

WHALE ENTANGLEMENT MITIGATION WORKSHOP 2025



The East Coast Whale Entanglement Mitigation program is supported by OceanWatch Australia, through funding provided by the Australian Government's Our Marine Parks Round 3 Grant and the Australian Government's Threatened and Migratory Species Bycatch Mitigation Grant.

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EXECUTIVE SUMMARY

OceanWatch Australia facilitated a dual project finalisation workshop at the Sydney Fish Market on 21 February, 2025. The workshop priority was to bring stakeholders together to discuss progress made in NSW, Queensland, and Tasmania regarding the East Coast Whale Entanglement Mitigation Program, and challenges faced through gear trials and the 2024 whale migration season.

The key takeaways from the workshop included:

- 1) An acknowledgement of the increasing humpback whale population and entanglement incidents.
- 2) The value of gear trials, and the importance of finding cost-effective, “simple” solutions that would allow fishers to continue operating without posing a threat to migrating whales.
- 3) The importance of collaboration between fishers, management, disentanglement teams, and conservation to work together towards coexistence
- 4) Need for proactive messaging and community education regarding this program and the efforts set-gear fishers have put towards coexistence strategies
- 5) Strong coordinated approach to problem-solving and increasing public awareness, highlighting Australia’s potential role as a leader in co-management of whale entanglement risk

The workshop was attended by 31 participants, including 4 via Zoom teleconferencing. Participants included; 11 professional fishers with endorsements in the NSW Ocean Trap and Line and Lobster Fisheries, Queensland Spanner Crab Fishery, South Australian Southern Rocklobster Fishery, and Tasmanian Southern Rocklobster fishery, 5 gear developers from North America (Ashored, LiftLabs LLC, and Sub Sea Sonics), and staff from; NSW Wild Harvest Fishers Association, Seafood Industry Tasmania, NSW Department of Primary Industries and Regional Development, NSW National Parks and Wildlife Service, Queensland Parks & Wildlife Service, Fisheries Research and Development Corporation, Marine Stewardship Council, Department of Climate Change, Energy, the Environment and Water, Department of Agriculture, Water and the Environment, and OceanWatch Australia.



The workshop agenda included progress updates from the NSW, Queensland, and Tasmania extensions of the program, discussions surrounding 2024 “ropeless”/rope-on-command gear trials in NSW, and presentations related to the 2024 whale migration season and reported entanglements.

Workshop participants were encouraged throughout the workshop to discuss their fishery-specific challenges and any insights they have for potential solutions. Additionally, they were encouraged to discuss potential benefits and challenges of different gear modifications and novel gear technology. Towards the end of the workshop, participants were encouraged to think about and discuss what the idea of coexistence between fisheries and whales looks like and what are ways we can better promote the unique and incredible collaborative effort this program has facilitated.



Agenda

Workshop agenda 21 st February, 2025 – Sydney Fish Market	
9:00	1. Introduction/welcome to workshop
9:05	2. East Coast Whale Entanglement Mitigation Program - NSW Update <ul style="list-style-type: none"> a. Overview of program b. Whale Safety Management Plans and gear trials c. 2024 Challenges for NSW fishers
9:25	3. NSW “Ropeless” Gear Trials Video
9:35	4. Ashored Gear Developer Update + Q&A
10:00	5. LiftLabs LLC Gear Developer Update + Q&A
10:30	6. NSW “Ropeless” Gear Trials Update <ul style="list-style-type: none"> a. Overview of Results b. Discussion with gear trial participants re: experience and opinions on the gear
11:00	Morning Tea Break
11:15	7. Tasmania Gear Trials Video
11:25	8. East Coast Whale Entanglement Mitigation Program - Tasmania Update <ul style="list-style-type: none"> a. Preliminary Gear Trials
11:55	9. Sub Sea Sonics Gear Developer Update + Q&A
12:15	Lunch
1:00	10. East Coast Whale Entanglement Mitigation Program – Queensland Update <ul style="list-style-type: none"> a. Co-design workshop and Code of Practice b. Gear Trials
1:30	11. 2024 Whale Migration Season – Queensland Update
1:50	12. 2024 Whale Migration Season – NSW Update
2:10	13. Disentangled gear return discussion
2:30	Afternoon Tea Break
2:45	14. Coexistence Discussion <ul style="list-style-type: none"> a. How to define coexistence? b. Ways to promote it?
3:15	15. Future Directions
3:45	16. Final Thoughts
4:00	Workshop Finish

**Green highlight denotes presentations/discussions relevant to the East Coast Whale Entanglement Mitigation Program

East Coast Whale Entanglement Mitigation Program:

- Primary objectives:
 - Find ways for Australian set-gear fishers to coexist with the migrating whale populations by reducing the risk of entanglements;
 - Developing and trialling various gear modifications that may be potential viable options that help fishers minimise interactions between whales and fishing gear.
- Achievements thus far:
 - Since 2019, the program has successfully developed Codes of Practice for fishing during the whale season for set-gear fisheries in New South Wales, Queensland, and Tasmania
 - Initial gear trials have been conducted in all involved states, and feedback from fishers has been integral to further refining modifications and identifying future gear modifications to trial
 - Effective collaboration between the fishing industry, government agencies, and conservation
- [East Coast Whale Entanglement Mitigation Program video](#)

NEW SOUTH WALES UPDATE:

- 2020 initial gear configuration surveys and gear trials with NSW Ocean Trap & Line fishers with demersal fish trap and/or spanner crab endorsements. These trials helped identify challenges to broader industry uptake, specifically for the offshore industry.
- Co-developed Code of Practice for NSW OTL fishery for fishing during the whale migration season in 2021
- Developed 32 vessel-specific whale safety management plans for individual vessels and fishing operations in the NSW OTL industry based off Code of Practice that can be adapted as necessary in 2024. To date, these account for 34% of NSW Spanner Crab shares, 24% of demersal fish trap shares, and 28% of Eastern Rock Lobster shares.¹
- 50 coils of 8mm neutrally buoyant rope (previously identified by trial fishers as useful in some operations) was purchased and distributed to 10 fishers (9 demersal fish trap, 1 spanner crab) who have not previously trialled this rope
- The humpback whale migration is an evolving challenge. 2024 brought a particularly challenging whale season for NSW set-gear fishers and has raised concerns about overall safety on the water and identified whale behaviour changes along the coast and in relation to fishing gear/vessels.
- Industry collaboration remains a crucial component to finding viable solutions.
- The continually growing humpback whale population highlights the importance of working to develop and refine a tool-kit of practices/modifications fishers can draw from during whale season

¹ Shares includes both active and inactive fishing operations in the respective fisheries.

TASMANIA UPDATE:

- Held a co-design workshop in 2023 with representatives from the Southern Rock Lobster fishery, Seafood Industry Tasmania, Tasmanian Rock Lobster Fishermen's Association, Department of Natural Resources and Environment Tasmania, and FioMarine.
- Developed a Code of Practice for fishing during the whale migration season, despite the acknowledged low "challenge" it poses their set-gear fisheries due to fishery regulations.
- Identified Sub Sea Sonics rope-on-command technology as having potential to be trialled with Tasmanian Southern Rock Lobster fishers
- Collaborated with Sub Sea Sonics to adapt the system to suit the lightweight beehive style pots used in the fishery
- Two fishers have been provided 3 systems to trial throughout 2025
- Initial few trials pushed the gear to its depth limit, and it still remains unclear whether this is a viable option for the southern rock lobster fishing industry

Sub Sea Sonics

- Shared success stories the rope-on-command systems have had with the Black Sea Bass, California Dungeness Crab, and American Lobster fisheries.
- Presented multiple concepts for retrofitting the system on to the cane beehive pots used in the Tasmanian Southern Rock Lobster fishery, ultimately decided on using a rescue throw bag design as it could be used on any style of pot, was easy to install, and could accommodate longer buoy lines
- [Sub Sea Sonics – Tasmania training video](#)
- Future uptake of this in the industry would require a long-term commitment to optimize the gear to the fishery and the economic driver of a fishery closure to make its use worthwhile
- Some NSW fishers expressed interest in adapting the Sub Sea Sonics system to mid-water application

QUEENSLAND UPDATE:

- Identified three fisheries with risks of whale entanglement: Spanner crab, offshore blue swimmer crab, offshore netting (mackerel/sharks)
- Conducted port visits at 4 locations: Gold Coast, Mooloolaba, Tin Can Bay, and Bundaberg
- Held a co-design workshop in 2023 that engaged 23 representatives from identified fisheries, Queensland Department of Agriculture and Fisheries, University of Sunshine Coast, Fisheries Research and Development Corporation, Moreton bay Seafood Industry Association, University of Queensland, Sea World, Department of Environment and Science, and OceanWatch Australia
- Identified where the primary risks for entanglement in gear lie, and determined which gear modifications may be suitable for trial, including 8mm and 10mm negatively buoyant rope, and acoustic pingers
- Developed a Code of Practice for fishing during the whale entanglement mitigation season

- 18 gear trial participants with survey feedback recorded from 9 (7 from spanner crab fishery, 1 from blue swimmer crab fishery, 1 from offshore gillnet fishery)
- Spanner crab fishers indicated the negatively buoyant rope was similar for setting, but was more difficult when it came to hauling, and using it throughout the mainline caused the rope to “crawl” along the seafloor and over the dillies, scaring crabs from being caught.
- The blue swimmer crab fisher found ease in using the 10mm negatively buoyant rope in setting and retrieval, and did not experience any excess wearing on their hauler plates.
- All acoustic pinger users were unconvinced whether they actually work as a deterrent, but mentioned they were easy to use and could be a good safeguard for their industry if they did work.

2024 Whale Season

QUEENSLAND

- Queensland Parks and Wildlife Service coordinates the responses to marine animal strandings around the Gold and Sunshine Coasts, and works closely with Department of Primary Industries Marine Animal Rescue Team to facilitate the release of large whales from marine debris
- Strandings are defined as both physical animal strandings and entangled animals
- 41 strandings in the 2024 season, but only 2 were classified as entanglements in ropes/buoy lines
- Developed QWildlife app that helps streamline the reporting and management of strandings and entanglements, as it allows users to report incidents in real-time and provide geo-referenced data to facilitate quick response.
- Some concerns were raised from fishers whether there would be any repercussions for reporting a confirmed entanglement in their gear.
- Working to address non-compliance of recreational vessels and marine animal approach distances

NEW SOUTH WALES

- 53 confirmed entanglements in 2024 season, all were humpback whales
- Current rate of entanglement is about 1 case per 1000 whales annually, and increases in entanglement numbers seem to be associated with the increases in humpback whale populations
- 32% of entanglements this year were from the NSW shark drumlines, which are designed to self-release, 58% of the entanglements were involved with rope +/- floats
- The importance of timely reporting of entanglements was emphasised to increase chances of successful rescues as the majority of reported entanglements are only seen once
- Fishers expressed that often they're not around their gear when entanglements likely occur, and they also lose their gear to shipping cut-offs and currents, so it can be difficult to report with certainty if your gear goes missing during the whale season

- Working to expand the network of disentanglement responders along the NSW coast to increase the probability of successful disentanglements
- Collaboration with fishers and other stakeholders is a priority to help improve disentanglement outcomes

GEAR IDENTIFICATION/RETURN

- Collaboration between NSW NPWS and NSW DPIRD Fisheries
- NSW NPWS reports the suspected tangle materials and any images they have to NSW DPIRD and if there are any clearly visible identifiers (e.g. LFB numbers) DPIRD will contact the fisher to discuss and confirm missing gear and collect any information about the location and timing of likely entanglement, and seek permission to share the details with NSW NPWS. From there, NSW NPWS and fishers can connect to facilitate gear return
- This only happens rarely, as often visible identifiers aren't on the pieces entangled on the whale as only a small proportion of the gear needs to be marked
- No repercussions to fishers for having their gear entangled, so reiterated the importance of notifying NSW NPWS and NSW DPIRD if fishers can confirm they've lost gear to a whale

Coexistence

- OceanWatch Australia attendance at the 2024 SMM Conference on the Biology of Marine Mammals was discussed as the major conference theme was "Culture and Conservation: Fishing for Change." OceanWatch Australia voiced concerns regarding the widespread perception by conservation sector of fisheries as the problem instead of needing to effectively collaborate with fisheries towards viable solutions.
 - Theme of "coexistence" was brought up throughout the conference and at workshops, and raised the question of how we actually define coexistence.
 - Attending two full-day workshops based around large whale entanglements in fishing gear reaffirmed how unique and crucial the Whale Entanglement Mitigation Program is in helping set a precedent for what effective industry collaboration looks like and how promoting pathways towards coexistence needs to include the industry from the outset.
- Fishers were asked to respond to the question "What does coexistence between fisheries and whales look like?"
- Common themes that emerged from the responses were:
 - Promoting a balance of the importance of fishers' livelihoods with the importance of whale conservation efforts
 - To minimise negative interactions with whales while promoting viable and healthy fisheries
 - The value of education and community support surrounding industry practices
- The primary goal is to achieve a sustainable coexistence where both healthy fisheries and whales can thrive together.

Future Directions and Recommendations

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1. Continue gear trials, prioritising cost-effective, straightforward gear modifications to further build and refine the industry “toolkit” for the whale migration season
 2. Encourage continuous innovation and improvement towards viable gear solutions through industry-driven research and development. Consider and assess the practicality of simpler emerging on-demand technology, such as what was trialled in Tasmania, for fisheries in New South Wales and Queensland
 3. Develop comprehensive educational community outreach programs through various media platforms to better inform the public about industry practices and the commendable collaborative efforts being made to help reduce whale entanglement risk.
 4. Establish a unified media response strategy for whale entanglements that promotes messaging of the aim for coexistence between fisheries and the migrating whale population.
 5. Extend vessel-specific whale safety management plans based on fishery Codes of Practice for fishing during the migration season more widely to other Australian set-gear fisheries.
 6. Explore strategies to better integrate industry knowledge and experience throughout the whale migration season and streamline reporting for confirmed whale interactions or unusual whale behaviours. This would supplement and inform research to better understand how changes in whale behaviour, in relation to fishing gear, vessels, and environmental factors, impact whale entanglement risks.
 7. Develop safety initiatives and programs for boaters to address the growing risk of whale-related boating incidents. As the humpback whale population continues to increase, ensuring boater safety becomes increasingly important.
 8. Continue to foster trusting relationships between fishers, management, compliance, disentanglement teams, and community in efforts to communicate potential solutions to whale conservation concerns.
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Workshop Outcomes

- Promote creation of vessel-specific whale safety management plans based on Codes of Practice in Queensland and Tasmania
- Strong commitment to continued collaboration and open communication between fishers, government agencies, and conservation organisations.
- Continued need to explore new gear modifications and technologies to help reduce whale entanglement risk, with an emphasis on simple, low-cost options.

- Ongoing collaborative research and monitoring of whale behaviour and interactions with fishing gear
- Encourage further stakeholder engagement to deal with issues related to whale entanglements and engage more of the NSW, Queensland, and Tasmanian set-gear fishing industry.
- Discussions with peak industry bodies regarding an organised message to promote and appropriate response to media attention during the whale migration season.
- Seek out opportunities to engage more with the conservation sector on Australian set-gear fisheries' commitment to promoting coexistence between fishers and migrating whale populations.
- Explore appropriate funding opportunities to continue the program in terms of project management, facilitating further trials, data collection procedures and continued communication and extension with relevant fishers, industry bodies, fisheries managers, compliance, disentanglement teams, etc.
- Explore opportunities to further extend the information to South Australian, Victorian and West Australian industry bodies/associations.

Workshop Conclusion

The collaboration achieved throughout the program between East coast set-gear fishers, Peak Industry Bodies in New South Wales, Queensland, and Tasmania, DPIRD Fisheries, National Parks & Wildlife Service, Marine Parks, and OceanWatch Australia has been exceptional. Recent gear trials in New South Wales, Queensland, and Tasmania have served as a crucial look into development of a range of mitigation measures to minimise interactions between Australian set-gear fishers and whales, but indicates there is still a lot of work to be done to find viable solutions for both the fishing industry and migrating whale populations, and a resounding recognition that there is no universal silver bullet solution. Additionally, there is a pressing need to further educate the community more widely about this collaborative effort as whale populations continue to grow and the challenge facing the fishing industry further evolves. Ultimately, the multi-state and multi-fishery dedication and progress that has been made in recent years highlights the continued commitment Australian set-gear fishers have to promoting coexistence with whales and identifying/developing mutually beneficial solutions.

Whilst there may be challenges of funding and other policy obstacles to overcome, the collective endorsement of professional fishers by openly participating and working towards viable solutions has been the core-strength of OceanWatch Australia's Whale Entanglement Mitigation Program throughout the past six years.

It is important that this work continues, and the resound commitment of East Coast fishers is not lost through disengagement.



Drawn live by
Catfish Creative
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Appendix:

WORKSHOP ATTENDEES

Name	Affiliation
Kristin Hoel	OceanWatch Australia
Lowri Pryce	OceanWatch Australia
Dave Schubert	OceanWatch Australia
Simon Rowe	OceanWatch Australia
Jane McGann	Seafood Industry Tasmania
Chris Melham	NSW Wild Harvest Fishers' Association
Elesha Curran	Department of Climate Change, Energy, the Environment, and Water
Andy Marshall	NSW National Parks and Wildlife
Britt Anderson	NSW National Parks and Wildlife
Daniel Johnson	NSW Department of Primary Industries and Regional Development
Steve Hoseck	Queensland Parks & Wildlife
Kris Cooling	Fisheries Research & Development Corporation
Steve Eayrs	Fisheries Research & Development Corporation
Steph Martin	Marine Stewardship Council
Aaron Stevenson	Ashored, Inc.
Cormac Hondros-McCarthy	LiftLabs, LLC
Paul Williams	LiftLabs LLC
Bart Chadwick	Sub Sea Sonics
Ryan Halonen	Sub Sea Sonics
Simon Rowe	South Australia – Southern Rock Lobster
Pat Richardson	NSW – Ocean Trap & Line, Eastern Rock Lobster
Ryan Starkey	Queensland – Spanner Crab

Gary Bordin	NSW – Spanner Crab
Danny Stewart	NSW – Ocean Trap & Line, Eastern Rock Lobster
Bryce Way	Tasmania – Southern Rock Lobster
Andre Gorissen	Queensland – Fraser Isle Spanner Crab
Kurbi Househam	NSW – Ocean Trap & Line, Eastern Rock Lobster
Mark Cranstone	NSW – Ocean Trap & Line, Eastern Rock Lobster
Mitch Sanders	NSW – Ocean Trap & Line, Eastern Rock Lobster
Troy Billin	NSW – Ocean Trap & Line
Cat Leach	Catfish Creative

PRESENTATIONS



ECWEMP Overview/
NSW Update



ECWEMP Queensland
Update



Sub Sea Sonics -
Rope-on-Command



2024 Queensland
Whale Season



2024 NSW Whale
Season



NSW Gear ID/Return
Protocol