2018-19 ABEKS Update

For: PCMB Annual Harvest Meeting

Inuvik NWT

February 12th, 2019

Photo Credit: Jessie Pascal 2018

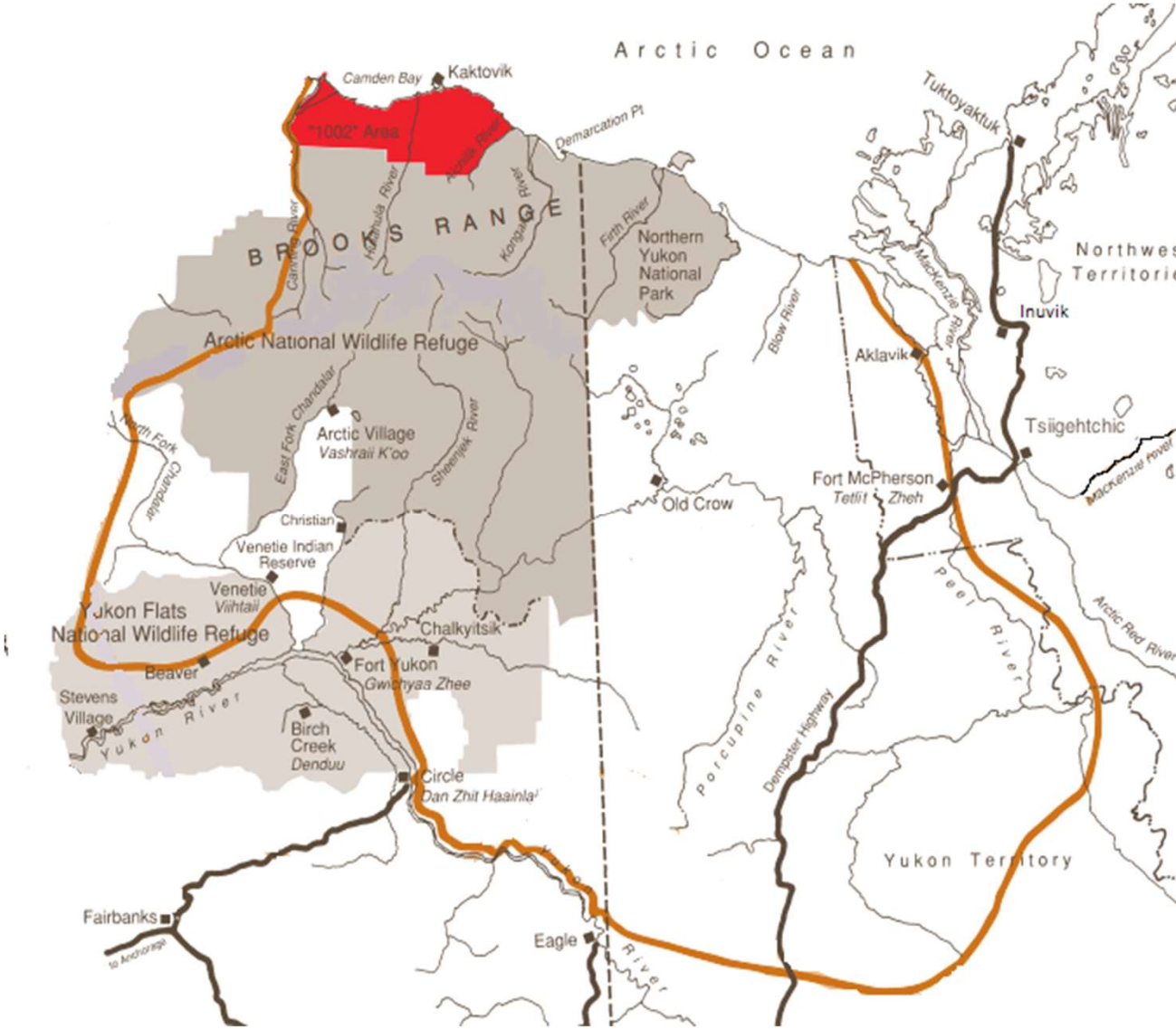
ABEKS 2018

129 interviews with local experts

Old Crow, Tsiigehtchic, Fort McPherson, Inuvik, Aklavik

Tuktoyaktuk is also an ABEKS community but is not included in this presentation.

Period covered = November 2017-October 2018



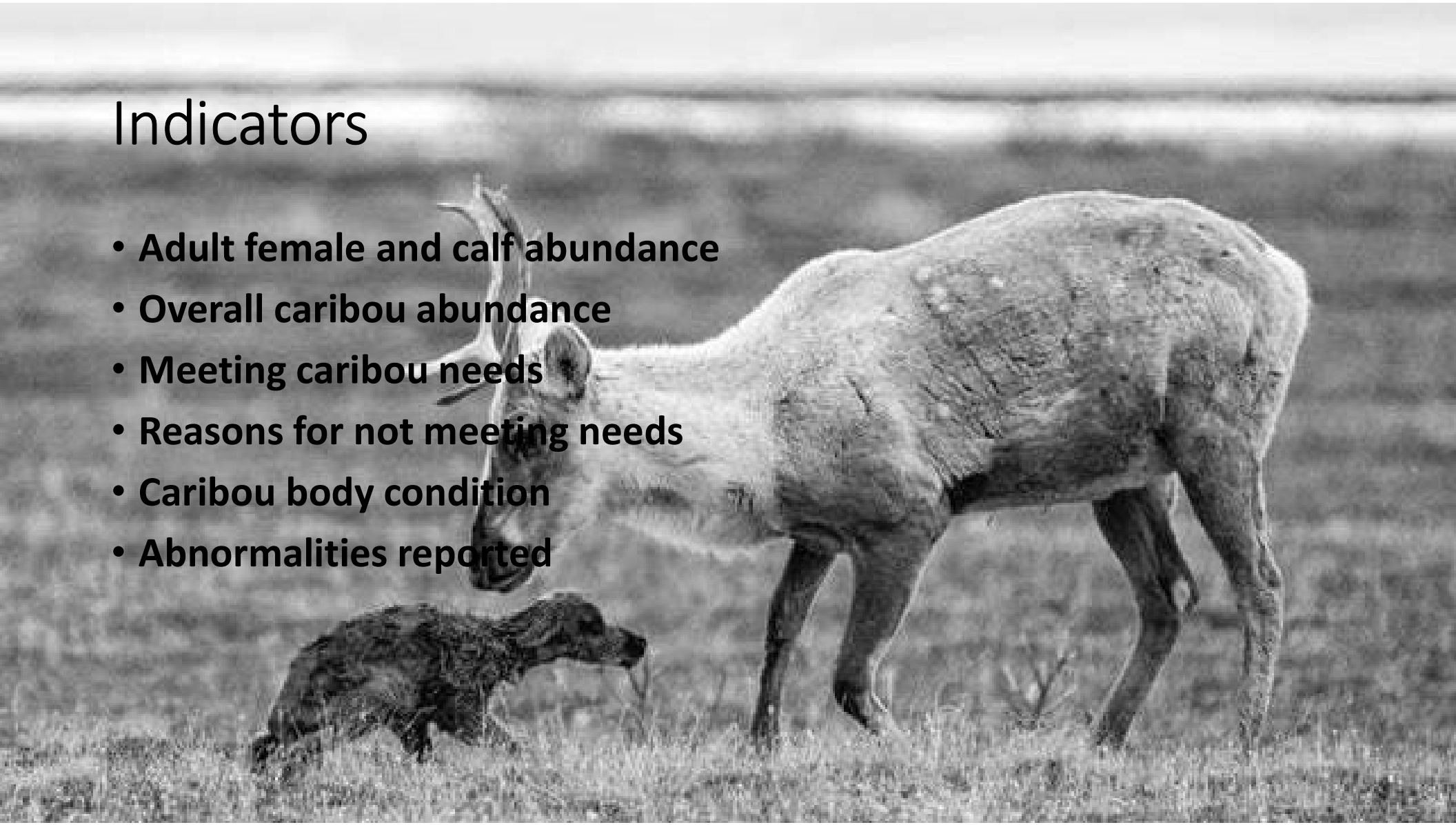
Number of interviews per year by community, 2011-2018
n=1004

	2011 (n=124)	2012 (n=155)	2013 (n=159)	2014 (n=141)	2015 (n=119)	2016 (n=27)	2017 (n=150)	2018 (n=129)
Aklavik (Gwich'in)	6	20	20	20	20	0	20	20
Aklavik (Inuvialuit)	21	20	20	20	20	0	19	20
Arctic Village (Gwich'in)	4	19	20	20	0	8	10	0
Fort McPherson (Gwich'in)	20	20	20	20	19	0	20	20
Inuvik (Gwich'in)	14	20	20	10	20	0	20	20
Inuvik (Inuvialuit)	19	19	20	11	20	0	20	10
Old Crow (Gwich'in)	20	17	19	20	20	19	21	20
Tsiigehtchic (Gwich'in)	20	20	20	20	0	0	20	19

Key findings

- Interviewees reported their ability to meet caribou needs was low this year due to availability (location) not abundance (how many in the herd)
- If people answer that that didn't hunt because caribou were too far it may be because of time of year that caribou came through. Migration time and routes are changing every year.
- Most people who didn't hunt say they didn't have time.

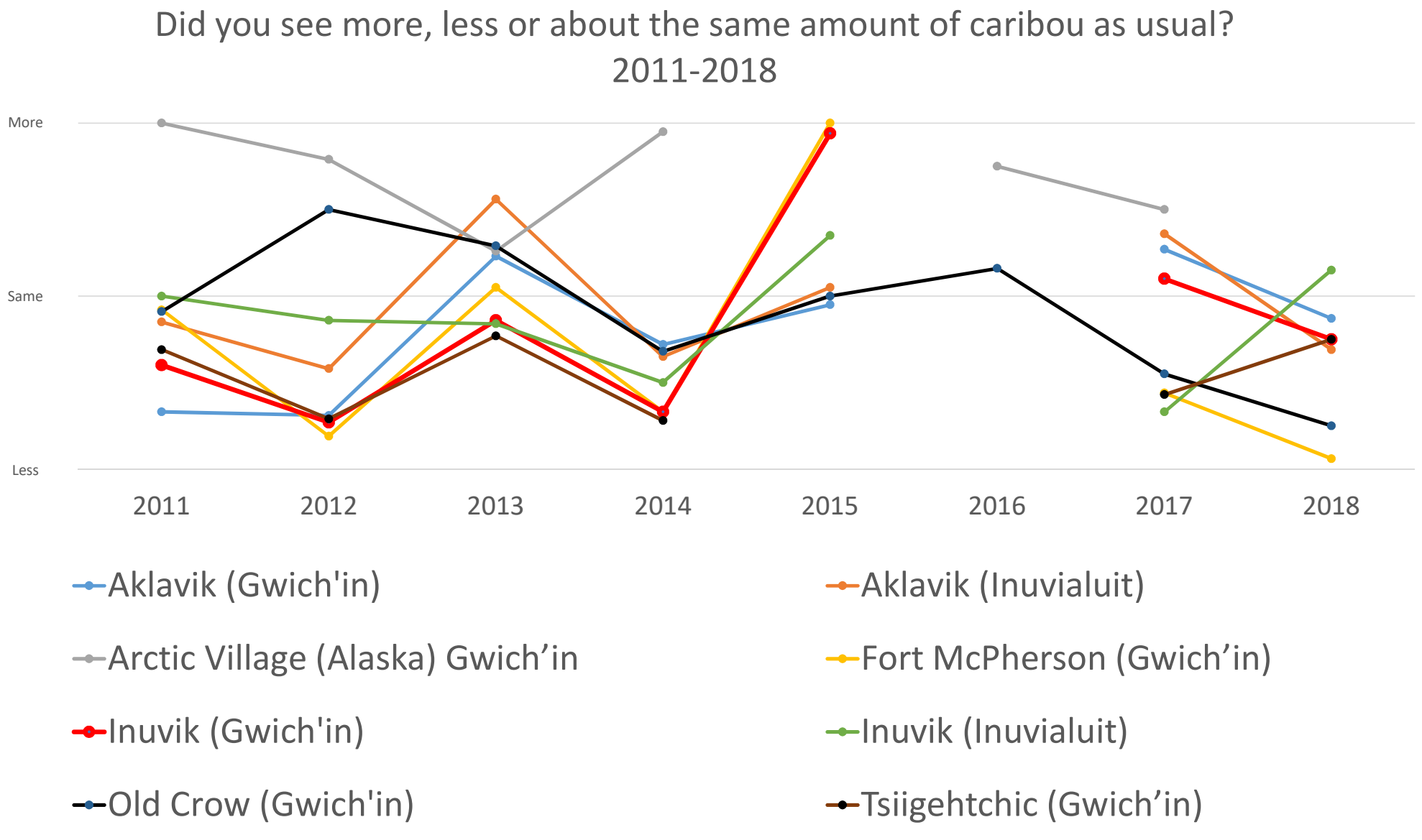
Indicators

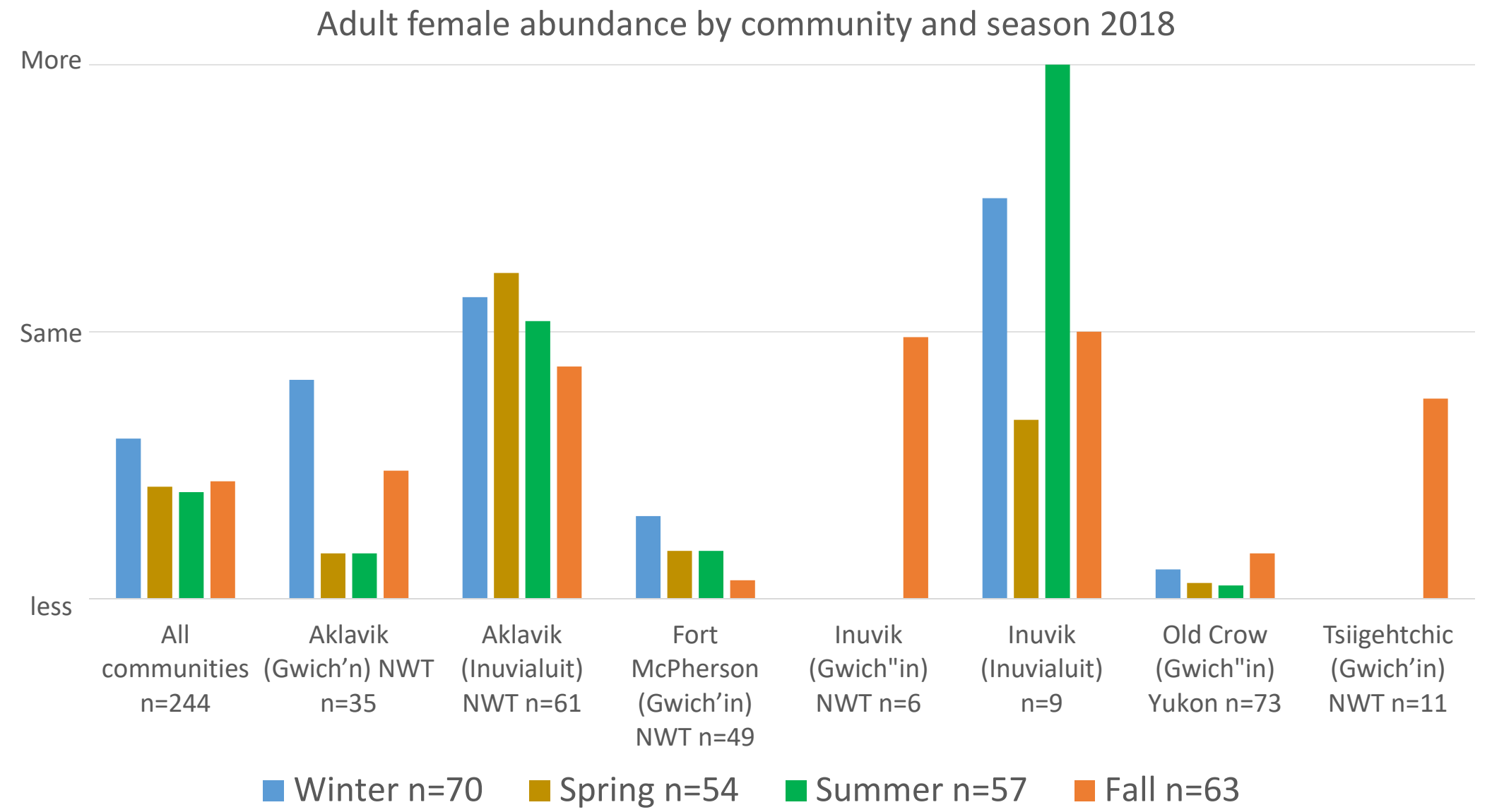


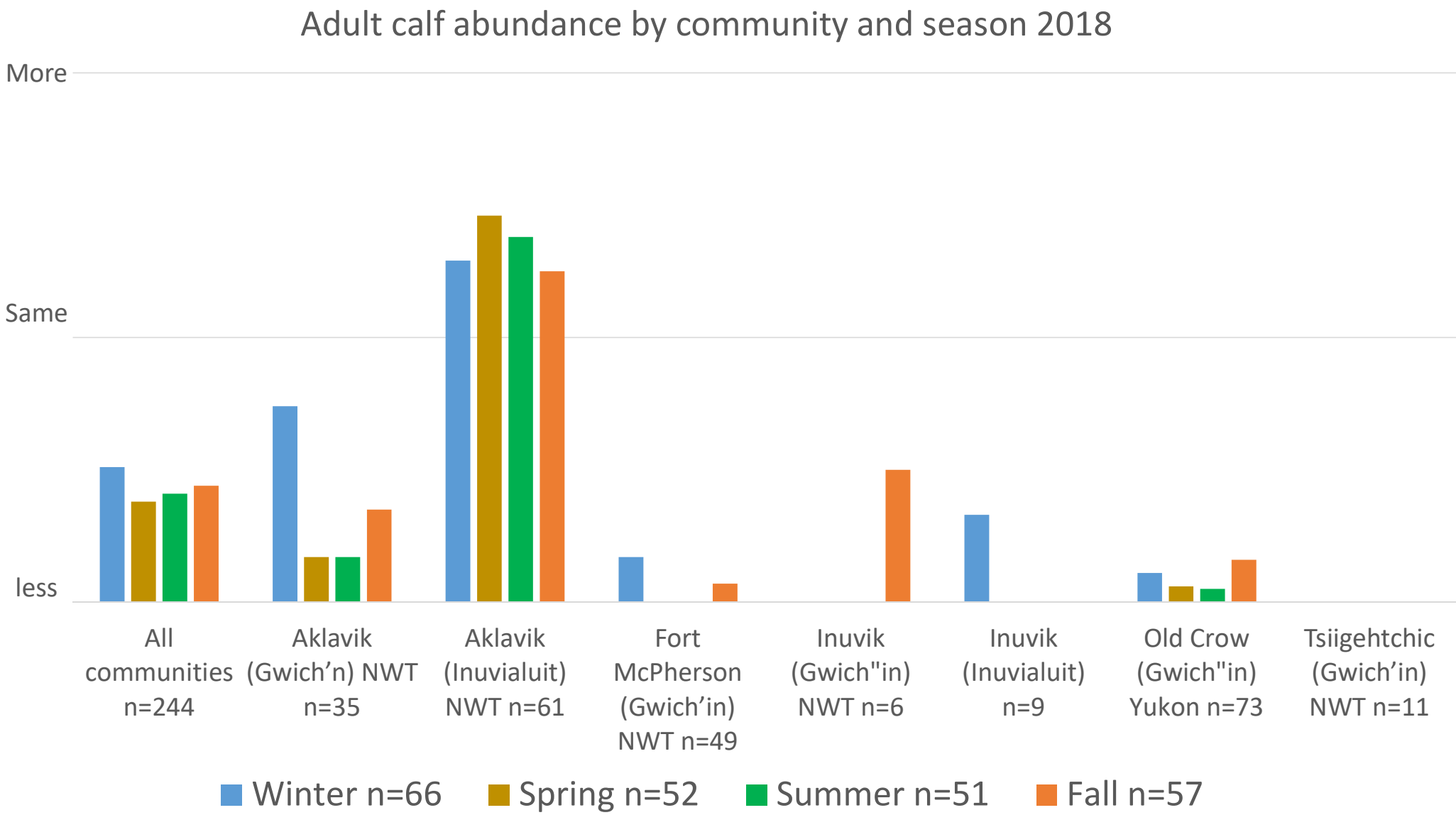
- **Adult female and calf abundance**
- **Overall caribou abundance**
- **Meeting caribou needs**
- **Reasons for not meeting needs**
- **Caribou body condition**
- **Abnormalities reported**

Example abundance index calculation

Calf abundance Winter 2018	All communities n=66	Aklavik (Gwich'n) NWT n=15	Aklavik (Inuvialuit) NWT n=14	Fort McPherson (Gwich'in) NWT n=12	Inuvik (Gwich"in) NWT n=1	Inuvik (Inuvialuit) NWT n=3	Old Crow (Gwich"in) Yukon n=19	Tsiigehtchic (Gwich'in) NWT n=2
more	9%	7%	36%	0	0	0	0	0
same	33%	60%	57%	17%	0	33%	11%	0
less	58%	33%	7%	83%	100%	67%	89%	100%
Index = 3(more) +2(same) +less	1.51	1.74	2.29	1.17	1	1.33	1.11	1


Did you see more, less or about the same amount of caribou as usual?
2011-2018
More
Same
Less
2011
2012
2013
2014
2015
2016
2017
2018
Aklavik (Gwich'in)
Aklavik (Inuvialuit)
Arctic Village (Alaska) Gwich’in
Fort McPherson (Gwich’in)
Inuvik (Gwich'in)
Inuvik (Inuvialuit)
Old Crow (Gwich'in)
Tsiigehtchic (Gwich’in)

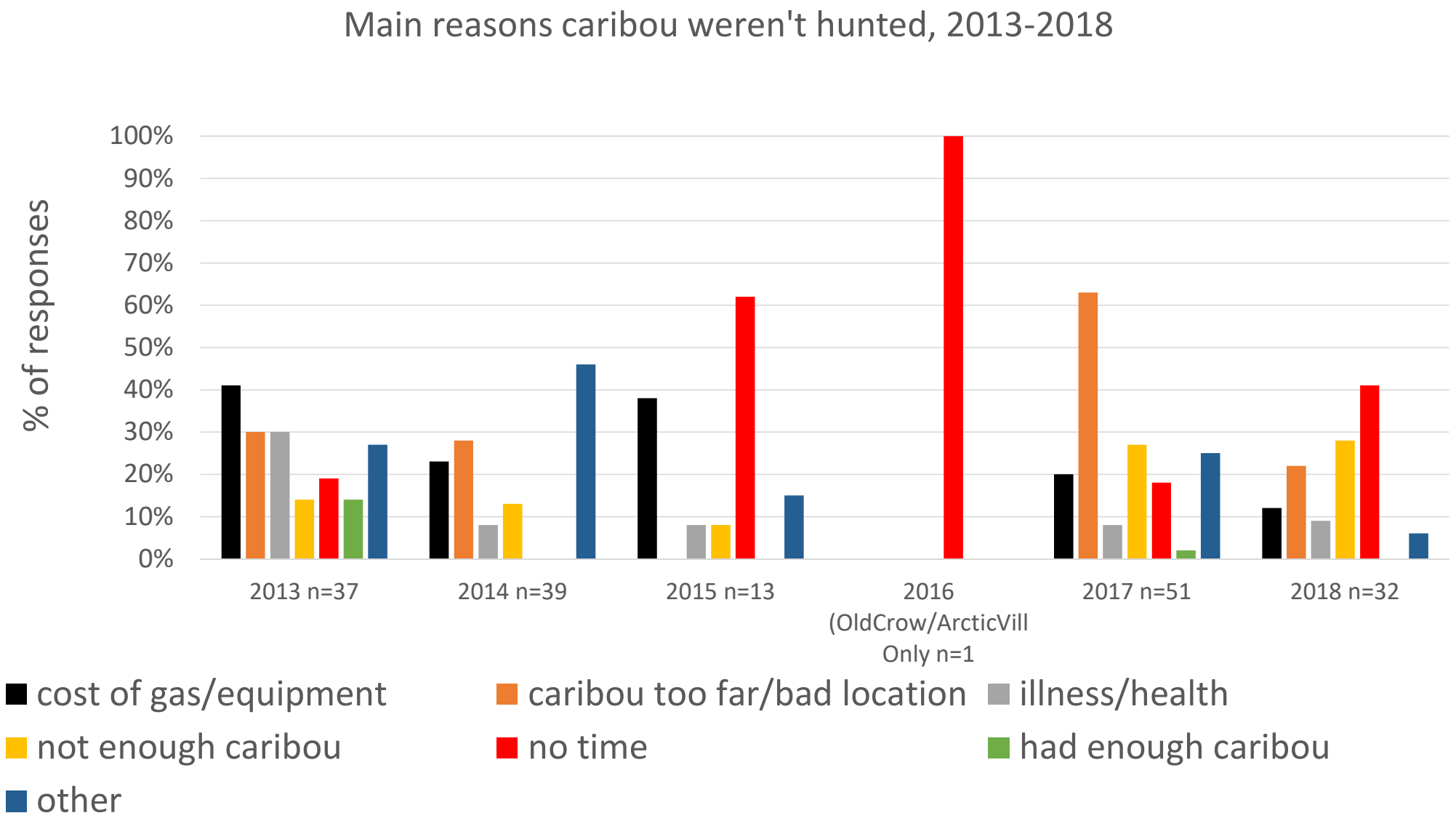

Adult female abundance by community and season 2018
More
Same
less
All communities n=244
Aklavik (Gwich’n) NWT n=35
Aklavik (Inuvialuit) NWT n=61
Fort McPherson (Gwich’in) NWT n=49
Inuvik (Gwich"in) NWT n=6
Inuvik (Inuvialuit) n=9
Old Crow (Gwich"in) Yukon n=73
Tsiigehtchic (Gwich’in) NWT n=11
Winter n=70
Spring n=54
Summer n=57
Fall n=63

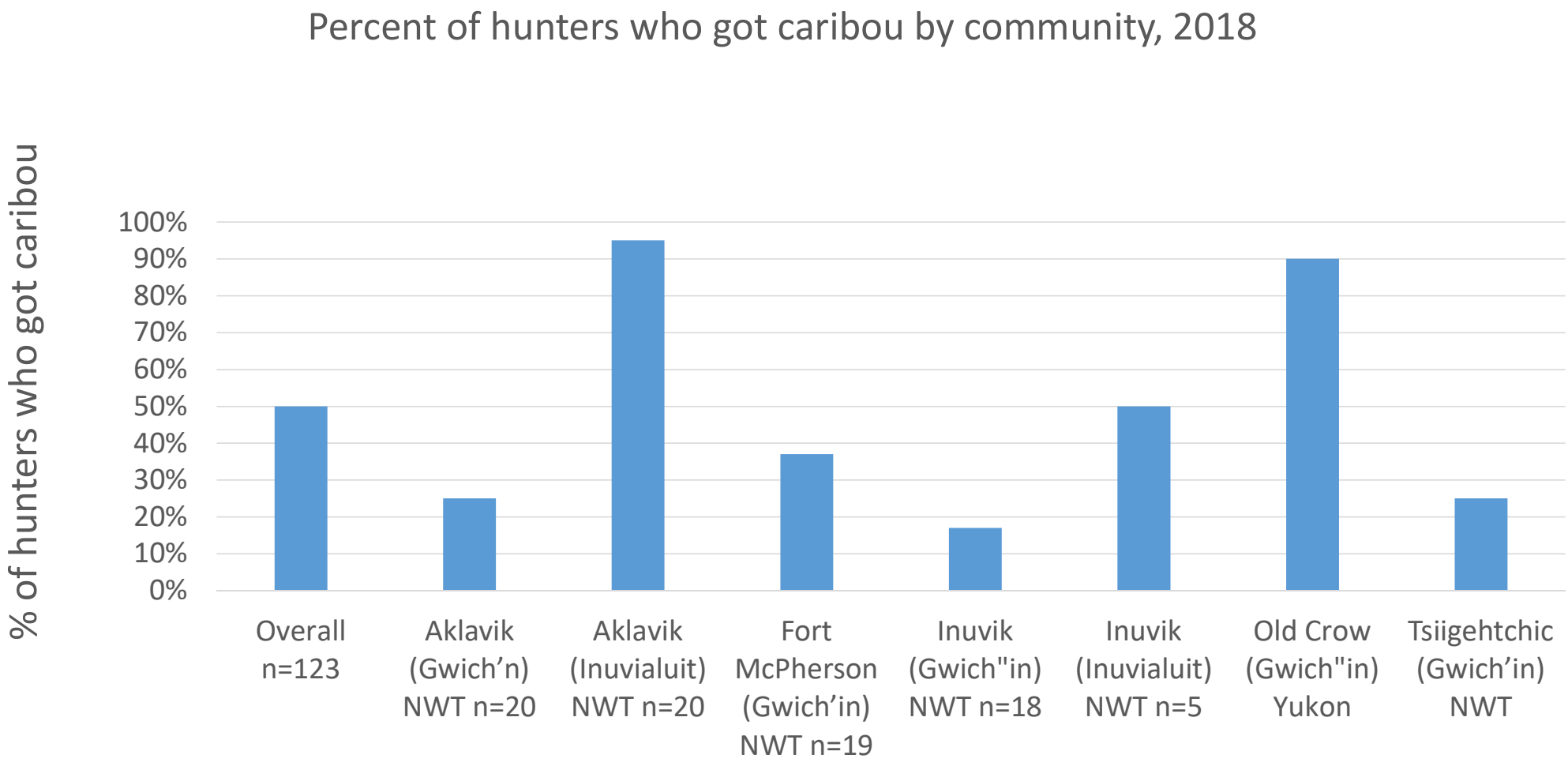

Adult calf abundance by community and season 2018
More
Same
less
All communities n=244
Aklavik (Gwich'n) NWT n=35
Aklavik (Inuvialuit) NWT n=61
Fort McPherson (Gwich'in) NWT n=49
Inuvik (Gwich"in) NWT n=6
Inuvik (Inuvialuit) n=9
Old Crow (Gwich"in) Yukon n=73
Tsiigehtchic (Gwich'in) NWT n=11
Winter n=66
Spring n=52
Summer n=51
Fall n=57

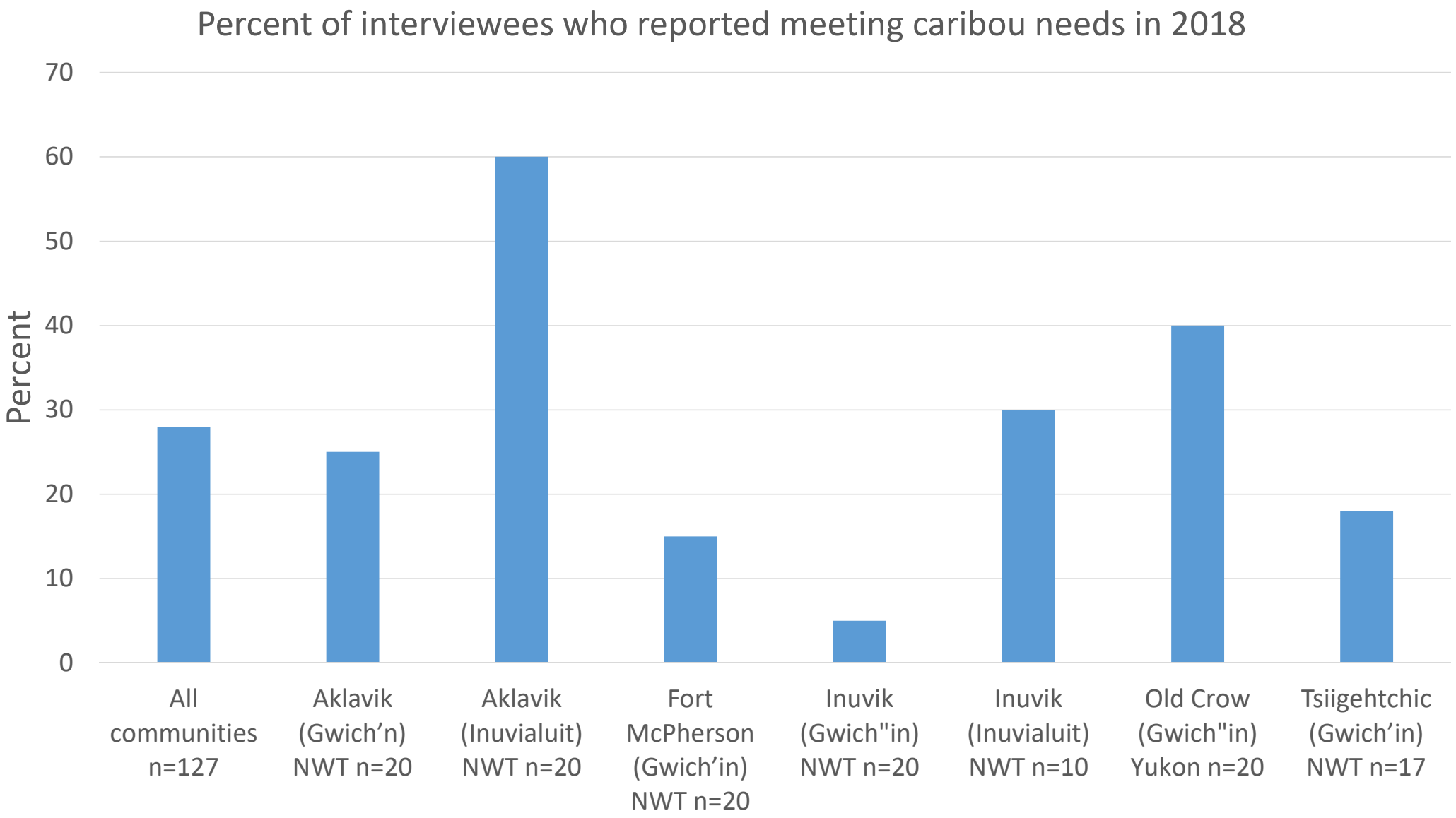
Aklavik (Gwich'in)	**less caribou around our area**
	gone back to alaska
	less and none around aklavik
	far back
	far back
Aklavik (Inuvialuit)	had to travel far to get
	mostly staying in Alaska.
	More
	never seen any
	they weren't in the area very much
	caribou only migrated through in late august
	more wild (scared of people)
Tsiigehtchic (Gwitch'n) NWT	They’re changing route, seeing less now
	Only sightings in the fall
	No caribou
	Out of range and not a successful hunt
	There weren't around
	Herd came earlier in mid-July. hung around longer and comes back later.
	All bulls came first.
	Scared

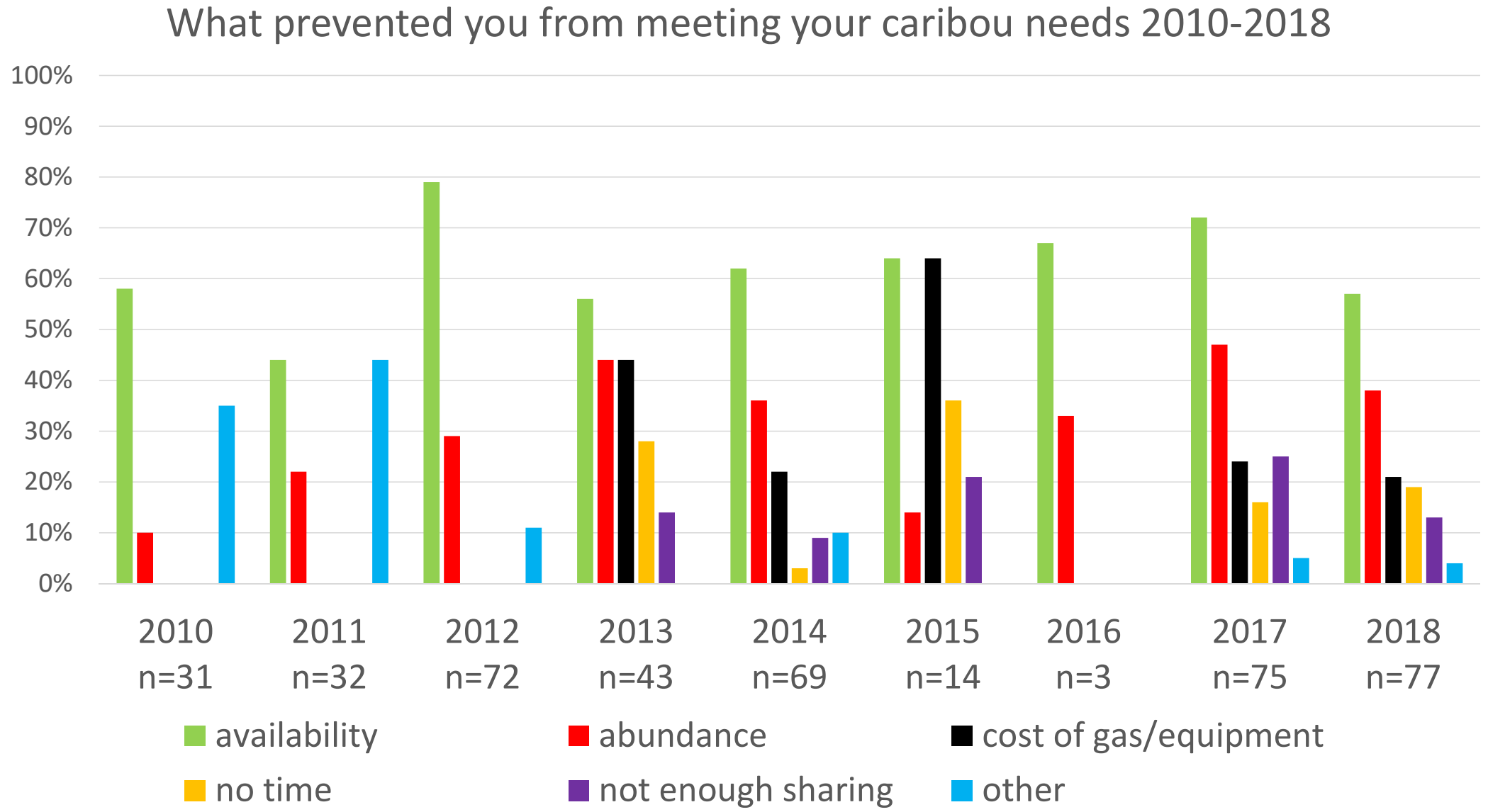
Fort McPherson (Gwich'in) NWT	less coming in herds.
	less caribou
	less caribou, small herd
	less caribou migrating in our area.
	less caribou coming this way.
	Caribou were changing migrating routes.
	Less caribou.
	Only a few around, should remove collars on them, they have no hair underneath they're suffering them in the cold weathers.
	Less caribou. taking different route
	Hunters not allowing for leaders to pass. Caribou taking different route
	NO caribou
	Less
	They're becoming more aware of people, less caribou came this year different migration & have less fat on them.
	Starting to beware of people. Less fat on caribou
	There were not many and they were chased away by four wheeler

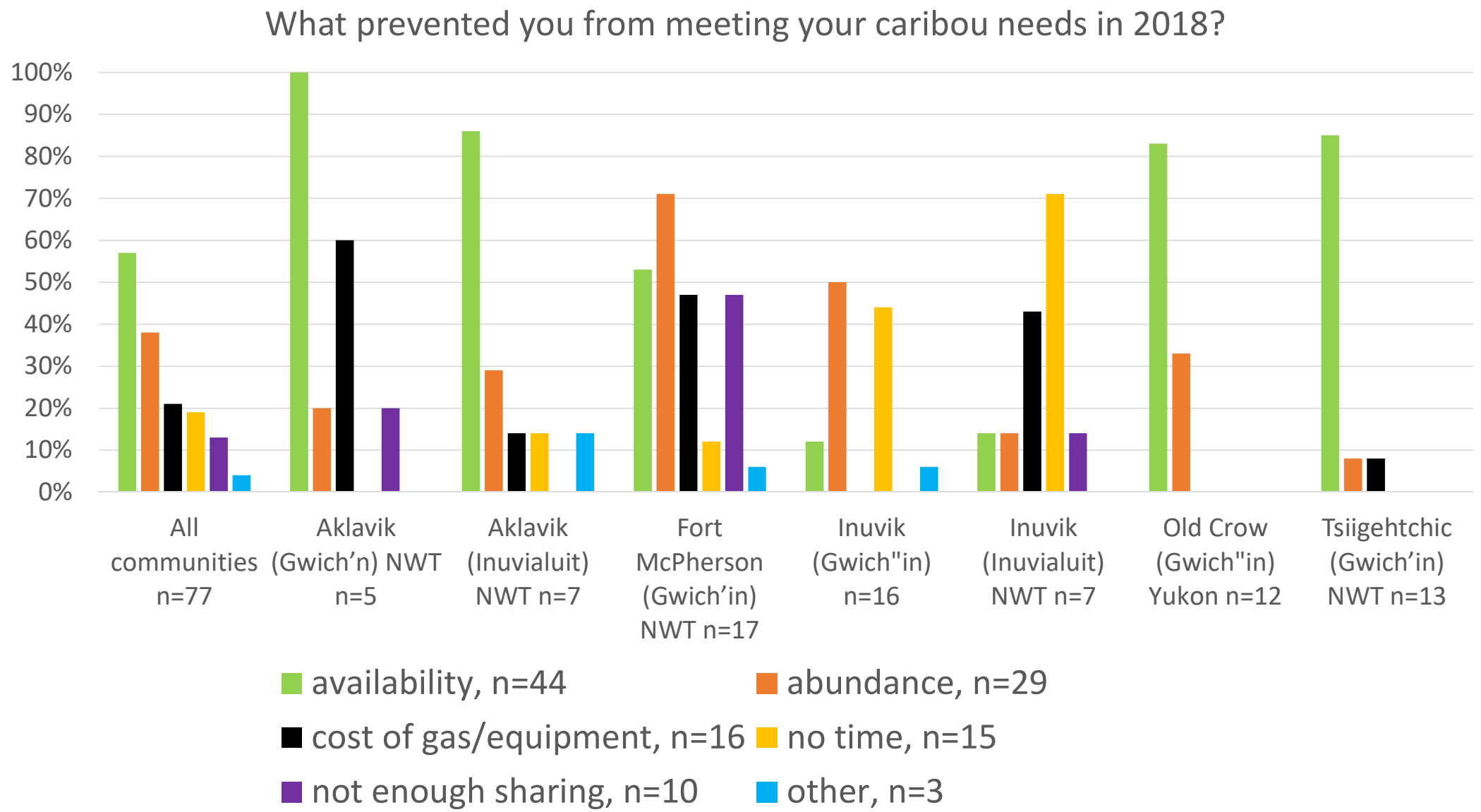
Inuvik (Gwich'in) NWT	**Did not stay long, caribou heading back to Alaska early again.**
	Hardly any caribou, LET THE LEADERS PASS.
	Nothing around. Went to check on Dempster Highway
	Caribou getting less and less
	Yes, Caribou finally back on the highway.
Inuvik (Inuvialuit) NWT	Very less
Old Crow (Gwtich'in) (Yukon)	Not very much caribou. Change of route.
	Less caribou in region due to change in their migration route
	Less caribou in region.
	Not in region.
	Not in region
	Change of route.
	Not in region, only a few come through.


Main reasons caribou weren't hunted, 2013-2018
% of responses
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2013 n=37
2014 n=39
2015 n=13
2016 (OldCrow/ArcticVill Only n=1
2017 n=51
2018 n=32
cost of gas/equipment
caribou too far/bad location
illness/health
not enough caribou
no time
had enough caribou
other

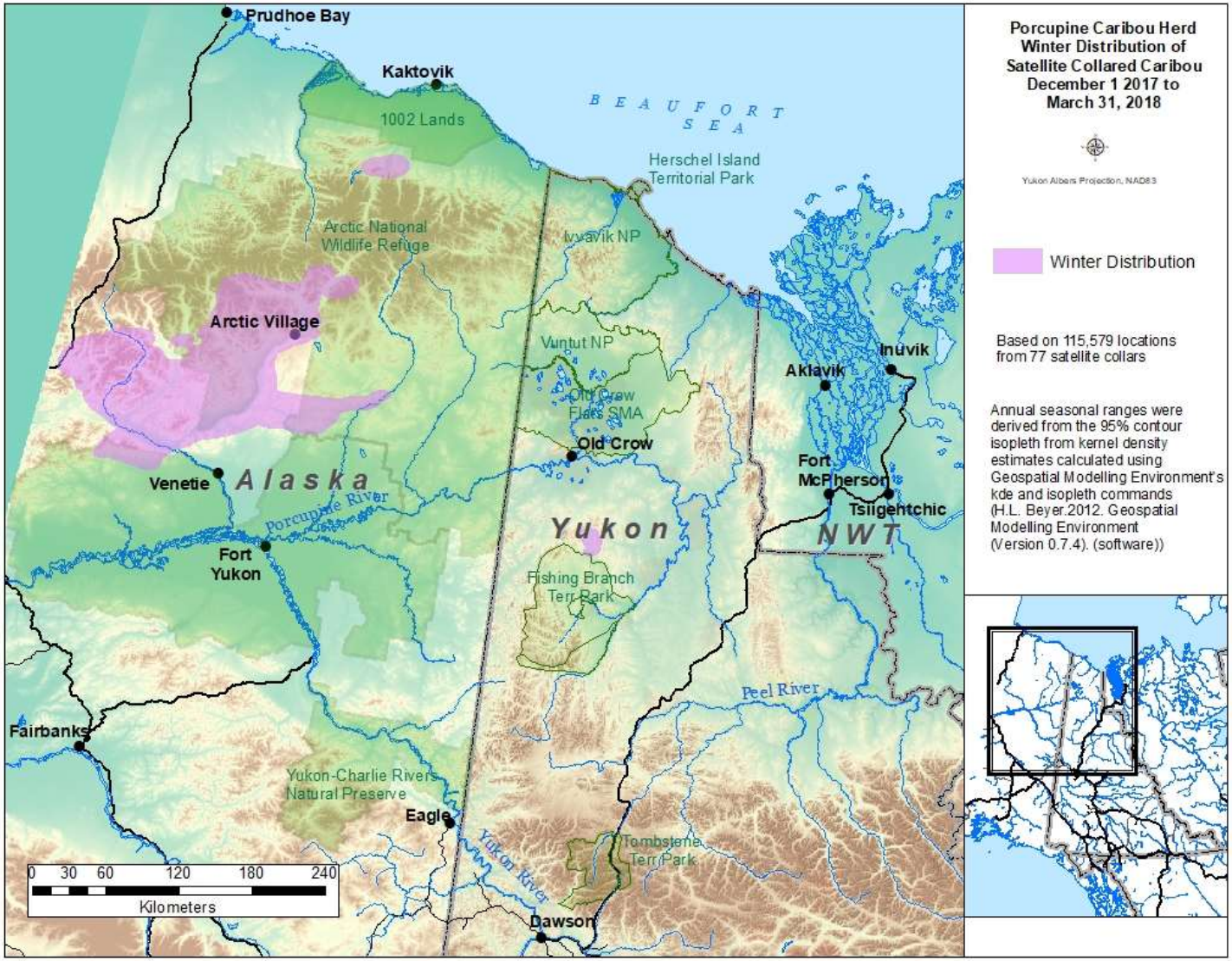

Percent of hunters who got caribou by community, 2018
% of hunters who got caribou
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Overall n=123
Aklavik (Gwich’n) NWT n=20
Aklavik (Inuvialuit) NWT n=20
Fort McPherson (Gwich’in) NWT n=19
Inuvik (Gwich"in) NWT n=18
Inuvik (Inuvialuit) NWT n=5
Old Crow (Gwich"in) Yukon
Tsiigehtchic (Gwich’in) NWT


Percent of interviewees who reported meeting caribou needs in 2018
Percent
70
60
50
40
30
20
10
0
All communities n=127
Aklavik (Gwich'n) NWT n=20
Aklavik (Inuvialuit) NWT n=20
Fort McPherson (Gwich'in) NWT n=20
Inuvik (Gwich"in) NWT n=20
Inuvik (Inuvialuit) NWT n=10
Old Crow (Gwich"in) Yukon n=20
Tsiigehtchic (Gwich'in) NWT n=17

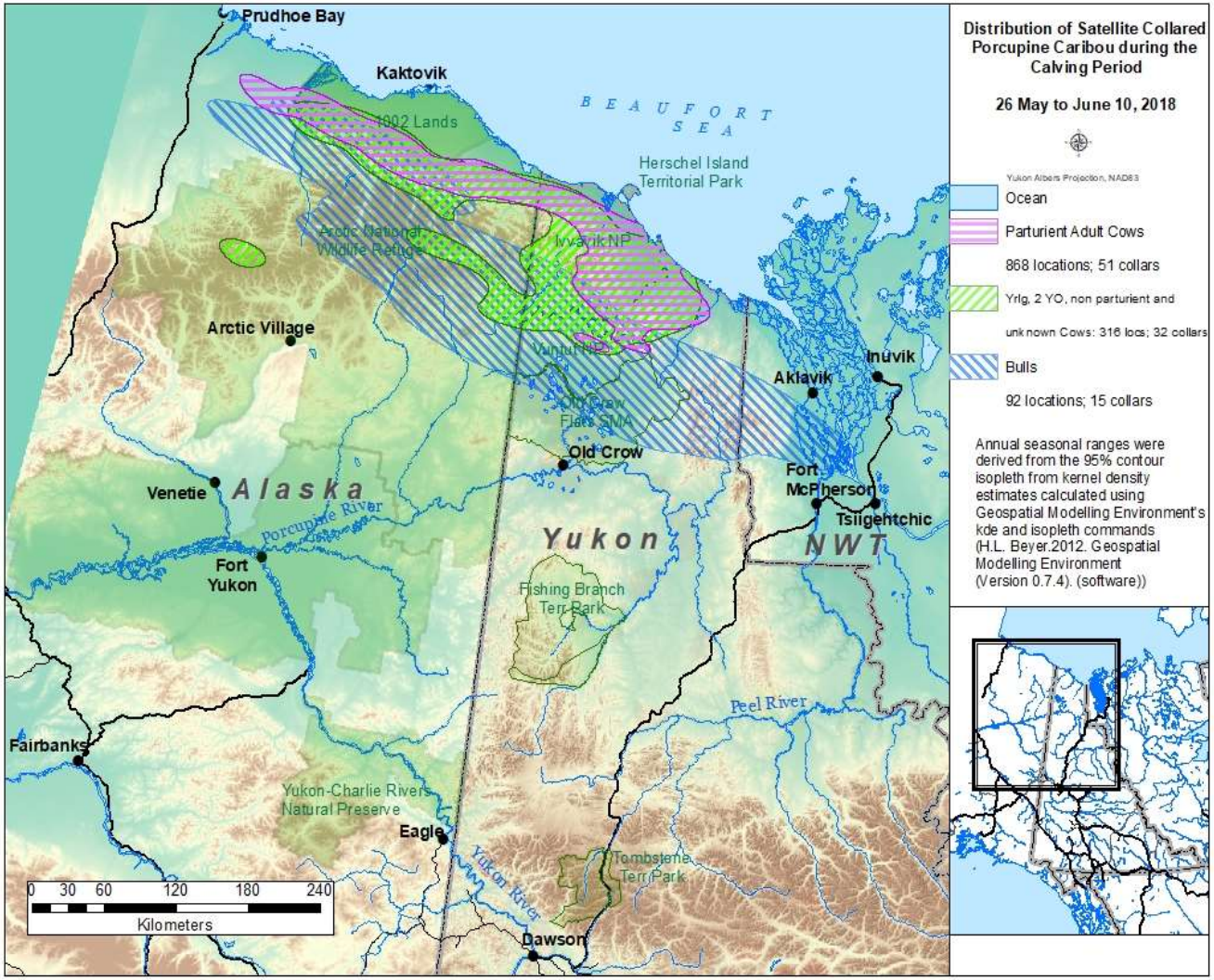

What prevented you from meeting your caribou needs 2010-2018
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2010 n=31
2011 n=32
2012 n=72
2013 n=43
2014 n=69
2015 n=14
2016 n=3
2017 n=75
2018 n=77
availability
abundance
cost of gas/equipment
no time
not enough sharing
other


What prevented you from meeting your caribou needs in 2018?
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
All communities n=77
Aklavik (Gwich'n) NWT n=5
Aklavik (Inuvialuit) NWT n=7
Fort McPherson (Gwich'in) NWT n=17
Inuvik (Gwich"in) n=16
Inuvik (Inuvialuit) NWT n=7
Old Crow (Gwich"in) Yukon n=12
Tsiigehtchic (Gwich'in) NWT n=13
availability, n=44
abundance, n=29
cost of gas/equipment, n=16
no time, n=15
not enough sharing, n=10
other, n=3

December-March



May-June


Distribution of Satellite Collared Porcupine Caribou during the Calving Period
26 May to June 10, 2018
Yukon Albers Projection, NAD83
Ocean
Parturient Adult Cows
868 locations; 51 collars
Yrlg, 2 YO, non parturient and
unknown Cows: 316 locs; 32 collars
Bulls
92 locations; 15 collars
Annual seasonal ranges were derived from the 95% contour isopleth from kernel density estimates calculated using Geospatial Modelling Environment's kde and isopleth commands (H.L. Beyer.2012. Geospatial Modelling Environment (Version 0.7.4). (software))
Prudhoe Bay
Kaktovik
1002 Lands
BEAUFORT SEA
Herschel Island Territorial Park
Arctic National Wildlife Refuge
Ivvavik NP
Vuntut NP
Arctic Village
Old Crow Flats SMA
Old Crow
Inuvik
Aklavik
Fort McPherson
Tsiigehtchic
Venetie
Alaska
Porcupine River
Yukon
NWT
Fort Yukon
Fishing Branch Terr Park
Peel River
Fairbanks
Yukon-Charlie Rivers Natural Preserve
Eagle
Tombstone Terr Park
Yukon River
Dawson
0 30 60 120 180 240
Kilometers

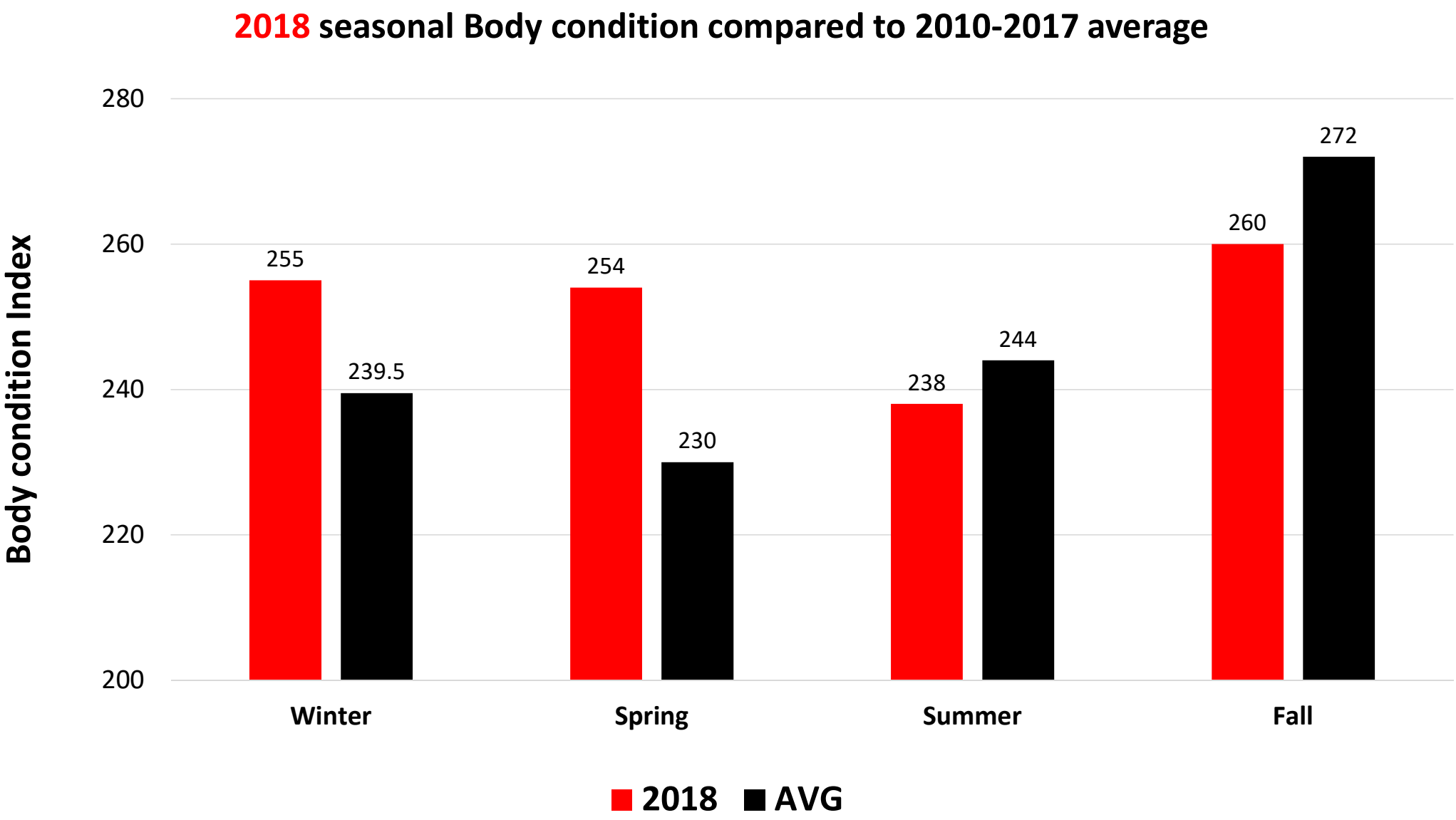
Body Condition

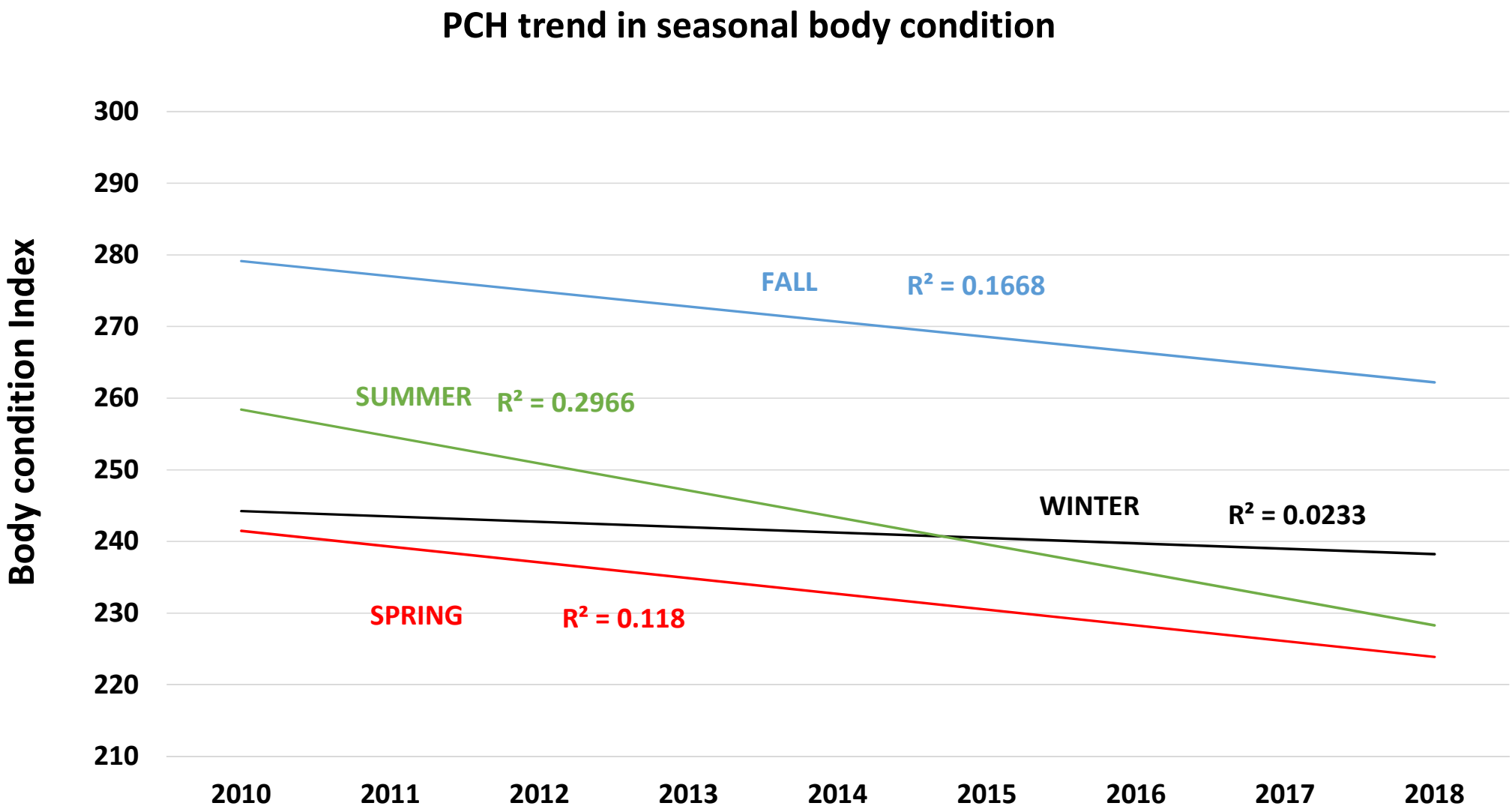
Of the animals seen or taken, the interviewees were asked to indicate the relative body condition. The categories of answers varied among interview session, community and year but were collapsed into “good’, “mixed”, and “poor”. To directly compare from one interview session to the next an index of caribou condition was developed, i.e. collapsing all responses into one metric. The caribou condition index (CC) was calculated as:

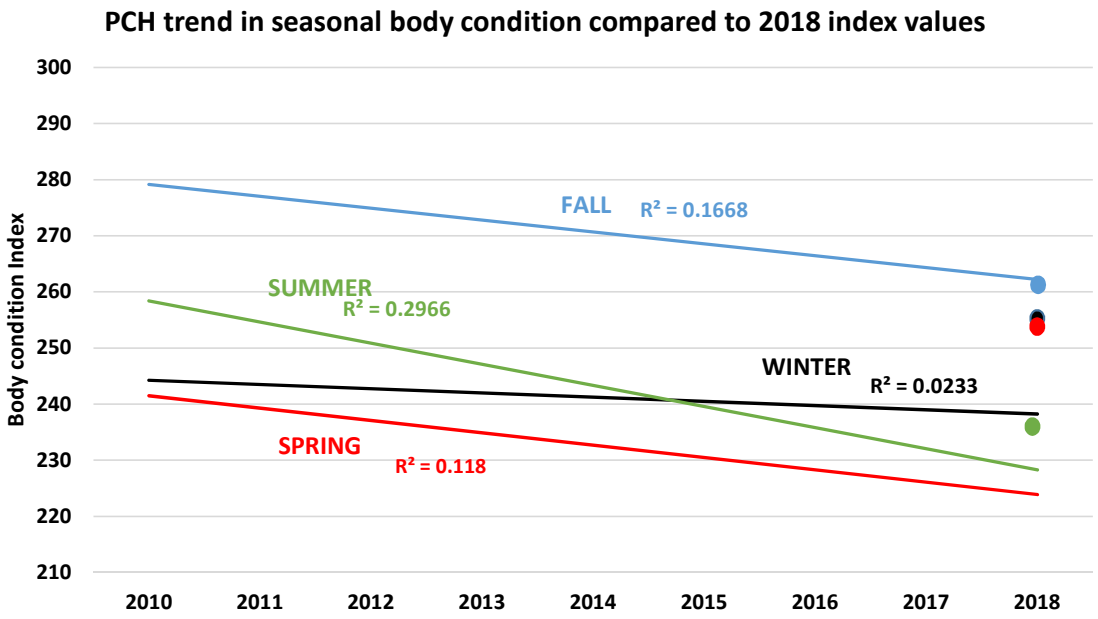
CC= 3*(good) + 2* (mixed) + (poor),

where “good”, “mixed” and “poor’ were the frequency of those responses for an interview session.

Don Russell provides an updated index below using 2018 interview data:

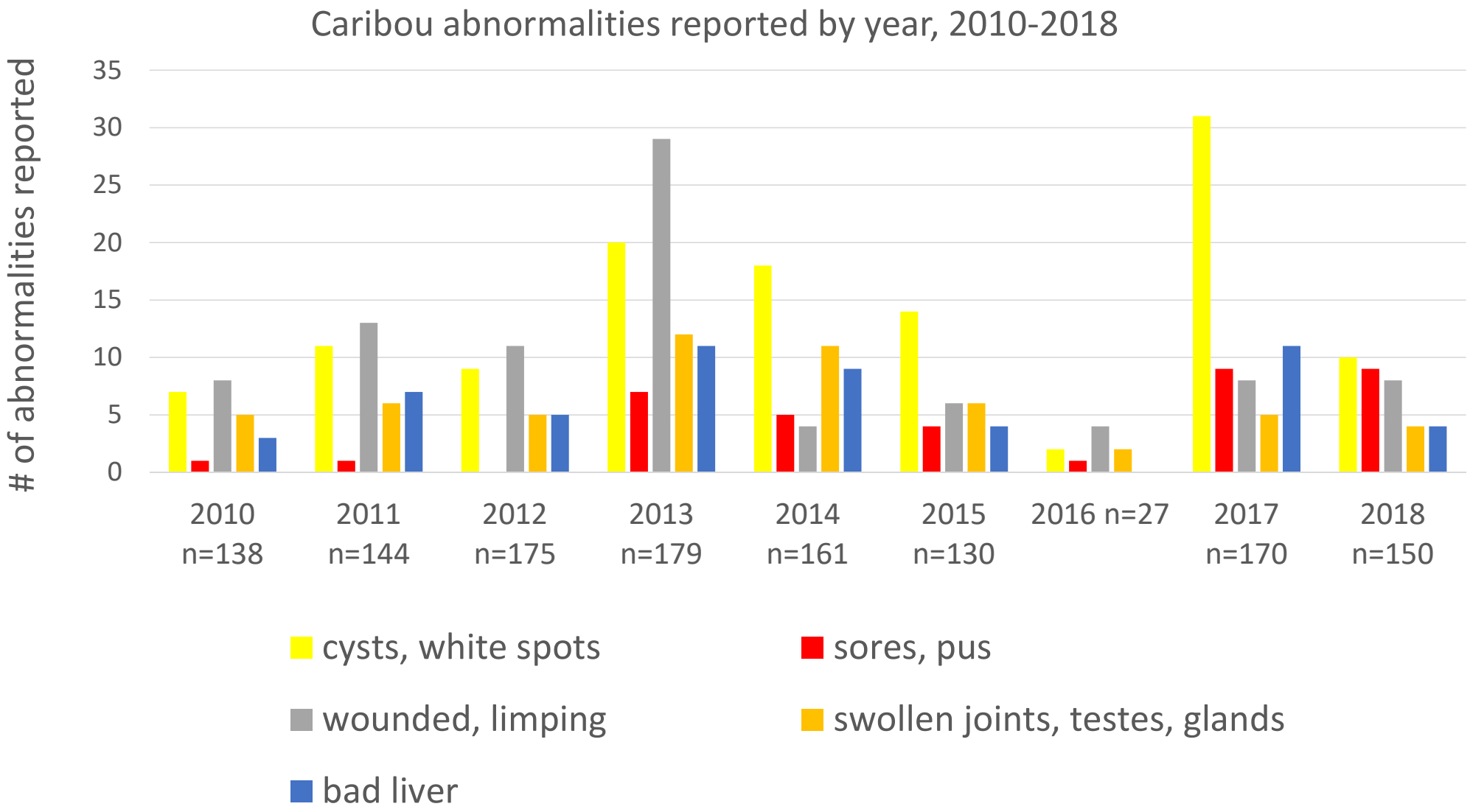

2018 seasonal Body condition compared to 2010-2017 average
Body condition Index
280
260
240
220
200
255
239.5
254
230
238
244
260
272
Winter
Spring
Summer
Fall
2018
AVG


PCH trend in seasonal body condition
Body condition Index
300
290
280
270
260
250
240
230
220
210
2010
2011
2012
2013
2014
2015
2016
2017
2018
FALL
R² = 0.1668
SUMMER
R² = 0.2966
WINTER
R² = 0.0233
SPRING
R² = 0.118


PCH trend in seasonal body condition compared to 2018 index values
Body condition Index
300
290
280
270
260
250
240
230
220
210
2010
2011
2012
2013
2014
2015
2016
2017
2018
FALL
R² = 0.1668
SUMMER
R² = 0.2966
WINTER
R² = 0.0233
SPRING
R² = 0.118

In summary (from Don Russell):

- Would be valuable to tie 2017-2018 data to climate conditions (presently downloading 2017 and 2018 climate data)
- Monitoring implications of lower summer and fall body condition – for the George River herd Couturiere found smaller body size in cows preceded the eventual herd decline.
- Generally lower fall condition relates to lower probability for pregnancy
- Lower spring conditions relate to lower spring recruitment and eventual adult cow survival (but there is a lag effect).
- In light of potential development on 1002, more important than ever to use all monitoring sources to help explain changes in herd size .


Caribou abnormalities reported by year, 2010-2018
# of abnormalities reported
35
30
25
20
15
10
5
0
2010 n=138
2011 n=144
2012 n=175
2013 n=179
2014 n=161
2015 n=130
2016 n=27
2017 n=170
2018 n=150
cysts, white spots
sores, pus
wounded, limping
swollen joints, testes, glands
bad liver