



Agreement on the Conservation
of Albatrosses and Petrels

**Information Paper to the
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**Robbing Peter to pay Paul: Replacing
unintended cross-taxa conflicts with
intentional tradeoffs by moving from
piecemeal to integrated fisheries bycatch
management**

Gilman, E., Chaloupka, M., Dagorn, L., Hall, M., Hobday, A., Musyl, M., Pitcher, T., Poisson, F., Restrepo, V., Suuronen, P.

Attachment:

Gilman, E., Chaloupka, M., Dagorn, L., Hall, M., Hobday, A., Musyl, M., Pitcher, T., Poisson, F., Restrepo, V., Suuronen, P. 2019. Robbing Peter to pay Paul: Replacing unintended cross-taxa conflicts with intentional tradeoffs by moving from piecemeal to integrated fisheries bycatch management. *Reviews in Fish Biology and Fisheries* <https://doi.org/10.1007/s11160-019-09547-1>

SUMMARY

Abstract. Bycatch in fisheries can have profound effects on the abundance of species with relatively low resilience to increased mortality, can alter the evolutionary characteristics and concomitant fitness of affected populations through heritable trait-based selective removals, and can alter ecosystem functions, structure and services through food web trophic links. We challenge current piecemeal bycatch management paradigms, which reduce the mortality of one taxon of conservation concern at the unintended expense of others. Bycatch mitigation measures may also reduce intraspecific genetic diversity. We drew examples of broadly prescribed ‘best practice’ methods to mitigate bycatch that result in unintended cross-taxa conflicts from pelagic longline, tuna purse seine, gillnet and trawl fisheries. We identified priority improvements in data quality and in understanding ecological effects of bycatch fishing mortality to support holistic ecological risk assessments of the effects of bycatch removals conducted through semi-quantitative and model-based approaches. A transition to integrated bycatch assessment and management that comprehensively consider biodiversity across its hierarchical manifestations is needed, where relative risks and conflicts from alternative bycatch management measures are evaluated and accounted for in fisheries decision-making processes. This would enable managers to select measures with intentional and acceptable tradeoffs to best meet objectives, when conflicts are unavoidable.