POLAR BEAR SAFETY

ARCTIC SAFETY CENTRE SEMINAR

14. FEBRUARY 2017

MAGNUS ANDERSEN

NORWEGIAN POLAR INSTITUTE
ARE POLAR BEARS DANGEROUS?

SINCE 1971: 5 PEOPLE KILLED IN SVALBARD

AT LEAST 7 INJURED (SOME SERIOUSLY)

ABOUT 50 BEARS SHOT LAST 20 YEARS, MOST AS A RESULT OF SAFETY CONSIDERATIONS

11 BEARS DRUGGED AND MOVED FROM SETTLEMENTS THE LAST 14 YEARS
   - IN ADDITION MANY HAVE BEEN CHASED AWAY BY HELICOPTER AND SNOW SCOOTERS

SEVERAL SERIOUS SITUATIONS REPORTED FROM TRAPPERS, RESEARCH AND METEOROLOGICAL STATIONS

AND THEN THERE IS THE LARGE NUMBER OF MORE OR LESS SERIOUS INTERACTIONS NEVER REPORTED
SOME RECENT EVENTS
GROWING CHALLENGES

LOCAL BEARS ESTABLISHING NEAR SETTLEMENTS?
CHANGES IN MOVEMENT PATTERS DUE TO CLIMATE CHANGE?

2015:
A FEMALE WITH TWO 1-YEAR OLDS TAGGED IN BILLFJORDEN
ONE OF THE CUBS LATER SHOT BY A TOURIST/SMS AT REDHEIM
OTHER BEARS NEAR DIFFERENT SETTLEMENTS

2016:
ONE THREE YEAR OLD WAS SHOT BY A RESEARCH PARTY
THE BROTHER WAS MOVED BY NPI/SMS FROM LONGYEARBYEN
BOTH CUBS OF WELL KNOWN FEMALE IN VAN MIJEN/VAN KEULENFJORD AREA
OTHER BEARS ALSO SCARED AWAY FROM LONGYEARBYEN

FEMALE AND CUB SHOT AT AUSTFJORDNES:
BOTH WELL KNOWN FROM THE AREA

2017:
FEMALE AND CUBS IN LONGYEARBYEN, DIFFICULT TO SCARE AWAY
THE POLAR BEAR IS PROTECTED IN SVALBARD

- Through the Polar bear Treaty in 1973
- PB can only be killed in self defense
- A goal: safety for people and polar bears
- We have to adjust our behavior
TAKE PRECAUTIONS FOR OUR OWN AND THE POLAR BEAR’S SAFETY

CHALLENGE IN DEALING WITH THIS TYPE OF RISK:

LOW PROBABILITY — MAJOR CONSEQUENCES

KNOWLEDGE BASED

EFFECTIVE

SIMPLE
WHAT MAKES POLAR BEARS DANGEROUS TO US?

VERY CURIOUS
**When out in the field**

- Get an overview
- Avoid close contact/interaction
- Enjoy polar bears on a safe distance
Polar bear behavior

When the bear is checking you out:

• Sniffs the air
• Head high
• Up on two legs

Easier to scare off
BEST TOOL FOR SCARING OFF BEARS IN THE FIELD:

FLARE GUN WITH FLASHBANG!
CAMPING:

- **CHOOSE A CAMPSITE INLAND AWAY FROM THE COAST LINE**
- **HAVE GOOD OVERVIEW OF THE SURROUNDINGS**
- **AVOID CAMPING CLOSE TO WHERE YOU HAVE SEEN BEARS OR FRESH TRACKS**
SECURING THE CAMP:

CHALLENGING WHEN SLEEPING IN TENTS!

• BEAR GUARD, WHEN POSSIBLE!
• A REALLY GOOD TRIP WIRE SYSTEM!!

USE TRIP WIRE ALSO:

• WHEN IN CABINS, IN BEAR AREA
• TO SECURE EQUIPMENT
A GOOD TRIP WIRE SYSTEM:

• **STABLE POLES, STRONG AND TIGHT WIRES!**

• **NOISE AND LIGHT**

• **TWO WIRES (APPROX 30 AND 70 CM HEIGHT)**

• **IF NEEDED DOUBLE SYSTEM**

• **PRIORITIZE QUALITY**

• **MAINTENANCE IS NEEDED!**
WHAT TO DO WITH A TRUE PROBLEM-BEAR:

• **SCARE OFF EARLY**

• **CONTINUOUS OBSERVATION OF THE MOVEMENTS OF THE BEAR**

• **KEEP IT ON A DISTANCE WITH FLARES ETC.**

• **BE PREPARED TO GUARD THE CAMP FOR AN EXTENDED PERIOD**

• **EVACUATE AND/OR CONTACT THE SMS FOR HELP**
WEAPON AND SHOOTING IN SELF DEFENSE

HEAVY CALIBER (.308 WIN AND UP)

WHEN YOUR LIFE IS AT RISK

AIM FOR THE CHEST
POLAR BEAR SAFETY

• **THINK ABOUT PREVENTIVE MEASURES**

• **ALWAYS BE ARMED (HEAVY CALIBER, .308 WIN OR UP)**

• **SCARE OFF EARLY (DO NOT LET THE BEAR GET COMFORTABLE AROUND CAMP)**

• **USE TRIP WIRES, FLARES AND BEAR GUARDS!!**

• **IF YOU HAVE TO SHOOT; SHOOT IN THE CHEST!**
Polar Bears in the Arctic Safety Center

Activity in the Arctic should be safe, but also sustainable so safe for people, but also for polar bears

• Information to the public
• Lectures in courses at UNIS

Project application to Svalbard Miljøvernfond
THREE SOURCES OF DATA WHEN STUDYING POLAR BEAR SAFETY

• A BROAD AND GOOD KNOWLEDGE BASE FROM POPULATION STUDIES

• COLLECTING EXPERIENCE/EVENTS FROM PEOPLE IN THE FIELD

• SPECIFIC PRACTICAL STUDIES ON METHODS AND EQUIPMENT
FIELD RESEARCH
POPULATION BIOLOGY
STUDYING HUMAN-POLAR BEAR CONFLICT EVENTS

• COOPERATION BETWEEN POLAR BEAR COUNTRIES INTERNATIONALLY
• WHICH REGIONS CAN EXPECT INCREASED CONFLICTS RESULTING FROM CLIMATE CHANGE
• RECOMMEND METHODS TO MINIMIZE THE RISK OF CONFLICTS PROJECT APPLICATION TO SVALBARD MILJØVERNFOND (UNIS, NP, SMS, MDIR)
EFFICACY OF DETERRENTS

• EFFICACY OF ELECTRIC FENCING IN SETTLEMENTS?

• EFFICACY AND EFFECT OF BEAR SPRAY?

• WHERE AND WHEN DO POLAR BEAR INTERACTIONS OCCUR?

• WHAT HAPPENS DURING HUMAN POLAR BEAR INTERACTIONS?

Photo courtesy of Bob Hansen (Government of Nunavut - Dept. of Environment)

Bear Spray Success vs Polar Bears (n=15)

Success = spray stopped undesirable behavior of bear
HAVE HAPPY AND SAFE TRIPS IN POLAR BEAR TERRITORY!
Polar bear safety

• Think about preventive measures
• Always be armed (heavy caliber, 308 Win and up)
• Scare off early (do not let the bear get comfortable around camp)
• Use trip wires, flares and bear guards!!
• If you have to shoot; shoot in the chest!