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Review of the CMS report "Technical Mitigation Techniques to Reduce Bycatch of Sharks: There is no Silver Bullet"

Delegation of France Overseas Territories

Document type	Working paper ✔ Information paper ☐
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Abstract

The CMS (Convention on Migratory Species) report from February 2024 (by David Drynan, G. Barry Baker, on behalf of the CMS Secretariat) outlines a comprehensive review of technical mitigation techniques designed to reduce shark bycatch in commercial fisheries, emphasizing that no single solution fits all contexts ("no silver bullet"). It examines various gear modifications, sensory deterrents, and fishing strategies to address shark bycatch.

[1] Restricted documents may contain confidential information. Please do not distribute restricted documents in any form without the explicit permission of the SIOFA Secretariat and the data owner(s)/provider(s).
[2] Documents available only to members invited to closed sessions.

Recommendations (for proposals and working papers only)
That the SIOFA SC: • **considers** the information and recommendations provided in this paper

Review of the CMS report “Technical Mitigation Techniques to Reduce Bycatch of Sharks: There is no Silver Bullet”

This paper presents a summary of the following report:

Drynan D, Baker G B, (2024). Technical Mitigation Techniques to Reduce Bycatch of Sharks: There is no Silver Bullet. *Convention on the Conservation of Migratory Species of Wild Animals* (CMS). 29 pages.

https://www.cms.int/sites/default/files/publication/bycatch_mitigation_e_0.pdf

Background

Shark populations have drastically declined due to bycatch in commercial fisheries.

Bycatch often results in wasted resources and unreported catches, exacerbating population declines.

Methods

The study analyzed 184 publications, assessing the effectiveness of mitigation measures across different gear types and fishing practices.

Key Findings

Techniques are categorized into three approaches: preventing capture, enabling escape, and reducing at-vessel mortality/increasing post-release survival.

Effective methods vary by fishery and species, and local trials are recommended to confirm effectiveness before implementation.

Recommendations

Prevention: Using specific bait types, removing ticklers of demersal trawl net, selecting the optimal mesh size for gill and trammel nets, constructing non-entangling Fish Aggregating Devices (FADs), or changing capture method can significantly reduce bycatch.

Escape: Modifications like nylon leaders or excluders in trawls enable sharks to escape, improving survival rates.

Survival: Reducing soak time/time on-line, considering hook type, releasing before haulback, proper handling and quick release methods are universally effective in reducing mortality.

Challenges

Limited data on shark biology and behavior complicates mitigation efforts.

Conflicting results highlight the need for context-specific solutions and stakeholder involvement.

Future Directions

A combination of technical and regulatory measures (e.g., quotas, bans on take, time/area closures, full retention, etc.), along with fisher support, is crucial.

The development of regionally tailored strategies and investment in research on shark behavior and movement is prioritized.