasing with 50,000 animals (DNR, 1983). The cyclic nature of the population is attributed to the foxes' dependence on snowshoe hares and lemmings (Savage and Savage, 1981). Red foxes themselves are preyed upon by wolves and lynx (Banfield, 1974).



The lynx is another large carnivore that frequents the Churchill area. These animals range within the dense boreal forest, but will make short trips to the tundra. During years of starvation they will travel deep into the tundra in search of food. Their only predators are wolves and man (Banfield, 1974). Lynx populations also fluctuate, with peaks occurring after snowshoe hares peak and collapses occurring after snowshoe hare collapses. These cycles usually occur every 10 years. In the province the lynx population is 6,000 and declining (DNR, 1983). Lynx have thick grey or buff coloured coats with indistinct spots and tufts of long dark hairs on the tips of the ears (Wooding, 1982). Lynx are solitary animals only forming brief associations during the breeding season. This species is also economically important because of its fur. However, over-trapping during the low end of the cycle can cause the population to fall below the recovery point (Savage and Savage, 1981).

#### 4.3 MARINE MAMMALS

The marine mammals of this region include three species of seal and beluga whales. All of these species were once essential to the survival of the native populations; however, at present the value of each species is variable.

There are three varieties of true seal found in the Churchill area. These are the harbour seal (Phoca vitulina), ringed seal (Phoca hispida), and the bearded seal (Erignathus barbatus). The best times for viewing seals in Churchill is during ice breakup in spring. The hunting season on these animals is year long.

The harbour seal is usually yellowish-gray with dark dorsal spots. These seals forage alone but are gregarious on land and may form herds of up to 500 individuals. They remain on the coast all year long with the largest congregations occurring at the mouths of rivers such as the Hayes, Nelson, Seal, and Churchill. They have also been found inhabiting fresh water lakes connected to Hudson Bay by these same rivers (Soper, 1961). Their major enemies in the Churchill area are man and walrus. The harbour seal has been traditionally used as a food source by the Inuit (Banfield, 1974), although presently it is of minor economic importance to the Canadian arctic (Davis et al., 1980).

The ringed seal is smaller than the harbour seal with a coat whose colour ranges from whitish to grey with creamy-edged, dark-centred stripes or spots. They are solitary animals which may form loose groups; however, they act independently. They prefer the solid ice cover of the polar region and are only infrequently found on shifting ice floes on open seas (Wooding, 1982). Their predators include polar bears, arctic foxes and man. This species was probably the most important for the original inhabitants of the area as it was used for food, fuel, summer clothing, lines and tents (Soper, 1961). The more isolated native communities still utilize this mammal to a great extent as a source of food, clothing and handicraft items as well as for a cash income (Davis et al., 1980). It is also believed that the polar bear depends on the ringed seal and, if this population were to decrease significantly, the polar bear population would be reduced as well (Wooding, 1982).

The bearded seal is the largest arctic seal. It has a grayish to brown body with unusually shaped flippers and a moustache composed of long regular vibrissae. Bearded seals are only found in small groups in shallow seas over continental shelves, living mainly on fields of drifting ice. Although these seals are less common than either the ring or harbour seals (Banfield, 1974) they are still used by the Inuit as a source of food and leather (Soper, 1961). The hide of these animals is more often used domestically for boot soles, dog traces, lashes, harpoon lines and kayaks, than it is for trading purposes (Davis et al., 1980).

#### 4.4 OTHER UNGULATES OF THE CHURCHILL AREA

The ungulates in the Churchill area are important as they once constituted the major food source of the native peoples. They are still utilized by the residents and there is some potential for a future consumptive tourist trade. There once were four species in the area: barren-ground caribou, woodland caribou, moose (Alces alces), and musk ox (Ovibos moschatus moschatus). Now only moose and woodland caribou are found at Churchill.

Moose are the largest member of the deer family. They also have a characteristic fur covered 'bell' which hangs from their throat (Wooding, 1982). These animals are found at a low density around Churchill, although in other areas of the province they are the main food-stuff of the native population. The population of this species is estimated to be 28,000 (DNR, 1983). The hide is valuable for items of clothing such as gloves, leggings and moccasins. Moose are solitary

creatures, only associating with others of their species during the breeding season. In areas of high food quality, their productivity increases and twins are common.

Musk ox were once found in the northern tundra regions of Manitoba (Spencer and Lensink, 1970), but were extirpated from the province at the turn of the century due to excessive hunting. Originally this species did not figure prominently in Inuit culture but the fur trade changed this. As the hides became valuable and as the natives had to travel across areas devoid of caribou to reach the trading post, musk ox became a dietary staple (Burch, 1977). Musk oxen differ from caribou in that they do not form large herds, nor do they perform major migrations (Hubert, 1974). The most common colour of the musk ox is dark brown with lighter coloured legs and hump area. Their coat which provides insulation to survive year round on the tundra, consists of two layers, a coarse outer layer of long hairs and a fine soft inner layer or qiviut (Gray, 1975).

Overhunting almost led to extinction of the species, but the government stepped in and banned hunting of the musk ox in 1917. Today it is still illegal to kill musk ox. There has recently been some interest in reintroducing the species to the Churchill area. This introduction could occur in two forms, farming or free ranging. Either way their presence in Churchill will increase the tourist value of the area. The local residents are very eager to have the animal in the area again (D. Jacobs, pers. commun.).

#### 4.5 VALUE OF WILDLIFE TO CHURCHILL

The animal species of Churchill have been important to the residents of the area in varying degrees since the area was first inhabited. Seal, whales, caribou and moose were originally used as food and clothing, but with the arrival of southern influences, these needs changed. When Fort Prince of Wales was established, the natives were turning to trapping as a livelihood. This increased dependence upon white-man's food and guns has reduced the population's need for the larger mammals but not totally eliminated their consumptive use. Dogs were replaced by machines, and skin garments were replaced by manufactured articles. The fur trapping industry utilized the animals of the region (hares, muskrat, wolverine), but the recent rise of animal rights and anti-trapping campaigns have significantly affected the industry throughout Canada. Trapping will continue to form some part of the future economy as it indirectly assists the tourist industry but the declining demand for fur and the restricted use of some species (polar bears and beluga whales) indicates that the most extensive future use of wildlife in the area may be for tourism. Churchill's wide variety of wildlife and easy accessibility make it a prime area for wildlife viewing.

Chapter V  
TOURISM IN CHURCHILL

5.1 THE TOURIST

While the wildlife is the major attraction of Churchill's tourism, the most important element of this tourism is the tourist himself. Without the individual's urge to get away there would be no need for the large transportation and accommodation industries nor jobs in the professional services.

The "traveller for pleasure" represents the largest and fastest growing sector of tourism. Better education is a factor in this phenomenon. This appears to be caused by heightened curiosity, which is a result of increased awareness and knowledge of exotic places. Larger incomes because of higher education also increases the motivation to travel.

The other type of tourist, the business person, was established before travelling for pleasure became popular. More than one half of all air passengers are travelling for business reasons (Van Harssel, 1982). It is these tourists more than any other that have caused the great increase in the accommodation sector. There is a great deal of tourism incidental to business trips due to Churchill's high concentration of government offices and research facilities.

## 5.2 TRANSPORTATION TO CHURCHILL

Transportation can take many forms. Aviation is one of the most popular forms of travel. It is fast and relatively inexpensive. In the summer PWA and Calm Air International offer daily weekday service. During the winter the service is cut back to three days a week. There are also a number of charter services offered (Nunasi-Central and Dymond Lake Air). The Churchill Airport runway was at one time the second largest in Canada but with the removal of the army base it has been shortened although it is still the largest in northern Canada (D. Webber, pers. commun.). In 1984 10,200 people arrived in Churchill by air (Marshall, 1986).

Before air passenger service, the railway was the dominant form of tourist transportation. Nowadays riding the rails in North America is not as popular as it once was. Churchill used to have VIA service daily but this has since been cut back to three times a week (arriving in Churchill on Tuesday, Thursday, and Saturday mornings and departing 12 hours later). The trip takes 32 hours and serves many communities in Northern Saskatchewan and Manitoba before terminating in Churchill. The train arrives in the early morning and departs in the evening, so that tourists can see Churchill without having to spend the night. Many individual tourists take advantage of this set up and some of the tour operators provide short tundra tours for these travellers. In the fall, VIA offers tours in which the passengers stay in Churchill for 2-3 days in order to take part in a Tundra Buggy Expedition as well as other local activities. In 1984, 7,300 people arrived in Churchill by train (Marshall, 1986).

Other modes of transport include passenger ships and buses, neither of which is directly important to Churchill's tourist industry. Bus-rail tours may indirectly supplement tourism in the area as the trip to Thompson from Winnipeg by bus is much shorter than by train and the passengers can then take the train to Churchill. This type of tour might be more popular if the train left Thompson in the morning and arrived in Churchill in the evening so that the passengers could see the transition from taiga to tundra. There is also a way-freight with a passenger car that makes this type of trip from Gillam to Churchill but is mostly used by residents of the area and has a very unreliable schedule. Another bonus of such a time schedule might be a stop in Gillam for a tour of the electricity generating dam at Kettle or Long-spruce rapids (L. Kowal, pers. commun.).

### 5.3 ACCOMMODATION OF CHURCHILL TOURISTS

In Churchill there are at present eight hotel/motels with over 116 rooms available. The majority of motels are open year round but the rooms are full throughout the fall season (Travel Manitoba, 1986).

Tourists want their vacation to be the best and most enjoyable trip possible. In order to achieve this goal, they utilize the services of travel experts. These people can arrange transportation and accommodation packages with more ease and less cost than the average traveler. In Churchill most of the visitors arrive with arrangements made in southern Canada and the USA. There is only one operator in Churchill (Churchill Wilderness Encounters) who organizes accommodations and



activities for groups (A. Chartier, pers. commun.), other operators work through agents in the South or take individual visitors off the train (R. Bukowsky, pers. commun.).

#### 5.4 VALUE OF TOURISM

The tourism industry is new to the Churchill area, and it appears that there is some need for educating the townspeople (many of whom are only summer residents) in ways to increase the benefits of tourism. There is also a need to monitor the wildlife populations of the area in order to ensure their future. At present there is a Land Resource Committee in Churchill to deal with these issues.

In Churchill, in 1985, tourism provided \$0.44 million as net business income, \$.17 million in local taxes, \$3.12 million in personal income and 252 jobs (Marshall, 1986).

Eltringham (1984) believes that the majority of tourists do not come to Canada strictly to see wildlife but enough have come to view Churchill's large concentration of birds, beluga and bears, to make it known worldwide.

Many of the problems associated with wildlife tourism have been avoided in Churchill. These problems have to do with conservation. In other wildlife areas, tours may disrupt the breeding and hunting of the species involved. There appears to be no problem in this area involving the polar bear as the denning ground of the females is too far south for intrusion by the large tour groups and in the summer these bears do not hunt rather they scrounge. There is constant com-

munication between all tour guides so that there is no congestion around any one bear. Thus reducing the disturbance to the animal. This also helps to retain the wilderness aspect of Churchill (R. Bukowsky, pers. commun.). There has not been a problem with the whales in the past due to very limited touring but as two new operators have started providing boat tours this summer, the impact on feeding and breeding behaviour remains to be seen. Extensive viewing of bird nests has in the past caused depredation and reproductive failure. These effects have since been reduced with protective measures.

The tundra itself is not at this time being damaged by the tours as the roads used were created by the army when the base was under full operation (A. Webb, pers. commun.). Off road tours to find bears are not permitted until the tundra is frozen which coincides with peak bear sightings (R. Bukowsky, pers. commun.). Trails that are no longer being used are slowly being revegetated but with new species of plant (A. Webb, pers. commun.), which may or may not be beneficial to the animals in the area (Eltringham, 1984).

Unlike Kenya and Australia, the tourist season in Churchill is short, limited to the warmer months of June to November. This season can be further divided into four subseasons according to the species present in the Churchill area at these times. Thus there is no prolonged yearlong overuse of each species or habitat around Churchill. Although intense exploitation during the short seasons may be detrimental to species and environment.

## 5.5 ACTIVITIES AVAILABLE IN CHURCHILL

The attractions of the Churchill area range from wildlife and scenery to history and festivals. Churchill wildlife have already been discussed in the previous chapter. There is also a large fishery resource available for tourists who wish to try the northern species of arctic char (Salvelinus alpinus) and grayling (Thymallus arcticus) in the right seasons. The variety of scenery is also spectacular. There are rugged shorelines, tidal marshes, sedge marshes, tundra, low scrub forests, and boreal forests.

The history of Churchill has been long and varied, as suggested in Chapter III. Much of this history is available to the tourist through presentations and tours. Attractions include the Eskimo Museum, Fort Prince of Wales, Sloop's Cove, Button Bay, Cape Merry, Parks Canada Pavilion, Canadian National Station, Harbours Board, the wreck of the M.V. Ithica, Rocket Range, Town Centre, Boreal Projects Ltd., and Northern Studies Centre.

There are a number of operators who offer tours to view wildlife, scenery, and historical sights. Three provide boating tours to see beluga and historic sights on the north side of the river. Two of these and four others conduct van or trekking tours in order to see the wildlife, scenery, and history on the south side of the river. The museum and Parks Canada provide presentations on the native and fur trade history of the area and tours can be arranged for the Harbours Board, Boreal Projects Ltd., and Northern Studies Centre.

Other activities in the area are the Aurora Snow Festival from mid to late April, and the annual "Dip in the Bay" on July 1st. These are primarily for the residents but may be expanded to include tourists.

#### 5.6 ECONOMIC IMPACTS OF TOURISM

Tourism is seen as a natural bridge between international relations and domestic affairs. Tourism can help both the industrial and undeveloped communities, by providing a meaningful experience for tourists and creating income and independence for the developing communities. The importance of tourism has been emphasized as a generator and diversifier of economic activity. Tourism is labour intensive, it creates jobs, and provides an increasing purchasing power. Planning seems to be the key factor of a successful tourist industry (Hiller, 1976).

Marshall (1986) reports that the average tourist spends approximately \$300 during his/her stay in Churchill. This is a generalization as many of the summer visitors arrive by train in the morning, take a tour, buy some souvenirs, and leave on the evening train, while the spring and fall visitors stay, on average, up to a week requiring accommodations (R. Bukowsky pers. commun.).

In Churchill the economic impacts of tourism are shown in the following tables (Marshall, 1985). In this study, businessmen were separated from tourists, (Table 2) which may not be a true representation of the real situation, and visitor spending may be greater than depicted in Table 3. Marshall (1986) states that business tourists

spend far less than the average tourist but personnel from the Manitoba Department of Business Development and Tourism believe that the two figures are much closer together. The use of visitor dollars by responding is shown in Table 4 with the direct and indirect impacts of these dollars shown in Tables 5 and 6.

TABLE 2  
Average Visitor Expenditures in Churchill, in 1985.

	Tourists	Business Travellers
Accommodations	\$ 80	130
Meals	65	110
Gifts and Other goods	80	-
Local Transportation, Recreation, and Entertainment	75	
Average Expenditure per Visitor	\$300	\$310

Source: Marshall, 1986.

TABLE 3

Total Visitor Spending in Churchill, in 1985.

	Tourists ( '000\$)	Business Travellers
Accommodation	624	579
Meals	507	490
Local Transportation		
Recreation and Other	585	311
Sub-total	1,716	1,380
Gifts	624	-
Total	2,340	1,380

Source: Marshall, 1986.

TABLE 4

Responding of the Visitors Dollars by Businesses in Churchill in 1984

	Direct Wages	Local Taxes	Net Business Incomes	Local Services	Imported Services Materials	Total
<b>TOURISTS</b>						
All Business except shops						
%	40	1	10	13	36	100%
'000\$	686	17	172	223	618	1,716,000
Shops						
%	17	1	10	36	36	100%
'000\$	106	6	62	225	225	624,000
<b>BUSINESS TRAVELLERS</b>						
%	40	1	10	13	36	100%
'000\$	552	14	138	179	497	1,380,000

Source: Marshall, 1986.

TABLE 5

Direct Impacts of Visitor Spending in Churchill, in 1984

	Jobs	Wages ('000\$)	Local Taxes ('000\$)	Business Income ('000\$)	Total ('000\$)
TOURISTS					
All Business					
Except Shops	55	686	17	172	875
Shops	8	106	6	62	174
Sub-total	63	792	23	234	1,049
BUSINESS TRAVELLERS					
All Business	44	552	14	138	704
TOTAL	107	1,344	37	372	1,753

Source: Marshall, 1986.

TABLE 6

Indirect Impacts of Visitor Spending in Churchill, in 1984

	Jobs	Wages	Local Taxes	Business Income	Total
Allocation of Amount collected by local services from tourist businesses		46.0%	1.2%	11.5%	58.7%*
Responding of tourist dollars#	13	206	5	52	263
Responding of business travellers dollars↑	5	82	2	20	104
Total	18	288	7	72	367
* - 41.3% spent on imported goods and services					
# - total spending by businesses on local services: \$448,000					
↑ - total spending by businesses on local services: \$179,000					

Source: Marshall, 1986.

Thus, tourism has a positive impact on Churchill's economy. From tourist activity in 1985, Marshall (1986) found that:

- 177 jobs were created directly and 75 jobs were created by the multiplier effect incidental to the respending of wages.
- net business income totalling 252 jobs or 36% of Churchill's total employment.
- \$3.12 million was received by Churchill residents in wages.
- \$0.44 million was retained as net business income.
- \$0.17 million was generated in local taxes.

The impacts of additional tourists in the future were estimated to be:

- \$224-243 per tourist spent in Churchill (depending on year and level of development of the industry).
- 11-12 jobs per 1000 tourists per year excluding indirect impacts.
- 16-17 jobs including indirect impacts.

In 1985, 13,900 visitors came to Churchill (Marshall, 1986). This same study predicts the number of tourists to Churchill to rise to 19,433 by 1995. Active promotion, as well as the development of package trips to Moosonee, Ontario, and the Keewatin district of NWT are required for this growth in tourism. Without these added attractions the tourist population is expected to rise to 16,433 by 1995 (Marshall, 1986).

By promoting the heritage of the community and by offering the best that they have to offer, the host community will create a meaningful experience for the tourist and ensure its survival (Hiller, 1976).



The attitude must be changed from "you gotta give 'em what they want", to "we have to give 'em what we have - and make what we have what they want" (Hiller, 1976), which in Churchill consists of birds, belugas and bears.

Chapter VI  
QUESTIONNAIRE RESULTS

6.1 VISITOR SURVEY

One hundred thirty nine questionnaires were returned over the twelve month study period (August 15, 1985 to August 14, 1986). The return rate of the survey was lower than expected (approximately 1% according to Marshall (1986) who estimated visitation to be 13,900 tourists). This low return rate does, however, fulfil the recommendation of Costis (1972), that a minimum sample of approximately 100 surveys be obtained to ensure statistical significance in situations where sample variance is unknown. Similarly, the sample meets the limits of 1-5% of a large population, suggested by Snedecor and Cochran (1967).

The lower than expected return rate could be attributed to several factors. Distribution of the surveys was not as complete as designed. Although airline and railway personnel had agreed to distribute the questionnaires personally, they simply placed the surveys on a shelf for visitors to pick up on their own. Neither agency had any method of collecting the surveys and as a result, most respondents felt that they had to mail the completed survey to the Natural Resources Institute.

The survey was also not distributed evenly throughout the year. VIA displayed it until December, 1985 and then placed the remaining surveys in storage. Upon request in June 1986, they again made the surveys available to tourists. No surveys were collected directly from PWA after January 1986.

Mager (1982) used a similar distribution method and encountered the same problems. A better and more effective method would have been for the researcher or a specifically hired person to be on hand at both terminals for all flight and train departures, although limited funds prevented this type of activity.

#### 6.1.1 Answers to the Survey Questions

Of the ten questions on the survey, results of nine can be presented in frequency tables. A number of the survey questions had multiple answers including "other". The responses recorded under the "other" category as well as comments generated from questions 7 and 8 are presented in Appendix F.

Pleasure/vacation was the most frequent (50%) reason tourists visited Churchill, closely followed by viewing of polar bears, scenery and other wildlife (43, 41, and 40% respectively) (Table 7). No respondents cited fishing or hunting as reasons for their visits, although hunting and fishing are available in the area. Other responses included school purposes, train ride, shopping, and northern lights.

TABLE 7

Reasons for Tourist Visit to Churchill, Manitoba, 1985-86.

Question: What were the reasons for your visit to Churchill?		
Reasons	Frequency (n=139)	Percent
Pleasure/Vacation	70	50
Viewing Polar Bears	60	43
Scenery	57	41
Other Wildlife	55	40
Historical Sites	46	33
Viewing Birds	37	27
Harbour Facilities	34	25
Professional	32	23
Other	19	14
Business	13	9
Festivals	1	1
Fishing	0	0
Hunting	0	0

Respondents generally found out about Churchill through 'other' advertising (40%) including atlas, school, work, interest in a northern location, or have always known of Churchill (Table 8) (Appendix F). The most frequent identified advertisement was "from a previous visitor" (26%), followed by "word-of-mouth" (23%). Actual advertising through Manitoba publications, travel guides and the media had a low response rate of 18% collectively.

TABLE 8

## Tourist Knowledge of Churchill Prior to Visit

Question: What brought Churchill to your attention?		
Advertisement	Frequency (n=139)	Percent
Other	54	40
Previous Visitor	36	26
Word of Mouth	32	23
Film	28	20
Newspaper/Magazine	27	19
Travel Book	15	11
Manitoba Publication	8	6
Resident	6	4
Radio	1	1

The most popular months of visitation were August and September (43 and 32% respectively) (Table 9). No surveys were handed out by VIA and PWA in the winter months due to little or no tourist activity. About half of all tourists observed birds, belugas, bears and ptarmigan (Table 10). Other wildlife included arctic and red foxes, seals, weasels and plants.

TABLE 9

Months of Visitation to Churchill, Manitoba, 1985-86.

Question: What were the dates of your trip to Churchill?		
Month	Frequency (n=139)	Percent
August	60	43
September	45	32
July	34	25
June	30	22
October	15	11
November	7	5
May	6	4
April	4	3

TABLE 10

Wildlife Seen by Tourists to Churchill, Manitoba, 1985-86.

Question: Did any of your activities involve any of the following wildlife?		
Wildlife	Frequency (n=139)	Percent
Beluga Whales	84	60
Birds	70	50
Polar Bears	62	45
Waterfowl	57	41
Ptarmigan	45	32
Other Wildlife	28	20
Ross' Gull	22	16
Caribou	19	14
Fish	12	9

Most tourists used tours available in Churchill (Table 11). These tours were either purchased by the visitor on arrival in Churchill or as part of a large organized package trip.

TABLE 11  
Usage of Tours by Tourists in Churchill, Manitoba, 1985-86.

Question: Did you take part in an organized tour while in Churchill?		
Organized Tours	Frequency (n=139)	Percent
Took Part	103	74
Did Not Take Part	34	25
No Answer	2	1
Total	139	100

Promotion of Churchill tourism was generally classed as useful by most tourists (86% indicated 'yes' for promotion while 11% checked 'no' and 3% did not answer the question). Further division showed seven categories of promotion (Table 12). The most popular suggestion for promoting Churchill (21%) was by advertising more in the United States and Europe, at sport shows and in nature magazines.

TABLE 12

## Suggestions by Tourists on how Churchill Should be Promoted

Question: If yes how?		
Type of Promotion	Frequency (n=139)	Percent
Yes/No Elaboration	67	48
More Advertising	30	21
No Promotion	15	11
Polar bear/Beluga		
Flora and Fauna	7	5
Outdoor Experience	5	4
Better Access, Facilities and Information	5	4
No Answer	4	3
Wildlife Management Packages	3	2
Total	139	100

Tourists were generally satisfied with their trips to Churchill (Table 13). The majority of people (45%) recorded that they saw less than they had intended to see, but 14% saw more than they had expected to see (attractions that visitors "intended to see" are those checked in question 1; Tables 18,19,20,and 21 show this in more detail). Many comments were made about tourist satisfaction and reasons for not viewing all that they had come to Churchill to view. These reasons inaccessibility of Fort Prince of Wales, beluga whales, tundra and polar bears due to inclement weather, not enough time, or the wrong season,as well as a lack of available information.



TABLE 13

Satisfaction of Tourists to Churchill, Manitoba, 1985-86.

Question: Did you see/do all that you intended to?		
Saw what they intended to	Frequency (n=139)	Percent
less	62	45
yes	53	38
more	20	14
no answer	3	2
more and less	1	1
Total	139	100

Question 8 ('How do you think that the wildlife-based tourist activities could be improved?') did not generate information for a frequency table. There were 43 different answers with many repeated suggestions (see Appendix F). In 27% of the cases, no answer was given. The largest group of respondents (28%), thought that there should be more co-operation between the various levels of government in Churchill and that each level could do more to improve the Churchill experience. The local government district and merchants could clean up the area, and improve the tourism infrastructure (roads and services). Parks Canada could provide more information at Cape Merry and Fort Prince of Wales. Provincial and local agencies, Parks Canada and researchers could provide evening sessions on the history, geology, birds, and mammals of the area for a small fee. It was also suggested that there be more co-operation between the guides and the governments, with better training and organization and more information. A

number of responses (19%) were 'to have whales and bears where they can be seen by tourists; allow visitors into the bear jail, build viewing towers for whales, have a sanctuary, baited bear stations, do not chase bears from town or provide a visitor complex/hotel in the Wildlife Management Area.

Churchill visitors (Table 14) were predominantly Manitoban (42%) with Americans (35%) being the next most numerous group. Residents of other countries included Great Britain, France, Japan and Kenya. Similar surveys conducted by Marshall (1985) and Mager (1982) found that the most numerous visitors were American (60 and 50.3% respectively). The origins of American visitors were further broken down by Marshall (1985) as 3% from Wisconsin, 6% from Minnesota, 21% from the North Western States, and 70% from other American States. In 1982, almost 30% of the American visitors originated from Minnesota and Wisconsin (Mager, 1982).

TABLE 14

Place of Origin of Visitors to Churchill, Manitoba 1985-1986

Question: Are you a resident of		
Area	Frequency (n=139)	Percent
Manitoba	58	42
United States	49	35
Other Canadian Province	21	15
Other	11	8
Total	139	100

Almost all (81%) of the visitors would return to Churchill (Table 15) to see several different wildlife species. Polar bears and beluga whales at the rate of 67% and 58% respectively, were the two most chosen species (Table 16). Additional responses were generated in the 'other' category for this question and are recorded in Appendix F. Research, historic sites, and the tundra were the most common of these answers.

TABLE 15

Return Rate of Visitors to Churchill, Manitoba in the Future.

Question: Would you return?		
Response	Frequency (n=139)	Percent
Yes	112	81
No	14	10
No Answer	13	9

TABLE 16

## Wildlife Activities That Would Influence Visitors To Return To Churchill

Question: What wildlife would you like to see if you returned?		
Wildlife	Frequency (n=139)	Percent
Polar Bear	93	67
Beluga Whales	80	58
Other Wildlife	61	44
Viewing Birds	48	35
Ross' Gull	34	25
Fishing	30	22
Other	30	22
Waterfowl Hunting	16	12
Caribou Hunting	17	12
Ptarmigan Hunting	12	9

6.1.2 Correlation of Variables

The answers to the survey questions were further analyzed by running crosstabs of all answers by the rate of satisfaction (question 7 of the questionnaire). The findings are presented in the following tables.

August and September were the poorest months for tourist viewing activities (Table 17), as this is the period when whales were migrating out of the river, bears had not started migration to the ice flows, and weather is generally unreliable.

TABLE 17

Satisfaction by the Month of Visitation.

Intended	Apr	May	June	July	Aug	Sept	Oct	Nov
Yes*	/	1	8	11	14	9	7	2
More	2	3	7	5	6	1	1	2
Less	1	1	7	8	23	22	2	1
More & Less	/	/	/	/	1	/	/	/
N/A	/	/	/	/	/	1	1	/
Total	3	5	22	25	44	33	11	5

\* Yes means that the tourists saw everything that they wanted to view.

Tables 18, 19, and 20 show which months were best in the 1985-86 year to see wildlife. There were many tourists who were disappointed because they did not see the wildlife that they had come to Churchill to view (mostly those in August and September). This may be due to inaccurate information on beluga and bear populations, inclement weather or lack of time.

Approximately half of the people who went to Churchill for a specific reason saw all that they had intended to see (Table 21). The people who were not satisfied either did not know where the various sights such as birds, nests, and caribou were to be found, were there in the wrong season, or the weather was too bad for them to participate in their chosen activities. Even people who saw some of the more elusive species (bears and caribou) were not satisfied with their trip (Table 22). This could be due to not seeing the other sights that they wanted to see, inclement weather, a lack of things to do in the

time that they were there, too many things to do in a very short period of time, or a lack of information on what is available in Churchill.

TABLE 18

Satisfaction by those who wished to see Birds.

Intended	Apr	May	June	July	Aug	Sept	Oct	Nov
Yes	/	/	13	12	3	4	33	/
More	/	/	7	3	2	2	6	14
Less	/	/	13	/	12	16	13	/
M & L	/	/	/	/	/	/	/	/
N/A	/	/	/	/	/	2	/	/
Total	0	0	33	15	17	24	52	14

TABLE 19

Satisfaction by those who wished to see Bears

Intended	Apr	May	June	July	Aug	Sept	Oct	Nov
Yes	/	/	3	15	7	9	60	29
More	/	/	7	3	2	2	13	29
Less	/	/	7	18	23	31	20	/
M & L	/	/	/	/	2	/	/	/
N/A	/	/	/	3	/	/	/	/
Total	/	/	17	39	34	42	93	58

TABLE 20

Satisfaction by those who wished to see Other Wildlife.

Intended	Apr	May	June	July	Aug	Sept	Oct	Nov
Yes	/	/	3	18	7	7	53	/
More	/	/	13	3	2	2	7	14
Less	/	/	17	6	22	24	20	/
M & L	/	/	/	/	2	2	/	/
N/A	/	/	/	/	/	/	/	/
Total	/	/	33	27	33	35	80	14

TABLE 21

Satisfaction by Reasons for Visit.

Intended	Birds	Bears	Historic Sights	Other Wildlife	Other
Yes	11	15	13	14	7
More	4	6	4	6	2
Less	11	21	14	19	5
M & L	/	1	/	1	/
N/A	1	/	1	1	/
Total	27	43	32	41	14

TABLE 22

## Satisfaction by What Tourists Saw.

Intended	Bears	Birds	Belugas	Caribou	Other Animals
Yes	19	20	19	6	10
More	9	8	10	5	5
Less	17	22	30	3	5
M & L	/	/	1	/	/
N/A	/	/	1	/	/
Total	45	50	61	14	20

These results seem to indicate a need for more information on what is available in Churchill and at what time of year. If tourists know about other activities available in town to fill their day, reduced effort may be put on trying to see wildlife. In this way, stress caused by too many tours might be alleviated and more tourists could be accommodated on existing tours (R. Bukowsky, pers. commun.).

Word of mouth and 'other' forms of advertising are the most important for Churchill's tourism industry. It would seem that there is room for improvement in the advertising field on both governmental and local levels. This improvement could be in the form of increased exposure of Churchill activities in media presentations and sport shows throughout Canada and the USA. Table 23 shows that a number of tourists were disappointed, which could mean that the advertising was misleading in that people believed activities such as polar bear and beluga whale watching were available in all seasons. Even though they



did not see all that they wanted to see, the majority of visitors wished to return to Churchill (Table 24). Presumably their next trip would be more successful because they had increased expectations about the area and what to expect on future trips.

TABLE 23  
Satisfaction by How Tourists heard of Churchill.

	Intended Manitoba Publication	Newspaper/ Magazine	Film/ Movie	Travel Book	Radio	Word of Mouth	Other
Yes	2	9	7	6	1	8	14
More	1	1	1	/	/	3	7
Less	3	9	11	5	/	12	16
M & L	/	/	/	/	/	1	1
N/A	/	/	1	/	/	/	/
Total	6	19	20	11	1	24	38

TABLE 24

Satisfaction by Would Tourists Return to Churchill.

Intended	Return	Not Return	N/A
Yes	28	5	6
More	14	/	1
Less	37	4	3
M & L	/	1	/
N/A	2	/	/
Total	81	10	9

Increased accurate promotion of beluga whales, historic sites and other summer activities could increase the number of people who spend more than one day in Churchill. Of the tourists surveyed, 4% stated that they did not have enough time to see all that was available. Providing more activities would be another meethod of increasing the number of people visiting and staying in Churchill. .

## 6.2 ENTREPRENEUR INTERVIEWS

### 6.2.1 The Answers

The results of these interviews are summarized in Table 25. On two trips to Churchill to conduct interviews a total of 21 people were questioned: 7 in the service industry, 11 from the tour guiding industry, and 3 from other industries.

	Service Owners (n=7)	Tour Operators (n=11)	Other Business (n=3)
What are the most important wildlife species?	Spring - Birds Summer - Whales Autumn - Bears/geese Winter - None	5 - bears 3 - all species 2 - whales 1 - bears and birds	2 - polar bears 1 - know nothing about it
What has the potential for future success	6 - felt that tourism was important to Churchill 1 - tourism and resources	7 - felt that tourism was important to Churchill 1 - more and better information 1 - photography tours 1 - polar bear tours 1 - beluga, waterfowl and upland game birds	2 - important to Churchill's future 1 - tourism is highly overrated
What do you think of the present tourist opportunities	5 - adequate to terrible 1 - adds to area, helps harbour 1 - good but need more reasonable rates	4 - expansion and diversification 2 - needs word / more information 2 - opportunities are fine 2 - better than 10 years ago/need 1 - no more expansion	1 - good, improve dock 1 - adequate 1 - do not like tourism more co-operation
Is there a need for more research	5 - answered yes within limits 1 - need more information on the research 1 - need habitat studies	5 - yes but not as important as tourism 2 - locals need more information 1 - does not aid tourism 1 - does not hurt tourism 1 - yes to improve viewing 1 - yes to understand the effect of tourism	1 - good in order to protect environment 1 - more information to locals 1 - do not know
What do you think of the present marketing of Churchill	4 - was good 1 - must increase in province 1 - can never have too much 1 - getting better	3 - did their own 2 - not good enough 1 - ok need accurate information 1 - enough promotion 1 - local good / government not 1 - could be more in the south 1 - not really sure 1 - improved in the last 5 years	1 - local and government good VIA and PWA need more 1 - not much being done 1 - do not care
Is an increase in tourism necessary	4 - increase good 1 - only if services available 1 - only during the winter 1 - need monitoring	7 - increase tourism 2 - no need for increase 1 - increase may be detrimental to the environment 1 - yes but need professionals	1 - yes need more facilities 1 - yes for town to survive but not for all people 1 - no
Tourism's effect on the environment	5 - felt there was no damage to the environment 1 - could not answer 1 - not much harm because the livelihood of the guides	5 - felt the environment could handle an increase 2 - bears must handled carefully 1 - ok need bait stations 1 - tourist respect environment 1 - there is a point of compromise 1 - research is needed	1 - no harm done 1 - none as long as knowledgeable people are in charge 1 - did not care

Interview Answers of Churchill III Entrepreneurs

TABLE 25

### 6.2.2 Analysis of the Answers

The most important wildlife species identified by entrepreneurs in Churchill is the polar bear. This animal was chosen exclusively by 33% of the respondents. Even though service owners operate year-round they each felt that the polar bear (limited to October-November) was the biggest attraction in the area. The tour operators that did not mention bears as important species were those that were only set up for boating tours, on which whales were the main attractions.

Most entrepreneurs (71%) stated that tourism was important to the future of Churchill. The service owners answered the question as "what was important to the future of Churchill?" while some of the tour guides answered with new tourism ideas that might be successful in the future. Only one respondent thought that tourism was not the answer to the recent depression of Churchill's economy.

Entrepreneur perceptions of present tourism opportunities generated a great variation in responses. In the service industry, 24% thought various facilities and activities were of varying quality. They felt that there could be no more expansion in the accommodation sector due to the lack of use during winter, however tours could be more organized and/or expanded to include all tourists, and advertising of them could be increased. The majority of tour guides (73%) felt that there was room for expansion and diversification within the tourism industry. Others in this sector felt that more co-operation between operators and information to tourists were required to make Churchill a more memorable experience for visitors. People from other Churchill

industries answered that the tourism industry seemed fine, but they really did not know. Only one did not agree with tourism and felt that it was unimportant.

Need for more wildlife research was identified by 66% of those interviewed. Research was felt to be important to preserve habitat and wildlife of the area, to enhance the chance of sighting various species of wildlife through increased knowledge of their behaviour, and to understand the effect of tourism on feeding, migration and general behaviour. A number of respondents (19%) felt that residents should be given more information on research as well as be allowed to participate in order to facilitate better feelings between residents and researchers. Only two respondents felt that research and tourism were unrelated.

Respondents were equally divided (43%) on the question of adequacy of marketing in Churchill. Half felt that advertising could increase within the province, especially in the south. Governments and passenger carriers could also boost their marketing programs. Two of the respondents felt that marketing had increased in the past years and three others did their own advertising, thus feeling enough was being done.

An increase in tourism to Churchill was seen as necessary by 81% of people questioned. This increase should be done on a professional level with the preservation of the environment as a number one priority. Only two respondents felt that the industry was running at peak capacity and that an increase might cause serious damage to the indus-

try. One felt that tourism was overrated and was not the only future for Churchill. Another respondent believed that an increase might destroy the environment which in turn would negate the tourism industry.

Tourism was believed by 71% to cause no harm to the environment nor animal species in the area. They felt that as long as tourists had respect for the environment, guides were knowledgeable and made their livelihoods in this manner, and legal bait stations were created and not associated with humans, then the tourist industry could continue to grow without any adverse effect on the area. Two respondents felt that tourism could be harmful to the environment and wildlife through the use of poor guides who bait bears to the tourists and do not treat wildlife with respect. One felt that there was an optimal point for tourism, too much or too little could cause harm through overuse or lack of interest. Two others could not answer the question and one believed that ecological research is needed in order to maintain the tourism industry.

### 6.3 ON THE STREET INTERVIEWS

A sample of nine people were interviewed in May and October 1986. Five were not employed in the tourist industry of Churchill, the other 4 were indirectly employed. A summary of the answers is found in Table 26.

TABLE 26

## Interview Answers to On the Street Interviews

Are you involved in the tourist trade?	4 - indirectly	5 - no
Is tourism important to the area?	4 - yes	5 - yes
How do you feel about: tourism? Improvements?	2 - is going to increase make rates and tours more reasonable 1 - expand services 1 - no harm to the environment - improve roads and town.	2 - could be improved 1 - not sure 1 - good the way it is 1 - good but need a co-operative and more support from government

Of the 9 people interviewed, four worked for the tourist trade indirectly, having jobs as seasonal employees in local restaurants, and as part-time guides and boat operators. The other 5 interviewed worked in other areas.

All felt that tourism was important to Churchill. The hotels, shops and town complex were all geared towards the tourist; and approximately one third of the town economy was based on tourism.

The answers to the final question were varied. Two individuals felt that tourism in Churchill was going to increase as commerce expanded in the South. They also felt that prices should be kept

within reach of everybody. Three others felt that the industry as a whole could improve with better roads, a cleaner townsite, parks, hiking trails, ferry service, and transporting tourist cars by train at a low rate. One wanted to see an expansion of the services offered while another felt that a co-operative to handle government loans for townsite improvement was needed as well as a government that was supportive of new ventures.



## Chapter VII

### DISCUSSION AND CONCLUSIONS

#### 7.1 INTRODUCTION

This chapter has been divided into sections that correspond with the objectives. Information from the previous chapters has been discussed in relation to each objective. Conclusions have been drawn that provide the basis for the Wildlife-Based Tourism Development Strategy that is presented in Chapter VIII.

#### 7.2 MAJOR COMPONENTS OF CHURCHILL'S PRESENT ECONOMY

Marshall (1986) estimates that tourism provided 252 jobs (177 direct jobs and 75 indirect jobs) in 1985, thereby making it the largest employer in the area. Marshall (1986) also estimates that tourism contributes over \$2 million to the economy of Churchill. Jobs within the government, Harbours Board, and transport sectors comprise the majority of available employment in Churchill's present economy. Tourism is not specifically included in the breakdown from the Manitoba Department of Economic Development and Tourism (1982).

Of the 40 Churchill residents interviewed, 22 were employed in the tourism industry. It was inferred by 97% of these people that tourism was very important to the economy of Churchill and would become more so in the future. Many of those interviewed believed that the tourism

industry would become the major supplier of jobs and income to the area in the next few years.

The tourism sector itself, can be further divided into transportation, accommodation and food, and tourist activity components. In general, the study by Mager (1982) revealed that there were negative ratings on transportation within, to and from Churchill. The rail link to Churchill is of primary importance to the tourist trade (Mager, 1982) but Marshall (1986) suggests that adding a third sleeper car and a larger diner car to the present VIA rail train, as well as improving the current reservation system and maintaining the CN station are essential for future tourism increases. To further facilitate transportation Marshall (1986) recommends that a new air terminal that meets Transport Canada's standards should be built, along with an increase in the service between Churchill and Winnipeg and introduction of service to and from Moosonee, Ont.

Accommodation and food services had improved, as indicated by higher ratings, since the 1974 survey (Mager, 1982). The Marshall (1986) study had similar findings although tourist projections for 1990 and 1995 indicate that an increase in accommodation will be required.

There were negative ratings for access to natural attractions which may have resulted from the failure to inform visitors of the 'best' time of season to view a certain attraction (Mager, 1982). These ratings are consistent with the findings of this study. Marshall (1986) reports that many visitors appeared to be satisfied with the level of accessibility to bird, tundra, and historic attractions but that a

significant number of visitors felt that accessibility to view whales and polar bears was less than satisfactory.

Some of the Marshall (1986) recommendations for improving tourist activities include; the building of a proper boat docking facility to accommodate activity on the river, and at least one operator should acquire a boat large enough to accommodate a full bus tour group of 44 people; construction of an airstrip and tourist promotion of York Factory; as well as upgrading of the existing road system.

Understanding of these findings and implementation of these recommendations are required if the level, quality, and importance of tourism in Churchill is to be maintained in the future.

### 7.3 IMPORTANT SPECIES OF WILDLIFE TOURISM IN CHURCHILL

As shown in Chapters IV and VI wildlife species important to Churchill's economy are polar bears, beluga whales, and birds. All of these species have a tourist and research value to Churchill. Mager (1982) states that beluga whales were the most popular tourist species in that they were viewed by 80.6% of the visitors surveyed. This statistic may be misleading as the survey was conducted in August which is the beluga whale season. Many of the respondents were disappointed with their trips because they were in Churchill in the wrong season and could not view polar bears.

There are three separate and distinct wildlife viewing seasons in Churchill. From an economic standpoint the best time is the late fall (October - November), when polar bears frequent the Hudson Bay shore-

line awaiting ice formation so that they can move out and hunt seals. Spring (late-May - mid-June) offers other major opportunities. During this period, as many as 200 avian species nest in or migrate through the area. This is also the time to see the bright summer plumage of species common to the south in the winter. July and August make up the summer season. Beluga whales are the popular wildlife attraction at this time of year. Other animal species (such as hares, foxes, ptarmigan, and raptors) can be sighted throughout the year.

Polar bears have been studied since the '60's, and recently there have been studies on belugas and other wildlife species. For the past 10 years, there has been population research done on the nesting population of snow and Canada geese. All of these studies provide financial support to the local businesses through demand for food, fuel, and mechanical supplies.

#### 7.4 VISITOR AND RESIDENT PERCEPTIONS ABOUT THE EFFECTS OF TOURISM IN THE CHURCHILL AREA

The survey respondents felt that care should be taken not to damage the environment. Approximately 50% of the people (Table 16) interviewed felt that the animals and the environment would not be harmed by an increase in tourism because there have been no observed adverse effects due to tourism. Environmentally, an increase could be harmful unless strict regulations regarding use of vehicles are developed, especially for tundra use (Webb, 1985). Both Webb (1985) and Rzakki (1985) agree vehicle design (weight and track type), topography, vegetation, composition, soil moisture condition, permafrost, attitudes of vehicle operators, the degree of trail usage during a given time peri-

od and the time of year, all affect the level of disturbance and subsequent damage to the tundra.

An increase in motor boats and hydrofoils may not increase the pollution level of the river area due to tidal activity, but the noise level may be detrimental to marine species. Studies by Randall et al. (1984) on bowhead whales seem to indicate that seismic activity caused the whales to stop feeding and huddle together. It is not certain from this study if the animals will habituate to this disturbance. Similar studies by Stirling et al. (1983) indicate that excessive noise can be intolerable to marine species, driving them from the area. It remains to be seen if motor boat use for viewing purposes will cause similar reactions. Free oil from spills will cause eye and skin irritations as well as lung and digestive disorders (Stirling et al., 1983).

Until now the beluga population has apparently not been affected by boat tours (R. Bukowsky, pers. commun.), but two new operations have recently commenced, which will increase activity on the river. The river is the summer feeding and calving ground of the whales. Thus, before tourism in this area can increase, it must be known whether the present level of boating activity to view whales, or visit Sloop's Cove and Fort Prince of Wales, interferes with the normal behaviour of the whales.

Observation does not disturb the normal behaviour of the polar bears during the summer because mating occurs on the ice in early spring, denning areas are too far from Churchill to be disturbed.

Moreover during this season they are in a type of hibernation state, and their feeding habits are not disrupted by human activity (R. Bukowsky, pers. commun.). Polar bears subsist on seal for most of the year and in the summer forage to a small degree, and only on vegetation (Stirling et al., 1983). One problem with increased tourism is too many tours around one bear, ruining the "wild" experience. There may also be a tendency to bait bears. In these instances, the bears may become used to people and come to associate them with food and then become a danger to local residents as bears roam around town looking for food. A strict policy against baiting of bears is now in place but additional regulation would be required to limit the use of each bear. If tourism increases, tour operators would have to go further out on the tundra in order to prevent over-crowding. This might require a greater amount of freedom of movement within the WMA, which could potentially cause severe damage to the tundra if new trails are created or certain fragile areas are overused.

As with polar bears there is a problem of too many people in the same area as the birds. This type of activity (constant observation and photographing) can cause depredation of nests or reproductive failure for the nesting pair if they are disturbed at the wrong time (A. Chartier, pers. commun.).

7.5 CAN INCREASED USE BE MADE OF THE WILDLIFE RESOURCES IN FUTURE TOURIST DEVELOPMENT AT CHURCHILL?

Most owners and operators felt that the resources could withstand an increase in visitor levels. For example there is only one tour guide in Churchill for birding purposes at present (1986) but two operators from the USA offer tours in May and June (J. Van Os, pers. commun.). This is an activity that many tourists can participate in without a guide, providing that they can obtain a vehicle.

The establishment of another tour operator might help to protect the birds by providing professional tours for visitors who are not with an organized tour group. This would reduce the number of people wandering about trying to find nests on their own. In this manner the tourists would view the birds at the same time thus reducing the amount of time that the population is disturbed. By taking more people to see certain nests, the rest of the bird population is left undisturbed. Another guide in this field might increase the individual visitors chance of seeing certain species. Rental vehicles are hard to obtain. As a result many visitors are restricted to populated areas.

To ensure the increase in tourism that they project, Marshall (1986) indicates that polar bear watching services should be expanded at a rate of one new vehicle every 2-3 years, bird watching services would expand with the addition of more window vans for hire, and the Tourism Committee and the DNR should attempt to define the carrying capacity for wildlife viewing in terms of impact on the tourists' experience.

Eight of the tourists surveyed wished to see a sanctuary in which they could view the more elusive animal species while fourteen others wished for more accessibility to these animals. This sanctuary could be set up in as natural a setting as possible so that it does not seem like a zoo. Suggestions included caribou kept in large fenced enclosures and polar bears held in pens made in rocks along the shoreline. Due to tidal activity and the possible stranding of the whales it would not be wise to pen belugas in the harbour, but they could be captured and put in a holding tank.



## Chapter VIII

### WILDLIFE-BASED DEVELOPMENT STRATEGY

#### 8.1 SUMMARY

Throughout this paper, wildlife tourism has been assumed to be beneficial to the economy of Churchill. It has been shown that tourism is the single most important generator of employment jobs in the area and brings in large revenues. With the recent decrease in other employment opportunities, tourism has become more important as an economic base for Churchill.

Wildlife tourism is the prominent form of tourism in Churchill. Polar bear watching in fall is the most active and profitable segment of the tourist season. Bird watching in spring is the second largest segment. The summer segment involves whale watching, as well as historic and scenic tours. This segment brings in the most tourists, but has the lowest revenues.

If wildlife tourism is going to continue to provide an increasing economic revenue base for Churchill, some changes will have to be made to improve the experience for tourists as most are not satisfied with their trips. These changes must involve a better presentation of Churchill's activities, better viewing facilities, the generating of interest in more wildlife species, the introduction of more activities and study of the prolonged effects of tourism on the wildlife and

environment. These steps should be taken before the end of the 1980's to reduce the incidence of tourist disappointment with their trips (Table 13). This disappointment could affect the "word-of-mouth" advertising which appears to be the major means by which visitors have learned about the area.

It is essential to recognize the effects of tourism on the wildlife in the area. Much is known about the polar bear from years of research but little data has been collected on the avian or marine species of the area.

At the moment there appears to be no adverse effect of tourism on the beluga population. With an increase in tourism and boating activity, this might change. Thus, there is a need for a study on the population status of this species before, during and after any change in tourist (and viewing) rate. The study itself will not increase tourism in Churchill but will help to establish guidelines in order to maintain the present beluga whale population. This in turn will maintain the summer tourist level. As more information is made available because of the study and better advertising and viewing opportunities are provided there may be an increase in the number of people who come to Churchill to see belugas. This study should run for 5 to 10 years in order to fully understand the population dynamics of this species. Research should be done on beluga behaviour according to the level of boat activity, the type of vehicle used, and the times of day that the viewing activity takes place, as well as the effect of harbour activity and river levels. Once the studies have been completed a decision regarding an increase or decrease in the number of tours can be made.

It could be operated by the Canadian Wildlife Service and the World Wildlife Fund and could be run through the Churchill Northern Studies Centre. The costs per year would range from \$10-15,000. Similar studies could also be conducted for the avian species in the area.

## 8.2 THE STRATEGY

### 8.2.1 Create a Tourism Development Committee

A Tourism Development Committee should be established to effectively design and implement a tourism strategy to maintain or increase the future level and quality of tourism in Churchill. This committee should include representatives from the federal government (Parks Canada, Transport Canada, Tourism Canada, Canadian Wildlife Service), Manitoba government (Department of Business Development and Tourism, Travel Manitoba, Department of Natural Resources, Department of Highways and Transportation, Manitoba Development Corporation), the Local Government District, Chamber of Commerce, tour operators, and other entrepreneurs.

Another way of meeting the need for this type of committee could be to form an association of the local tourist operators. This association would have a mandate of improving the Churchill experience in order to maintain the economic importance of the industry to the area. The members would donate money into a general fund that would be used to cover the costs of implementing the strategy. The donations could be based on the level of tourist use each operation sees. The fund could be supplemented by grants from government branches interested in northern development.

### 8.2.2 Establish a "Tundra Booth" in Churchill.

A successful trip is one where the visitor views all that they wish to see and does not have a chance to get bored. In order to increase the possibility of a successful trip (ie. more satisfied visitors) a Tourist "Tundra Booth" should be assembled. This booth should contain listings of the activities that are available to the tourist during each season. Information about these activities should include accurate up-to-date locations and habits of the species in the area in that season as well as times, dates, and places of tours, lectures, movies, etc. In short, it should be a starting place for tourists so that they can find out about Churchill and can plan their activities from there or without needless rushing about trying to gather this same information from other sources. Another service that the staff might provide could be that of a booking station for the available tours, with information as to capacities, cancellations and reservations. The information for these services should be provided by researchers in the area, Department of Natural Resources, tour operators, Churchill Tourism Committee, Parks Canada, and various other institutions which hope to benefit from tourism. It can be compiled and displayed by staff of the booth with direction from the Tourism Development Committee. The booth should be in a readily available location such as the town centre or on the main street. The approximate cost would be the salary of seasonal staff (3 staff members at \$800/month from mid-May to mid-November would amount to \$14,400/year) which can be supplemented by government grants.

### 8.2.3 Develop a "Northern Lights" seminar series.

These seminars would provide additional habitat and ecological information on the plant and animal species of the area as well as some natural history. This information would supplement the literature provided by the Tundra Booth. If the seminars were presented by experts who come to Churchill to study the flora and fauna, they would increase the interaction between townspeople and researchers. Both tourists and residents would be encouraged to attend. These seminars would provide the tourists with evening activities. They could be organized by staff of the Tundra booth with the co-operation of the Churchill Northern Studies Centre staff and held at the research centre. Money generated from entrance fees could be used towards the costs of these seminars ie. hall rental, speakers, refreshments, materials if any, and the overall costs of the Tundra Booth. No additional salaries need be involved if it was treated as part of staff duties.

### 8.2.4 Provide accurate advertising.

This advertising should benefit the tourist so that they leave Churchill satisfied. More information from Travel Manitoba, tourist agencies or local hotels about what is available during each season might alleviate the disappointment felt by tourists when they do not see their desired objectives. Information that should be included in the advertising consists of the times of year that certain species are present in the area:

- Birds - late-May to June;
- Whales - July to mid-August;
- Bears - late-October to mid-November;

and what activities are available to tourists at different times of the year:

- Spring - bird and seal watching, Harbours Board tours, museum, movies, Parks Canada, and seminars;
- Summer - tundra, whale, historic, Harbours Board, hiking, and grain ship tours, fishing, museum, Canada Day Celebrations, Parks Canada, movies, and seminars;
- Early Fall - tundra, Harbours Board, and grain ship tours, hunting, museum, and movies;
- Late Fall - polar bear, tundra, Harbours Board, and dog sled tours, museum, movies, and seminars;
- Winter - dog sled and tundra tours, and winter camping (as proposed by one new operator).

This information should also be made more available to the public in pamphlets, magazines, and the media which at present are the least important advertising mediums to Churchill tourism. It should be provided by the Federal and Provincial Tourism Departments, the LGD, and the local tourist operators. The Tourism Development Committee should gather material on all that is available in Churchill and exhibit it at trade shows for increased exposure.

#### 8.2.5 Development of new summer activities.

The summer season attracts the most visitors to Churchill, but generates the least revenue. This may be due to many visitors spending only the time between train arrival and departure and not staying overnight. If there were more summer activities, these same visitors might stay longer, thus increasing their expenditure in Churchill. Also if there were enough activities to fill tourist's time there might be more enthusiastic "word-of-mouth" advertising.

Additional summer activities could involve overland trekking (day and overnight trips), ecology tours, Hudson Bay voyages, and ecological seminars. The overland treks could take place on the west side of the river, to include Sloop's Cove and Fort Prince of Wales; on the east side of the river to include a tour of town and inland and coastal routes to Twin Lakes. These excursions could be made by hiking or on three-wheel ATCs. Tundra excursions could be made to the different botanical zones around Churchill (coastal, tundra, and boreal). Bay voyages could be for fishing and camping purposes north of Churchill or south to Fort York. Rather than increase the boating activity to see whales, improving the experience with underwater audio-equipped glass bottomed or semi-submerged boats would add an attraction to the summer season. Costs of implementing new summer activities would include more staff members within each tour operation (approximately \$10,-20,000 per year per new staff member) or introduction of a new operator offering these opportunities.

#### 8.2.6 Develop an "Ice Season".

There is not a large group of tourists who wish to go North in winter. However, if there were activities unique to Churchill, they might attract sufficient numbers of tourists to supplement the regular winter trade. Some of these winter activities might include dog sled/snowmobile trips to Eskimo Point, York Factory, or Marantz Lake to see winter wildlife and habitats; school exchanges; hockey tournaments or curling bonspiels, or a winter festival similar to the Trapper's Festival in The Pas. Costs of these activities would mainly be for advertising, ranging from \$3,000 to \$5,000 per activity per year, as accommodations and other facilities are already in place.

#### 8.2.7 Introduce musk ox to the area.

A re-introduction of this species would enhance the tourist value to the Churchill area. The herd would be another species unique to the area that tourists would come to view in their natural state. They would become a drawing card similar to beluga whales and polar bears. Musk ox would be a year-round attraction and a good reason for the summer tourist to stay on another day to see more (this would provide added income to both service owners and tour operators). This introduction would be an expensive venture, but a number of owners and operators have displayed interest in the idea. The costs would cover moving animals from either Fort Chimo, Quebec, or the Thelon Game Reserve, NWT to Churchill as well as monitoring the population to ensure that the introduction is successful. This project should be a joint venture between the Federal and Provincial governments, with



possible assistance from the World Wildlife Fund, as well as entrepreneurs involved in the Churchill tourist trade. The costs would range from \$50-100,000 in the first year with minimal costs in the following years.

#### 8.2.8 Establish Churchill's Caribou Corral

Caribou ranching might be feasible in the area. Reindeer ranching has been successful in the Yukon. A similar operation could be established in Churchill preferably by a private entrepreneur. As well as providing meat and skins for the tourist trade, the ranch would be a year-round wildlife attraction. An added bonus might be a few trained animals capable of pulling small tourist sleds as described by at least one tour operator.

#### 8.2.9 Examine the possibilities of a "Tree Tops" type of tourist accommodation

'Tree Tops' is a resort in Kenya that is built on stilts over a major wildlife watering hole. Patrons are able to see wildlife in a wild state in comfort seemingly without disturbing the animals. This type of accommodation might reduce the usage of far ranging tours to find desirable species. In so doing, there might be less damage done to the tundra and to animal habitat. There is also the increased likelihood of sighting the desired species especially if a carefully monitored bait station was established. Costs of building this type of structure can vary with design (ranging from \$2-5 million). A private sector owner might ensure a better chance of success. Permission

would have to be obtained from the Manitoba Department of Natural Resources to build in the Cape Churchill Wildlife Management Area. A similar but less expensive suggestion would be to build viewing towers at different sites where bears are known to collect. If these towers were heated, they would provide a comfortable means of observing bears in a more natural state than that provided by tundra buggies. Carefully baited stations near the towers would attract bears without establishing a link between food and man. Portable towers along both sides of the river mouth or set up in the river would provide an excellent situation for viewing beluga whales. Costs for these towers should be covered by the entrepreneurs of the area who wish to see tourism increase. The cost of each tower would be for materials only if the entrepreneurs built the towers themselves.

### 8.3 STRATEGY IMPLEMENTATION

This strategy should be implemented by the Churchill Tourism Development Committee. Costs of the outlined strategy could be expected to range from \$100,000 to \$180,000 in the first year (not including the costs of the 'Tree Tops' resort or towers). The thrust behind this strategy is to ensure the future of tourism in Churchill by providing visitors with a full and satisfying experience. If by increasing the number of activities, tourists could on average be encouraged to spend even one extra day, the added revenue would more than offset the costs. Marshall (1986) reports that the average tourist spends \$145 on food and accommodations for an overnight trip. With 13,900 tourists an extra day could generate over \$2 million in supplementary revenues in addition to the money spent on the new activities, trans-

portation, and entertainment. While expecting all the tourists to spend an added night is unrealistic the revenue generated by just 25% of these visitors staying an extra day (over \$500,000) could be expected to more than cover the costs of implementing the strategy.

To increase tourism, there a need to increase the number of tours to the tundra to observe characteristic flora and fauna. This increased activity may cause damage to the environment, especially if operators have to go further afield to find desired species. It was noted earlier that the present level of activity is not causing any short term effects as long as the tours stayed on existing trails. If usage increased and new trails were developed, however, there might be some long range damage to the tundra. Thus, there is a need to know what the sustainable levels of activity are and how long it takes for the environment to recover from such damage as might occur.

It is extremely important for some action to be taken if tourism is to remain as an economic base for Churchill. This action is required to maintain and improve the enjoyment of the tourists in order to encourage an increase in return visits and "word-of-mouth" advertising. The above recommendations or similar ideas should be implemented within the next five years in order to establish a future market for tourism. The most important recommendations are to establish a Tundra Booth and provide accurate advertising. As well, studies on the long term affects of tourism on the environment should commence as soon as possible. The development of a greater variety of activities and better viewing arrangements are secondary suggestions.

#### LITERATURE CITED

- BANFIELD, A.W.F. 1974. The Mammals of Canada. University of Toronto Press. 342pp.
- \_\_\_\_\_ 1969. The Polar Bear. Canadian Geographic.  
78 (3):98-105.
- BRUEMMER, F. 1983. Churchill: polar bear capital of the world. Canadian Geographic. 103(6):20-27.
- BURCH, E.S. 1977. Muskox and Man in the Canadian Subarctic 1689-1974. Arctic 30(3):135-154
- CANADA GRAINS COUNCIL. 1981. Exporting Grain Through The Port of Churchill. A capacity, cost, and systems analysis. Canada Grains Council. Winnipeg, Man. 70pp.
- CANADIAN WILDLIFE SERVICE. 1983. Ross's Gull Canadian Wildlife Service and Manitoba Department of Natural Resources. 2pp.
- CHURCHILL CHAMBER OF COMMERCE. No Date. Churchill Community Report. Churchill Chamber of Commerce. 4pp.
- COOKE, F., R.K. ROSS, R.K. SCHMIDT, AND A.J. PAKULAK. 1975. Birds of the Tundra Biome at Cape Churchill and La Perouse Bay. The Canadian Field-Naturalist. 89(4):413-422.
- COSTIS H.G. 1972. Statistics For Business. Merril Publ. Co. Columbus, Ohio. 356pp.
- DACKS G. (1981). A Choice of Futures: politics in the Canadian North. Methuen. Toronto. 220pp.
- DAVIS, R.A., K.J. FINLEY, AND W.J. RICHARDSON. 1980. The Present Status and Future Management of Arctic Marine Mammals in Canada. LGL Limited. Environmental Research Associates. Toronto. 93pp.
- DNR. 1983. Five-Year Report to the Legislature on Wildlife: Year Ending March 31, 1982. Manitoba Department of Natural Resources. Winnipeg. 150 pp.
- ELTRINGHAM, S.K. 1984. Wildlife Resources and Economic Development. John Wiley and Sons. New York. 325pp.
- FILION, F.L., S.W. JANES, J. DUCHARME, W. PEPPER, R. ROGER, P. BOXALL, AND D. TEILLET. 1983. The Importance of Wildlife to Canadians: Highlights of the 1981 National Survey. Canadian Wildlife Service. 40 pages.

- GODFREY, E.W. 1966. The Birds of Canada. Minister of Supply and Services Canada. Ottawa. 450pp.
- GRAY, D.R. 1975. Muskox. Canadian Wildlife Service. Ottawa. 291pp.
- HILLER, H.L. 1976. Alternative Tourism as a Basis for Intervention by Third World Nations on the Ethical Debate within Industrial Society. Tourism Research Department of Geography, McGill University. Montreal. 56pp.
- HUBERT, B.A. 1974. Estimated Productivity of Muskox on Northeastern Devon Island, NWT. M.Sc. Thesis. University of Manitoba. 118pp.
- IBI GROUP. 1986. Port of Churchill. IBI Group. Toronto. 1000pp.
- JONKEL, C., P. SMITH, I. STIRLING, AND G. KOLENOSKY. 1979. The Present Status of the Polar Bear in the James Bay and Belcher Islands Area. Canadian Wildlife Services. Minister of Supply and Services Canada. Ottawa. 42pp.
- KROEKER, I. 1985. Guide to Churchill, Manitoba. Port Churchill Chamber of Commerce. Fourth ed. 35pp.
- LANE, J.A. AND B. CHARTIER. 1983. A Birders Guide to Churchill. L and P Press. Denver. 62pp.
- LOCAL GOVERNMENT DISTRICT. 1982. Public Service, Institutional Profile. 5pp.
- MAGER, D. 1982. Churchill Visitor Survey: 1982. Data Development Group. Winnipeg. 47pp.
- MANITOBA DEPARTMENT OF ECONOMIC DEVELOPMENT AND TOURISM. 1982. Churchill - Community Report. Winnipeg. 5pp.
- MANITOBA DEPARTMENT OF INDUSTRY AND COMMERCE. 1977. The Economy - Province of Manitoba. Winnipeg. 50pp.
- MANITOBA DEPARTMENT OF MUNICIPAL AFFAIRS. 1983. Statistical Information - Municipalities of the Province of Manitoba. Winnipeg. 60 pp.
- MARSHALL. 1986. Churchill: Tourism and Transportation Study. Marshall Macklin Monaghan Limited. Toronto. 305pp.
- MURPHY, P.E. 1983. Tourism in Canada: selected issues and options. Department of Geography. University of Victoria. 275pp.
- NATIONAL HARBOUR BOARD. 1975. Port of Churchill - Potential for Development. Canada: Department of Transport. Winnipeg. 20pp.
- NERO, R.W. 1976. The Great White Bears. Manitoba Department of Renewable Resources and Transportation Services. Winnipeg. 16pp.

- NORMAN REGIONAL DEVELOPMENT CORPORATION. 1986. Community Statistics - 1986 - Community Profile Information System. Manitoba's Economic Development Network. Portage La Prairie. 105pp.
- RANDALL, R.R., D.K. LJUNGBLAD, AND J.T. CLARKE. 1984. Bowhead Whales and Acoustic Seismic Surveys in the Beaufort Sea. Polar Rec. 22(138):271-80.
- RZADKI, J.A. 1985. Sensitivity Analysis of Low Arctic Tundra as an Aid to the Management of All-Terrain Vehicle Use in the Cape Churchill Wildlife Management Area. Interim Report. University of Guelph. 78pp.
- SAVAGE, A. AND C. SAVAGE. 1981. Wild Mammals of Western Canada. Western Producer Prairie Books. Saskatoon. 200pp.
- SNEDECOR G.W., AND W.G. COCHRAN. 1967. Statistical Methods. Ames, Iowa State University Press. 593pp.
- SOPER, J.D. 1961. The Mammals of Manitoba. Can. Field-Nat. 75(4):171-219.
- SPENCER, D.L. AND C.J. LENSINK. 1970. The Muskox of Nunivak Island, Alaska. J. Wild. Manage. 34(1):1-15.
- STIRLING, I., C. JONKEL, P. SMITH, R. ROBERTSON, AND D. CROSS. 1977. The Ecology of the Polar Bear (*Ursus maritimus*) along the Northwestern coast of Hudson Bay. Canadian Wildlife Service. Minister of Supply and Services, Ottawa. 64pp.
- STIRLING, I. AND W. CALVERT. 1983. Environmental Threats to Marine Mammals in the Canadian Arctic. Polar Rec. 21(134):433-49.
- TEILLET, D.J. 1983. The Cape Churchill Wildlife Management Area Plan. Manitoba: Department of Natural Resources. Winnipeg. 73 pp.
- THOMASSON, R., D. TEILLET, H. SCHELL, S. COPEN, R. BUKOWSKY, S. KEARNY, AND B. CARRUTHERS. 1979. Taiga, Tundra, and Tidal. Manitoba: Department of Natural Resources. Winnipeg. 32 pp.
- TRAVEL MANITOBA. 1986. Manitoba Vacation Guide '86. Manitoba Business Development and Tourism. Winnipeg. 329pp.
- VAN HARSEL, J. 1982. Tourism: an Exploration. National Publishers of the Blackhills Inc. 373pp.
- WEBB, A. 1985. The Effects of All-Terrain Vehicles on the Tundra. M.N.R.M. Practicum. University of Manitoba. 182pp.
- WINNIPEG FREE PRESS. 1981. "Government Guidance Urged for Churchill Tourism Industry". 27 April. pp.8.
- WINNIPEG FREE PRESS. 1983. "Brighter year for tourism seen." 10 Aug. pp.3.

- WINNIPEG FREE PRESS. 1984. "Government expects tourism growth."  
3 May. pp.54.
- WINNIPEG FREE PRESS. 1985. "A role for Churchill?"  
11 Sept. pp.8.
- WINNIPEG FREE PRESS. 1986. "Botch-up blamed for scuttling Churchill  
tour". Winnipeg  
4 Feb. pp.1.
- WOODING, F.H. 1982. Wild Mammals of Canada. McGraw-Hill Ryerson.  
Toronto. 272pp.
- WTO. 1984. Economic Review of World Tourism. World Tourism  
Organization. AVDA Del generalismo. Madrid. 88pp.

#### PERSONAL COMMUNICATIONS

Bukowsky, R. Tour Operator, Tundra Buggy Tours. Churchill. 1986.

Chartier, A. Tour Operator, Churchill Wilderness Encounters.  
Churchill. 1986.

DeMeulles, D. National Research Council Employee. Churchill. 1986.

Jacobs, D. Conservation Officer, Department of Natural Resources.  
Churchill. 1985.

Kowal, L. Manager, Polar Motel. Churchill. 1986.

Webb, A. Researcher, Natural Resources Institute. Winnipeg. 1985.

Webber, D. Manager, Dymond Lake Outfitters Ltd. Churchill. 1986.

Van Os, J. Manager, Joseph Van Os Tours Ltd. Churchill. 1986.



Appendix A  
THE VISITOR SURVEY

Please check all appropriate spaces.

1. What were the reasons for your visit to Churchill?  
 Business       Pleasure/vacation       Professional/Research  
 Viewing birds       Viewing Polar Bears       Viewing Other Wildlife  
 Fishing       Hunting       Festivals  
 Scenery       Historic Sights       Grain & Harbour Sights  
 Other (specify) \_\_\_\_\_

2. What brought Churchill to your attention?  
 A Resident       Previous visitor  
 Travel Manitoba publication       Travel guide book  
 Newspaper/magazine article       Radio advertising  
 TV film/movies       Word of mouth  
 Other (specify) \_\_\_\_\_

3. What were the dates of your trip to Churchill? \_\_\_\_\_

4. Did any of your activities involve any of the following wildlife?  
 Polar bears       Beluga whales       Caribou  
 Ross's Gull       Waterfowl       Ptarmigan  
 Other Birds       Fish       Other \_\_\_\_\_

5. Did you take part in an organized tour while in Churchill?  
 Yes (specify) \_\_\_\_\_  No

6. Do you think that Churchill should be promoted as a tourist area?  
 Yes       No      If yes how? \_\_\_\_\_

7. Did you see/do all that you had intended to?  
 Yes       More       Less      Comments \_\_\_\_\_

8. How do you think the wildlife-based tourist activities could be improved?  
\_\_\_\_\_  
\_\_\_\_\_

9. Would you return? (If yes what wildlife activities would you plan to participate in)  
 Yes       No  
 Viewing Polar bears       Viewing Beluga whales       Viewing Birds  
 Viewing Ross' gulls       Viewing Other Wildlife       Fishing  
 Waterfowl hunting       Ptarmigan hunting       Caribou hunting  
 Other (specify) \_\_\_\_\_

10. Are you a resident of:  
 Churchill       Other Manitoba area       Other Canadian Province  
 USA       Other (specify) \_\_\_\_\_

Thank-you

Appendix B  
INTERVIEW QUESTIONS

Entrepreneur Interview Questions

1. What are the most important wildlife species to Churchill and to your operations?
2. What do you feel has the potential for future success?
3. What do you think of the tourist opportunities that exist now and how could they be organized differently?
- 3a. Could more research and/or understanding of the wildlife species involved improve the management of the tours and hunting opportunities?
4. What do you think of the present marketing of Churchill?
5. Do you think that an increase in tourism is necessary for the future of Churchill?
6. What are your feelings about tourism and its effect on the wildlife, and environment?

On the Street Interview Questions

1. Are you presently occupied in the tourist industry in Churchill?
2. Do you think tourism is important to the area (how about wildlife tourism?)
3. What are your feelings on tourism in the area?  
Do you think there can be improvements made?

Appendix C  
CHURCHILL SHIPPING

Churchill Export Grain Shipments (thousands of tonnes)					
Calendar Year	No. of Ships	Wheat	Barley	Screenings and Pellets	Total
1985	13	236.0	123.0	-	359.0
1984	15	428.0	8.0	-	436.0
1983	22	22.0	599.0	-	621.0
1982	18	389.0	168.0	11.9	568.9
1981	16	294.0	144.0	14.1	452.1
1980	12	280.3	9.5	19.0	308.8
1979	20	-	522.6	13.9	536.5
1978	20	69.1	450.3	23.3	542.7
1977	34	709.9	19.3	26.0	755.2
1976	27	383.3	311.5	24.3	719.1
1975	21	-	494.4	11.8	506.2
1974	20	15.0	483.0	-	498.0
1973	-	265.0	197.0	-	462.0
1972	30	443.0	192.8	-	635.8
1971	37	559.8	107.1	-	666.9
1970	35	669.9	-	-	669.9

Source: National Harbours Board, Annual Traffic Reports.

Cargo Handled at Port of Churchill, 1975.		
Commodity	Loaded (Tons)	Unloaded (Tons)
Grain (Barley)	545,045	/
Pellets	12,958	/
Sulphur	99,408	/
Metal Products	2,159	/
Petroleum	10,208	30,136
General Cargo	4,817	/
Total	674,595	30,136

Source: The Economy: Province of Manitoba.

Manitoba Department of Industry and Commerce. 1977.

NTCL Keewatin Operations						
DRY CARGO (TONNES)						
Destination	Pop'n	1981	1982	1983	1984	1985
Eskimo Point	1138	558	273	559	790	755
Whale Cove	206	152	70	96	241	470
Rankin Inlet	1239	2123	1103	840	2006	1377
Chesterfield	251	227	312	426	779	365
Baker Lake	1014	1487	462	652	1854	1694
Coral Harbour	432	749	343	383	1231	499
Subtotal	4280	5296	2563	2956	6901	5160
Retrograde	4280	485	1031	934	523	552
Total	4280	5781	3594	3890	7424	5712
% of total cargo		30.0	23.0	19.9	30.3	25.9
BULK FUEL (TONNES)						
Eskimo Point		2505	1826	2995	3092	2560
Whale Cove		1038	225	515	954	801
Rankin Inlet		4647	4648	6422	6128	5513
Chesterfield		726	649	743	1100	1050
Baker Lake		2558	3059	3496	3622	4312
Coral Harbour		2013	1655	1532	1991	2068
Subtotal		13487	12062	15703	16887	16304
Retrograde		0	0	0	187	0
Total		13487	12062	15703	17074	16304
% of total cargo		70.0	77.0	80.1	69.7	74.1
TOTAL CARGO (TONNES)						
Eskimo Point		3063	2099	3554	3882	3315
Whale Cove		1190	295	611	1195	1271
Rankin Inlet		6770	5751	7262	8134	6890
Chesterfield		953	961	1169	1879	1415
Baker Lake		4045	3521	4148	5476	6006
Coral Harbour		2762	1998	1915	3222	2567
Subtotal		18783	14625	18659	23788	21464
Retrograde		485	1031	934	710	552
Total		19268	15656	19593	24468	22016

Source: Port of Churchill Study. 1986.



Appendix D

MAMMALS OF CHURCHILL

Snowshoe Hare	( <i>Lepus americanus</i> )
Arctic Hare	( <i>Lepus arcticus</i> )
Muskrat	( <i>Ondatra zibethicus</i> )
Beluga Whale	( <i>Delphinapterus leucas</i> )
Wolf	( <i>Canis lupus</i> )
Arctic Fox	( <i>Alopex lagopus</i> )
Red Fox	( <i>Vulpes vulpes regalis</i> )
Black Bear	( <i>Ursus americanus</i> )
Polar Bear	( <i>Ursus maritimus</i> )
Marten	( <i>Martes americana</i> )
Ermine	( <i>Mustela erminea</i> )
Least Weasel	( <i>Mustela nivalis</i> )
Mink	( <i>Mustela vison</i> )
Wolverine	( <i>Gulo gulo</i> )
Lynx	( <i>Lynx lynx</i> )
Walrus	( <i>Odobenus rosmarus</i> )
Harbour Seal	( <i>Phoca vitulina</i> )
Ring Seal	( <i>Phoca hispida</i> )
Bearded Seal	( <i>Erignathus barbatus</i> )
Moose	( <i>Alces alces</i> )
Barrenland Caribou	( <i>Rangifer tarandus groenlandicus</i> )
Woodland Caribou	( <i>Rangifer tarandus caribou</i> )
Muskox	( <i>Ovibos moschatus moschatus</i> ) {From Banfield, 1974}

Appendix E  
BIRDS OF CHURCHILL

Arctic Loon	( <i>Gavia arctica</i> )
Common Loon	( <i>Gavia immer</i> )
Red-throated Loon	( <i>Gavia stellata</i> )
Horned Grebe	( <i>Podiceps auritus</i> )
Pied-billed Grebe	( <i>Podilymbus podiceps</i> )
American Bittern	( <i>Botaurus lentiginosus</i> )
Tundra Swan (Whistling)	( <i>Olor columbianus</i> )
Canada Goose	( <i>Branta canadensis</i> )
Brant	( <i>Branta bernicla</i> )
Greater White-Fronted Goose	( <i>Anser albifrons</i> )
Snow Goose	( <i>Anser caerulescens</i> )
Ross' Goose	( <i>Anser rossii</i> )
Mallard	( <i>Anas platyrhynchos</i> )
American Black Duck	( <i>Anas rubripes</i> )
Gadwall	( <i>Anas strepera</i> )
Northern Pintail	( <i>Anas acuta</i> )
Green Winged Teal	( <i>Anas crecca</i> )
Blue Winged Teal	( <i>Anas discors</i> )
American Wigeon	( <i>Anas americana</i> )
Northern Shoveler	( <i>Anas clypeata</i> )
Redhead	( <i>Aythya americana</i> )
Ring-necked Duck	( <i>Aythya collaris</i> )
Canvasback	( <i>Aythya valisineria</i> )

Greater Scaup	( <i>Aythya affinis</i> )
Lesser Scaup	( <i>Aythya affinis</i> )
Common Goldeneye	( <i>Bucephala clangula</i> )
Bufflehead	( <i>Bucephala albeola</i> )
Oldsquaw	( <i>Clangula hyemalis</i> )
Harliquin Duck	( <i>Histrionicus histrionicus</i> )
Common Eider	( <i>Somateria mollissima</i> )
King Eider	( <i>Somateria Spectabilis</i> )
White-winged Scoter	( <i>Melanitta deglandi</i> )
Surf Scoter	( <i>Melanitta perspicillata</i> )
Black Scoter	( <i>Melanitta nigra</i> )
Hooded Merganser	( <i>Lophodytes cusullatus</i> )
Common Merganser	( <i>Mergus merganser</i> )
Red-breasted Merganser	( <i>Mergus serrator</i> )
Northern Goshawk	( <i>Accipiter gentilis</i> )
Red Tailed Hawk	( <i>Buteo jamaicensis</i> )
Rough-legged Hawk	( <i>Buteo lagopus</i> )
Northern Harrier	( <i>Circus cyaneus</i> )
Osprey	( <i>Pandion haliaetus</i> )
Gyrfalcon	( <i>Falco rusticolus</i> )
Peregrine	( <i>Falco peregrinus</i> )
Merlin	( <i>Falco columbarius</i> )
American Kestrel	( <i>Falco sparverius</i> )
Spruce Grouse	( <i>Canachites canadensis</i> )
Willow Ptarmigan	( <i>Lagopus mutus</i> )
Rock Ptarmigan	( <i>Lagopus lagopus</i> )
Sandhill Crane	( <i>Grus canadensis</i> )
Sora	( <i>Porzana carolina</i> )

Yellow Rail	( <i>Coturnicops noveboracensis</i> )
American Coot	( <i>Fulica americana</i> )
Semipalmated Plover	( <i>Charadrius semipalmatus</i> )
Kildeer	( <i>Charadrius vociferus</i> )
Lesser-Golden Plover	( <i>Pluvialis dominica</i> )
Black-bellied Plover	( <i>Pluvialis squatarola</i> )
Hudsonian Godwit	( <i>Limosa haemastica</i> )
Whimbrel (Hudsonian Curlew)	( <i>Numenius phaeopus</i> )
Greater Yellowlegs	( <i>Tringa melanoleuca</i> )
Lesser Yellowlegs	( <i>Tringa flavipes</i> )
Solitary Sandpiper	( <i>Fringa solitaria</i> )
Spotted Sandpiper	( <i>Actitis macularia</i> )
Ruddy Turnstone	( <i>Arenaria melanocephala</i> )
Red-necked Phalarope	( <i>Lobipes lobatus</i> )
Red Phalarope	( <i>Phalaropus fulicarius</i> )
Wilson's Phalarope	( <i>Phalaropus tricolor</i> )
Common Snipe	( <i>Capella gallinago</i> )
Short-billed Dowitcher	( <i>Limnodromus griseus</i> )
Long-billed Dowitcher	( <i>Limnodromus scolapaceus</i> )
Red Knot	( <i>Calidris canutus</i> )
Sanderling	( <i>Calidris alba</i> )
Semipalmated Sandpiper	( <i>Calidris pusilla</i> )
Least Sandpiper	( <i>Calidris minutilla</i> )
White-rumped Sandpiper	( <i>Calidris fuscicollis</i> )
Bairds Sandpiper	( <i>Calidris Bairdii</i> )
Pectoral Sandpiper	( <i>Calidris melanotos</i> )
Dunlin	( <i>Calidris auratus</i> )
Stilt Sandpiper	( <i>Micropalama himantopus</i> )

Buff-breasted Sandpiper	( <i>Tryngites subruficollis</i> )
Pomarine Jaeger	( <i>Stercorarius pomarinus</i> )
Parasitic Jaeger	( <i>Stercorarius parasiticus</i> )
Long-tailed Jaeger	( <i>Stercorarius longicaudus</i> )
Glaucus Gull	( <i>Larus hyperboreus</i> )
Iceland Gull	( <i>Larus glaucoides</i> )
Great Black-backed Gull	( <i>Larus marinus</i> )
Herring Gull	( <i>Larus argentatus</i> )
Thayer's Gull	( <i>Larus thayeri</i> )
Ring-billed Gull	( <i>Larus delawarensis</i> )
Mew Gull	( <i>Larus canus</i> )
Bonaparte's Gull	( <i>Larus philadelphus</i> )
Little Gull	( <i>Larus minutus</i> )
Ross' Gull	( <i>Rhodostethia rosea</i> )
Sabine's Gull	( <i>Xema sabini</i> )
Common Tern	( <i>Sterno hirundo</i> )
Arctic Tern	( <i>Sterno paradisaea</i> )
Caspain Tern	( <i>Sterno caspia</i> )
Black Tern	( <i>Chlidonias niger</i> )
Black Guillemot	( <i>Cephus grylle</i> )
Rock Dove	( <i>Columbia livia</i> )
Mourning Dove	( <i>Zenaidura macroura</i> )
Snowy Owl	( <i>Nyctea scandiaca</i> )
Northern Hawk Owl	( <i>Surnia ulula</i> )
Short-eared Owl	( <i>Asio flammeus</i> )
Common Nighthawk	( <i>Chordeiles minor</i> )
Ruby-throated Hummingbird	( <i>Archilochus colubris</i> )
Common Flicker	( <i>Colaptes auratus</i> )

Three-toed Woodpecker	(Picoides tridactylus)
Eastern Kingbird	(Tyrannus tyrannus)
Alder Flycatcher	(Empidonax alnorum)
Horned Lark	(Eremophila alpestris)
Tree Swallow	(Iridoprocne bicolor)
Bank Swallow	(Riparia riparia)
Barn Swallow	(Hirundo rustica)
Cliff Swallow	(Petrochelidon pyrrhonota)
Gray Jay	(Perisoreus canadensis)
Common Raven	(Corvus corax)
American Crow	(Corvus brachyrhynchos)
Boreal Chickadee	(Parus hudsonicus)
Brown Thrasher	(Toxostoma rufum)
American Robin	(Turdus migratorius)
Hermit Thrush	(Catharus minimus)
Swainson's Thrush	(Catharus guttatus)
Gray-cheeked Thrush	(Catharus ustulatus)
Ruby-crowned Kinglet	(Regulus calendula)
Water Pipit	(Anthus spinoletta)
Bohemian Waxwing	(Bombycilla garrulus)
Northern Shrike	(Lanius excubitor)
Starling	(Sturnus vulgaris)
Tennessee Warbler	(Vermivora peregrine)
Orange-crowned Warbler	(Vermivora celata)
Yellow Warbler	(Dendroica petechia)
Yellow-rumped Warbler	(Dendroica coronata)
Blackpoll Warbler	(Dendroica striata)
Palm Warbler	(Dendroica palmarum)

Northern Waterthrush	( <i>Seiurus noveboracensis</i> )
Common Yellowthroat	( <i>Geothlypis trichas</i> )
Wilson's Warbler	( <i>Wilsonia pusilla</i> )
House Sparrow	( <i>Passer domesticus</i> )
Western Meadowlark	( <i>Sturnella neglecta</i> )
Yellow-headed Blackbird	( <i>Xanthocephalus xanthocephalus</i> )
Red-winged Blackbird	( <i>Agelaius phoeniceus</i> )
Rusty Blackbird	( <i>Euphagus carolinus</i> )
Common Grackle	( <i>Quiscalus quiscula</i> )
Brown-headed Cowbird	( <i>Molothrus ater</i> )
Pine Grosbeak	( <i>Pinicola enucleator</i> )
Hoary Redpoll	( <i>Carduelis hornemanni</i> )
Common Redpoll	( <i>Carduelis flammia</i> )
Pine Siskin	( <i>Carduelis pinus</i> )
Red Crossbill	( <i>Loxia curvirostra</i> )
White-winged Crossbill	( <i>Loxia leucoptera</i> )
Savannah Sparrow	( <i>Passerculus sandwichensis</i> )
Dark-eyed Junco	( <i>Junco hyemalis</i> )
American Tree Sparrow	( <i>Spizella arborea</i> )
Chipping Sparrow	( <i>Spizella passerina</i> )
Clay-coloured Sparrow	( <i>Spizella pallida</i> )
Harris Sparrow	( <i>Zonotrichia querula</i> )
White-crowned Sparrow	( <i>Zonotrichia leucophrys</i> )
White-throated Sparrow	( <i>Zonotrichia albicollis</i> )
Fox Sparrow	( <i>Passerella iliaca</i> )
Lincoln's Sparrow	( <i>Melospiza lincolni</i> )
Swamp Sparrow	( <i>Melospiza georgiana</i> )
Song Sparrow	( <i>Melospiza melodia</i> )

Lapland Longspur	( <i>Calidris lapponicus</i> )
Smith's Longspur	( <i>Calidris pictus</i> )
Snow Bunting	( <i>Plectrophenax nivalis</i> )

from Lane and Chartier (1983); Godfrey (1966).



Appendix F

UNRECORDED ANSWERS OF THE SURVEY

Question 1 - What were your reasons for visiting Churchill, Mb.?

Response to 'Other'	Frequency (n=139)	Percent
Talking to Inhabitants	1	.7
Writing newspaper articles	1	.7
Came with Parents	1	.7
To increase Teaching Skills	1	.7
Buying fuel for the Plane	1	.7
To rest	1	.7
Going Further North	1	.7
To see a Northern City	1	.7
Meeting with Wildlife Managers	1	.7
Have not seen the area before	1	.7
Northern Lights	1	.7
Photography	1	.7
Shopping	2	1.4
Flora	2	1.4
Train Ride	3	2.0
School	9	6.0

Question 2 - How did you learn about Churchill, Mb.?

Response to 'Other'	Frequency (n=139)	Percent
Geological Interest	1	.7
Rocket Research	1	.7
From Birding Circles	1	.7
As far north as Via goes	1	.7
Lived in Eastern Arctic	1	.7
Former Travel	1	.7
Museum	1	.7
Husband	1	.7
Just wanted to see Hudson Bay area	2	1.4
Goose Survey	2	1.4
Always known of Churchill	4	3.0
Train Advertisements	4	3.0
Northern Location	5	3.6
Atlas	5	4.5
Work	10	7.2
School	14	10.1

Question 4 - What wildlife did you view in Churchill, Mb.?

Response to 'Other'	Frequency (n=139)	Percent
General aspect	1	.7
Weasels	1	.7
Seals	1	.7
Plants	3	2.0
Red fox	3	2.0
Arctic fox	10	9.0

Question 7 - Comments on doing or not doing all that you intended to do?

Response to 'Comments'	Frequency (n=139)	Percent
Very nice	1	.7
Tours were full	1	.7
Car rental was pitiful	1	.7
No easy place to fish	1	.7
Had no specific plans	1	.7
Bears too far from town	1	.7
Bus trip long and boring	1	.7
Wanted to go to the North Pole	1	.7
Wrong time	1	.7
Wrong time for Northern Lights	1	.7
Tour of supply ship a bonus	1	.7
Everything was closed on Canada Day	2	1.4
Excellent tour opportunities	2	1.4
Advertize tours (reduce cost)	2	1.4
Aerial tours were great	2	1.4
Did not get on to the tundra	5	3.6
Never got to Fort	5	3.6
Not enough time (too much to do)	6	4.3
Inclement weather	7	6.0
Not much wildlife	10	7.2
Wrong season for bears and whales (no information)	30	21.6

Question 8 - How can Wildlife tourism be Improved in Churchill, Mb.?

<u>Improve wildlife activities</u>	<u>Frequency (n=139)</u>	<u>Precent</u>
Monitor bird groups around nests	1	.7
Advertize at Sports Shows (combine car and rail travel - cheaper)	1	.7
Make tours more available (all booked with package deals)	1	.7
Have more night life	1	.7
Provide Mosquito nets	1	.7
Increase tourist agency's awareness	1	.7
Leave wildlife alone	1	.7
Visitor complex in WMA	1	.7
Viewing tower for whales	1	.7
Introduce musk-ox	1	.7
Open Museum longer for train passengers	1	.7
Restore the Fort	1	.7
Include unique Churchill activities	1	.7
Increase accessibility to tundra	1	.7
Provide a youth hostel	1	.7
Provide Ship tours	1	.7
Stop chasing bears from area	1	.7
Provide cheaper souvenirs (canned char, slide, kids books, calendars etc.)	1	.7
Open road to Gorden Point	1	.7
Build high-rise hotel viewing bay	1	.7
Publicize Harbours Board	1	.7
Provide more History	1	.7
Provide Flower Treks	1	.7
Provide Better Maps	1	.7
Co-operation between tour operators and conservation officers	2	1.4
Build fishing piers (for bay and river)	2	1.4
Baited stations for bears	2	1.4
Provide more activities with locals	2	1.4
Put in a road from Gillam	2	1.4
Do not use large vehicles on the tundra	3	2.0
Make goose nesting sites more accessible (advertize)	3	2.0
Improve infrastructure	4	3.0
Improve rail service	4	3.0
More advertising-flights tours services	5	3.6
Improve Parks Canada operations	5	3.6
Tour guides should be trained, friendly and knowledgeable	5	3.6
No need to improve	7	5.0
Have more organization (Info Centre)	8	5.8
Provide an animal sanctuary	8	5.8
Clean up the area	8	5.6
Provincial, Federal agencies and Experts Should provide knowledge	13	9.4
Have bears and whales more accessible (advertize the right seasons)	14	10.1
No answer	38	27.0

Question 9 - What would you do on returning to Churchill, Mb.?

Response to 'Others'	Frequency (n=139)	Percent
Canoeing	1	.7
Northern lights	1	.7
Tidal fauna	1	.7
Dog sleds	1	.7
Nature walks	1	.7
Flowers	1	.7
Inuit Culture	1	.7
Cold Weather Experience	1	.7
Rocks	2	1.4
Glacial History	2	1.4
As much as possible in season	2	1.4
Locals	2	1.4
Historic sites	5	3.6
Research	6	4.3
Tundra	7	5.0

Question 10 - What was your Country of Origin?

Response to 'Other'	Frequency (n=139)	Percent
Holland	1	.7
Sweden	1	.7
Britain	1	.7
Scotland	1	.7
Kenya	2	1.4
Switzerland	1	.7
France	2	1.4
Japan	2	1.4