

Roadmap for ICES bycatch advice on PETS

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ACCOBAMS-ASCOBANS workshop on '*Current cetacean bycatch issues in European waters*', April 2023



Science for sustainable seas



Legislative instruments

- EU Common Fisheries Policy
- EU Marine Strategy Framework Directive
- EU Habitats Directive
- EU Action Plan for reducing incidental catches of seabirds in fishing gears
- Norway - Marine Resources Act
- Iceland - Regulation on Catch Books
- Canada - Policy on Managing Bycatch
- US - Marine Mammal Protection Act

To address the requirements of the legislative instruments, the bycatch roadmap aims to facilitate more efficient consolidation of data and knowledge, and planning future steps in ICES.

<https://doi.org/10.17895/ices.advice.19657167>

**Roadmap for ICES bycatch advice
on protected, endangered,
and threatened species**



General



Considering important differences and limitations in the evidence basis available for population-level assessments of PETS, and the absence of agreed and comparable objectives for the management of PETS bycatch, ICES will provide advice in accordance with the generic and precautionary objective to “minimize and, where possible, eliminate bycatch of PETS to prevent any serious harm to the species concerned”, consistent with several legislative instruments and governmental initiatives.

International organisations

- ✓ **ASCOBANS** – Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas
- ✓ **ACCOBAMS** – The Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area
- ✓ **NAMMCO** – North Atlantic Marine Mammal Commission
- ✓ **NEAFC** – North East Atlantic Fisheries Commission
- ✓ **GFCM** – The General Fisheries Commission for the Mediterranean
- ✓ **OSPAR** – Oslo-Paris Commission
- ✓ **HELCOM** – Helsinki Commission
- ✓ **RCGs** – Regional Coordination Groups

Objective #1: Ensure cooperation with ACCOBAMS, ASCOBANS, GFCM, HELCOM, NAMMCO, NEAFC, OSPAR, RCGs, and other RFMOs and RSCs for data/information sharing, bycatch assessments, and risk evaluations.

General

Approach: one single expert group to evaluate all bycatch data/information and determine the primary sources to be utilized for advisory purposes

ICES /FAO Working Group on Fishing Technology and Fish Behaviour (WGFTFB)

- investigates interactions of protected species in capture fisheries, such as modifications in fishing gear and/or operational methods to minimize impacts; and mitigation of bycatch impacts

Working Group on Marine Mammal Ecology (WGMME)

- assembles data on marine mammals (including strandings, entanglement, interviews, research projects, national/local monitoring)

ICES/NAFO/NAMMCO Working Group on Harp and Hooded Seals (WGHARP)

- assembles data on harp and hooded seals

Working Group on Commercial Catches (WGCATCH)

- develops sampling protocols

Working Group on Spatial Fisheries Data (WGSFD)

- performs quality checks of the fishing effort data and develops methods to estimate gear-specific fishing effort

Working Group on Bycatch of Protected Species (WGBYC)

- central group, which evaluates all bycatch data/information from multiple sources and determines the primary sources (i.e. highest quality; best available science) to be utilized for advisory purposes

Joint OSPAR/ HELCOM/ICES Working Group on Seabirds (JWGBIRD)

- assembles data on seabirds

Working Group on Elasmobranch Fishes (WGEF)

- proposes options for improving the data availability and quality (e.g. through monitoring)

Steering Committee for the RDBS (SCRDB)

- secures that data on incidental bycatches are appropriately recorded and used in ICES Regional Database and Estimation System (RDBS)

Working Group on Cumulative Effects Assessment Approaches in Management (WGCEAM)

- assesses cumulative effects of human activities on marine organisms

General

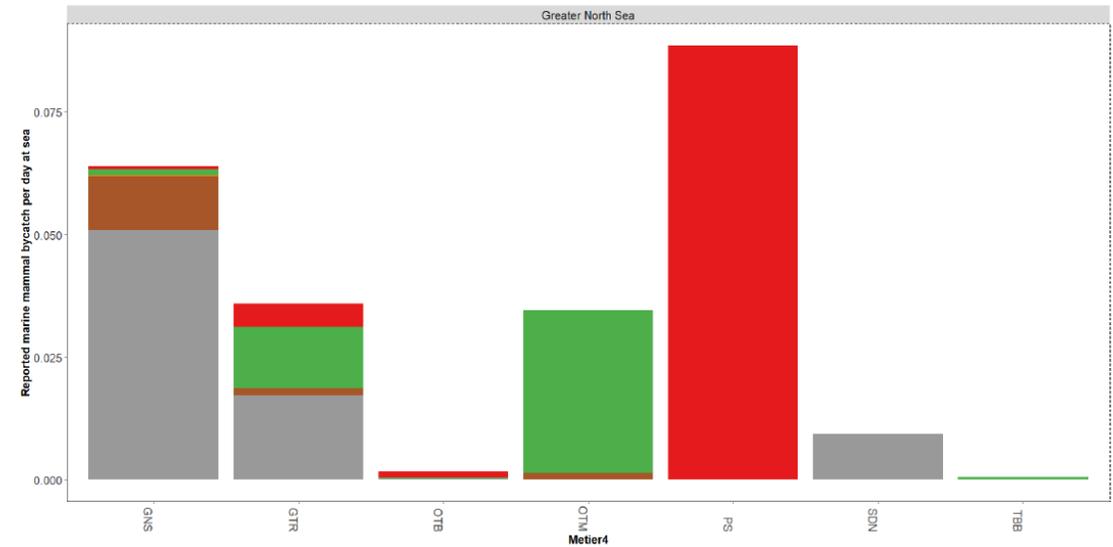
The overarching goal: to assess risk and impact of, and the impact of fleet activity on incidental bycatch, and to include it these in ICES Fisheries Overviews by 2022

- ✓ the most frequently reported species (fish, birds, mammals and turtles) for the last year,
- ✓ multiannual average bycatch rates by métier and fishing effort dynamics

Greater North Sea, Celtic Seas, Icelandic Waters, Baltic Sea and Bay of Biscay and Iberian Coast ecoregions



■ Delphinus delphis ■ Halichoerus grypus ■ Lagenorhynchus albirostris ■ Phoca vitulina ■ Phocoena phocoena



Reported marine mammal bycatch rates in the Greater North Sea Ecoregion 2017 –2021 by level 4 métier

Data and method requirements



To estimate the conservation threat posed by fishery bycatch, is needed:

- (i) the susceptibility of that population to bycatch in particular fisheries (based on **observer effort data** and number of **bycatch incidents** recorded by fishing gear, but also using other sources such as strandings or fishermen logbooks)
- (ii) the scale of the fisheries concerned (based on total **fishing effort** by fishing gear for all relevant fleet segments, incl. recreational fisheries)
- (iii) **the resilience of the population to bycatch**

- ICES data call gathers information to estimate i) and ii).
- The most pressing data gap is for small vessels (< 12m in size), not covered by either VMS or AIS.
- Data to assess iii) would be required from national and international scientific surveys.

Data needs, availability and database issues



Objective #3: collect information and determine methods to assess the resilience of protected species to bycatch (by WGMME, WGHARP, JWGBIRD, WGEF).

Objective #4: identify and describe potential new data sources (WGMME, WGHARP, JWGBIRD), and propose options for improving the data availability and quality (e.g. through monitoring; WGBYC, WGCATCH, WGSFD, WGEF).

Strategic developments



Improving data availability and quality is the key to improve the advice

- development of new (bycatch) **indicators**
- methodological work towards setting **threshold values**
- development of new **metrics to measure fishing effort**
- assessing **cumulative effects** of human activities
- evaluate if **improved resolution** bycatch data will improve advice
- interactions of PETS in capture fisheries to **minimize** and **mitigate bycatch impacts**
- **trade-offs** when reconciling objectives in legislation on bycatch of PETS

Species lists

Annex 1: List of fish species of bycatch relevance

According to [ICES Roadmap for bycatch advice on protected, endangered and threatened species \(PETS\)](#) incidental bycatch is defined as all catches of species not targeted in fisheries operations (incidentally/accidentally caught), including those not taken on board, regardless of later treatment. This list of fish species of bycatch relevance, presented for all ICES ecoregions, contains species which are: i) included in international and national legislations and on relevant red lists, ii) identified by experts as being sensitive to fishing, and iii) not advised upon or listed as data deficient on red lists. The list excludes species for which quantitative or qualitative stock assessments are available. The species listed will be considered in ICES advice products on bycatch of PETS.

