GLAERE marine mammal fieldwork 2014

(by Christian Lydersen and Kit M. Kovacs)

White whales were selected as the model species for the GLAERE fieldwork in 2014. This is because previous tagging had shown that these whales spend a lot of time foraging at tidal-glacier fronts. Tagging these whales will give us novel, updated data on space use at a time when the Arctic is rapidly changing, in addition to hydrographic data collected by the oceanographic sensors on the tags that is useful for both habitat and climate modelling.

During field work we use a sailboat as the base "ship" (see picture below) and operate out of this mobile platform on a daily basis using two zodiacs.

We did combination field work this year to minimize costs – so the start of the fieldseason was dedicated to another project (walrus tagging at Tusenøyane), and at the start of August we had a helikopter change some of the "walrus-people" over with some new "white-whale people". This happened in Wichebukta, in the very north of Storfjorden (see below – white whale people arriving).

White whale field team, from the left: Kit. M. Kovacs (NP), Charmain Hamilton (NP and University of Tromsø), Christian Lydersen (NP), Captain Oddmund Isaksen (very short legged this day), Martin Haupt (Africa Wildlife Tracking, South Africa) and Ketil Hylland (University of Oslo).

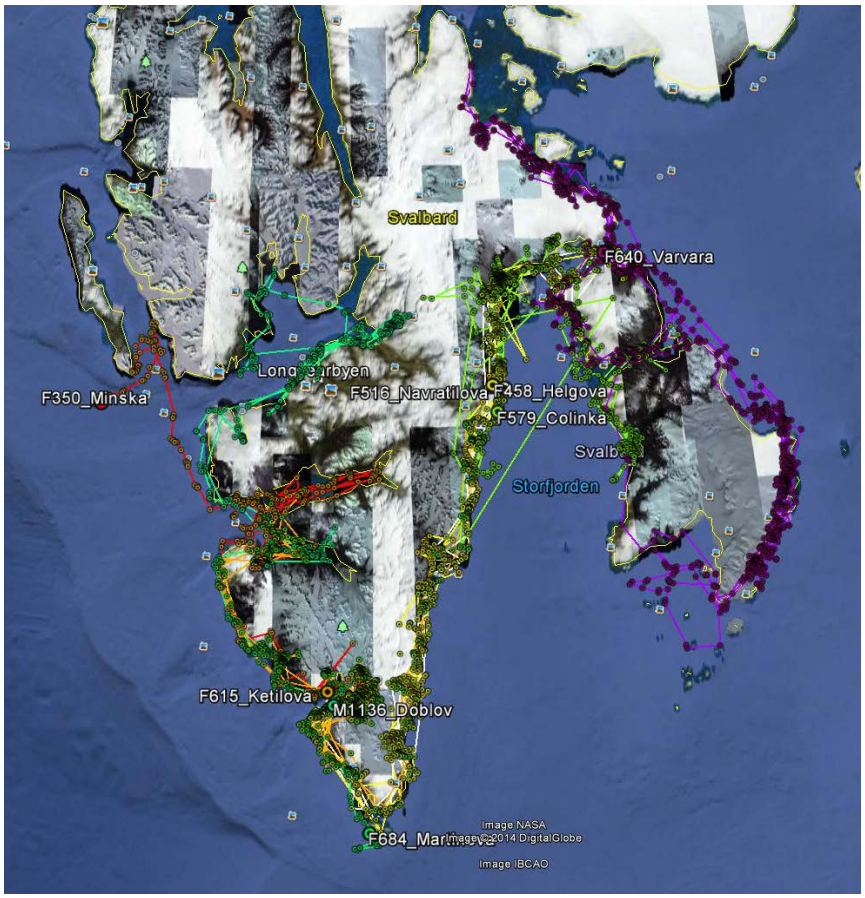
When we catch white whales we basically use two different approcahes (see pictures below); either we travel with the base boat and actively search for animals, and if we see some we jump in the zodiacs and set a net from the coast in front of them and try to herd a whale into it. The other approach is to set the net in a presumed good place and hope for whales to come by and herd an animal into the net when they are close enough.

When a whale is caught it is disentangled from the net, a rope is attached to the tail which is anchored by a person up on shore, while a hoopnet is held over the head to ensure that the whale can breathe easily while we process it. The whale is measured (length and girth around the whale at the level of the foreflippers, which we use to estimate body mass) and then blood and blubber samples are collected for a whole suite of studies, including health assessment, various ecotoxicology projects and diet studies. Then we attach a satellite tag to the whale using surgical-nylon pins. These tags are custom made in co-operation with the Sea Mammal Research Unit, University of St Andrews, Scotland. They provide unique information on location, diving depth and duration as well as hydrographic data (temperature only on one tag type, and temperature and salinity on another). When the tag is on and the samples taken, the whale is released to swim freely and collect data that is delivered to us via the ARGOS satellite system.

Pictures of the process of attaching a satellite tag to a white whale during field work in Svalbard during the summer of 2014.

Alway a lot of splashing when the whales are set free.

Below is a map showing the tracking results so far (end of Sept 2014) and as expected the whales generally travel very close to the shoreline. These data will not be filtered and analysed completely



until after the 2015 field season when we hope to deploy some more tags. In addition to GLAERE NFR financing, this project is also sponsored by the Fram Centre Fiord & Coast Flagship and the Norwegian Polar Institute.