



# Review of best practice mitigation for endangered, threatened and protected species bycatch

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# Roadmap for the Scientific Committee

g) To review international best practices in bycatch and incidental catches (seabirds, marine mammals and reptiles) mitigation options in pelagic and bottom fisheries and make the appropriate recommendations.

# Endangered, Threatened & Protected (ETP) species

A working definition in the SPRFMO context:

- seabirds
- marine mammals
- reptiles
- some fish species, primarily the elasmobranch species listed by CMS and CITES (e.g. *Cetorhinus maximus*, *Carcharodon carcharias*, *Manta birostris*, *Rhincodon typus*)

Note: this definition excludes endangered, threatened or protected invertebrate species.





# Mitigation options by ETP taxa

- seabirds
- marine mammals
- reptiles
- elasmobranchs



# Seabirds

ACAP provides best practice mitigation advice for trawl and bottom longline fishing methods

SC-01-INF-09 Demersal Longline Mitigation Review and Advice

SC-01-INF-10 Trawl Mitigation Review and Advice

# Seabirds - BLL

- use of an appropriate line weighting regime to maximise hook sink rates close to the vessel to reduce the availability of baits to seabirds
- actively deter birds from baited hooks by means of bird scaring lines, and
- set fishing gear during night-time.

Further measures include:

- bird deterrent curtains at the hauling bay
- responsible offal management
- avoidance of peak areas and periods of seabird foraging activity



# Seabirds - trawl

- Offal and discard management
- Cable (warp and third wire) strike
- Net entanglement

Note: cryptic mortality in trawl fisheries may be particularly high due to warp strikes







# Seabirds

Good information on mitigation options readily available

Resources include multi-lingual fact sheets:  
SC-01-INF-08 Seabird Bycatch Mitigation Fact Sheets



# Marine mammals

## Dolphins – purse seine

Most development of mitigation options has been in tuna target fisheries

Also some other purse seine fisheries

Mitigation options focused on:

- avoidance
- escape panels





# Pinnipeds - trawl

Risk is likely to be higher within EEZs rather than outside, though bycatch has been recorded historically out of EEZs

Mitigation options focused on exclusion devices

Avoidance and offal/discard management may also be appropriate

# Marine reptiles

## Turtles – purse seine

Mitigation experience mainly in tuna target fisheries

Mitigation options include (non-)use of FADs

## Turtles – trawl

Mitigation experience mainly in coastal trawl, with exclusion devices developed





# Turtles – BLL

Information and experience sparse

Mitigation options developed in surface longline fisheries, and may be applicable (e.g. hook shape, bait type)

Live release tools readily available (turtle dehookers)



# Elasmobranchs – purse seine

Mitigation options focused on live-release in development for tuna target fisheries

# Elasmobranchs – trawl

No mitigation options available, under investigation



# Conclusions

Robust and practical seabird mitigation options and best practice advice for BLL and trawl fisheries exist, and there is known overlap of vulnerable seabirds and SPRFMO fisheries

For seabird mitigation in purse seine fisheries and mitigation for other taxa options are less well developed, and there is less information on potential risk from SPRFMO fisheries

# Recommendations

**Recommendation 1:** the Science Committee recognise that best practice seabird mitigation for demersal longline and trawl fisheries has been developed by working groups of the Agreement on the Conservation of Albatrosses and Petrels, and that a range of resources exist to support the implementation of these bycatch measures.

**Recommendation 2:** the Science Committee recommend to the Commission that a Conservation Management Measure to mitigate seabird bycatch in SPRFMO demersal longline and trawl fisheries be developed with reference to best practice mitigation.

**Recommendation 3:** the Science Committee agrees that in order to better understand any potential bycatch of non-seabird taxa in SPRFMO fisheries, and seabird bycatch in SPRFMO purse seine fisheries, further robust ETP species data collection and reporting is necessary.

