

PROPOSAL REVIEW

Project Number: 2-14-05

Applicant: Stephen Atkinson

Title: Kane Basin Polar Bear Genetic Mark-Recapture.

Funding Requested: Single Year Funding - \$65,000 for 2014-2015

Rank: 7 / 18

Total Score 81.00 /100
(no deductions)

Scoring Breakdown: NWMB Priority: 17.50 / 17.50
Regional Priority: 7.50 / 7.50
Quality: 31.50 / 35.00
Consultation: 12.00 / 15
Funding: 12.50 / 25

Project Summary: The project's main objectives are to: 1) estimate the abundance and composition of polar bears in Kane Basin; 2) compare new estimates of abundance with those derived from earlier studies in order to assess population trend; 3) estimate survival and reproductive parameters to facilitate population viability analyses; 4) delineate the boundaries of the Kane Basin sub-population and reassess the validity of the area as a demographic unit; and 5) evaluate polar bear distribution and habitat use with respect to environmental variables, particularly ice conditions, topography and food availability distribution.

Project Contributions:

Requested from NWMB	\$65,000	19%
Other Contributions	<u>\$286,300</u>	<u>81%</u>
Total	\$351,300	100%

NWMB Staff Evaluation:

NWMB Priority: #1 - Contributes to the establishment, modification or removal of levels of Total Allowable Harvest (S 5.6.16 to S 5.6.18) for stocks or populations where there is believed to be a conservation concern or that are priority species for harvest by Inuit.

Regional Priority: #1 Baffin – Polar bear population estimate (Baffin Bay)

Project design: The project design is similar to physical mark-recapture studies conducted on polar bear but does not involve the immobilization and handling of bears. Instead bears are “marked” by being darted with a DNA biopsy dart that extracts a small sample of skin and hair. The “recapture” event occurs when the same bear is darted on a later occasion, or when a genetic sample is recovered from a harvest in either Nunavut or Greenland. The DNA biopsy dart is fired from a helicopter and after contact with the bear the dart falls to the ground for retrieval.

The DNA biopsy darting will be conducted in late April to May on the sea-ice and coastal areas around Kane Basin. In addition, to the darting GPS locations and information on location, behavior, body condition, estimated age/sex and group/litter size will also be recorded. The survey area will be determined based on previous mark-recapture and telemetry studies combined with information on sea-ice conditions at the time of

sampling. The proposal does indicate that due to the uncertainty about the abundance of bears in Kane Basin and the rate at which samples can be collected, the time and effort required cannot be determined at this time. The goal for year 1 is to sample as many bears as possible based on available funding.

The project will also deploy 20 satellite instruments (10 ear tags; 10 collars) which will require immobilization in order to support the reassessment of the boundaries of the Kane Basin subpopulation.

Application of results: Information on polar bear abundance in Kane Basin will be used as a basis for: recommendations for total allowable harvest; development of management plans and inter-jurisdictional agreements; and updating status reports for Kane Basin. The distribution, movements and habitat selection of polar bears may be used to support land-use planning and environmental impact assessment processes within the geographic range of the subpopulation. Sea-ice habitat selection by polar bears may be used to help understand the effects of future changes in sea-ice on polar bear habitat availability in Kane Basin.

Community involvement / consultation: The proposal specifies that an in-community consultation was conducted in Grise Fiord before the research (Jan. 2012), and consultations will also continue to occur during the research (April 2012, 2013, and 2014) and at the conclusion of the research (Fall 2014). The proposal indicates that project support has been requested but not obtained from the Grise Fiord Hunters and Trappers Organization. The project will not employ any Nunavut residents in 2014-2015.

As per the NWRT policy, if the project is funded by the NWRT the project leader is required to: (1) provide a letter of support from all affected communities by June 30th, 2014; **OR** (2) provide a letter of support from a majority of the affected communities by June 30th, 2014 and provide evidence that the research has done a “conscientious” job of consulting; **OR** (3) provide the required information to demonstrate that “conscientious” consultation has been conducted by June 30th, 2014.

Recommendations: If this project is funded, the following conditions should apply:

1. Funding should be conditional on other funding, as identified in the proposal, being approved. This should be confirmed in writing; and
2. Funding should be conditional on meeting the consultation requirements identified as per the NWRT policy.

Consultations: Danica Crystal, Wildlife Management Biologist, NWMB

Prepared By: Peter Kydd, Wildlife Management Biologist, NWMB

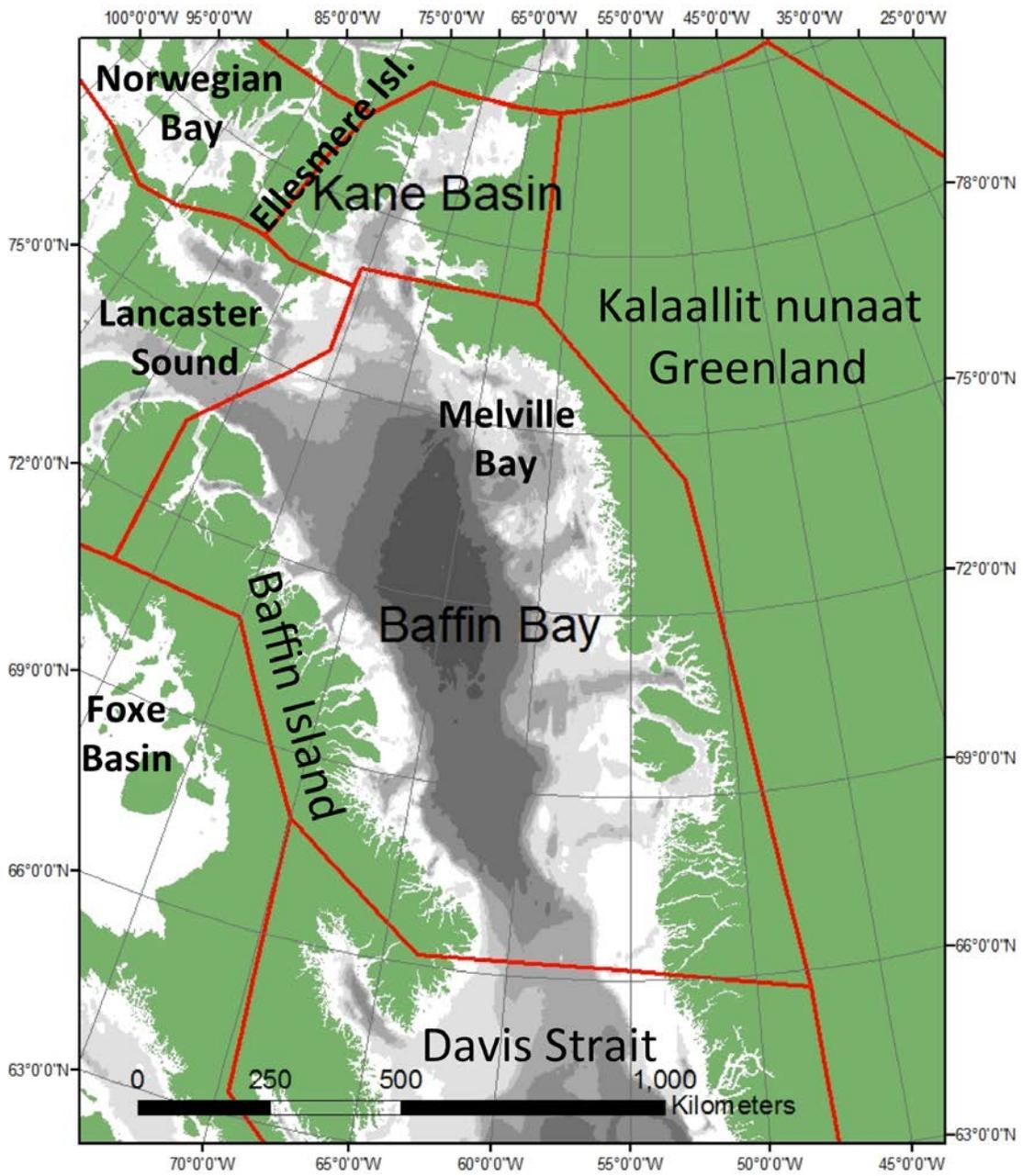


Figure 1: Kane Basin study area.