



Marine
and Coastal

National Environmental Science Program

PROJECT 3.12

Sea snake monitoring: improved collection of fisher bycatch data

The challenge

Northern Australian waters are inhabited by at least 20 species of sea snakes, but there are probably more. All are classified as Protected Marine Species, and two are Critically Endangered.

Sea snake numbers are believed to be in decline, but why this is happening is not well understood. What is certain, is that many are caught as 'bycatch' by trawlers and trap fishers; which species and how many are unknown.

Although fishers should record all interactions with sea snakes in a Species of Conservation Interest logbook (SOCI), this doesn't always happen. For many fishers, quick removal of the venomous reptiles is an occupational health and safety priority that surpasses recording sea snake data.

This project is working to improve sea snake bycatch reporting, and thus population assessments, by improving training and increasing participation in crew member observer programs (CMOPs) aboard fishing vessels.

The approach

Through consultation and collaboration, this project will build a strong, committed and skilled network of trawl and trap fishers, actively collecting sea snake data.

This will be achieved by:

- creating a standard crew member observation program to ensure consistent data collection;
- training crew members to handle sea snakes and collect samples and other data;
- overseeing the implementation of a standardised observation program for fishers;
- assessing collected data for further review and refinement of processes; and
- comparing bycatch data from both fishery and fishery-independent collectors.

Over the course of the project the collected data will contribute to a much greater understanding of sea snake encounters, species, numbers, life cycle features, and seasonal and multi-year patterns of bycatch. Improved sampling will also contribute to a better understanding of the genetic relationships between individuals, regional populations, and species.

Expected outcomes

- Increased knowledge on sea snake diversity, ecology, and populations.
- Regional planning for sea snake conservation supported.
- Innovative stakeholder-designed standard monitoring implemented and tested.

Project leaders

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FRONT: Short-nosed sea snake in Exmouth Gulf by Laura Murray. BACK: (Left) Researchers with vessel crew in the Exmouth Gulf by James Franklin. (Right) An olive-headed sea snake recapture by Laura Murray.