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The incidental catch of seabirds in gillnet fisheries: a global review

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SUMMARY

Based on bird feeding ecology we identified 148 seabird species as susceptible to bycatch in gillnets, of which 81 have been recorded caught. The highest densities of susceptible species occur in temperate and sub-polar regions of both hemispheres, with lower densities in tropical regions. Gillnet fisheries are widespread and particularly prevalent in coastal areas. A review of reported bycatch estimates suggests that at least 400 000 birds die in gillnets each year. The highest bycatch has been reported in the Northwest Pacific, Iceland and the Baltic Sea. Species suffering potentially significant impacts of gillnet mortality include common guillemot (Uria aalge), thick-billed guillemot (Uria lomvia), redthroated loon (Gavia stellata), Humboldt penguin (Spheniscus humboldti), Magellanic penguin (Spheniscus magellanicus), yellow-eyed penguin (Megadyptes antipodes), little penguin (Eudyptula minor), greater scaup (Aythya marila) and long-tailed duck (Clangula hyemalis). Although reports of seabird bycatch in gillnets are relatively numerous, the magnitude of this phenomenon is poorly known for all regions. Further, population modelling to assess effects of gillnet bycatch mortality on seabird populations has rarely been feasible and there is a need for further data to advance development of bycatch mitigation measures.