

Bycatch of small cetaceans and other marine animals – review of national reports under Council Regulation (EC) No. 812/2004 and other information

Advice summary

ICES summarizes the bycatch of marine animals as reported by EU Member States under Council Regulation (EC) No. 812/2004 and other mechanisms. Observations are insufficient to enable any assessment of the overall impact of EU fisheries on these animals. One EU Member State provided extrapolated numbers of bycaught marine mammals – some other major fishing countries failed to provide any information. It is hoped the EU Multiannual Programme will improve consistency of bycatch data at a regional scale and improve the ability of ICES to advise on the impact of fisheries. The numbers of bycaught animals recorded on the shores of the Bay of Biscay indicate that a dedicated bycatch observer programme is required for relevant fisheries in this area.

Request

Annex IIA in the Memorandum of Understanding between the EU and ICES requests ICES, under “*Fisheries-based advisory deliverables*”, to:

“provide any new information regarding the impact of fisheries on other components of the ecosystem including small cetaceans and other marine mammals, seabirds and habitats. This should include any new information on the location of habitats sensitive to particular fishing activities.”

This advice section covers only aspects of impacts on marine mammals, seabirds, and other marine vertebrates. Information relating to habitats is advised separately (ICES, 2017a).

Elaboration on the advice

A total of 72 cetacean specimens (from four species: 21 common dolphins; one white-beaked dolphin; two bottlenose dolphins; 48 harbour porpoises) were observed bycaught in 2015 (Table 1). A total of 372 bird specimens are reported for nine bird species (Table 2). Of note is the bycatch rate of 0.098 critically endangered Balearic shearwaters being caught per day in the polyvalent fishery in ICES Subarea 27.9. ICES is unable to use any of these observations to extrapolate to total bycatch of any marine animal in EU waters this year.

The UK reported extrapolated bycatches for marine mammals in their fisheries for 2015. The several important caveats that apply to these estimates are described in detail in the UK Regulation 812/2004 report for 2015 (Northridge *et al.*, 2016); for example, these estimates are likely to be biased and too high, based on some of the assumptions that had to be made for estimation across all gillnet métiers and areas. These extrapolations indicate that between 1200 and 1500 harbour porpoises and around 240 common dolphins might have been taken in UK gillnet fisheries.

Fifteen bycaught seals were recorded by the UK in 2015, 13 of which were identified or assumed (from location) to be grey seals in divisions 27.7.e (two) and 27.7.f (eleven), while two bycaught common seals were also recorded from a static net fishery in the northern North Sea (Division 27.4.a). Total mortality estimates for seals in UK static net fisheries were produced for 2015 and the resulting point estimate of 581 (CV = 0.078; 95% confidence limits 423–1297) is similar to previous years. Seal bycatch in UK fisheries appears to mostly occur in large-mesh static nets in Subarea 27.7.

ICES notes a recently published paper (Peltier *et al.*, 2016) on the numbers of common dolphins stranding on the shores of the Bay of Biscay and the southern Celtic Sea after being bycaught in fishing gear. These stranding data, from 1990 until 2009, have been extrapolated using drift modelling and the probability of corpses being buoyant, and they suggest that since 1997, average bycatch levels have ranged from 3650 to 4700 dolphins per year in this area. ICES recommends that relevant fisheries in the Bay of Biscay now require dedicated observation to determine bycatch levels.

Suggestions

ICES is preparing for the transition away from using EU Member State reports under Council Regulation (EC) No. 812/2004 (EU, 2004) as the primary source of data on bycatch of cetaceans. In the future, data will be provided through the ICES

regional database as a result of the implementation of the EU Multiannual Programme (EU MAP; EU, 2016). ICES notes that the revised Commission Decision on the Marine Strategy Framework Directive (EU, 2017) requires that EU Member States need accurate bycatch rates to assess whether or not species are at risk from fisheries. ICES suggests that the regional groups that are coordinating the implementation of EU MAP will need to adapt at-sea sampling designs to include data on frequency of protected species bycatch events in all relevant fisheries. In particular, gillnet fisheries are currently receiving little observation overall. Advice on the bycatch of protected species will also need information on both monitored and total effort in the relevant fisheries.

Basis of the advice

Background

Reports required by Council Regulation (EC) No. 812/2004 (EU, 2004) for 2015 were received from 14 of the 17 EU Member States affected by that Regulation in that year. No reports for 2015 were provided to the Commission by Finland, Italy, and Spain. The quality and scope of the information provided by the reports for 2015 was variable, with several EU Member States simply repeating the information provided in previous years. It is difficult for ICES to assess the overall impact of fisheries on protected species if data from major fishing nations are not provided.

Methods

UK used observations made over several years to estimate bycatch rates of harbour porpoises, common dolphins, and seals. For most extrapolations, data from 2010 to 2015 were used; however, in fisheries with few bycatch observations, data from 2005 to 2015 were used. With only few observations of common seals, grey and common seals were both included in the total estimation of seal bycatch. The 2015 estimations were based on stratified fishing effort data for the entire UK gillnet fleet for 2015.

Additional information

Bycatch of elasmobranchs

A number ($n = 767$) of large and/or protected elasmobranch species were recorded by one EU Member State (UK) in 2015, mostly from gillnets and trammelnets in Subarea 27.7. A single basking shark *Cetorhinus maximus* was recorded taken in a gillnet in Division 27.7.g. Several other large sharks (blue shark *Prionace glauca*, porbeagle *Lamna nasus*, and six-gilled shark *Hexanchus griseus*) were taken in a range of net types, mostly in Subarea 27.7. Smaller sharks such as spurdog *Squalus* spp. and tope *Galeorhinus galeus* were recorded bycaught in quite large numbers ($n = 481$), mainly in Subarea 27.7. As in previous years, observed bycatches of common skate *Dipturus batis* ($n = 220$) were heavily concentrated in offshore trammelnet fisheries in divisions 27.7.g and 27.7.h. Some bycaught elasmobranchs were returned to the sea alive.

Mitigation

EU Member State reports submitted under Council Regulation (EC) No. 812/2004 (EU, 2004) provided information on research on methods to reduce small cetacean bycatch. These methods included acoustic devices and other gear modifications.

Sources and references

EU. 2004. Council Regulation (EC) No. 812/2004 of 26 April 2004 laying down measures concerning incidental catches of cetaceans in fisheries and amending Regulation (EC) No. 88/98. Official Journal of the European Union, L 150/12. 20 pp. <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32004R0812&from=EN>

EU. 2016. Commission Implementing Decision (EU) 2016/1251 of 12 July 2016 adopting a multiannual Union programme for the collection, management and use of data in the fisheries and aquaculture sectors for the period 2017–2019 (notified under document C(2016) 4329). Official Journal of the European Union, L 207/113. 65 pp. https://datacollection.jrc.ec.europa.eu/c/document_library/get_file?uuid=a9a69267-d036-45ad-90b5-f2d0dcd4e80d&groupId=10213

EU. 2017. Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU. Official Journal of the European Union, L 125/43. 32 pp. <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017D0848&from=EN>

ICES. 2017a. New information regarding the impact of fisheries on other components of the ecosystem. *In* Report of the ICES Advisory Committee, 2017. ICES Advice 2017, vme.eu. 12 pp.

ICES. 2017b. Report of the Working Group on Bycatch of Protected Species (WGBYC), 12–15 June 2017, Woods Hole, Massachusetts, USA. ICES CM 2017/ACOM:24. 82 pp.

Northridge, S. P., Kingston, A. R., and Thomas, L. J. 2016. Annual Report on the Implementation of Council Regulation (EC) No. 812/2004 during 2015. DEFRA, 2016. 44 pp.

Peltier, H., Authier, M., Deaville, R., Dabin, W., Jepson, P. D., van Canneyt, O., Daniel, P., and Ridoux, V. 2016. Small cetacean bycatch as estimated from stranding schemes: The common dolphin case in the Northeast Atlantic. *Environmental Science and Policy*, 63: 7–18.

Annex

Table 1 Total number of common dolphin and harbour porpoise bycatch specimens and bycatch rates (number of specimens/days-at-sea) in 2015 reported by EU Member States in their Council Regulation (EC) No. 812/2004 (EU, 2004) reports, including other sources of opportunistically or dedicated data collected on bycatch of cetaceans (e.g. the EU Data Collection Framework or other monitoring programmes). Bycatch numbers and rates are grouped by gear type and ICES fishing area. In addition, one white-beaked dolphin was observed bycaught in ICES Division 27.6.a in pelagic trawl gear, and two bottlenose dolphins in other gear in ICES Subarea 27.9.

Gear type (Métier level 3)	ICES area code	Observed days at sea	Common dolphin (specimens)	Common dolphin (bycatch rate per day at sea)	Harbour porpoise (specimens)	Harbour porpoise (bycatch rate per day at sea)
Nets	27.3.a.20	40	0	0.0	6	0.15
Nets	27.3.c.22	125	0	0.0	9	0.072
Nets	27.7.e	150	2	0.013	0	0.0
Nets	27.7.f	40	0	0.0	2	0.05
Nets	27.7.g	25	1	0.04	6	0.24
Nets	27.7.h	47	1	0.021	0	0.0
Nets	27.8.a	153	3	0.02	1	0.007
Nets	27.8.b	226	2	0.009	0	0.0
Nets	27.4.b	62	0	0.0	18	0.29
Polyvalent	27.9	245	7	0.029	6	0.024
Pelagic trawls	27.6.a	84	0	0.0	0	0.0
Pelagic trawls	27.7.j	82	3	0.037	0	0.0
Pelagic trawls	27.8.b	13	2	0.15	0	0.0
Total		1292	21		48	

Table 2 Total number of seabird bycatch specimens in 2015 reported by EU Member States in their Council Regulation (EC) No. 812/2004 (EU, 2004) reports and in other sources of opportunistically or dedicated data collected on bycatch of seabirds (e.g. the EU Data Collection Framework or other monitoring programmes): Raz = Razorbill *Alca torda*; Gull = Large gull *Larus sp.*; CS = Common scoter *Melanitta nigra*; Gan = Northern gannet *Morus bassanus*; Shag = Common shag *Phalacrocorax aristotelis*; Corm = Great cormorant *Phalacrocorax carbo*; Bal S = Balearic shearwater *Puffinus mauretanicus*; Eider = Common eider *Somateria mollissima*; Guill = Common guillemot *Uria aalge*.

Gear type (Métier level 3)	ICES area code	Observed days at sea	Raz	Gull	CS	Gan	Shag	Corm	Bal S	Eider	Guill
Nets	27.3 (22, 24)	127						9		6	
Polyvalent	27.9	245	10	5	11	5	1	6	24		3
Total		372	10	5	11	5	1	15	24	6	3