

'Popeye Fishbox' bycatch reduction device

The 'Popeye Fishbox' bycatch reduction device (BRD) was assessed by Erik Raudzens (AFMA) for approval by the Northern Prawn Fishery's bycatch sub-committee during the last three weeks of the 2006 tiger prawn season. Funding for the project was provided by the Australian Government. The Popeye Fishbox was assessed on the FV Adelaide Pearl during normal industry operations for 82 trawls, with 54 trawls trailed with the BRD positioned at a distance of 70 meshes from the codend draw strings and a further 28 trawls trailed at 100 meshes.

Methods

During the assessment twin trawl nets containing standard (TEDs) were compared. One net contained the Popeye Fishbox with the other net containing a BRD (image on right). All small bycatch (including sharks and rays) from both nets was separated and weighed in lug baskets. All prawn catch was also weighed separately to assess for potential prawn escapement. The BRD was swapped from starboard to port side nets twice during the trial to account for potential differences in both nets performance.



Photo: The net on the right has the 'popeye fishbox' BRD installed, the net on the left doesn't. The difference in amount of bycatch is quite obvious to the eye. Photo taken by Erik Raudzens (AFMA).

Results

The following results are sourced from raw data. Further statistical analyses are presented in the final report that was completed in January 2007.

http://www.afma.gov.au/fisheries/northern_trawl/northern_prawn/publications/docs/other/popeyebdreport.pdf

70 Meshes from the codend drawstring

- The Popeye Fishbox captured 52.1% less small bycatch with a negligible reduction in prawn catch.
- The Popeye Fishbox captured 85.7% less sea snakes.
- The number of small sharks and rays was approximately 35.4% less in the Popeye Fishbox.

100 Meshes from the codend drawstring

- The Popeye Fishbox captured 28.7% less small bycatch with a 2.2% increase in prawn catch.
- Causes for a decreased reduction in the capture of small bycatch at 100 meshes are still being investigated.

Preliminary Conclusions

- Popeye's Fishbox results in a substantial reduction in the amount of small bycatch.
- Further analyses are required to determine whether the distance from the codend is crucial in reducing the amount of small bycatch.
- The 17.6% reduction in prawn catch when targeting banana prawns may suggest that the BRD is best applied during the tiger prawn season, although current data is limited.
- Further analyses on catch compositions, twilight versus night trawls and sharks and rays will be presented in the final report.

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(Editors note – by the way, the fishbox is named after its creator, a Queensland netmaker and former fisherman known as "Popeye")

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Australian Government

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