

 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p>Fifth Meeting of the Seabird Bycatch Working Group <i>La Rochelle, France, 1-3 May 2013</i></p> <p>Improving ACAP's advice on best practice line weighting for coastal State pelagic longline fisheries</p> <p><i>Graham Robertson, Australian Antarctic Division</i></p>
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RECOMMENDATIONS

It is recommended that:

1. ACAP use the following criteria to define best practice for coastal State fisheries:
 - i) line weighting regime;
 - ii) crew safety; and
 - iii) ease of compliance monitoring.
2. Best practice line weighting be assessed as if it is used as a single measure to safeguard against any non-compliance to night setting and the non-use of streamer lines;
3. Best practice line weighting be defined as the placement of leads either at the hook or on very short (≤ 0.5 m) leaders in areas where shark bite-offs are considered excessive. Lead sinkers on long leaders should not be considered best practice; and
4. 40 g sinkers at the hook (or ≤ 0.05 m) be considered best practice in areas of low risk to seabirds. In areas of medium to high risk to seabirds, or where risk is unknown, ≥ 60 g sinkers at the hook (or ≤ 0.5 m) be considered best practice.

Mejora del asesoramiento del ACAP sobre las mejores prácticas para el uso de pesas en la línea para pesquerías con palangre pelágico del estado ribereño

RECOMENDACIONES

Se recomienda que:

1. El ACAP use los siguientes criterios para definir las mejores prácticas para las pesquerías del estado ribereño
 - i) esquema de uso de pesas en la línea;
 - ii) seguridad de la tripulación; y
 - iii) facilidad del cumplimiento del monitoreo.
2. Se evalúen las mejores prácticas para el uso de pesas si se usan como única medida para proteger contra cualquier incumplimiento de lance nocturno y el no uso de líneas espantapájaros;
3. Se defina a las mejores prácticas para el uso de pesas en la línea como la colocación de pesas de plomo cerca del anzuelo o en líneas muy cortas ($\leq 0,5$ m) en áreas en las que se considera que los tiburones arrancan el anzuelo en forma excesiva. Las pesas de plomo en las líneas largas no deben considerarse como mejores prácticas; y
4. Las pesas de 40 g en el anzuelo (o a $\leq 0,05$ m) se consideren mejores prácticas en las áreas de bajo riesgo para las aves marinas. En las áreas de riesgo de mediano a alto para las aves marinas, o en las que se desconoce el riesgo, las pesas de ≥ 60 g en el anzuelo (o a $\leq 0,5$ m) se consideren mejores prácticas.

Renforcement des conseils de l'ACAP sur les bonnes pratiques en matière de lestage de la palangre pour la pêche à la palangre pélagique des États côtiers

RECOMMANDATIONS

Il est recommandé que :

- 1) L'ACAP s'inspire des critères ci-dessous pour définir les bonnes pratiques de pêche des États côtiers.
 - i) le lestage de la palangre ;
 - ii) la sécurité des membres d'équipage ; et
 - iii) faciliter le contrôle de conformité.

- 2) Les bonnes pratiques de lestage de la palangre soient évaluées comme s'il s'agissait de mesures uniques pour se prémunir contre le non-respect de la pause de nuit et la non-utilisation des lignes de banderoles.
- 3) Les bonnes pratiques de lestage de la palangre prévoient que les plombs soient placés sur l'hameçon ou sur un bas de ligne très court (≤ 0.5 m) dans les zones où les morsures de requins sont excessives. Les lests en plomb sur des bas de ligne longs soient exclus des bonnes pratiques ; et
- 4) Les lests de 40 g sur le hameçon (ou ≤ 0.05 m) soient repris dans les bonnes pratiques dans les zones où les oiseaux marins courent peu de risques. Dans les zones de moyen à haut risque pour les oiseaux marins, ou dans les zones où le risque n'a pas été évalué, il est recommandé que les lests ≥ 60 g sur le hameçon (ou ≤ 0.5 m) soient repris dans les bonnes pratiques.

1. PURPOSE

This paper proposes changes to ACAP's best practice advice for line weighting in coastal State pelagic longline fisheries to improve its effectiveness, and to facilitate improved crew safety and compliance monitoring of fishers' implementation efforts.

2. DISCUSSION

To minimise seabird mortality in pelagic longline fisheries ACAP recommends the night setting of longlines, use of effective bird scaring streamer lines and branch line weighting. These measures used in concert are considered "best practice" (ACAP, 2011). To achieve consistent and effective implementation requires definitions and/or design specifications for each of these measures to guide fishers and to facilitate compliance monitoring. Night setting is defined in the context of the timing of nautical dawn and dusk. Streamer lines are configured according to specifications on the length of aerial sections, density and length of the streamers, materials and rigging position on vessels (e.g. Melvin et al., 2010; Domingo et al., 2011). There is no equivalent definition or design specification for best practice line weighting.

Since ACAPs concept of best practice pertains to combined use of the three mitigation measures, one definition of branch line weighting would be weighting regimes that sink baited hooks to prescribed depths before the baited hook passes the end of the aerial section of the streamer line. That definition assumes line weighting and a streamer line (and night setting) will always be used together as a combination and ignores the real possibility the streamer line will not be used in the absence of scientific observers or electronic monitoring. In practice, it is likely that observer coverage and compliance monitoring in many, if not most, fisheries will be low. While observer coverage varies with each country and fishery, it is typically of the order of 5% or less, meaning 95% or more of line sets are not observed. The available evidence suggests low compliance levels may be the norm in many pelagic longline fisheries. This concern is supported by one case of flagrant non-compliance in the presence of scientific observers (see Azocar et al., 2011). Another concern is that vessel operators often do not comply with permit conditions governing aerial section lengths, which are the critical component of deterrence. For example, in the Australian pelagic longline fishery 90 m aerial sections are specified in fishing permits as the minimum, but 40-50 m is more typical (source: Australian Fisheries Management Authority).

The issue of non-compliance, in terms of use *per se* and reduced aerial sections, calls for ACAP to adopt a more pragmatic attitude to line weighting. Where streamer line (and probably night setting also, given its lack of popularity with many fishers) non compliance is common, line weighting would be the only safeguard against excessive levels of seabird mortality. In the absence of evidence to demonstrate high compliance levels on unobserved vessels it is important for ACAP to be precautionary and err on the side of measures that minimise risks to seabirds. For this reason it is recommended that best practice advice on line weighting be developed on the assumption that it is used as a sole measure (ie. not in concert with night setting and streamer lines).

The mechanism by which line weighting reduces seabird bycatch is the sink rate of baited hooks. The relationship between weighting regime/sink rate and seabird mortality is known for only one longline fishing method in the world, the Spanish method for Patagonian toothfish (three weighting regimes/sink rate scenarios versus seabird mortality; Agnew et al., 2000). The absence of equivalent information for pelagic longline fisheries complicates

assessments of best practice. Until such time that the abovementioned relationship is properly quantified for pelagic longline fisheries, a key feature of best practice should be the rate at which line weighting regimes sink the baited hooks.

It follows then, that in the likely absence of other seabird deterrent measures best practice line weighting should yield the fastest initial and final sink rates that are practical for fishing operations (Both components of sink rate are important. Fast initial rates reduce bait visibility near the surface and fast final rates reduce accessibility at deeper depths). Put differently, best practice line weighting must maximise the initial and final sink rates while also being practical for operators to fish with. To satisfy this standard lead sinkers must be placed at the hook (ie., no leader) or, in fisheries where shark bite offs are considered excessive, on very short (≤ 0.5 m) leaders. Long leaders (e.g. 2-4 m), even with very heavy weights, do not satisfy the standard because their initial sink rates are very slow due to the lag created by the long leader, and losses at the surface persist well down the water column (see Robertson et al., 2010; Robertson et al., 2013).

The mass of the sinker depends on fishery risk to seabirds. In the absence of knowledge on the relationship between weighting regime/seabird mortality mentioned above, the following weighting regimes are suggested: i) 40 g lead sinkers at the hook (or ≤ 0.5 m, see above) in areas of low risk to seabirds; ii) ≥ 60 g lead sinkers at the hook (or on ≤ 0.5 m leaders) in areas of medium to high risk to seabirds, or where risks are unknown. The sink rates of these regimes are far superior to conventional gear (e.g. 60 g at 3.5 m), fish catch rates are not affected by the location of the sinker at the hook (in the case of the 40 g sinker) and the regimes are practical to fish with (see Robertson et al., 2013).

The concept of best practice should not be confined to weighting regimes alone. Crew safety and compliance monitoring are critically important and should be included in a broader interpretation of best practice. Two recent developments now make this possible. The first development concerns 'safe leads'. These leads slide onto (not crimped into) and along branch lines and are designed to reduce the incidence of dangerous fly-back in the event of line breakage under tension when fish are landed (see Sullivan et al., 2012). They deal effectively with the long standing concerns about crew safety posed by weighted branch lines which, hitherto, has been an impediment to their adoption in some fisheries. The second development concerns monitoring compliance to line weighting provisions of permit conditions. Gear on coastal State vessels is stored in bins which are capable of holding several hundred branch lines. The lead sinkers on branch lines with long leaders are scattered throughout several kilometres of coiled monofilament branch line making it almost impossible to inspect in port to check compliance with prescribed sinker weight and leader lengths. The advent of hook leads solves this problem. The sinkers at the hook are suspended (along with the hook) above the coils of monofilament in gear bins and are highly visible. This greatly facilitates port-based inspection of branch line weighting regime and assessment for the purposes of compliance (see Robertson et al., 2013). The height of suspension rails of bins on some vessels may need to be raised to ensure all sinkers are visible above the coils of monofilament.

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