

Project information

Project title

A coastal, ice-associated arctic whale in a changing climate

Year

2013/2014

Project leader

Christian Lydersen, NPI

Participants

- Project leader(s)/institutions: Dr. Christian Lydersen, Norwegian Polar Institute
- Project participants/institutions: Prof. Rolf A. Ims, University of Tromsø,
- Prof. Kit M. Kovacs, Norwegian Polar Institute
- Prof. Aaron Fisk, University of Windsor, Canada
- Prof. Morten Tryland, Norwegian School of Veterinary Science, Tromsø

Flagship

Fjord and coast, Theme: Physical-biological coupling: Oceanography and habitat use by predators and their prey

Funding Source

Fram Centre

Summary of Results

This is the first field season in a multiyear program. Together with Sea Mammal Research Unit at University of St. Andrews in Scotland we have designed/developed two new Satellite-Relay Data-Loggers (SRDLs) for white whales. One is based on their normal SDRLs but designed especially to fit on the ridge of these whales; the other a new GPS-CTD-SRDL. The latter SRDL have, in addition to the normal sensors, also integrated a GPS and CT-sensors (conductivity and temperature) so they perform vertical CTD-measurements of the water masses the whales dive through and deliver GPS positions through the Argos system. See attached figure for these two tags.

During July/August we captures 3 white whales that got these tags attached; one with the normal SRDL and two with the new GPS-CTD-SRDLs; see attached figure for the tracks.

From these whales we also collected blood and blubber samples for the analyses of diet, pollution and health assessment as described in the application. These samples have yet not been analyzed.



For the Management

Coming.....

Published Results/Planned Publications

No results have been published here yet since this project has just started. Planned primary publications to come out of this will be:

1. Habitat use (based on satellite telemetry) both based on tracking and hydrographic data collected by the whales
2. Screening of new pollutants
3. Levels of various POPs
4. Effects of various POP levels
5. Health assessment of the whales based on analyses of blood parameters
6. Assessment of diet based on fatty acid analyses and analyses of stable isotopes

Communicated Results

None so far.

Interdisciplinary Cooperation

Interdisciplinary cooperation is a crucial part of this program, but too early in the program to evaluate. Fields involved would be ecology, ecotoxicology, veterinary medicine, oceanography, sea ice physics.

Budget in accordance to results

This kind of research is expensive and Fram Centre funding in addition to NP internal funding is the sole funding sources (so far), so the Fram Centre funding has thus been crucial for this project.

Could results from the project be subject for any commercial utilization

No

Conclusions

Coming.....