

Project information

Project title

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

Year

2015

Project leader

Christian Lydersen

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

Funding Source

Fram Center

NFR

Summary of Results

This is the third 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.

During July/August we captures 2 white whales that got these tags attached; both with the normal SRDL. We have now data from 13 animals so far in this project

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 this autumn been sent for analyses at various labs.

For the Management

- Data on distribution, movements and habitat selection is essential input for a proper management of a species. All these will be dealt with in this project. Also impacts on climate change on these parameters will be dealt with by comparing with tracking data from more than a decade ago. Additionally, updated diet, health and contaminant data will provide material to assess the past decade's influences on the individual/population level health for the locale white whale population. Such data have been identified as essential monitoring elements within CAFFs Circumpolar Biodiversity Monitoring Plan – so comparative data from other Arctic sectors should be available, in addition to our time-series data from the 1990s.

Published Results/Planned Publications

Planned published results are as initially described in the first proposal and includes primary publications on:

- 1: Space use and habitat selection (likely several papers)
2. Pollutants (several papers)
3. Diet (Fatty acids and stable isotopes)
4. Health screening (from serum samples)

However, these will be delayed some due to the fact that we were lucky enough to get funding from NFR for a larger Arctic whale programme (see above) that will involve two more seasons of field work(2016-17) on white whales similar to the field work we have conducted via this funding from the FRAM Flagship.

Communicated Results

Non so far

Budget in accordance to results

The 350.000 that was awarded for 2015 has been used as planned and described in the application.

Could results from the project be subject for any commercial utilization

No

Conclusions

Project will not be finished within the time frame promised in the initial application. The reason for this is that we have gotten funding to continue this project as an integrated part of a larger NFR funded program on Arctic whales. So from my point of view this is a very positive outcome of the FRAM Centre funding and hopefully will make the resulting publications better and more comprehensive.