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# Implications of new Technical Measures Regulation for cetacean bycatch in European waters

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## BACKGROUND

For decades, cetacean bycatch has been a major conservation and welfare concern in the European Union with high numbers of harbour porpoises, dolphins and whales dying each year (see Table 1). Despite binding legal requirements to monitor and reduce bycatch, cetacean bycatch monitoring has been insufficient in most fisheries and areas (ICES, 2011; Northridge, 2011; Desportes, 2014; ICES, 2016; Read et al., 2017), to generate reliable estimates of bycatch. Measures to reduce bycatch have been limited and not always directed at the most problematic fisheries.

EU cetacean bycatch legislation (Council Regulation (EC) No. 812/2004) has been found to have significant weaknesses (European Commission, 2009; 2011; ICES, 2013; 2014; 2015; 2016) and in April 2019 the European Parliament plenary voted for Regulation 812/2004 to be repealed, and approved a new replacement Regulation, *Regulation on the conservation of fishery resources and the protection of marine ecosystems through technical measures (2016/0074) (hereafter referred to as the Technical Conservation Measures (Technical Measures Regulation))*. The Technical Measures Regulation combines about 30 pieces of fisheries conservation legislation that determine the conditions under which fishermen may fish, including the incidental catches of cetaceans in fisheries (previously covered by Regulation 812/2004). This new Regulation will enter into force 20 days after its publication, which will take place after the necessary steps in the Council and the signature by the Council and the European Parliament.

Whilst undergoing amendment, the draft Technical Measures Regulation provided the opportunity to improve bycatch mitigation requirements and to help safeguard European cetacean populations. However, whilst some improvements have been made, we believe that this opportunity to tackle bycatch comprehensively and effectively has been missed. Rather than providing the critically needed strengthening of the European Commission's proposal<sup>1</sup> adopted in March 2016, based on the expert scientific advice of the ICES Bycatch Working Group, and other expert regional bodies, such as ASCOBANS and ACCOBAMS, many of the measures in the adopted Technical Measures Regulation actually significantly weaken both the provisions of the existing cetacean bycatch legislation and the Commission's original proposal. The bycatch measures adopted for cetaceans are not sufficient to mitigate bycatch effectively in European waters.

Based on the authors' assessment, the key strengths and weaknesses of the technical Measures Regulation, adopted by European Parliament Plenary vote, are identified here.

## Technical Measures in the new Regulation that might strengthen European bycatch mitigation

- An obligation to ensure bycatch of sensitive species is minimised and where possible eliminated (Article 3); which is consistent with the ASCOBANS aspiration towards zero bycatch.

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<sup>1</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52016PC0134>

- The requirement for new or updated technical measures to be applied at the regional level to high risk fisheries and to be at least equivalent to the existing measures with regards to achieving these objectives, and the obligation for Member States to submit joint recommendations for new or updated measures within a clear timeframe (Article 18), as well as additional criteria to be met by such measures (Articles 20-26).
- The requirement for Member States to provide information on the effectiveness of existing mitigation measures and monitoring arrangements with respect to bycatch of sensitive species, including cetaceans, seabirds and sea turtles, and to submit joint recommendations for additional mitigation measures for the reduction of incidental catches of these species (Annex XIII).

#### **Technical Measures that seem likely to weaken European bycatch mitigation**

- The agreed target thresholds for tackling bycatch of sensitive species is not clear, as it refers to managing species to levels agreed under Union legislation. Given that monitoring of bycatch is inadequate to obtain robust estimates for individual species, it will be difficult to demonstrate the level of impact, and particularly where bycatch within a particular fishery is having a population level effect, even if thresholds have been set for affected species. And thus Member States may avoid taking necessary mitigation action.
- The agreed process for adopting new or updated measures through regionalisation depends on Member States reaching unanimous agreement when submitting a joint recommendation. This means that if no such agreement is reached or Member States do not take the initiative to propose effective measures, nothing will change, and the new framework will fail to meet its objectives, so its success will depend heavily on the level of ambition demonstrated by the Member States. We note that existing joint recommendations regarding fisheries regulations have been notoriously difficult to achieve so far, and mostly have resulted in the smallest common denominator of the involved MS. Converse to this, the Regulation does deliver recommendations that Member States are fully behind, ensures regional appropriateness and not the historic one size fits all, and greater accountability for Member States. As a result, civil society can better apply pressure to their Member State and hold them to account. The Commission can step in and bring forward proposals if it considers insufficient progress is being made.
- There is now a requirement for MSs to report every three years, rather than annually.

#### **Proposals that could have enhanced bycatch mitigation but that were not taken up:**

- The Commission proposal to require the use of Acoustic Deterrent Devices (ADDs) in Area VIa (West of Scotland), ICES sub-areas VIII and IXa (south west waters), the Mediterranean and Black Seas was not taken up. Although robust mitigations beyond the use of ADDs should be applied as appropriate (see the discussion below in the section ‘Identifying management solutions to reduce bycatch’), as it is, this has resulted in an unbalanced approach to mitigation in different ocean basins.
- European Parliament Amendments for the extension of bycatch mitigation measures to a more appropriate range of fishing gear types, including *static nets, driftnet, pelagic trawl or high vertical opening trawl or other fisheries where monitoring identifies bycatch*, were not taken up.
- A prohibition on the deployment of gears known to have a high risk of cetacean bycatch, as appropriate, (e.g. bottom set gillnet, driftnet, entangling net or high vertical opening trawl) without the use of proven mitigation technology, in line with the recommendations made by ASCOBANS to the European Commission in 2016 were not taken up.

There is a general obligation to reduce bycatch in the new Regulation, but no details are provided as to how to achieve that, in order to allow for regionally appropriate approaches. The primary obligation to set standards is now left to individual Member States. Given the current poor track record for bycatch measures implementation, Member States have been shown to poorly or moderately implement Regulation 812/2004 (Read et al., 2017), this is of some concern. Once the Technical Measures legislation has been adopted, it can only be implemented effectively if the European Member States provide relevant joint solutions as soon as possible, in particular with regard to the bycatch of marine mammals, seabirds and marine turtles.

#### **Identifying management solutions to reduce bycatch**

Bycatch continues to pose a major threat to cetacean individuals and some populations in EU waters, with indications of population level impacts in all European regions, but the Outer Regions, where data are poor anyway (Table 1). Efforts to strengthen and coordinate cetacean bycatch solutions are long overdue.

Working in partnership with fishers and fisheries stakeholders is central to successful bycatch mitigation efforts. Fishers do not want to catch cetaceans, but they may need to be convinced about the value of providing accurate data on bycatch and for implementing management approaches. Ongoing outreach and collaboration are central to successful efforts to assess and reduce bycatch. Member States need to focus attention to enable the achievement of meaningful bycatch reductions.

A review of existing cetacean bycatch mitigation methods was recently undertaken, covering methods such as reduction of fishing effort, closed areas, ADDs, fishing gear modifications and alternative gears, reducing gear loss (or discarding) and wet storage (setting gear to preserve use of an area) (Leaper & Calderan, 2017). While ADDs have been the principal method stipulated by EU legislation, it is crucial that mitigation does not solely rely on ADDs, as these are not known to be effective for all species and only apply to certain gear types. Furthermore, they may exclude animals from habitats upon which they critically depend. Hence, there should be species and gear-specific mitigation as appropriate and, most importantly, ongoing monitoring of the efficacy of all mitigation methods applied, including to understand issues surrounding habituation. Where measures do not result in reductions in bycatch, Member States should introduce additional or alternative mitigation options based on scientific advice. Drawing upon the scientific literature, a preliminary summary of fishery and species-specific potential bycatch solutions is provided here (Tables 2 and 3).

Robust monitoring and mitigation is needed to assess, prioritise and continually reduce bycatch in European waters. We urge that such a toolbox of mitigation approaches be developed, coordinated, and implemented through regional fora, and at the European Member State level, working closely with cetacean and fisheries experts.

### **Recommendations**

Member States need to implement scientifically robust bycatch monitoring schemes to include mandatory monitoring covering a predetermined percentage of the fleet using independent observers and/or electronic monitoring (REM), regardless of vessel size; more accurate monitoring of fishing effort (including calculated areas swept and/or soak durations for specified lengths of nets); mandatory reporting of all bycatch by fishers; and compliance efforts for monitoring and mitigation measures.

Fishing licences or permits should be suspended for vessels/fishers that deny access to observers or deployment of REM. Alternatively, vessels/fishers who comply with the obligation might receive a commercial incentive (e.g. to be allowed a higher quota, sell their catch at a higher price, or under some ‘transparent fisheries’ label).

Member States need to implement scientifically robust management measures to reduce bycatch, with enforcement and assessment of effectiveness and compliance. This is the highest priority for those fisheries identified as having a likely population level impact (see Table 1) and, in turn, will reduce the number of individuals suffering welfare impacts.

As a priority, management measures are urgently required for the following populations (Tables 2 & 3):

- Harbour porpoise: Baltic Proper, Iberian Peninsula, Celtic Sea, English Channel, North Sea and inner Danish waters
- Common dolphin: Bay of Biscay, English Channel
- Bottlenose dolphin: Andalusia
- Humpback and minke whale: Scottish waters

The Technical Measures include the current measures required by Regulation 812/2004 but without some of the specific details (such as expected precision of bycatch estimates or technical specification of pingers). These specifics will require further scientific input. The measures also provide a legal basis to address cetacean bycatch in other ways. For example, they allow for ‘the creation of real-time closures in conjunction with moving-on provisions as an additional measure for the protection of sensitive species (Paragraph 31)’. Member States may also take stronger actions to address bycatch (‘On the basis of the best available scientific advice, a Member State may put in place for vessels flying its flag, mitigation measures or restrictions on the use of

certain gears to minimise and where possible eliminate the catches'). The advice and recommendations from the Committee could thus assist in the implementation of the legislation.

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**Table 1.** Cetacean bycatch in European waters by Common Fisheries Policy region

Region	Sea / Country	Member State(s)	Species	Gear	Level of impact	Reference
North Sea	North Sea and inner Danish waters	Denmark, Germany, Sweden, United Kingdom, The Netherlands, Belgium	Harbour porpoise	Static nets	Population	Vinther, 1999
North Western Waters/North Sea	Scottish waters	United Kingdom	Humpback whale	Creel gear	Population	Ryan et al., 2016
North Western Waters	Bay of Biscay, English Channel	France, Spain, United Kingdom,	Common dolphin	Various, Incl trawls - pair, high opening	Population	Peltier et al. 2016; ICES, 2016
South Western Waters	Iberian Peninsula	Portugal, Spain	Harbour porpoise	Various (purse seine, trawl and longline, polyvalent and beach seine)	Population	Sequeira, 1996; López et al., 2002, 2003; López-Fernández and Martínez-Cedeira, 2011; López et al., 2012; Read et al., 2013; Pereira, 2015; Read, 2016; Llavona Vallina, 2018
South Western Waters	Andalusia	Spain	Bottlenose dolphin	Unknown	Population	ICES, 2015
Baltic Sea	Baltic Proper	Germany, Poland, Sweden, Latvia, Lithuania, Finland	Harbour porpoise	Static nets	Population	Benke et al., 2014; ICES, 2008; ICES, 2015; Scheidat et al., 2008
North Sea	North Sea and English Channel	Belgium, Denmark, France, Germany, The Netherlands, Sweden, United Kingdom	Harbour porpoise	Static nets	Insufficient data	ICES, 2014; ASCOBANS North Sea Steering Group, 2014, 2018
North Western Waters/North Sea	UK waters	United Kingdom	Minke whale	Creel gear, Ghost netting	Insufficient data	Northridge et al., 2010
North Western Waters	Celtic and Irish Sea	Ireland, United Kingdom	Harbour porpoise	Static nets	Insufficient data	ICES, 2015
North Western Waters	Celtic Sea	Ireland, United Kingdom	Common dolphin	Static nets	Insufficient data	Tregenza et al., 1997; Reeves et

Waters		Kingdom				al., 2013
North Western Waters	Celtic Sea	Ireland, United Kingdom	Striped dolphin	Static nets	Insufficient data	Reeves et al., 2013
North Western Waters	Bay of Biscay, Celtic Sea	France, Ireland, Spain, United Kingdom	Common dolphin	Historic tuna drift nets	Insufficient data	Rogan and Mackay, 2007; Reeves et al., 2013
North Western Waters	Bay of Biscay, Celtic Sea	France, Ireland, Spain, United Kingdom	Striped dolphin	Historic tuna drift nets	Insufficient data	Rogan and Mackay, 2007; Reeves et al., 2013
North Western Waters	Bay of Biscay	France, Ireland, Spain, United Kingdom	Striped dolphin	Static nets	Insufficient data	Morizur et al., 1999
North Western Waters	Irish waters	Ireland	Minke whale	Trammel nets	Insufficient data	Cosgrove et al., 2013
South Western Waters	NW Spain	Spain	Common dolphin	Pair-trawls	Insufficient data	Fernández-Contreras et al., 2010
South Western Waters	Portuguese waters	Portugal	Common dolphin	Purse-seine nets	Insufficient data	Marçalo et al., 2015



**Table 2.** Preliminary fishery specific bycatch solutions for identified priority cetacean populations

<b>Species</b>	<b>Fishery region, where specified</b>	<b>Potential mitigation measures</b> <i>These are likely to vary from region to region, &amp; best in combination</i>	<b>Notes</b>
Harbour porpoise (HP)	Beach seine <i>Portugal</i>	Inclusion of beach seines for mandatory ADDs Trials on alternative mitigation Spatial & temporal restrictions Monitoring & compliance efforts	Beach seines are not permitted in most countries. ADDs not required under current legislation because it is considered a mobile gear.
	Driftnets Static gillnets <i>Baltic Sea</i>	Maintain existing ban on driftnets Alternative gear such as cod pots to replace gillnets Spatial & temporal restrictions where higher densities of HP occur	Draft proposal from European Parliament PECH Committee proposes reintroducing driftnet use in the Baltic
	All other static nets	Appropriately spaced and functioning pingers on all static nets, not based on vessel size Restrictions (e.g. spatial, temporal) in the use of static nets where high densities of harbour porpoises occur Consider restrictions versus pinger use within Special Areas of Conservation (due to noise/disturbance impacts)	Investigate modifications to gear types, and spatial & temporal measures that might reduce bycatch Investigate welfare impacts Understand behaviour of porpoises around nets
Common dolphin (CD)	see Table 3		Regional collaboration required across the English Channel, Celtic Sea & Bay of Biscay ADDs trials to assess effectiveness for CD Concern about welfare impacts of exclusion grids
Harbour porpoise Common dolphin Striped dolphin (SD) Bottlenose dolphin (BND)	Static gillnets <i>Mediterranean</i> (SD) <i>Black Sea, Andalučia &amp; Galicia</i> (BND)	Multiple mitigation measures required, including: ADDs on all static nets, not based on vessel size Restrictions (e.g. spatial, temporal, gear types) where high densities of cetaceans occur Trials on alternatives to pingers Monitoring & compliance efforts	Regional collaborations required across the North Sea for HP ADDs trials to assess effectiveness for CD & BND
Baleen whale (humpback & minke whale)	Static creels / pots	Reduce the amount of rope, including wet storage Cap on number of licenses Application of best practice <sup>2</sup> Training and capacity building in whale disentanglement	Investigate ropeless fishing gear Understand where minke and humpback whales become predominantly entangled in the gear Investigate welfare impacts of creel entanglements
Sperm whale Common dolphin Striped dolphin	Driftnets <i>Mediterranean</i>	Stop use of illegal driftnets Compliance efforts	Wider use of illegal driftnets beyond the Mediterranean is not well documented, but may still occur
Various species	Long-lines	Gear modifications, such as 'net sleeve' or changes to hooks Robust monitoring	Unknown levels of impacts

<sup>2</sup> For example: <http://www.scottishreelfishermensfederation.co.uk/entanglement.htm>

**Table 3.** Monitoring, mitigation and research measures to be considered in eastern North Atlantic fisheries to understand and eliminate common dolphin bycatch

<b>Fishery</b>	<b>Monitoring requirements</b>	<b>Mitigation measures</b> <i>Best in combination</i>	<b>Research requirements</b>
Pair trawls	1. Mandatory monitoring using predetermined % of independent observers and/or electronic monitoring, regardless of vessel size  2. Mandatory reporting of all bycatch by fishermen  3. Compliance efforts, for monitoring and mitigation measures	Spatial (e.g. depth) & temporal restrictions (e.g. December to March)	Review data to understand temporal component of bycatch
Very high vertical opening (VHVO) trawls		Real time fishing restrictions, where fishing vessel moves away a predetermined distance from an area when CD observed at sea by an independent observer, before bycatch occurs	Investigate effectiveness of ‘moving away’  Understand effectiveness of pingers to reduce common dolphin bycatch
Pelagic trawls		Functioning and appropriately spaced pingers on all nets, not based on vessel size	Trials on alternative mitigation  Investigate exclusion grids/hatches on trawls, with monitoring of efficacy and any welfare impacts - Concern about welfare impacts of exclusion grids
Factory trawlers			
Static nets		Appropriately spaced and functioning pingers on all static nets, not based on vessel size  Restrictions (e.g. spatial, temporal) in the use of static nets where high densities of common dolphins occur	Understand effectiveness of pingers to reduce dolphin, porpoise & seal bycatch  Investigate modifications to gear types, and spatial & temporal measures that might influence bycatch,  Investigate welfare impacts
Driftnets	Maintain existing ban on driftnets	Maintain existing ban on driftnets	None