

Submission to the

Nunavut Wildlife Management Board

For

✓ Information:

Decision:

Issue: Circumpolar Action Plan for the Management and Conservation of Polar Bears- Part II.

Background:

In 1973 the governments of Canada, Denmark (now represented by Greenland), Norway, the Union of Soviet Socialist Republics (now Russia), and the United States, collectively known as the polar bear Range States, signed the *Agreement on the Conservation of Polar Bears*. This committed the Range States to coordinate national measures to protect the species, and to collaborate on polar bear research and conservation initiatives. One such initiative is the preparation of a Circumpolar Action Plan (CAP) to avoid, and mitigate threats to the polar bear, and ensure the persistence of the species throughout its historic range. This plan will focus on issues that benefit from international coordination (e.g. best management practice for marine shipping) and will not address issues that are better managed at national or lower levels (e.g. harvest management). Environment Canada represents Canada on the Range States Committee. Departmental officials have been involved in the drafting of this Plan and are consulting with wildlife management boards across the north.

As you will recall, we engaged in discussion with you on Part I of the Circumpolar Action Plan in the fall of 2014. As noted during those meetings, Part II is now being finalized. Part II contains best management practices that could be used by Canada and other range states, and outlines action items to be undertaken (for example, the development of a circumpolar population inventory schedule) by the Range States. Being that the NWMB is an active participant in the management of polar bear in Canada; Environment Canada would like to discuss Part II of the CAP.

That said, an official from the Canadian Wildlife Service would like to take 10-15 minutes to present Part II of the Action Plan at your upcoming meeting, and address any questions you may have. After allowance for questions we recommend a total time of 20-30 minutes for this agenda item.

Consultation:

Consultations on Part I of this Action Plan were conducted in Fall 2014 with all of the northern wildlife management boards.

The second round of consultations with the wildlife management boards, including the NWMB, will occur over the winter of 2014/2015 and spring of 2015. Simultaneously other Polar Bear Range States will be consulting and seeking comments on the document from relevant authorities within their own jurisdictions.

Recommendation:

We recommend that you accept this submission and afford Environment Canada the opportunity to present the Circumpolar Action Plan –Part II for the NWMB's comments.

Prepared by:

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Environment Canada

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Date:

Submission prepared November, 6th, 2014.

Circumpolar Action Plan for Polar Bear

Part II

INTRODUCTION

- a. Reference principles, goal, objectives from Part I
- b. Participation of Indigenous people in management and research

STRATEGIES TO ADDRESS THREATS

1. Adaptive management and conservation

a. General/overarching actions

- i. Adaptive Management
 - Climate
 - Habitat
 - Prey
 - Disease
- ii. Best Management Practices
 - Oil & gas
 - Mining
 - Contaminants
 - Tourism
 - Shipping
 - Human/Bear Interactions

b. Threat specific management actions

- i. Unsustainable harvest/poaching

2. Monitoring and research

a. General/overarching actions

- i. Inventory schedule for each subpopulation
- ii. Traditional Ecological Knowledge inventory schedule for each subpopulation
- iii. Identification of essential habitat
- iv. Coordinated national monitoring of prey species
- v. Polar Bear-Human Interactions

b. Threat-specific research actions

- i. Climate change
- ii. Contaminants
- iii. Disease
- iv. Shipping

3. Communication and outreach

a. General/overarching actions

- i. Website
 - Best Management Practices

- Reports
 - Fact sheets
 - Educational Material
 - Links to other websites
- ii. Outreach to/participation in other fora/organizations
- iii. Educational material
- b. [Threat-specific actions](#)
 - i. Climate change communication
 - ii. CITES Trade Working Group report

IMPLEMENTATION SCHEDULE

Living document – revisited every two years.

[Table: Summary of actions and threats, that details:](#)

- Responsible jurisdiction
- Estimate costs
- Timeline to implement
- Measureable targets

PERFORMANCE MEASURES

- Biennial report tabled at the Meeting of the Parties
- Review and evaluation of the Action Plan
- Achievement of plan objectives and goals

CONCLUSION

REFERENCES

APPENDICES

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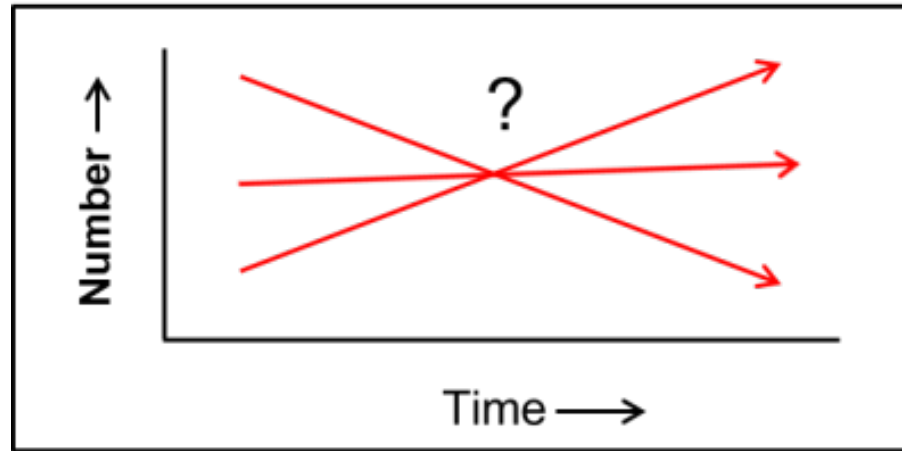
POPULATION ASSESSMENT OF POLAR BEARS IN WESTERN HUDSON BAY

ኦሪጽጽጽ, ጠቅላይ
 2014

Rankin Inlet, Nunavut 2014

Canada

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- Supports harvest management by answering:
 - how many bears are there?
 - is this number stable or changing?
 - what is the health of the population?

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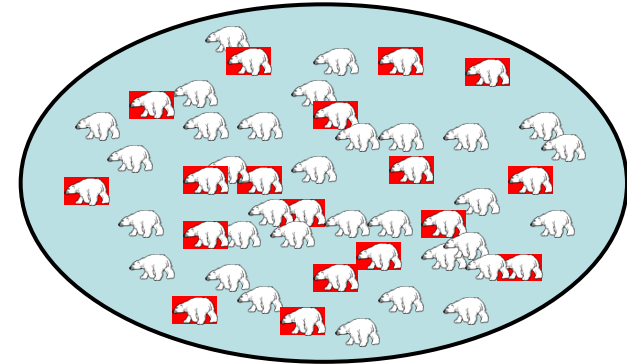
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- We used data from bears handled in our research and by partners in Nunavut and Manitoba
- Also included harvest records of bears taken in Nunavut
- 6,743 records from 3,034 individual bears
 - 6,224 live encounters
 - 519 removals (harvest and problem bears)

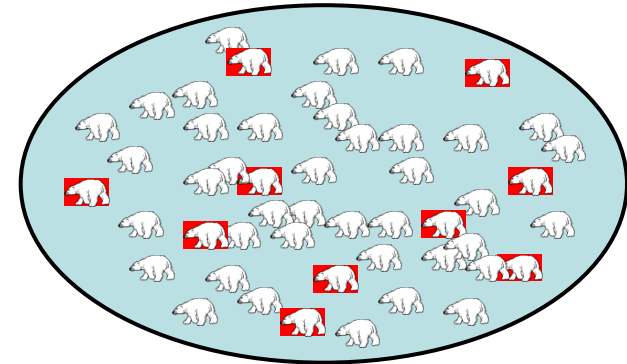
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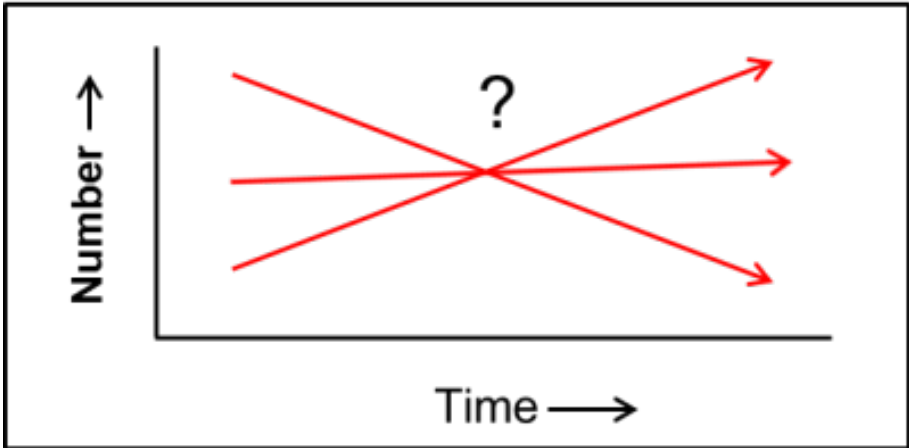
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- We used a new statistical approach to analyze the data from WH
- This approach allowed us to:
 - Include data for bears with different recapture probabilities;
 - Estimate survival for different age, sex, and reproductive classes;
 - Estimate population trend;
 - Estimate population size over time.



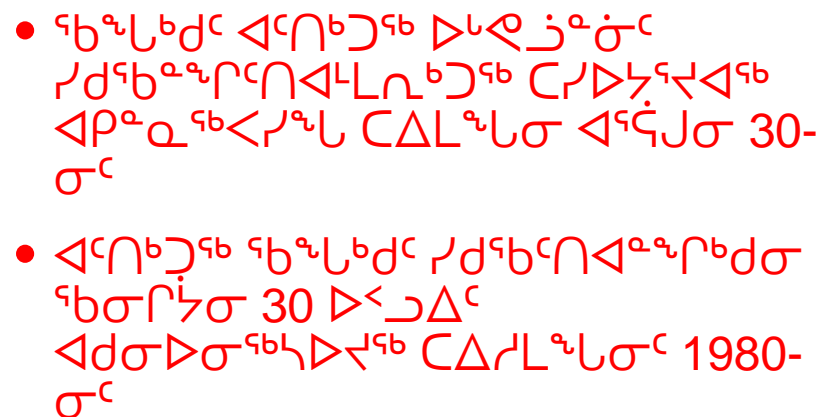
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- We estimated past population trends up to 2011
- Also projected what future population trends might be under differing sea ice conditions

- Period with low or no ice in western Hudson Bay has increased over last 30 years
- The low ice period is roughly 30 days longer than in the early 1980's



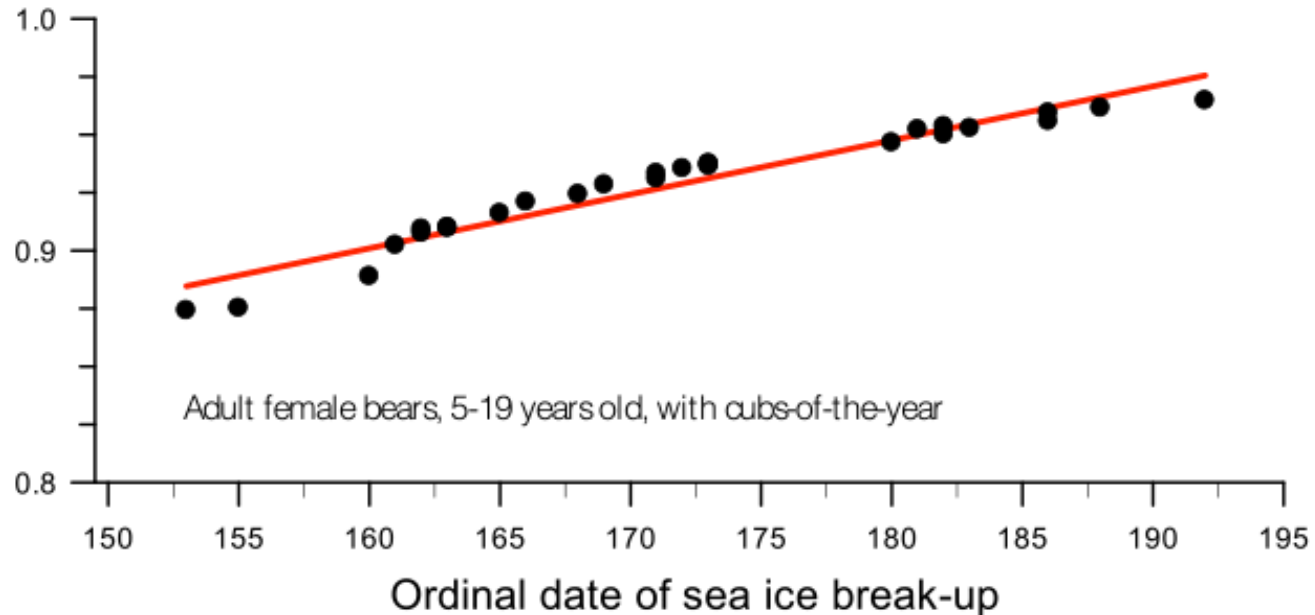
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- Condition of bears when they come ashore is related to timing of break-up
- Earlier break-up: bears tend to be thinner when they come ashore
- Later break-up: bears tend to be fatter when they come ashore

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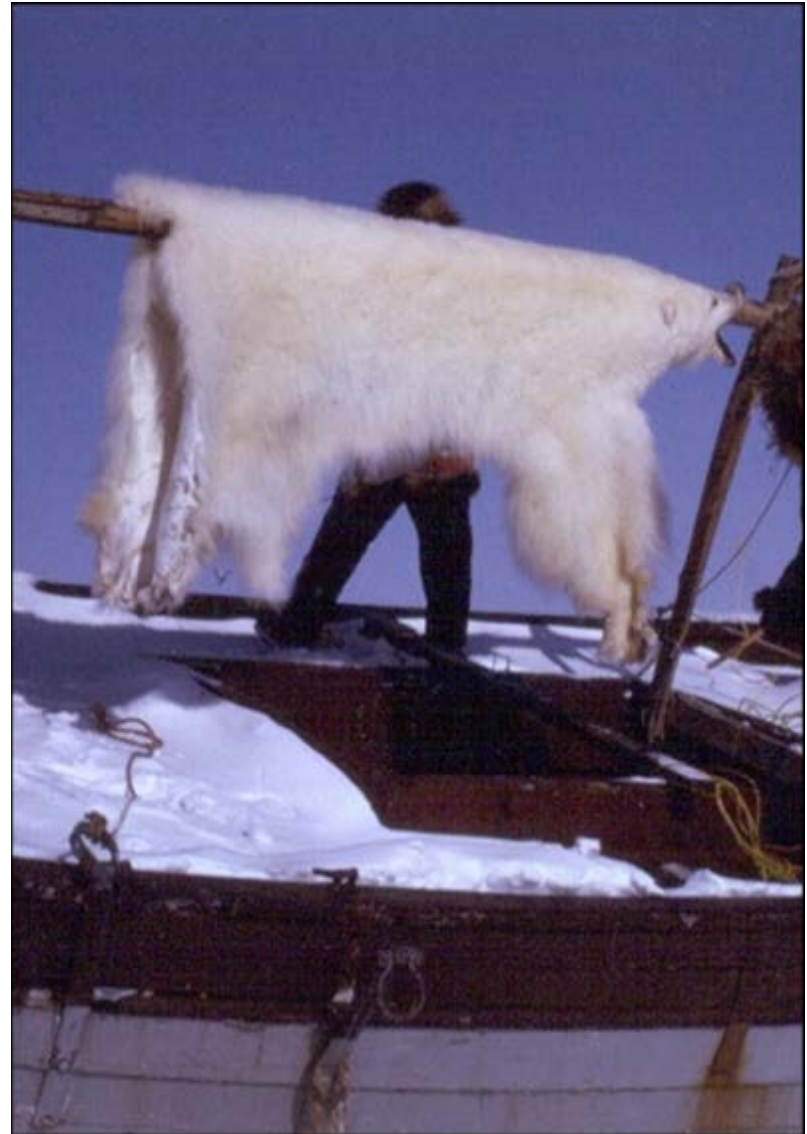
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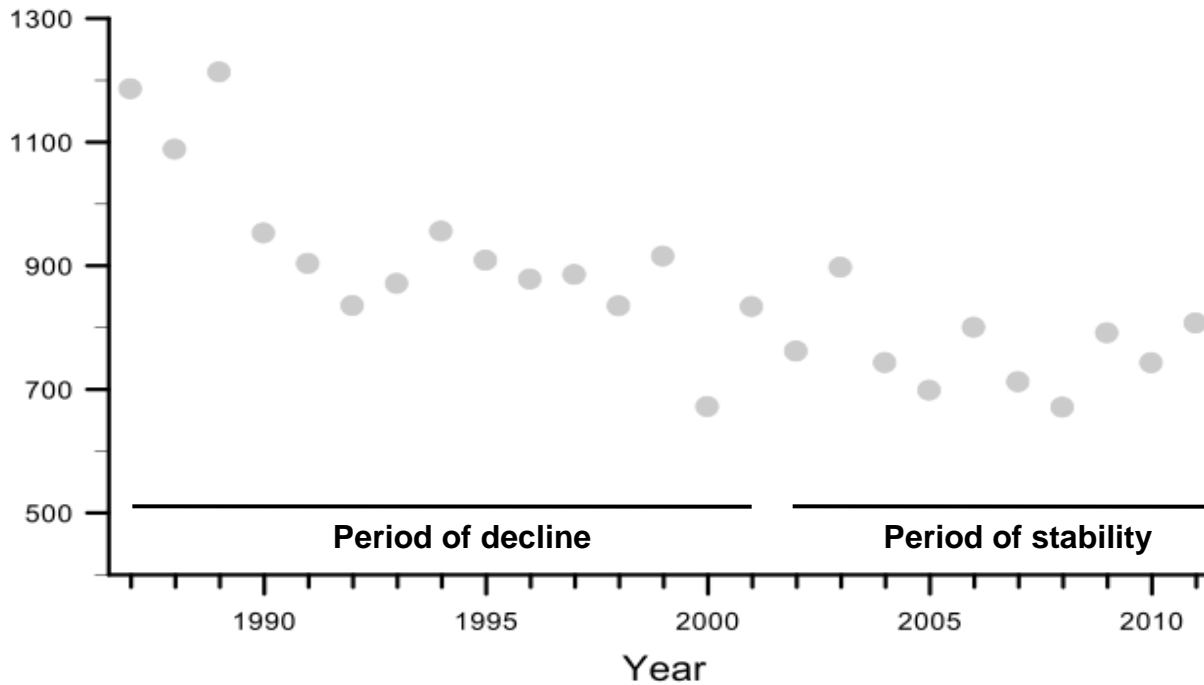
- Survival of males was not affected by sea ice conditions
 - Human-caused mortality had a greater impact on male survival
 - Likely the Nunavut harvest has the greatest effect
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- Our new analysis estimated 806 bears (95% confidence intervals = 653-984) in Fall 2011
- The aerial survey estimated 1,030 bears (95% confidence intervals = 715-1398)
- Despite different sampling methods, these estimates overlap

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- Population has declined overall since the late 1980s
- However, it appears to have stabilized over last decade
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- Survival of females is important in determining the WH population trend
- Population growth of female polar bears was likely stable over the past decade, 2001-2011 ($\lambda = 1.02$; 95%CI = 0.98-1.06)



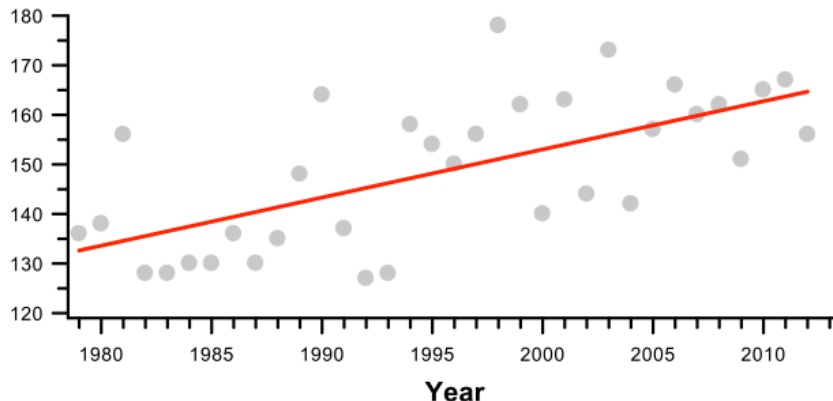
- $\Delta L_{\text{CO}} \propto \dot{M}_{\text{CO}} \propto \dot{M}_{\text{H}_2}$
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- $\Delta L_{\text{CO}} \propto \dot{M}_{\text{CO}} \propto \dot{M}_{\text{H}_2}$
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 $2001-2011$ (Lambda = 1.02; 95%CI = 0.98-1.06)



Sea Ice Condition Scenarios

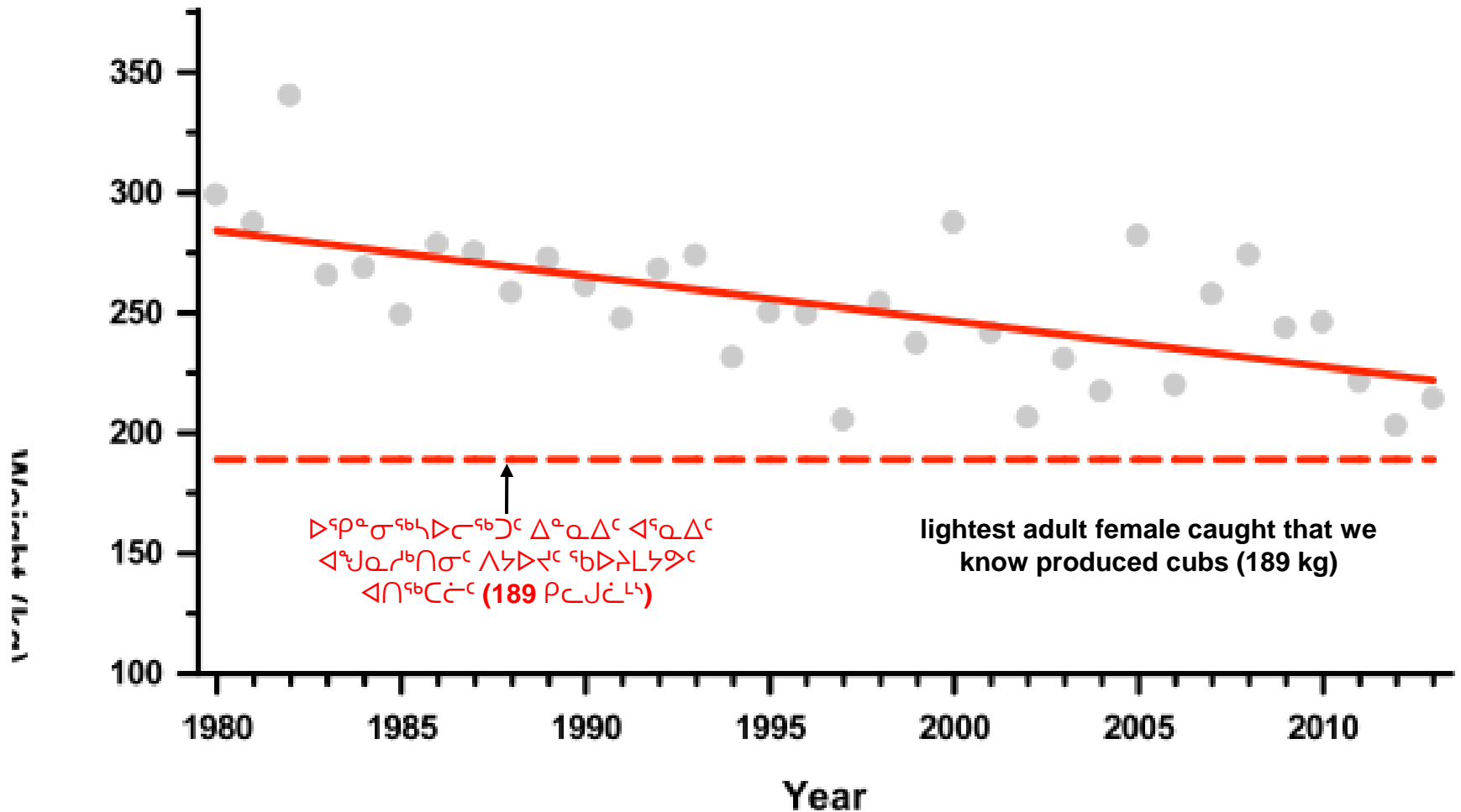
- Under favourable sea ice conditions, the population would increase by about 2% per year
- Under less favourable sea ice conditions, the population would decline by about 4% per year

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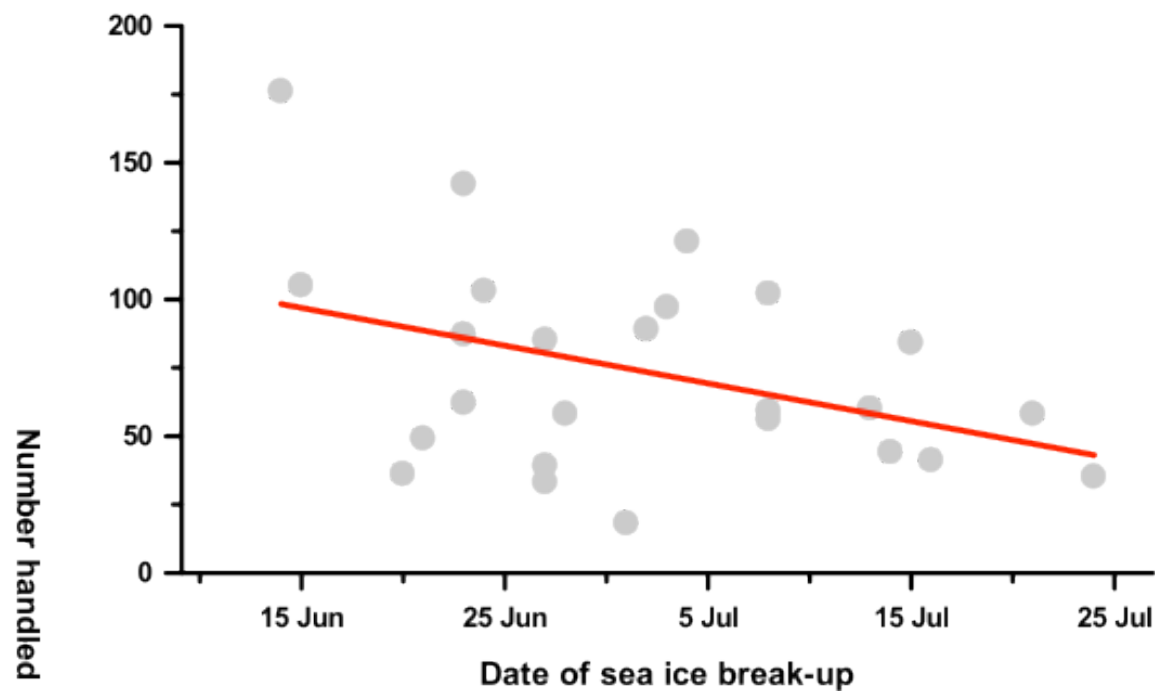
- Sea ice conditions were likely favourable over past decade
- But sea ice models predict continued decline over the longer-term
- It's important to know about trends in health of bears, as well as numbers

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Canada



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- Sea ice conditions affected the survival of female bears but not male bears
 - WH population has declined since 1980s. but appears to have been stable over past decade
 - While this should be considered good news, we need to think about future environmental conditions
 - Under favourable sea ice conditions, WH population has potential to increase but, under less favourable sea ice conditions it would certainly decline
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ԾԳԵԴՐԱՎԼՆՈՐ ՎԷԼՆ ՎԼԳԾՈՒՆՈՐ...



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