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With every vessel that returns to port with a hold full of fish comes a large amount of species incidentally killed in fishing gears. How can the fishing industry feed people and the economies of the Coral Triangle while keeping the ocean's fragile balance? ▶

BYCATCH

Bycatch is an urgent issue for marine life, the fisheries industry and consumers. In the Pacific Ocean alone, over four million sharks, billfish, marine turtles, seabirds, and marine mammals are killed incidentally in fishing gear each year. ►



THE CORAL TRIANGLE — the nursery of the seas — is the most diverse marine region on the planet, covering 6 million km² of ocean across six countries in the Indo-Pacific region. It is home to 3000 species of reef fish and commercially-valuable species such as tuna, whales, dolphins, rays, sharks, and six of the seven known species of marine turtles.

An economic and ecological nightmare

In the Coral Triangle, the impacts of bycatch have been devastating. Populations of nesting marine turtles have declined in some areas by over 90 percent; overfishing of sharks in longline fisheries targeting tuna has endangered many species; and in shrimp fisheries, juvenile “trash fish” can outweigh the catch of targeted shrimp by more than 10 to one.

These trends are attributable to indiscriminate fishing and lack of management over “non-targeted” species. It is this kind of wasteful management that can have potentially catastrophic food security implications if left unaddressed. If the ocean’s fragile balance were to collapse, this could have far-reaching consequences for the viability of the fisheries industry as a whole.



“ We never catch turtles with these circle hooks so far. If a turtle is caught, it must be the J-hook. We are fishing for tuna and we get tuna, not harming other species. ”

– Kisyono, fisherman

“ At ANOVA we are very pleased to have WWF as a partner towards sustainable fishing and minimizing bycatch of marine turtles, through circle hook trials and onboard observer programmes on tuna fishing vessels that supply us. ”

– Bas Zaunbrecher
Southeast Asia Representative
Anova Food B.V.

“ Culimer believes that improved seafood quality and extra value to fishers is linked to more sustainable fishing practices. That is why we directly support implementing circle hooks and onboard observer programmes. In partnership with WWF, we aim to create a ‘critical mass’ of circle hook users, forming a basis for sustainable growth. ”

– Martin Brugman
Director, Culimer B.V.



Bycatch, a regular occurrence in many fishing gears

Fishing gear is rarely selective—any species can be caught, including non-targeted species.

Longline fisheries



Marine turtles and seabirds are caught when the gear is dispersed or hauled in. At normal fishing depths, it is sharks, billfish and juvenile tunas which are the victims.

Trawl fisheries



Large nets dragged along the seabed catch almost everything on their path. At shallow depths, bottom trawls also catch marine turtles.

Gillnet fisheries



Gillnet fisheries can be set at any depth, posing a major risk for marine turtles, whales, and seabirds among others.

Crafting solutions for improved fisheries

In the Coral Triangle, WWF has partnered with businesses and local fishing communities to roll out technological solutions to bycatch.

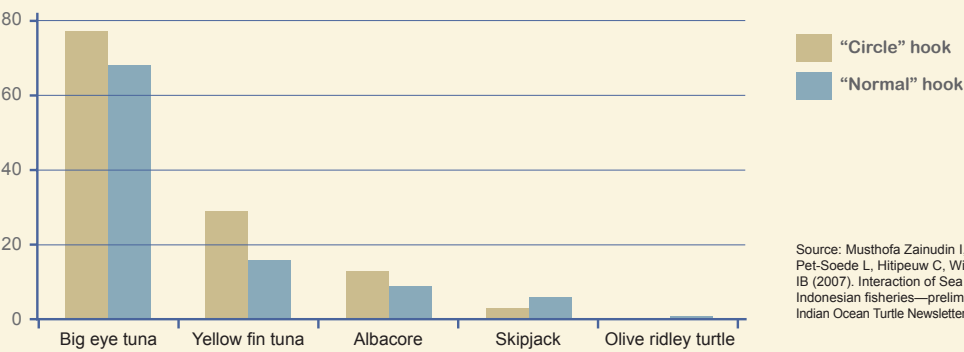
Safer longline hooks, less bycatch

Replacing “J” hooks by “circle” hooks can reduce actual bycatch rates of longline fishing by up to 90 percent. In some cases such as tuna fisheries, “circle” hooks can even increase target catch rates.

- In Bali, Indonesia, WWF smoothed the transition from “J” hooks to “circle” hooks for several fishing boats, in a move to supply more responsibly-caught produce for ANOVA, a seafood company.
- In Tiwi, Philippines, WWF deployed “circle” hooks on 110 vessels, or about 80 percent of the area’s artisanal fleet.
- Across the Coral Triangle, WWF is collaborating with Luen Thai Fishing Ventures towards experimental “circle” hook trials and with an agreement in principle to use these hooks on all of the fleet’s fishing vessels.

Through gradual steps towards more sustainable practices, these fishing companies can eventually score higher in seafood guideline assessments.

Through “circle” hooks, more targeted catches



Source: Musthofa Zainudin I.
Pet-Soede L, Hitepuw C, Windya Adnyana
IB (2007). Interaction of Sea Turtles with
Indonesian fisheries—preliminary findings.
Indian Ocean Turtle Newsletter, Issue 6.



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NOAA Fisheries Service



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Giving endangered species an escape route

Simple techniques are available to help non-target species to survive. The Turtle Excluder Device (TED), a simple device that consists of an escape hatch at the back of shrimp trawls, makes it possible for turtles to easily escape from a slow death. For smaller non-target species, the Juvenile Trash Excluder Devices (JTED) excludes objects the same size or smaller than the target species. In addition to preventing sea turtles from drowning, TEDs and JTEDs protect marine biodiversity by allowing other species to escape from trawl nets, benefiting inshore fishing communities.



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Turtle de-hookers and handling training

With a few basic skills, fishers can remove hooks from turtles using "de-hookers", rescue them from entanglement, and handle them when injured. WWF has carried out a variety of training programmes in longline fisheries across the Coral Triangle in turtle de-hooking, rescue and handling techniques, as a critical and integral element of its fisheries bycatch programme.



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WWF's Coral Triangle Programme

WWF's Coral Triangle Programme is focused on securing the health of the region's natural resources and the millions of livelihoods that depend on it. We are working to ensure that proper environmental, political and socio-economic management is put in place towards:

- Building a sustainable live reef food fish trade
- Promoting sustainable tuna fisheries
- Financing marine protected areas
- Protecting marine turtles and reducing their bycatch
- Reducing the impacts of climate change

www.panda.org/coraltriangle/bycatch/



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For more information

Lida Pet-Soede
Leader

WWF Coral Triangle Programme
Tel/Fax +62 361 730185
Email lpet@wallacea.wwf.or.id

Keith Symington
Bycatch Strategy Leader

WWF Coral Triangle Programme
Tel +84 914 435 348
Email keith.symington@wwfgreatermekong.org



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