Turtle excluder devices

Turtle excluder devices (TEDs) modify trawl nets to allow larger animals to escape. These animals include sea turtles, stingrays, sharks and sponges. TEDs are usually fitted into a trawl net at the beginning of the codend. At this point in the net, water-flow is fastest and maximises the ability of a TED to separate target animals from non-target animals.

The use of TEDs as specified in the Fisheries (East Coast Trawl) Management Plan (2010) (https://www.legislation.qld.gov.au/view/html/inforce/current/sl-2010-0357) helps reduce the catch of endangered and protected sea turtle species.

TED design

TEDs consist of either a metal or plastic grid with vertical bars running from the top to the bottom of the frame (much like a storm-water-drain grate). The grid is then installed in a tube of mesh netting.

Grids are installed in the netting at an angle of 30-55°. This creates a physical barrier that lets prawns and other animals smaller than the bar spacing pass through the TED and into the codend. Sea turtles, other large animals and debris slide along the grid to an exit hole cut in the top or bottom of the surrounding mesh. The exit hole may be partially covered by a flap of webbing to reduce the possibility of losing prawns.

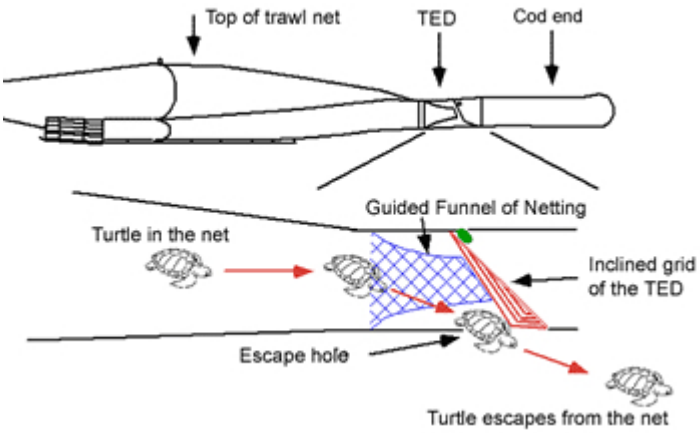
From 1 March 2015 fishers will have the option of using an accelerator funnel with their TEDs. From this date fishers will also have the option to use scallop mesh up to 90mm when constructing TED flaps for use with their scallop nets.

Accelerator funnel specifications

Mesh size of funnel	38-50mm
Attachment of leading edge of funnel to net	At least 18 meshes in front of grid (and trailing edge does not extend past grid)
Minimum funnel circumference	38-42mm mesh – 100 meshes
	43-47mm mesh – 83 meshes
	48-49mm mesh – 93 meshes
	50mm mesh – 100 meshes

Accelerator funnel specifications	
Attachment of trailing edge to grid bars	Top shooter TEDs – bottom one third of funnel circumference may be attached to grid bars Bottom shooter TEDs – top one third of funnel circumference may be attached to grid bars

When working properly, catch loss associated with these devices should be minimal. There is evidence that TEDs may improve the quality or the quantity of the prawn catch in certain circumstances. A poorly constructed or maintained TED may cause major losses in prawn catch.



TED legislation

In Queensland's east coast trawl fishery the use of TEDs with bycatch reduction devices (BRDs) (https://www.business.qld.gov.au/industries/farms-fishing-forestry/fisheries/fisheries-profiles/trawl-fisheries/reducing-bycatch) is mandatory in all otter trawl nets.

The mandatory use of TEDs is helping to prevent sea turtles from being caught in Australian trawl fisheries. TEDs have been made compulsory in the following trawl fisheries of Australia:

- Queensland east coast trawl fishery - daytime and inshore trawling in all areas except river beam trawl
- northern prawn fishery (Gulf of Carpentaria, Arnhem Land coast and Joseph Bonaparte Gulf)
- Torres Strait prawn fishery.

While TEDs are not compulsory in all Australian fisheries, other trawl fisheries (i.e. South Australia and Western Australia) are using TEDs to improve quality of catch and reduce sorting times through less bycatch.

TEDs technical information guide

This TEDs guide provides technical information to ensure that TEDs are made to a consistent standard and are fitted correctly to trawl nets used throughout the Queensland east coast trawl fishery.

The guide and the standardised design specifications contained within it will help both net makers (to construct TEDs) and fishers (to fit and use TEDs). This will ensure TEDs effectively reduce bycatch (non-target species) while also retaining catches of target and permitted species.

Technical information guide:

- Turtle excluder devices - part 1 (PDF, 306KB) (http://www.daf.qld.gov.au/__data/assets/pdf_file/0006/61872/TED-guide_update_web_Part1.pdf)
- Turtle excluder devices - part 2 (PDF, 508KB) (http://www.daf.qld.gov.au/__data/assets/pdf_file/0011/75971/TED-guide_update_web_Part2.pdf)

- Turtle excluder devices - part 3 (PDF, 457KB) (http://www.daf.qld.gov.au/__data/assets/pdf_file/0008/61100/TED-guide_update_web_Part3.pdf)
- Turtle excluder devices - part 4 (PDF, 300KB) (http://www.daf.qld.gov.au/__data/assets/pdf_file/0013/63013/TED-guide_update_web_Part4.pdf).

Also consider...

- Find out more about bycatch reduction devices (BRDs) (https://www.business.qld.gov.au/industries/farms-fishing-forestry/fisheries/fisheries-profiles/trawl-fisheries/reducing-bycatch).

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