

November 18, 2021

To: Members of ASP-AGC Fishery Improvement Project (FIP) Working Group

Cc: Dr. Atef Mansour – Director General NL Region, Fisheries and Oceans Canada
Ms. Tracy King – Deputy Minister Fisheries and Land Resources, NL Government

Subject: Northern Cod Acoustic Tagging (NCAT) Project: Update

After considerable efforts in 2021, the [ASP-AGC Northern Cod Fisheries Improvement Project \(FIP\) \\$8.5M Northern Cod Acoustic Tracking \(NCAT\) Project](#) concluded the 2021 field season with modest gains.

In early 2021, the FIP faced numerous obstacles contracting a suitable vessel to catch and tag cod this year for a number of reasons including issues stemming from the on-going COVID pandemic (reluctance of vessel crews to work with unknown technicians), availability of larger offshore vessels capable of working that time of year, competition from other fisheries (increased crab quotas and landing prices) which decreased interest in contract work from vessel owners.

The FIP negotiated with three different vessel owners starting in January. The third vessel was contracted in early May and was a joint partnership with another DFO tagging project. The vessel departed for the offshore on May 12 able to travel to the offshore and tag cod, witch flounder and Greenland halibut.

Spawning aggregations were identified along the shelf edge in NAFO 2J. 116 suitably sized Atlantic Cod were captured in good condition (i.e. no barotrauma). 67 larger cod (>60cm) were implanted with acoustic tags, 49 moderate size (45-59cm) were tagged with T-tags. Cod <45cm are considered too small for tagging purposes.

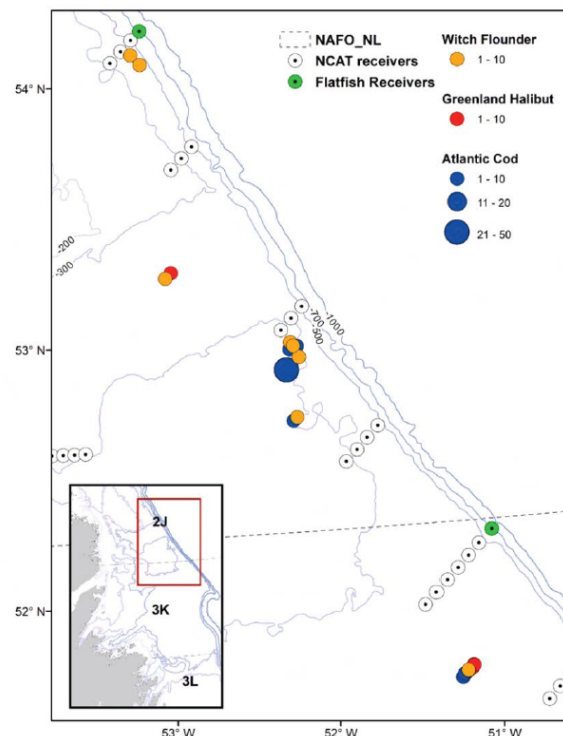


Fig 1: Tagging Locations, May 12 – 30, 2021



Fig 2: Tagging Surgery

Lessons Learned

There were valuable lessons learned during the trip.

- Spawning cod aggregations are far from shore along the shelf edge and can be difficult to locate.
- In final pre-spawning phase, cod are in poor physical condition and many were not suitable to tolerate the tagging surgery.
- At this time of year, fish brought up from in deep waters (>300m) may have barotrauma which can also prohibit tagging.
- These cod aggregated most densely during nighttime and future trips should anticipate nighttime sets/ tagging with sufficient search time to locate aggregations.

Early Results!

Some of the 338 cod tagged and released inshore during 2019 were detected at various other project acoustic receivers on the Newfoundland shelf. The red circles on the map indicate non-NCAT receiver locations that have recorded NCAT tagged fish with some fish pinging as many as 50 times over a several-day period. While far too early to infer results, it's great to see all the project pieces working together!

NCAT Array Upload Delayed

The OTN Wave Glider was in transit to conduct the initial NCAT array upload in October when it lost satellite connection and had to be rescued manually. Due to the decreased daylength there is insufficient sunlight for the solar cells on the unit to conduct the mission this fall. OTN now plans upload data in March 2022 as daylength increases to an acceptable level.

The FIP is currently reviewing options for March 2022 tagging missions with its project partners, DFO and OTN, in order to conclude deployment of the remaining project tags.

Bruce Chapman & Derek Butler
Co-Chairs – ASP/AGC Fishery Improvement Project (FIP)

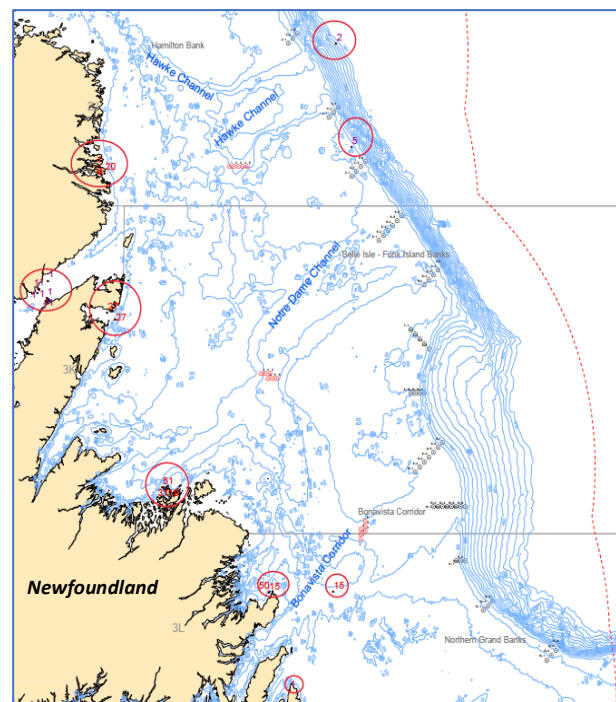


Fig 3: NCAT Cod Detections 2020