



# Gwich'in Harvest Study

## Summary



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"Mackenzie Delta" GRRB (Kristen Callaghan)

"Netting fish at Rat River" GRRB (Nathan Miller)

"Tent along the Mackenzie River" GRRB

"Rebecca Francis teaches youth to harvest coney" GRRB

**Front Cover Photos:** "Wolf" GRRB, "Winter Tent" GRRB, "Drying Meat" GRRB, "Herd of Muskoxen" GRRB (Brian Dokum), "Jane Charlie Sr. harvesting a moose" GRRB

# INTRODUCTION

The Gwich'in Harvest Study counted the number of animals, fish and birds harvested by Gwich'in participants in the Gwich'in Settlement Area (GSA) from 1995-2001.

- All Gwich'in participants who harvested in the settlement area were included.

## Purpose

Section 12.5.6 of the Gwich'in Comprehensive Land Claim Agreement (1992) required the Gwich'in Renewable Resource Board (GRRB) to conduct a Harvest Study. The Study will provide necessary harvesting information for the effective management of wildlife by the GRRB and government. It will also be used to determine Gwich'in Needs Levels.

- Total Allowable Harvest is the maximum number of animals of a species or population of wildlife that can be harvested by all people. The GRRB will consult with the Renewable Resource Councils (RRCs) when allocating total allowable harvests.
- The Gwich'in Minimum Needs Level sets the minimum number of a species that Gwich'in participants need to maintain a sustainable harvest. The Board will establish Needs Levels as issues regarding harvest limits and conservation arise, in coordination with all parties involved, including the Gwich'in and government.

"Mountain view" GRRB

"Richardson Mountains" GRRB (Kristen Callaghan)

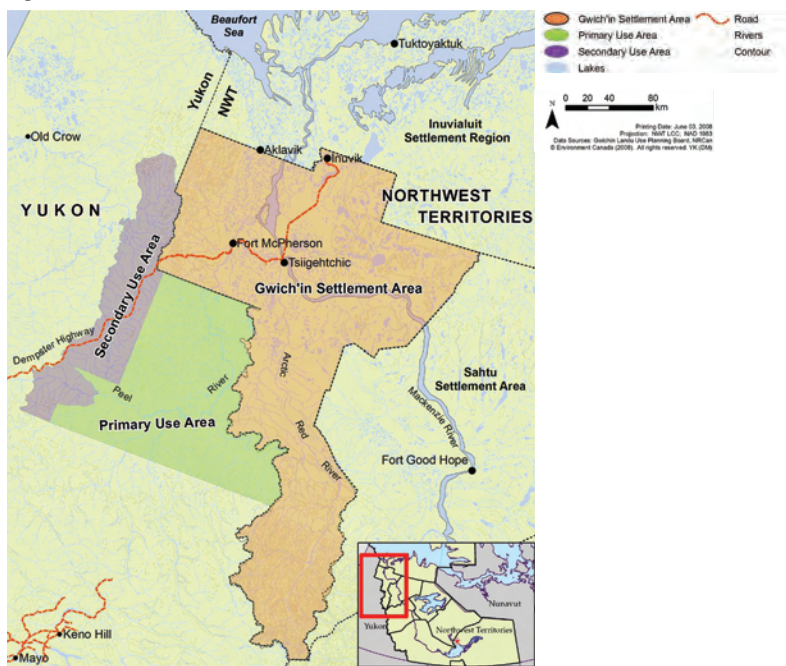
# GWICH'IN SETTLEMENT AREA

## Study Area

The Gwich'in Settlement Area covers approximately 56,935 square kilometers of land. The settlement area includes the communities of Aklavik, Fort McPherson, Inuvik and Tsiigehtchic in the Northwest Territories (Figure 1). It is surrounded by the Inuvialuit Settlement Region, the Sahtu Settlement Area and the Yukon. The study area also included the Primary and Secondary Use areas, adjacent to the settlement area. Populations of the four communities were as follows (1996, Gwich'in Enrollment Board; NWT Bureau of Statistics, GNWT):

- Aklavik: 727 (228 Gwich'in participants)
- Fort McPherson: 878 (769 Gwich'in participants)
- Inuvik: 3,296 (378 Gwich'in participants)
- Tsiigehtchic: 162 (126 Gwich'in participants)

Figure 1: Gwich'in Settlement Area



# GWICH'IN SETTLEMENT AREA

## Environment

The Mackenzie Delta lies north of the Mackenzie Mountains and the Richardson Mountains. Most of the region is flat.

Plants found in the GSA include spruce, birch, willow, Labrador tea and blueberry, among others. Some of the harvested wildlife include beaver, black duck, caribou, coney, Dall's sheep, Dolly Varden char, fox, geese, grayling, herring, lake trout, loche, moose, snowshoe hare, whitefish and wolf. Species listed at risk in the Northwest Territories and Canada include the grizzly bear, peregrine falcon, wolverine and woodland caribou.

Climate varies with long cold winters and short cool summers. The geology is influenced by glacial and flood deposits with permafrost melting occurring. The three main rivers (Mackenzie, Arctic Red and Peel) flow into the Delta. Largest lakes include Cardinal, Campbell and Travaillant.

## Culture

Four bands live in the GSA: Ehdiitat Gwich'in in Aklavik, Teet'it Gwich'in in Fort McPherson, Nihtat Gwich'in in Inuvik and Gwichya Gwich'in in Tsiigehtchic.

The traditional economy relies on harvesting of renewable resources including trapping, hunting and fishing. Gwich'in also depend on forest products including edible and medicinal plants as well as wood for fuel wood, cabins, and crafts, but these were beyond the scope of the Harvest Study.

There are a few areas where commercial harvesting of wildlife and forest products may not be allowed. As well, wildlife harvesting may be limited during specific seasons. These zones are described in the Gwich'in Land Use Plan and management plans. Co-management boards work together to sustain harvesting of wildlife in transboundary areas, such as overlapping caribou migration in several settlement areas. The GRRB can also make policies around commercial harvesting and activities related to wildlife, such as outfitting.



# METHODS

The Harvest Study was designed to ensure the accuracy of information. All information collected was recorded in a manner which protects harvester confidentiality.

- The GRRB met with the four communities and the RRCs in each community to determine names of hunters to be interviewed.
- Efforts were made to contact all hunters in the area.
- Persons on the hunter list were interviewed once a month and a data report was made available each of the five years of the Study.
- Numbers of animals and locations and dates of harvests were noted at each interview.
- The names of hunters were kept confidential.
- The harvest study information was stored in a computer database.
- Posters, radio announcements, prizes, presentations and calendars were produced to increase awareness of the Harvest Study.
- A final check was done after the information had been collected.
- A final report which describes Harvest Study methods and results in more detail was also created.



"Winter Cabin" GRRB

"Dall's Sheep" GRRB (Catherine Lambert Koizumi)



# RESULTS

## Response Rate

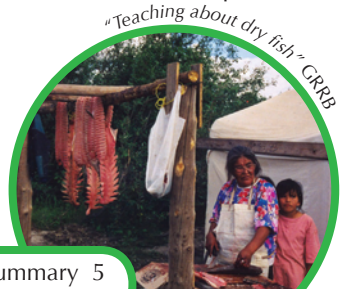
Most hunters were interviewed regularly. The harvest study provided a good summary of aboriginal harvest activity in the GSA as the Study attempted to interview all possible Gwich'in hunters and was successful in regularly contacting most of the people on the list.

- The overall response rate was about 90%.
- Response rates were high for all communities except during the last 2 years of the Study (79 - 91%).

## Reliability of Information

The information collected is thought to be reliable, as care was taken to minimize survey problems such as recall bias. However, there were other factors, such as voluntary harvesting restraints, that will influence the harvest survey results for some species.

- Most interviews happened within one month of the harvest to avoid problems in recalling harvest.
- The Harvest Study took place during a voluntary moratorium on grizzly bear from 1992-98. These limits may have influenced the harvest of these animals.
- Voluntary harvest guidelines were set for Rat River char from 1996-2004. These limits may have influenced the harvest of these animals.
- Caribou were reported as woodland, Bluenose, or Porcupine. In recent years, the Bluenose herd has been divided into Bluenose West, Bluenose East and Cape Bathurst.
- It is not known if all hunters that reported their harvests knew the difference between woodland and barren-ground caribou or the difference between each herd.
- Some hunters may have had concerns with reporting tundra swan harvests because of historical restrictions on hunting swans, despite changes in the Migratory Birds Convention Act (1994) and the Gwich'in Comprehensive Land Claim Agreement.
- It is important to remember that only Gwich'in aboriginal harvest was recorded in the Gwich'in Harvest Study. All available harvest information should be considered to gain a full understanding of the effects of harvesting on wildlife populations in the GSA.



# RESULTS

## Total Harvest Estimates

- 57 species and groups of animals were included in the Study.
- Over 329,827 harvests were included in approximately 9000 records.
- 542 hunters were recorded in over 56,000 interviews.
- The number of hunters harvesting the most common species was highest in 1997-98.
- Some of the most common animals harvested were black duck and other duck species, char, muskrat, Porcupine caribou, snowshoe hare and whitefish.
- Moose harvest was consistent over the Study period.
- Some of the fewest animals harvested were Arctic grayling, Dall's sheep, grizzly bear and woodland caribou.

## Gwich'in Settlement Area -Total Harvest Estimates

Category	Species	Annual Average	Range
Big Game	Black Bear	4	0-8
	Bluenose Caribou	104	22-153
	Dall's Sheep	1	0-5
	Grizzly Bear	1	0-2
	Moose	43	28-55
	Porcupine Caribou	1,558	452-2,206
	Woodland Caribou	2	0-6



"Ice-fishing" GRRB

# RESULTS

## Gwich'in Settlement Area -Total Harvest Estimates

Category	Species	Annual Average	Range
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### Fish

Char	1,564	857-3,024
Chum Salmon	11	0-60
Coney	5,265	4,162-6,272
Crookedback	5,984	1,161-13,993
Grayling	12	0-59
Herring	3,258	364-5,833
Jackfish	1,052	661-1,556
Lake Trout	157	81-287
Loche	1,101	362-1,611
Sucker	13	0-36
Walleye	2	0-6
Whitefish	26,533	20,147-33,980
Fish sp.	1,825	8-6,323

### Fur Bearer

Beaver	112	83-150
Ermine	5	0-24
Lynx	64	42-95
Marten	599	193-1,145
Mink	67	8-104
Muskrat	2,660	5-5,614
Otter	0	0-2
Red Fox	61	15-111
White Fox	0	0-2
Wolf	12	2-29
Wolverine	11	418

### Marine

### Mammal

Beluga Whale	1	0-2
Ringed Seal	0	0-2

"Boats" GRRB



# RESULTS

## Gwich'in Settlement Area -Total Harvest Estimates

Category	Species	Annual Average	Range
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### Small Game

Ground Squirrel	2	0-5
Grouse	44	4-99
Porcupine	3	0-6
Ptarmigan	93	33-187
Snowshoe Hare	864	315-1,180

### Waterfowl

Black Duck	717	452-1,002
Blue-winged Teal	2	0-6
Brant	5	0-30
Canada Goose	128	17-246
Canvasback	15	0-65
Goldeneye	14	0-61
Greater White-fronted Goose	85	36-161
Green-winged Teal	3	0-8
Long-tailed Duck	7	0-34
Mallard	169	69-259
Pintail	17	7-43
Ring-necked Duck	1	0-3
Scaup	10	0-34
Shoveller	3	0-10
Snow Goose	270	168-352
Tundra Swan	78	61-95
Wigeon	42	9-79
Duck sp.	166	0-288
Goose sp.	151	75-269

"Stanley Bonnetplume harvesting geese" CRRB

# CONCLUSION

The Harvest Study has been successful. Thanks are due to all who participated and helped complete this important project.

The Harvest Study is a useful tool for wildlife management. It provides good harvesting information that can be used when planning management activities and examining Needs Levels.

- Information will benefit present and future generations of hunters and wildlife managers alike.
- The Harvest Study promotes a greater understanding of population management to communities, land claim organizations, government agencies and the public.

## For More Information

Copies of the Gwich'in Harvest Study final report can be obtained by contacting the GRRB or visiting their website. Additional requests for harvest study information can be made by contacting the Executive Director. The Renewable Resource Board has a data release policy which outlines measures for the release of specific information.

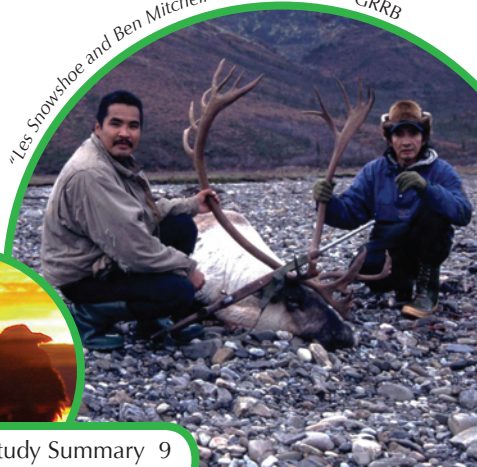


"Sunset" GRRB



"Raven at Sunset" GRRB

"Les Snowshoe and Ben Mitchell hunting caribou" GRRB





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