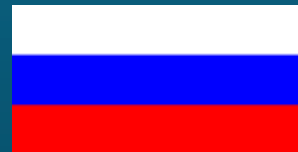


Polar Bear-Human Information Management System

Range States' Human-Polar Bear Conflict Working Group

Dag Vongraven, Norwegian Polar Institute

James Wilder, U.S. Fish and Wildlife Service*



*currently U.S. Forest Service

POLAR BEAR INVASION

NUNAVUT IS UNDER SIEGE. JAKE MACDONALD INVESTIGATES



In villages across the Arctic, Inuit are reporting an invasion. Polar bears, once rare, are now strolling the streets, peering in windows, killing dogs – even stalking kids. No place has been more menaced than Arviat, where Jake MacDonald discovered

A TOWN, BESIEGED BY BEARS

When David Baker was growing up in Arviat, he didn't know much about polar bears. "You could go all summer up and down the Hudson Bay coast in a boat and never see one. When the elders camped out, they would let out a dog to warn them if a bear was coming. But no young guys didn't bother with that, because the street was busy."

He recalls that he didn't know much about anything else, either. His father was a white man who took off and left him to be raised by his Inuit mother and various Inuit aunts and grandmothers. "I seemed to be a hunter and trapper like them, but I was very stupid and I nearly died, many times. I would escape the bear at sea, or get whited out, or get lost on the tundra. I bought a GPS, thinking I could go anywhere now. But the elders just smiled. 'Will that little thing teach you where the fish live?'"

Killer Polar Bears Besiege Remote Russian Town of Ryrkaypy

More than 40 desperate and hungry polar bears mass on outskirts of Chukotka village in Russia's Far East

By [TOYIN OWOSEJE](#) : Subscribe to Toyin's [RSS feed](#) | November 11, 2013 5:50 PM GMT



23

Even an AK-47 wouldn't have helped him during polar bear attack, says recovering lawyer

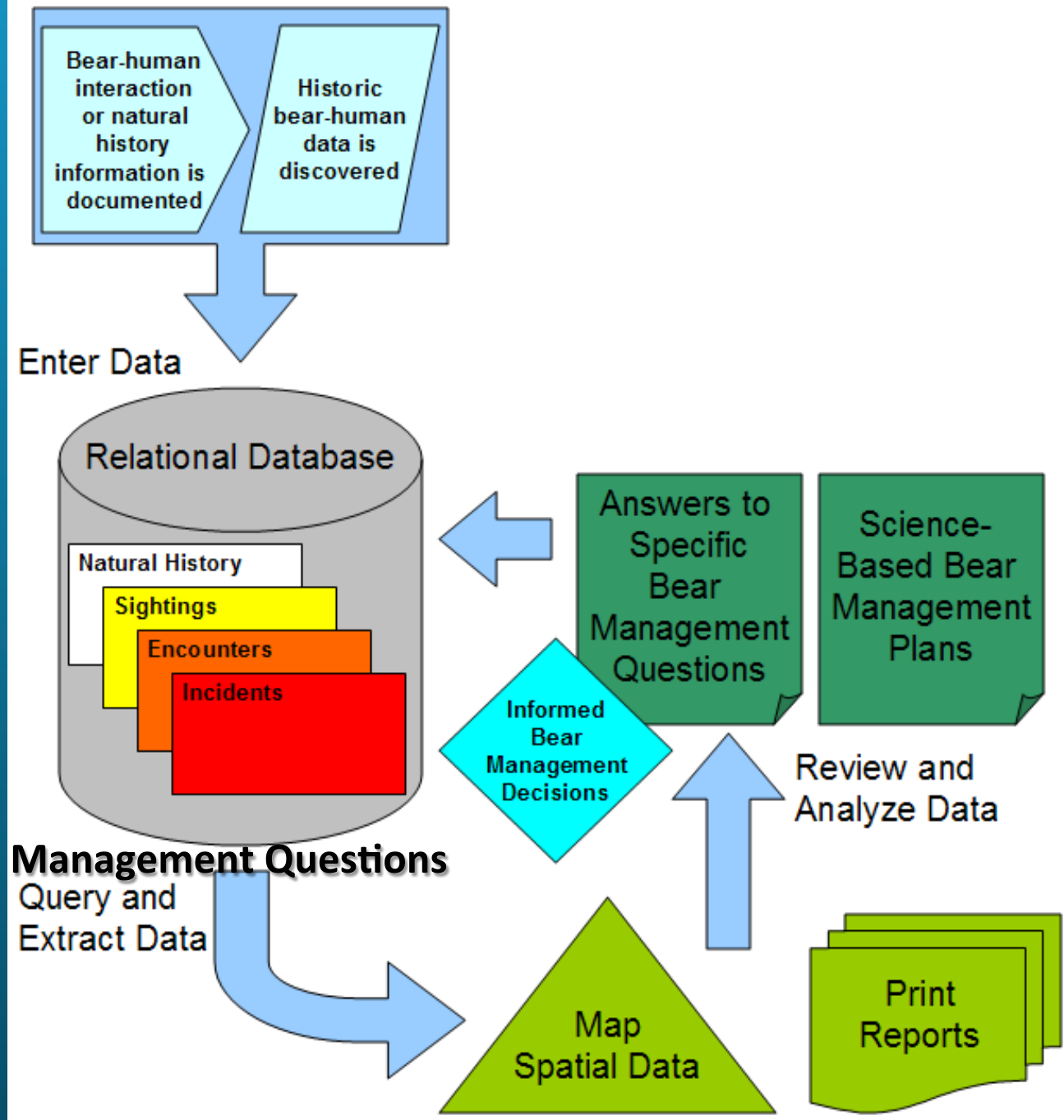
Posted Aug 13, 2013 10:10 AM CST

By [Martha Neil](#)

Human-Polar Bear Conflict Management is a Priority Issue for the Range States



PBHIMS Facilitates Adaptive Management



Range-wide Attacks Overview

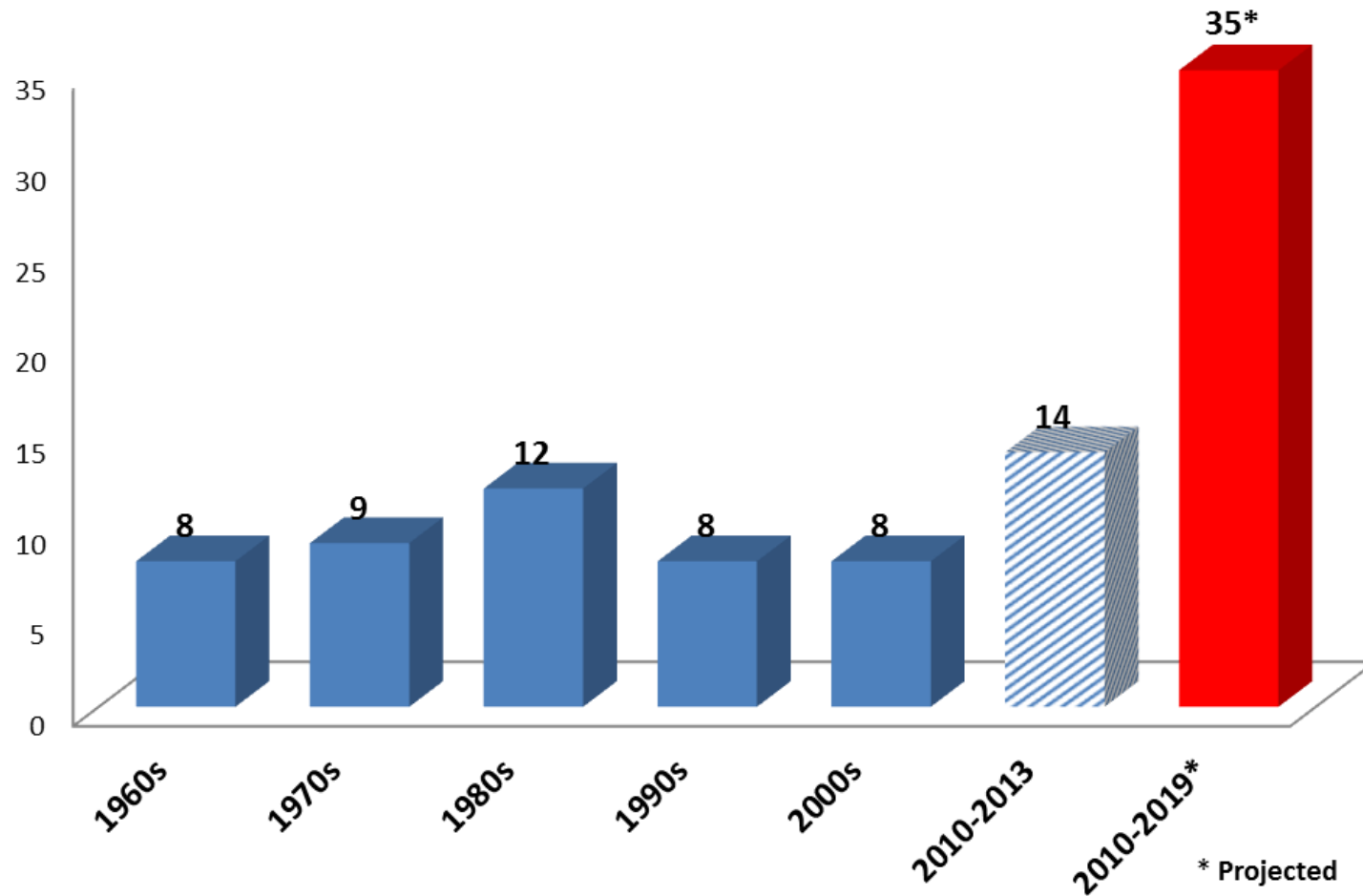
Country	Years	Attacks	Human Fatalities	Human Injuries
Canada	1961-2014	38	6	37
Greenland	1870-2010	4	1	3
Norway	1971-2011*	10	5	10
Russia	1893-2012**	13	6	7
United States	1881-1993	6	3	3
		71	21	60

*One probable, but unconfirmed, fatal attack occurred in the 1920s

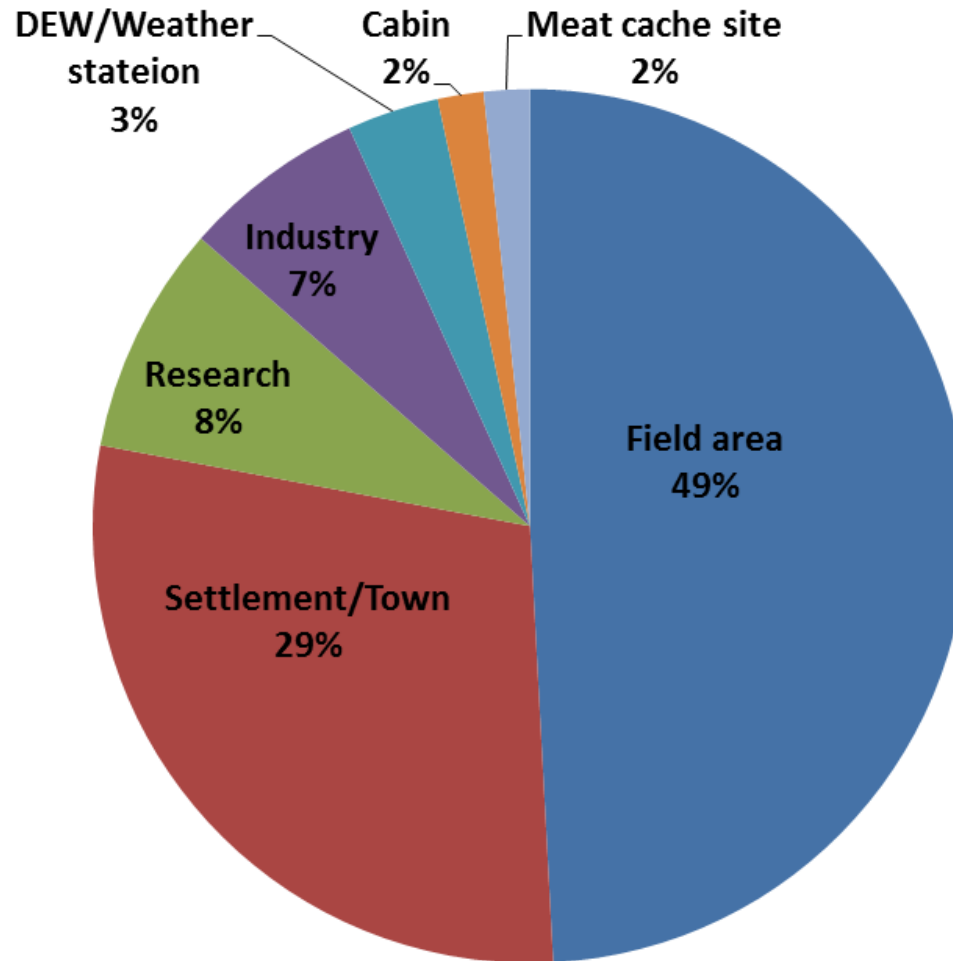
**Not included in this analysis: 2 reported fatalities from 1595 ; 4 reported fatalities and 5 injuries in Soviet Arctic, 1930-1967

We also have data on 64 attempted attacks on people (i.e. the bear was intent on attacking, but was killed or physically deterred prior to injuring a person).

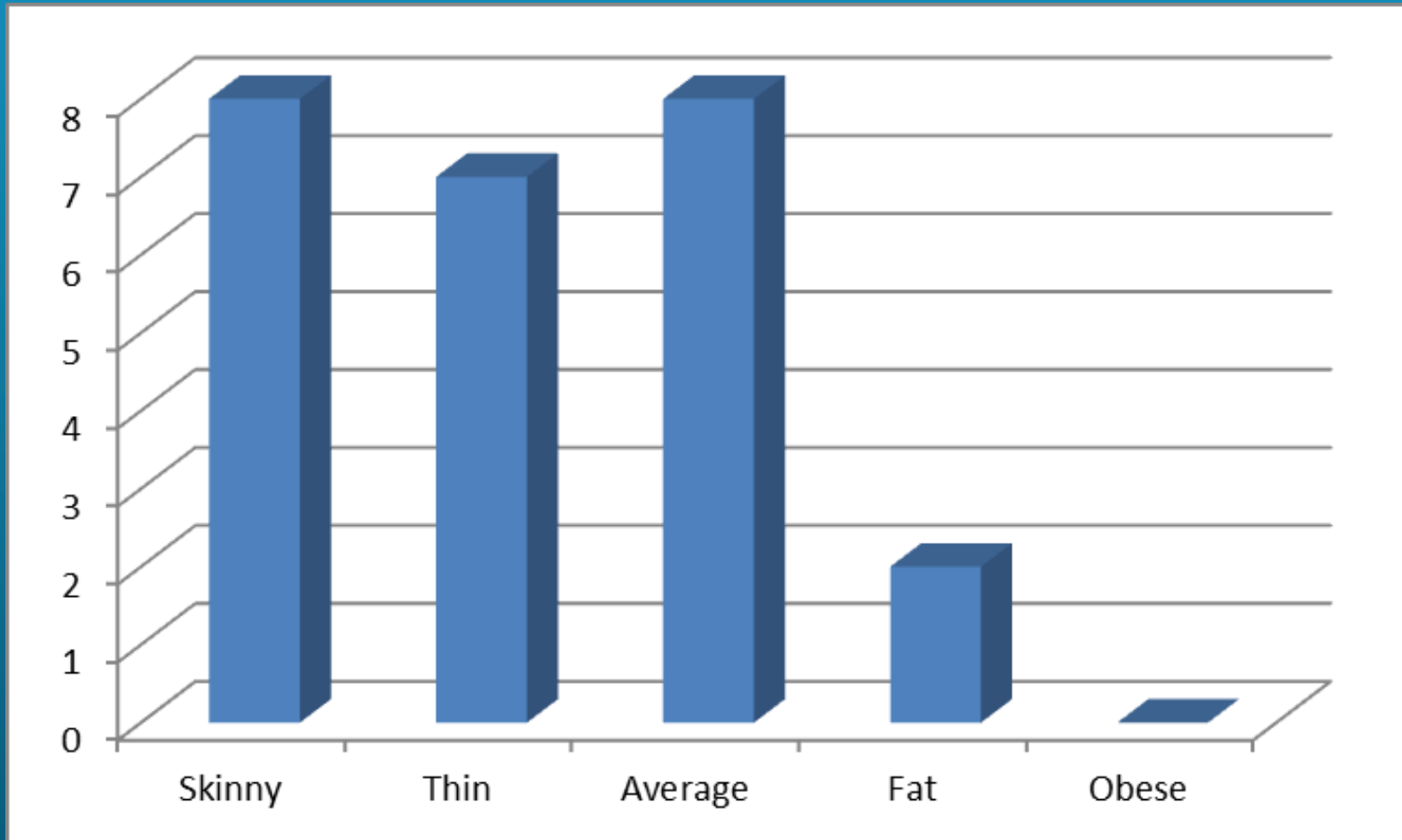
Range-wide Attacks on People by Decade, 1960-2013 (n=59)



Attacks by Location Type



Attacks by Body Condition (n=25)



- 70% of bears involved in fatal attacks on humans were in below-average body condition

Chukchi Sea Polar Bear Attacks

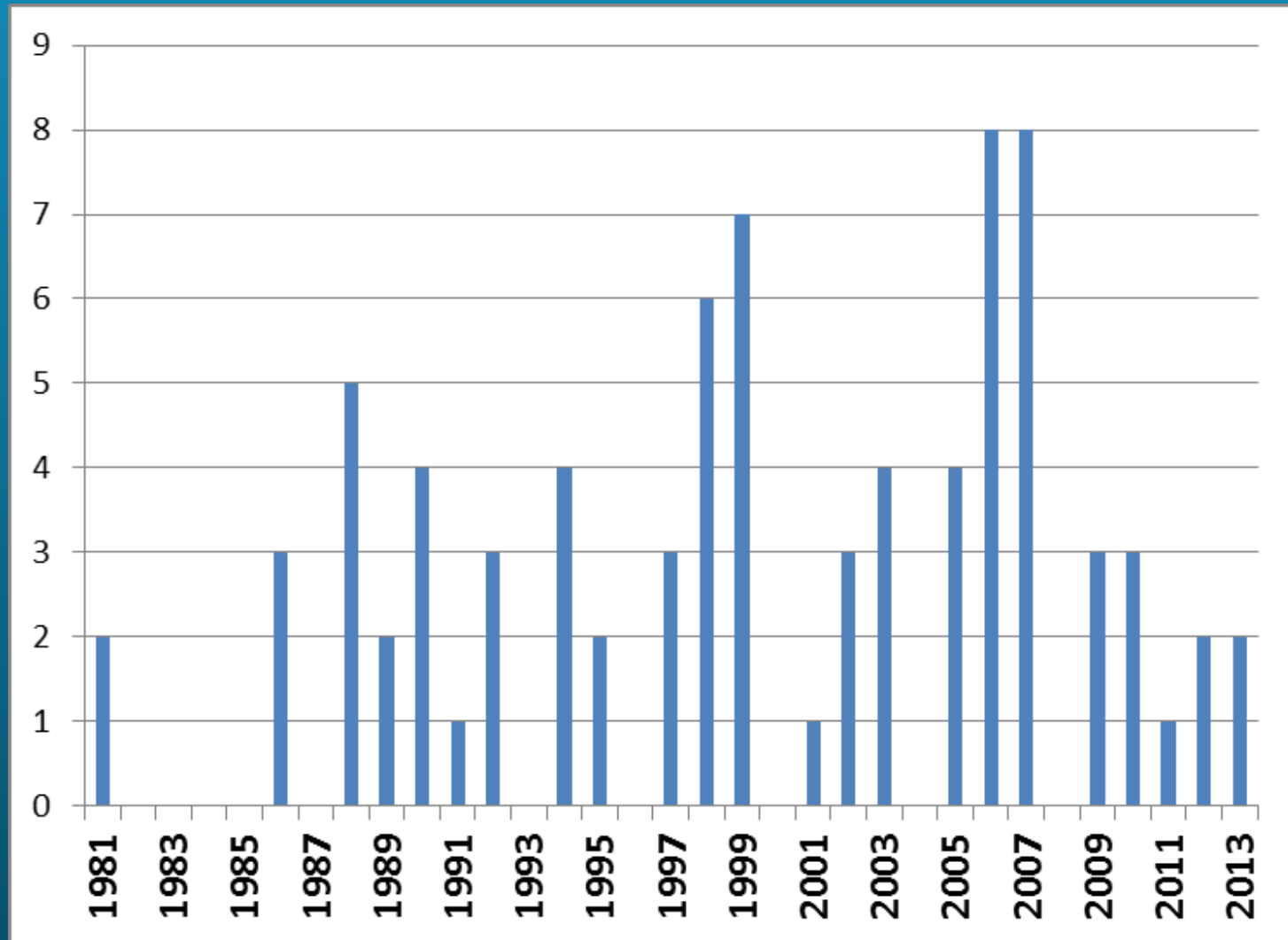
	Russia	United States	Total
Years	2003-2012	1881-1990	
Attacks	6*	4**	10
Human Fatalities	4	3	7
Human Injuries	2	1	3
Attempted Attacks	8	6	14

*Three predatory on human, 2 unknown, 1 person feeding the bear

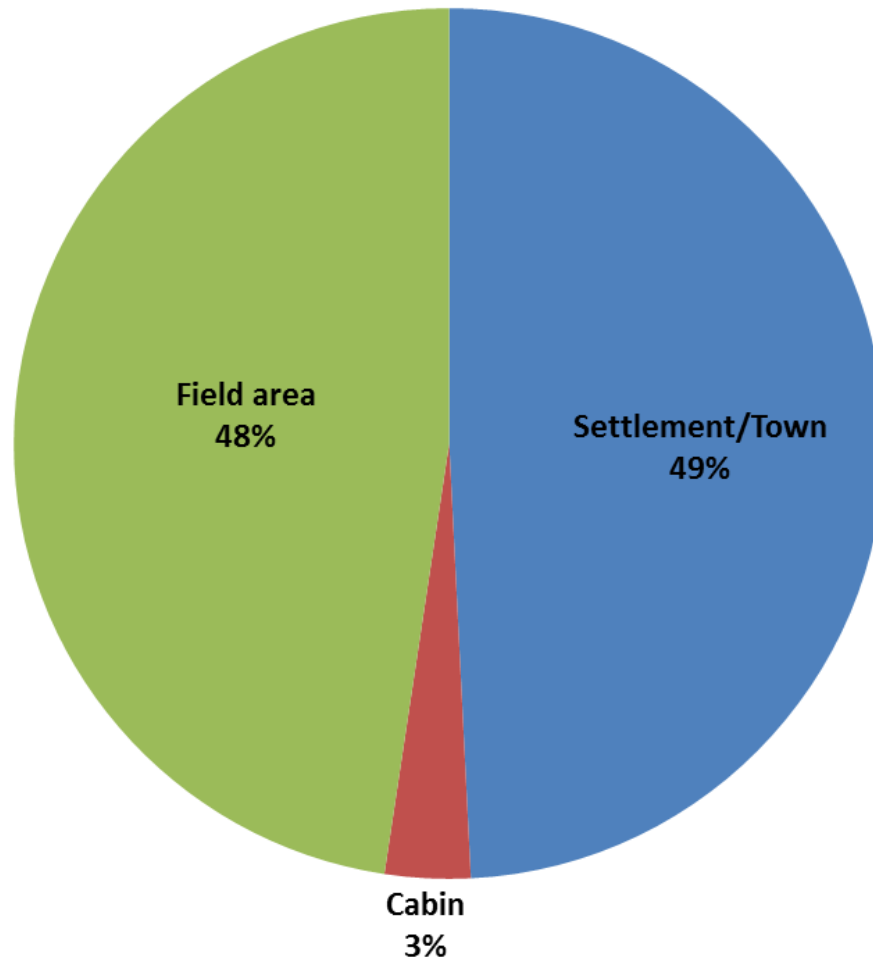
**Two predatory on human, one defense of cubs, 1 shot and wounded bear

Attempted attack= the bear was intent on attacking, but was killed or physically deterred prior to injuring a person.

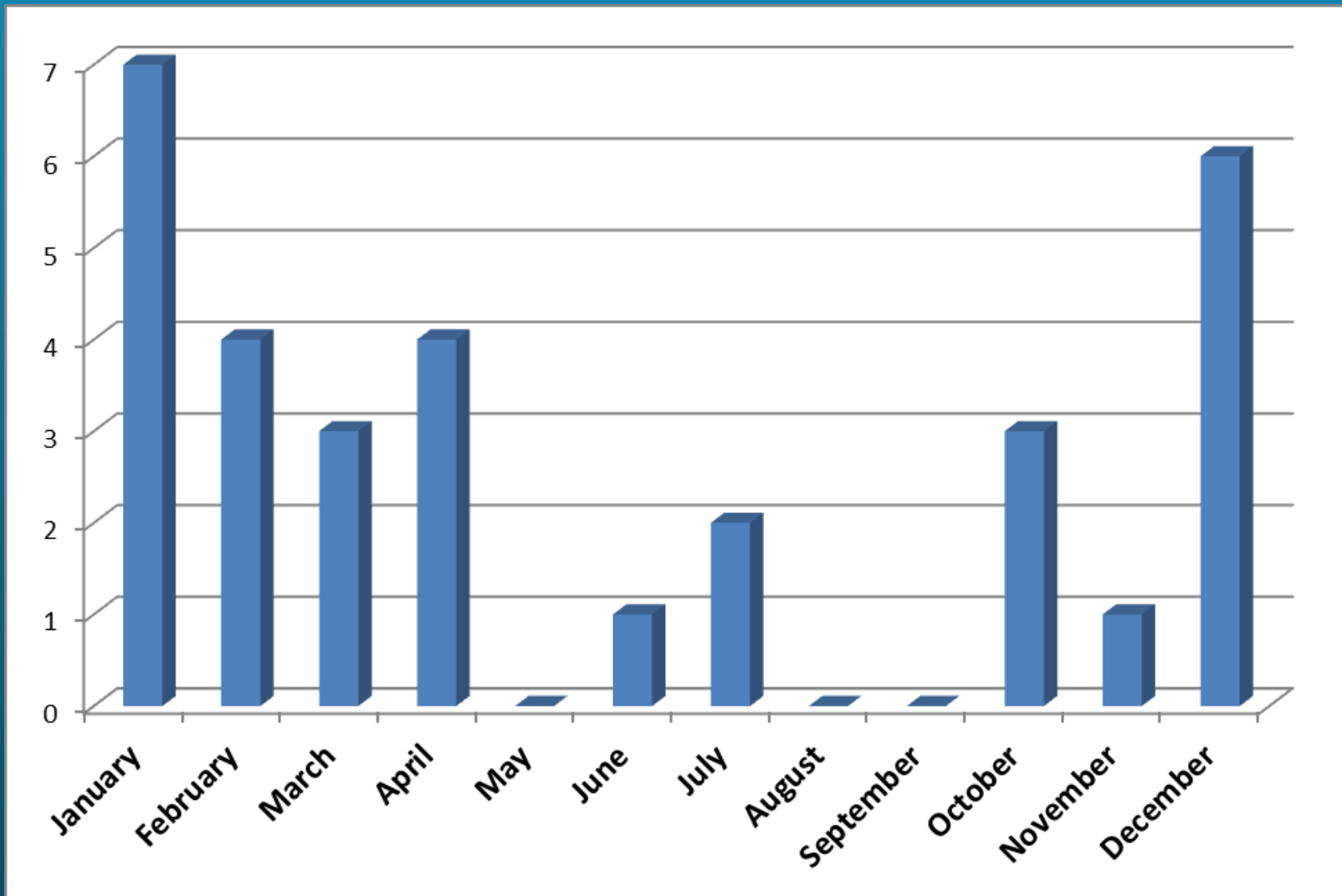
U.S. Conflict Bear Kills 1980-2013, Chukchi Sea



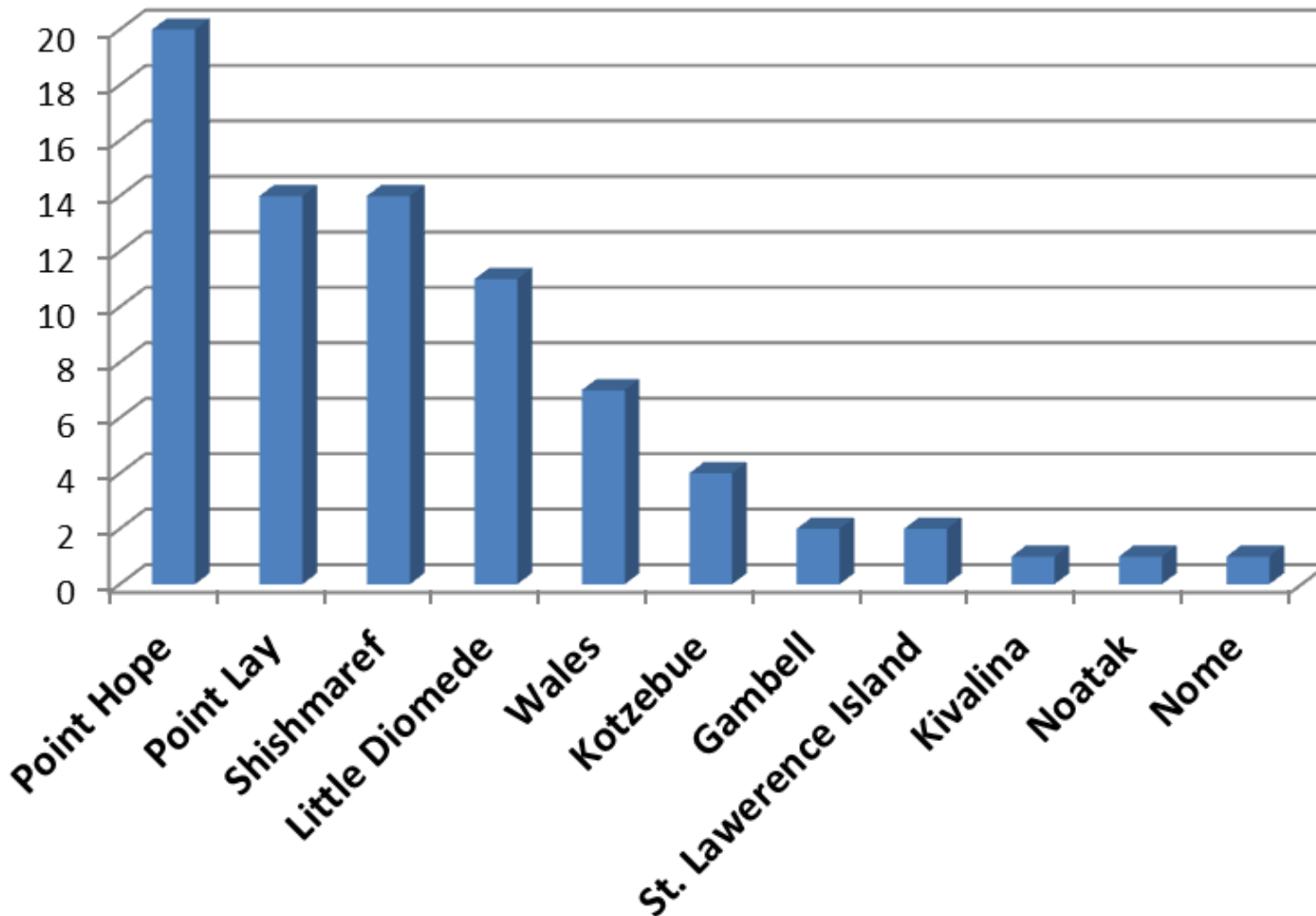
Location of U.S. Conflict Bear Kills, Chukchi Sea



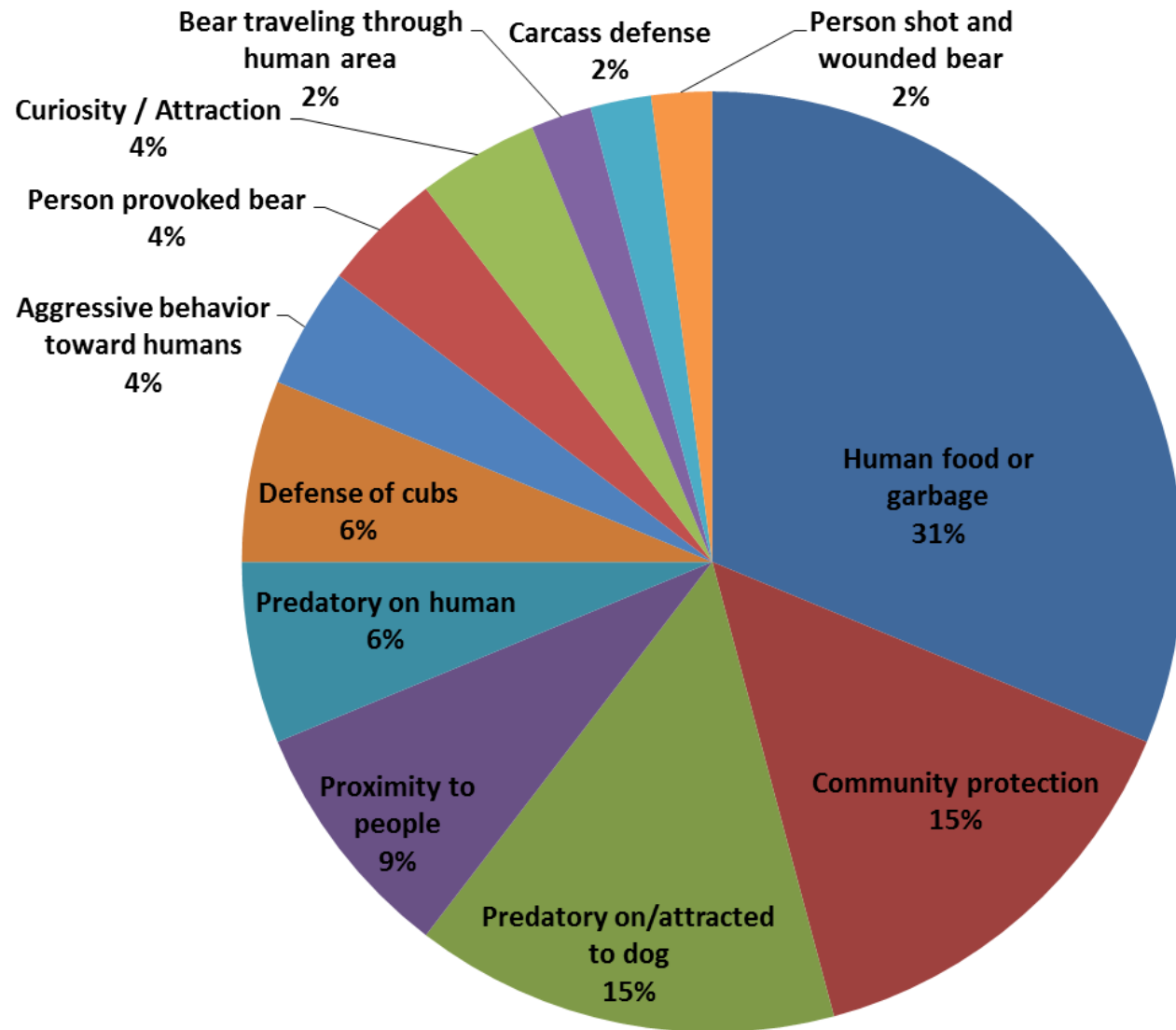
U.S. Conflict Bear Kills in Villages by Month, Chukchi Sea



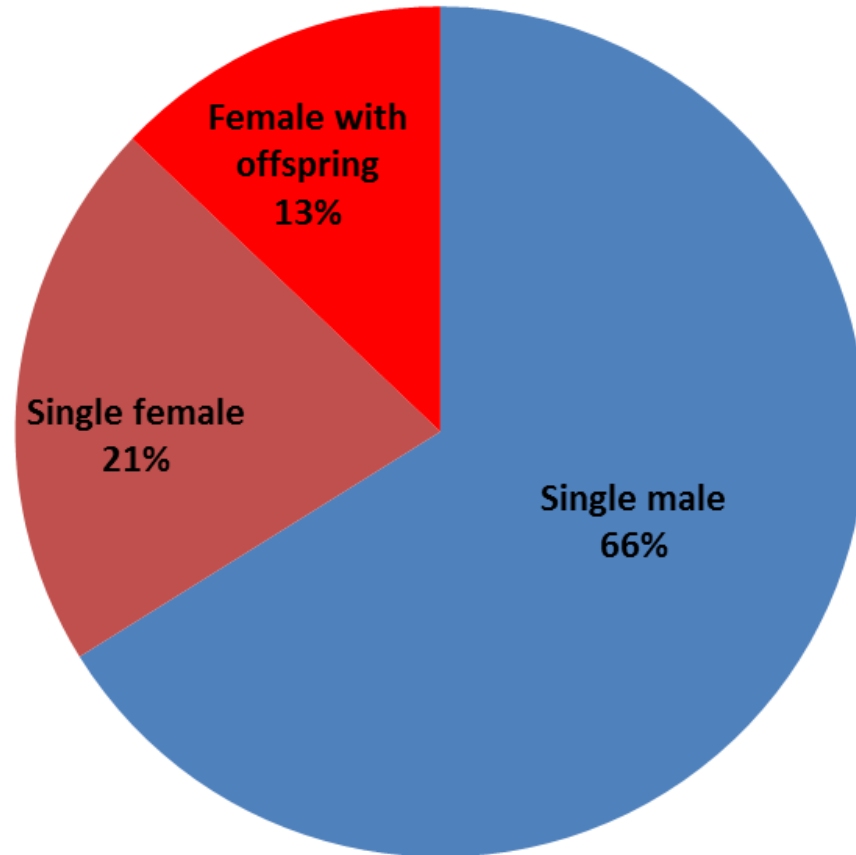
U.S. Conflict Bear Kills by Village, Chukchi Sea



Reason for Conflict Kills, Chukchi Sea



Conflict Kills by Bears' Sex, Chukchi Sea



Other Types of Information

- Motivation of attacks on humans (e.g., predatory, defense of cubs).
- Efficiency of deterrents (e.g., electric fences, bear spray).
- Role of human behavior in human-bear interactions; development of best practices.

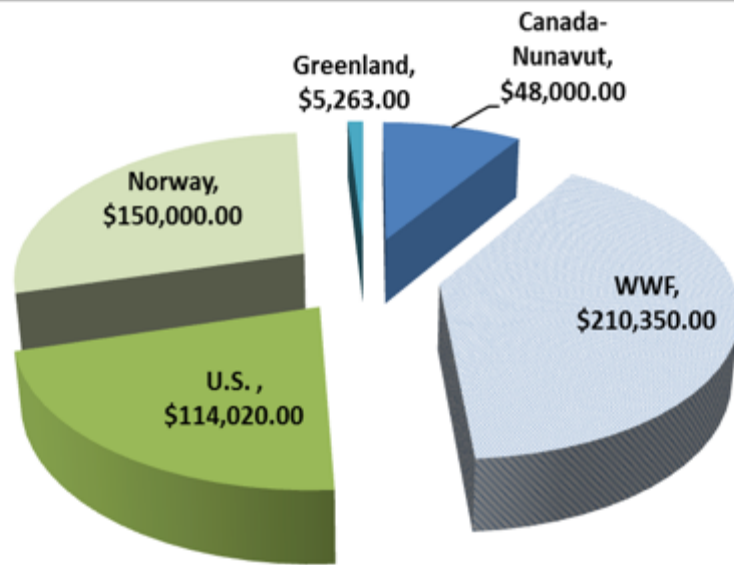
Management Implications

- Nutritionally-stressed polar bears are the most likely to pose threats to human safety.
- Increased concern for human safety is warranted in light of predicted loss of sea ice.
- We must act now to implement effective strategies to address human-bear conflicts in the face of predicted climate change.
- For example, what will we do if unusually high sea ice loss in one summer leads to hundreds of bears in poor condition on shore?
- Managing food attractants in communities, use of deterrents, and effective hazing techniques are all important in this regard.

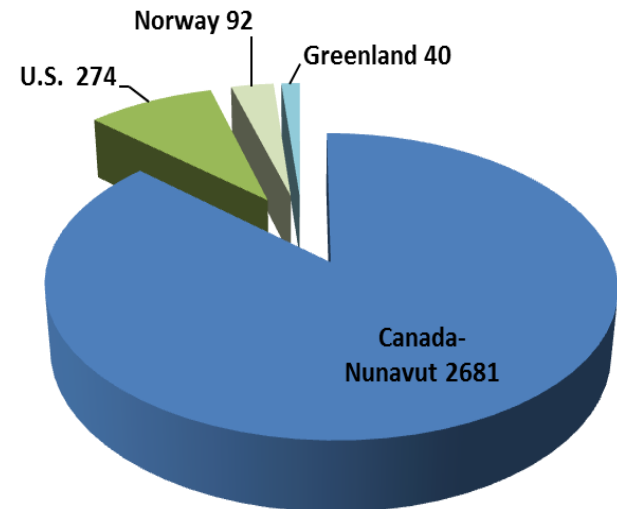
Management Implications

- In order to make effective plans, we need to act on the best information available.
- The current results are informative, but only tell part of the story.
- In order to more fully understand human-polar bear interactions, it is necessary to also analyze incidents that don't result in the injury or death of the bears and people involved.
- Improved conflict investigation and collaboration with people living (e.g., communities) and working (e.g., industry) in polar bear country is needed to collect accurate and relevant data, to better define risk factors, and to improve bear safety recommendations to ensure the safe co-existence of polar bears and people.

Investments and Progress to Date, 2009-2014

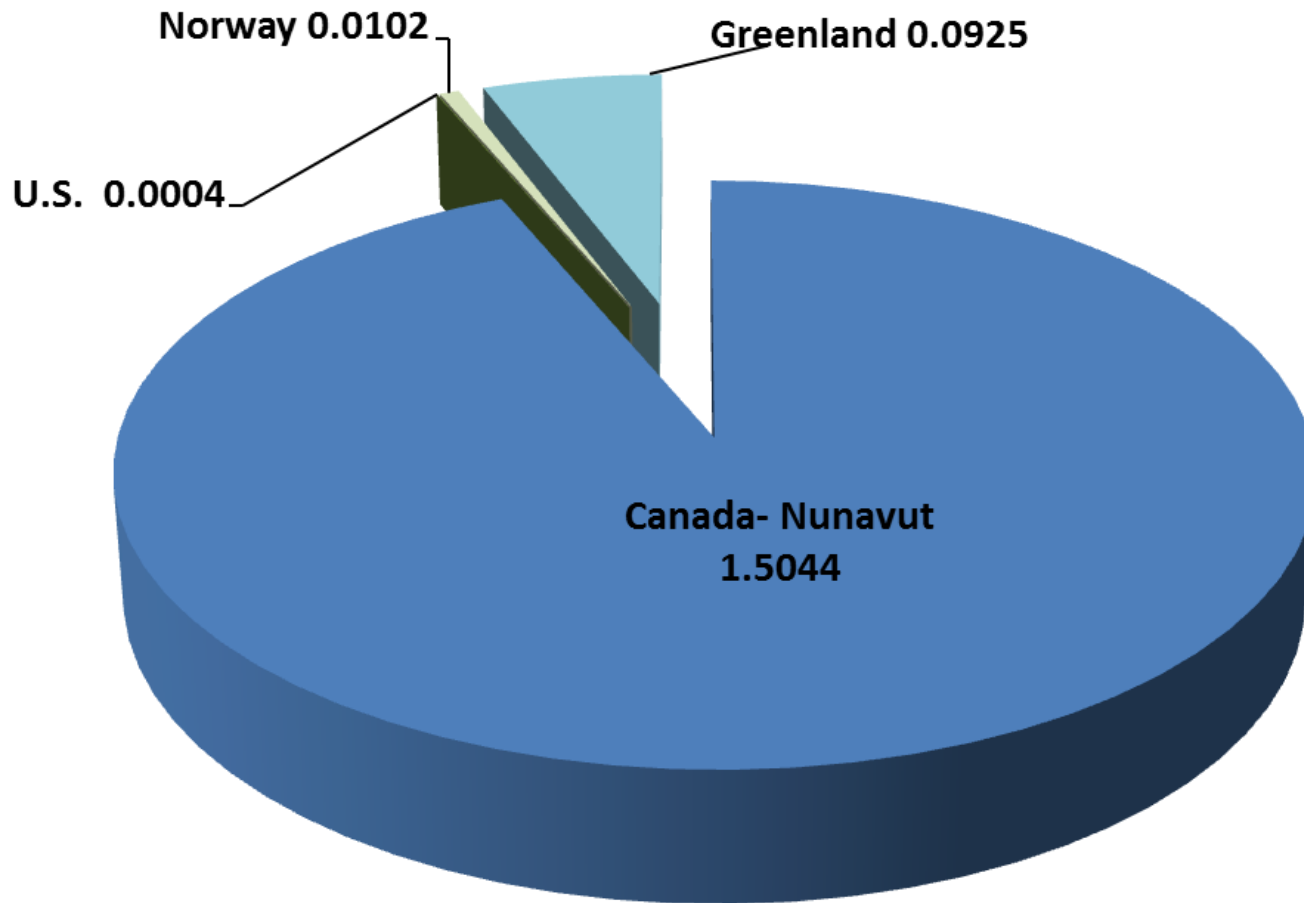


Investments to date, \$527, 633 (USD)



Records Entered, n=3087

Per Capita Investments to Date (in USD)



Range States' Human-Polar Bear Conflicts Working Group

Range State Appointees:

- Canada- Daryll Hedman, Melissa Gibbons, vacant
- Greenland- Amalie Jessen, Peter Løvstrøm
- Norway- Dag Vongraven, vacant
- Russia- vacant, vacant
- U.S.- James Wilder, Todd Atwood, Mike Pederson

Other Participants:

- Russia- M. Gavriilo, E. Zdor
- Norway- E. Movik
- U.S.- K. Dobelbower
- Canada- R. Vallender, B. Romaniuk, B. Highway
- WWF- S. Klenzendorf
- PBI- G. York



Questions and comments

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Presentation created by: James Wilder, U.S. Fish and Wildlife Service

Presentation reflects the work of the Range States' Human-Polar Bear Conflict Working Group with support from Canada, Greenland, Norway, the United State, and Russia

