

# East Coast Whale Entanglement Mitigation Program

## Update 1

As Humpback whale populations in the southern hemisphere recover from past commercial whaling, the potential for interactions between whales and commercial fishing operations is increasing, with most entanglements occurring since 2006. Most entanglement incidents involve Humpback whales, a species listed as a Vulnerable within the Commonwealth EPBC Act and NSW Biodiversity Conservation Act 2016.

In the past few years, there has been an increase in media reports relating to whale entanglement in fishing gear and an increase in community awareness and concern for animal welfare and bycatch issues. Whale media in NSW in 2018/19 had a public reach of 223 million.

Preliminary assessment of reported whale entanglements in New South Wales has confirmed a variety of sources including NSW set fishing gear. Entanglements assessed as being associated with NSW set fishing gear include configurations used in the demersal fish trap, spanner crab, demersal setline and lobster trap fisheries, with higher incidents in demersal fish trap sector and lower incidents in the other sectors.

An initial workshop was held in mid September to set an overall direction for the East Coast Whale Entanglement Mitigation Program.

The workshop was attended by 34 participants, including 15 NSW fishers and scientists as well as representatives from Western Australia, Victoria, Tasmania, Queensland and the Commonwealth.

Open workshop discussion encouraged fishers to consider solutions, both within and outside current fishery practices and management regulations. Following workshop discussion there was strong agreement among attendees for the following four actions:

1. Trial gear and techniques to reduce entanglements.
2. Develop a NSW OTL Code of Practice for whale entanglements.
3. Develop and complete a gear survey throughout the NSW OTL.
4. Investigate options for funding of further research.

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## Whale Code of Practice

Following the workshop, a NSW OTL Whale Code of Practice has been developed and adopted by the PFA. The Whale CoP is a supplement to the existing NSW OTL CoP previously developed by OceanWatch and adopted by NSW OTL fishers through the OceanWatch Master Fishermen training and assessment program, and is designed to assist fishers to reduce the incidence of, and risks associated with, whale entanglements in fishing gear.

Current best practice fishing advice includes limiting slack rope in the water column, and avoiding excessive knots on ropes.

The Code will be regularly reviewed as further knowledge regarding whale specific best practice fishing operations for NSW OTL fishers becomes available.

## Gear Trials

Gear trials will be undertaken by NSW OTL fishers, commencing early 2020, to determine the practical utility and safety aspects of gear modifications that may potentially minimise whale entanglement. These trials will determine potential for uptake of gear modifications by other NSW OTL fishers, and provide focus for further scientific trials to determine whale entanglement mitigation.

Planning for the gear trials is underway, including applications for permits to allow trials to proceed using gears currently outside management regulations (sunken head gear).

NSW OTL fishers who have an interest in participating in the field trials should contact Brad Warren – [brad.warren61@gmail.com](mailto:brad.warren61@gmail.com) – 0412606959

The final report of the East Coast Whale Entanglement Mitigation Program workshop final report and the NSW OTL Whale Code of Practice are both available for download at the OceanWatch website.

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**Update 27/3/2020**

13 NSW Ocean Trap and Line (NSW OTL) fishers are taking part in gear trials to determine the practical utility and safety aspects of gear modifications that may potentially minimise whale entanglement. These trials will determine potential for uptake of gear modifications by other NSW OTL fishers, and provide focus for further scientific trials to determine whale entanglement mitigation.

Fishers undertaking the trials utilise two fishing methods within the NSW OTL fishery, Demersal Fish Trap (DFT) and Spanner Crab (SC). The fishers are located between Ballina (nth coast NSW) to Wallaga Lake (sth coast NSW), with a geographical spread of approximately 900kms. Fishers will be conducting trials in water depths between 10m and 150m, using licensed fishing vessels between 5.8m and 16m in length.

Most fishers are trialling multiple gears/methods, with maximum flexibility of use of trial gears an inherent part of the trial methodology.

## **Trial Gears**

The main focus is to trial gears/methods which minimise the amount of rope (particularly slack rope) in the water column, consistent with advice for DFT and SC fishers within the NSW OTL Fishery Code of Practice for Reducing Whale Entanglements.

Negatively Buoyant Rope (NBR) - A total of 64 coils (18,000 metres) of NBR have been sourced from an Australian rope importer via Vietnam. The NBR is in three sizes 6mm, 7mm and 8mm.



*Negative Bouyant Rope (NBR)*

32 coils of NBR (7and 8mm) have been distributed to 9 DFT fishers for use on head gear. The objective is to increase tension on the upper portion of the head gear to reduce slack rope in the water column.

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Lead Core Rope (LCR) – 250 m of 8mm LCR has been distributed to one SC fisher for use on spanner crab trot lines.



*Lead Core Rope (LCR)*

The objective is to ensure the trot line lies on the substrate to eliminate the potential for rope associated with the ground gear rising into the water column.

Galvanic Time Releases (GTR) – A total of 8300 GTRs have been ordered from an Australian supplier. Models ordered include A2 (11hrs), A4 (17hrs), A5 (21.5hrs), B5 (39hrs) and G8 (7days). The spread of models ordered will enable flexibility for fishers to tailor GTR use to various water temperatures and gear soak times. The G8 GTRs will be used as a back up within the grappling trials to reduce the risk of lost gear as a result of the trials.



*Galvanic Time Releases (GTR)*

To date 3950 GTRs have been received, with a further 1850 expected to be received in the next few days. There have been some difficulties obtaining A5 GTRs from the US

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manufacturer within the project time frame, compounded by the recent Covid 19 health emergency. Contingencies include the sourcing of B5 GTRs if available, with fishers able to “burn off” time on the GTR before deployment with the trial gear.



*GTRs delivered as at 27/3/2020*

The GTRs will be distributed to 8 DFT fishers for use on head gear. The objective is to remove the head gear from the water column for the majority of the soak time. Expected delivery date to DFT fishers undertaking GTR trials is the 1<sup>st</sup> week of April 2020.



*Packed rope bag (NSW Lobster Fishery example)*



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### Ancillary Items

Deep Sea Floats – A total of 70 x 8” and 30 x 10” deep sea floats with the capability to withstand pressure to 250m depth have been distributed to 8 DFT fishers undertaking GTR trials. The floats will be used as a substitute for the common polystyrene variety to ensure the floats are not crushed by pressure when deployed at depth. Floats are white in colour.



*Deep Sea Floats – white in colour*

Oyster Mesh – A total of 8 rolls of 20 x 20 oyster mesh have been distributed to 8 DFT fishers undertaking GTR trials. The mesh will be used to manufacture rope bags to be used in conjunction with GTRs.



*Oyster Mesh*

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**Shark Clips** – A total of 100 x 4” stainless steel shark clips with swivels have been distributed to 8 DFT fishers undertaking GTR trials. The shark clips will be used to attach the GTR rope bag to the hauling rope to enable retrieval of the rope bag after the deployment of the floats.



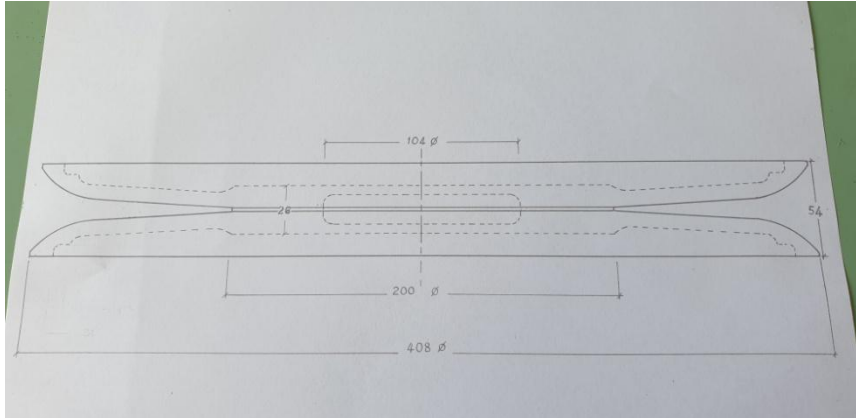
*Packed rope bag attached to dan line with shark clip (NSW Lobster fishery example)*

**Phosphor Bronze Line Hauler Plates** – A total of 3 sets of phosphor bronze line hauler plates have been ordered and will be distributed to 3 SC fishers undertaking LCR and NBR trials. It is expected that the use of LCR and NBR within the trot line of SC ground gear will result in particles of sand becoming embedded with the trot line resulting in excess abrasion of standard alloy line hauler plates.

An initial mould has been created with 3 sets of line hauler plates being cast with higher phosphor bronze content.

At the time of writing, the line hauler plates have been manufactured. The plates are currently in transit between the manufacturer on Flinders Island Tas and the delivery address in Ballina NSW.

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*Details of bronze hauler plate castings.*

### Delivery

A total of 4111 kms have been driven between 28/2/20 and 16/3/20 to pick up and deliver trial gear to fishers.



*Pick up from Sydney*

### Sect 37 Permits – NSW DPI

Section 37 Permits to allow the trialling of Galvanic Time Releases (GTR) and grappling of sub surface rope by DFT fishers have been negotiated and signed off, and were distributed on 26<sup>th</sup> March 2020 by NSW DPI.

More information – Brad Warren. East Coast Whale Entanglement Mitigation Program project officer.

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### Trial Reporting

At the completion of the trials, fishers will report on details of their typical gear and gear modifications, utility of the gear modifications, safety aspects of the gear modifications, impacts of gear modifications on the amount of lost gear and potential for future uptake by themselves and others through a standardised questionnaire.

Each fisher undertaking trials has had a face to face briefing explaining the reporting questionnaire when the project officer delivered the trial gear.

### Code of Practice

Each fisher undertaking trials has had a face to face briefing regarding the NSW OTL Fishery Code of Practice for Reducing Whale Entanglements from the project officer.

### Entanglement Information

Wheelhouse stickers providing information on the course of action when an entangled whale is encountered are currently under development by the NSW NPWS.

### Fiobouy Acoustic Release System

The planned trials of the Fiobouy Acoustic Release System will not be able to go ahead. Travel restrictions associated with the current Covid 19 health emergency will not allow the principal of Fiobouy, John Fiotakis, to travel from Tasmania to NSW to deliver equipment and training to the fisher undertaking the trials without undergoing 14 days quarantine on his return to Tasmania. There is a strong desire from Fiobouy, the East Coast Whale Entanglement Mitigation Program, and the fisher volunteering to undertake the trials to re-evaluate the situation when circumstances permit.



*Fiobouy AC100 (photo credit - Fiobouy)*

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### Update and Call for Interest in Trials – November 2021

NSW Commercial fish trap and spanner crab fishers are working collaboratively with OceanWatch to reduce the potential for fishing gear impacts on Australia's growing east coast Humpback Whale population.

Over the past 3 months, OceanWatch through guidance from NSW DPI fisheries have commenced the delivery of a gear survey, to assess common gear configurations and materials used in commercial fish trap and spanner crab fisheries. This information will help to assist the identification of reported whale entanglements and to identify potential problematic gear configurations.

OceanWatch have assisted commercial fish trap and spanner crab fishers to attain permits to trial modified gear configurations, including some currently not permitted in regulation. With 3 monthly reporting requirements, permit holders may remove ropes and floats from the water to reduce potential of entanglement with migratory whales, using techniques such as grappling and galvanic time release (GTR) to retrieve gear.

Additionally, 300 coils of 8mm and 40 coils of 7mm A grade negatively buoyant sink rope (NBR) has been sourced for interested demersal fish trap and spanner crab fishers wishing to trial in their fishing operations. NBR aims to minimise excessive slack rope in the water column as encouraged in the OTL Fishery Code of Practice to reduce potential for whale entanglement.

**Endorsed OTL fishers who want to discuss the project or register interest in the trials (including required reporting) can contact Michael Wooden at OceanWatch [michael@oceanwatch.org.au](mailto:michael@oceanwatch.org.au); 0422 618 248.**

This research is funded by the NSW Government under the Marine Estate Management Strategy. The ten-year Strategy was developed by the NSW Marine Estate Management Authority to coordinate the management of the marine estate.