Written evidence submitted by International Union for the Conservation of Nature (IUCN) Species Survival Commission (SSC) Cetacean Specialist Group (MM0019)

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Executive Summary

The IUCN/SSC Cetacean Specialist Group (CSG) includes 138 members who are actively involved in scientific research and conservation of whales, dolphins and porpoises around the globe. This document summarises a collective response from the group to the five questions posed by the EFRA Committee, with an emphasis on the role that the UK government can play in promoting the conservation of cetaceans internationally.

Multilateral agreements have been effective in protecting whales. Agreements on the best approaches to manage whaling, and the current moratorium on commercial whaling have led to global improvement in the conservation status of most whale populations. At the same time, our use of the oceans has intensified and diversified. New threats have emerged, and are still emerging, which are hindering whale population recovery and severely impacting the conservation status of coastal dolphins, whales, porpoises, and seals. Unintentional bycatch in fisheries is now the predominant threat to the conservation of most marine mammal species. Underwater noise from shipping and construction, as well as habitat degradation from other coastal and marine activities can also further exacerbate conservation challenges.

Many of the world's most threatened cetacean populations are found outside of the UK's borders. However, the UK hosts a wealth of institutional and individual expertise in marine mammal research and conservation. We encourage the UK government to prioritise the reduction of bycatch in its own territorial waters through the proven technical adaptations that are available, as well restricting the use of non-selective high bycatch gears in areas of critical importance to marine mammal populations. We also recommend support for research into new technical adaptations and fishing methods that reduce bycatch, along with the necessary trials to prove their effectiveness. Furthermore, we encourage the continuation and expansion of schemes and grants that support collaborative research and capacity building for scientists and organisations from countries where less support is available for marine mammal conservation. Finally, we encourage the UK to contribute to international forums such as the International Whaling Commission, the International Maritime Organisation, the Convention on Migratory Species, ICES, ASCOBANS, and the IUCN, to ensure that they have the financial, technical and political support and resources required to work effectively on the marine mammal conservation issues that fall under their purview.

IUCN Cetacean Specialist Group

The IUCN/SSC **Cetacean Specialist Group** (CSG) (iucn-csg.org) is one of the more than 100 Specialist Groups and Task Forces that constitute the IUCN Species Survival Commission (SSC). The CSG includes 138 of the world's leading cetacean scientists, and works to promote and facilitate the conservation of cetaceans worldwide. The CSG provides advice on the status of cetacean populations, abundance, trends, the effects of current or potential threats, and the efficacy of mitigation. It functions as a catalyst, clearing house, and facilitator for cetacean-related research and conservation action. The guiding premise of the CSG is that conservation ultimately depends on evidence-based research, and the group's credibility and value are based on maintaining high standards of scientific rigour.

The CSG provides this input to the UK Government after consulting its members and consolidating their suggestions in this document. Our membership is global, but includes members from the UK. Our suggestions primarily concern the potential role of the UK government in the regional and global arena of cetacean conservation. If required we would be willing to provide our information in person at a Committee meeting.

Evidence

1. What is the status of marine mammal populations?

There are currently 132 known species of marine mammals alive and 39 of those are currently listed as Threatened on the IUCN Red List (IUCN 2021). One in every four cetacean species assessed for the Red List (26%, n=24) is currently assigned to a threatened category (Critically Endangered, Endangered, or Vulnerable). Five species are considered Critically Endangered: the vaquita (*Phocoena sinus*), the Atlantic humpback dolphin (*Sousa teuszii*), the North Atlantic right whale (*Eubalaena glacialis*), Rice's whale (*Balaenoptera ricei*) and the Yangtze River dolphin *(Lipotes vexillifer* or Baiji), which is considered extinct (Turvey *et al.*, 2007). A further four subspecies and subpopulations have been evaluated as Critically Endangered, although subspecies and subpopulations are not systematically assessed, and there are likely to be many more that meet the criteria. Fifty-three percent of cetacean species are classified as Least Concern, 11% as Near Threatened, and 10% as Data Deficient (see https://iucn-csg.org/status-of-the-worlds-cetaceans/ for more information). Local populations of other several other species have either disappeared or are seriously imperilled (e.g. Collins et al., 2017; Li, 2020; Minton *et al.*, 2017).

Although many baleen whale populations are recovering after over-exploitation from whaling, and some have recovered, many species and populations remain at great risk (Thomas *et al.*, 2015). In general, the status of coastal dolphins, river dolphins, sirenians (dugong and manatees) and marine otters is deteriorating on a global scale, with the vaquita, endemic to Mexico, close to extinction (Jaramillo-Legorreta *et al.,* 2019) and the Māui dolphin in New Zealand (*Cephalorhynchus hectori maui*) which has a population estimated at about 50 individuals (Constantine *et al.,* 2021). Many species, especially those that occur in habitats far from land still lack population abundance information (Nelms *et al.,* 2021; UNOLA 2021).

2. How, and for what purpose, are marine mammals being killed?

The primary human-directed cause of mortality for marine mammals is unintentional bycatch in fisheries, mostly gillnet and trawl fisheries, with lower levels of bycatch in longlines, purse seine and other fishing gears (Read *et al.,* 2006; Lewison *et al.,* 2014). Bycatch in gillnet fisheries is the main conservation threat for 11 of the 14 small cetacean species and subspecies listed as Critically Endangered on the IUCN Red List (Brownell *et al.,* 2019). Unsustainable bycatch was the primary reason for the extinction of the Baiji or Yangtze River dolphin (Turvey *et al.,* 2007), and is currently driving the vaquita toward extinction as well (Gulland *et al.,* 2020). Baleen whales tend to be caught in a wide variety of static gears, including the ropes attached to lobster and crab pots (Thomas *et al.,* 2016). The fisheries causing marine mammal bycatch range from artisanal to industrial, and include many fisheries that are subsidised. It has been estimated that global bycatch is around 650,000 marine mammals per year, comprising 307,000 cetaceans and 345,000 pinnipeds (Read *et al.,* 2006). In the Indian Ocean estimates suggest that 4.1 million small cetaceans were killed in gillnets set for tuna between 1950 and 2018 (Anderson *et al.,* 2020). These estimates, predominantly based on official statistics of reported bycatch in commercial fleets, are likely to be under-estimates, as bycatch mortality in commercial fisheries can go unnoticed and/or unreported, and bycatch in smaller scale artisanal fisheries is notoriously difficult to document (Reeves *et al.,* 2005; Lewison *et al.,* 2014).

Bycaught marine mammals are used as aquatic wildmeat[1] in a number of developing countries, and these products play important nutritional, economic and cultural roles in often impoverished communities. There is evidence that these practices may be increasing at lower latitudes (Ingram *et al.,* 2022). Marine mammals are also deliberately killed for consumption and for their fur in

[1] 'The products derived from aquatic mammals and reptiles that are used for subsistence food and traditional uses, including shells, bones and organs and also bait for fisheries. Aquatic wildmeat is obtained through unregulated, and sometimes illegal, hunts as well as from stranded (dead or alive) and/or by caught animals.

many countries (Reeves, 2009; Robards & Reeves, 2011). Some of these hunts are reported to the International Whaling Commission and the North Atlantic Marine Mammal Commission. This includes 16 species of seals, 9 species of whales and 43 species of dolphins (IUCN 2021). Several small cetaceans are noted to be at risk of local and even regional extinction from excessive hunting, e.g., the southeast Greenland narwhal (*Monodon monoceros*) population (Garde *et al*., 2022). Marine mammals are also deliberately caught for use as bait in many fisheries, including fisheries for threatened sharks (Mintzer *et al*., 2018).

3. Beyond whaling, what human behaviours are affecting whale populations and how?

Fisheries by-catch continues to be the dominant conservation threat for most marine mammal species, including the most threatened small cetaceans, with non-selective gears like drift nets and gillnets causing the highest rates of bycatch (e.g. Northridge *et al.*, 2017, Brownell *et al.,* 2019, Anderson *et al.,* 2020). Anthropogenic noise, ship strikes and disturbances associated with shipping are also greatly affecting many species globally, especially migratory baleen whale species and deep sea divers (e.g. beaked whales). Furthermore, indirect threats, such as habitat alteration, overfishing of prey, land-based pollution, marine construction (including port developments), offshore energy plants, tourism and recreation, in particular in coastal zones, directly affect the survival of local coastal populations (Kovacs *et al.,* 2012; Avila *et al.,* 2018).

Climate change also presents a significant, but as yet unquantified threat to marine mammal populations globally (e.g. Tulloch *et al.,* 2019; van Weelden *et al.*, 2021) . There is evidence that climate change-related shifts in prey are causing whales to change the timing and trajectories of their migrations and/or to occupy new feeding grounds, potentially exposing them to increased risks of fisheries bycatch and ship strikes, among other things (e.g. Heide-Jørgensen *et al.*, 2012; Reeves *et al.*, 2014; Ingman *et al.,* 2021; Meyer-Gutbrod *et al.,* 2021; Gulland *et al.,* 2022). Recently, novel diseases are emerging in small cetaceans that have been linked to climate change (e.g., IWC 2021; Toms *et al.,* 2021).

4. How effective are the global protections of marine mammals?

The fact that marine mammal species cross multiple national and regional jurisdictions, and/or inhabit international waters, makes it more difficult to demonstrate how protection improves the conservation status of marine mammal populations (Johnson *et al.*, 2022). Efficient monitoring and enforcement remain a key hurdle for assuring the effectiveness of protective measures whether they are implemented nationally, regionally, or internationally (including Areas Beyond National Jurisdiction, ABNJ).

Several international examples of effective, or partially effective protections show the potential for the UK to protect its marine mammal populations.

These include:

- The change in whaling governance and management procedures introduced at the **International Whaling Commission (IWC)** in the early 1990s, which has led to the recovery of several whale stocks from overexploitation due to commercial hunting (e.g., Bortolotto *et al.*, 2016).
- The 1992 **United Nations ban of large-scale pelagic driftnet fishing** (UN GA Resolutions 44/225, 45/197, and 46/215) which led to substantial decrease in the number of whales and dolphins killed every year in fisheries (NMFS 2016).
- The legally binding multilateral **Agreement on the International Dolphin Conservation Program of the Inter-American Tropical Tuna Commission (IATTC)** which led to modifications to fishing gear and practices resulting in a 99% reduction in dolphin bycatch mortality associated with tuna fisheries in the Eastern Tropical Pacific, while international collaboration through the Marine Stewardship Council helped to bring about a global awareness of the concept of 'dolphin safe tuna' (Ballance *et al.*, 2021).
- International collaborations and discussions in forums such as the **International Whaling Commission's Scientific Committee** helped to motivate the use of gear modification and fisheries exclusion measures to improve the conservation status of species threatened by bycatch without endangering commercial activities. For example, a substantial increase in Hector's dolphin survival rates, following partial protection from gillnet bycatch (Gormley *et al.*, 2012). Survival rates increased by 5.4% which meant a change from rapid population decline (at about 6% per year) to a population that is stable, or at worst declining slowly (< 1% annual population decline).

5. How can the UK better protect marine mammals? What role can the UK Government play to protect and promote the conservation of marine mammals internationally?

5.1 Marine Mammal Bycatch in Fisheries

Given the urgency and scale of the issue of marine megafauna bycatch in fisheries, the UK should dedicate expertise and resources to promoting a national and global commitment on bycatch reduction. Many techniques are now available to reduce and avoid bycatch, yet they are still poorly implemented in fisheries where they are needed. Measures that would directly or indirectly help to reduce bycatch in the UK and beyond include:

1) incentivising **adequate monitoring of fisheries** so that demonstrated observer coverage becomes a commercial competitive advantage for participating fisheries. This would lead to a high level of observer coverage and more accurate estimates of marine mammal bycatch. The use of remote electronic monitoring (REM) is proving useful in reducing the financial and human resources required to achieve higher observer coverage in fisheries (e.g. Course, 2021).

2) incentivising or mandating the **use of technical measures to reduce bycatch** (e.g. Hamilton and Baker 2019; FAO, 2021);

3) incentivising or mandating more **selective gears and methods**, and the research and trials required to identify alternative gears that allow fisheries to catch target fish without marine mammal bycatch.

4) the implementation of **time-area closures** or management measures that prohibit or restrict the types of gears that can be used in areas of critical marine mammal habitat.

5.2 Reduction in Anthropogenic Noise

The UK, in partnership with other governments and intergovernmental institutions, can also lead a global commitment for the reduction of anthropogenic noise in the oceans. This should include the adoption of regulatory measures to reduce shipping noise using the following approaches (e.g. IMO/MEPC 2014; Leaper *et al*., 2014; Williams *et al*. 2019; Chou *et al.*, 2021):

1) the adoption of new, **'quiet ship' standards** that incorporate proven noise reduction technologies (e.g. quieter engines, modified propellers and hull designs) (e.g. Veirs *et al.,* 2018; Jones, 2019).

2) the identification and implementation of shipping routes that avoid important marine mammals habitats and aggregations, which may include **shifting existing shipping lanes** to avoid critical habitats (e.g. Erbe *et al.*, 2012; Redfern *et al.,* 2017).

3) the implementation of measures to **reduce ship speed** in areas where overlaps between cetacean habitat and shipping channels cannot be avoided (e.g. Leaper, 2019).

4) Loud **sound sources used for petroleum exploratio**n (including seismic surveys) should be further regulated to reduce their proven impacts (e.g. Cerchio *et al*., 2014). This should include setting targets for phasing out their use as the world shifts towards alternative energy sources (Nowacek et al., 2013; Nowacek et al., 2015).

5) **Naval operations** that use loud sonar sources, which are a well-documented threat for many populations of cetaceans, should be regulated and monitored in a transparent manner to carefully assess and mitigate their potential risks (Fernandez *et al*. 2005; Jepson *et al*. 2003).

Underwater noise has far-ranging consequences for marine species in general, and measures designed to reduce impacts on marine mammals will have much broader benefits for marine ecosystems (Erbe *et al.*, 2019).

5.3 Commitment to Long-term Monitoring

Adequate management of fisheries bycatch and other threats requires an understanding not only of the mortality that is occurring, but its potential impact on the marine mammal populations that are affected. This requires data on the **abundance and trends of marine mammal populations** (e.g. Wade *et al.*, 2021).

The UK should ensure that the essential baseline research to monitor the **distribution, status and trends of marine mammal populations** in its territorial waters is in place. The government should support research to monitor cetacean populations and map their critical habitats to ensure that adequate threat mitigation measures are implemented wherever possible. This work is time- and cost intensive, but is the only way to monitor population trends, generate the basic data that underpins effective management, allows those management measures to be adapted in

response to change, and for the effectiveness of management measures to be proven. New technologies like passive acoustic monitoring show potential for reducing monitoring costs (e.g. Van Parijs *et al*., 2009).

5.4 Knowledge sharing to build capacity beyond the UK

Many of the most Critically Endangered cetaceans and pinnipeds occur in Asia, Africa and South America where resources for marine mammal science are often limited and governance challenges can compromise marine resource management. Beyond the UK's borders and territories, the UK can play a leading role in **building capacity for marine mammal research and conservation**, supporting research and promoting measures that will result in more effective conservation measures abroad.

UK academic institutions can help to build capacity for marine mammal research and conservation in countries where universities and research institutes may not yet be focusing on marine mammal issues. The UK government could consider making scholarships available specifically for aspiring marine mammal scientists pursuing higher degrees, and encouraging them to conduct the research for their degrees in their home countries as much as possible. Additional grant schemes, similar to the Darwin Initiative, could promote collaborative research and conservation projects involving UK institutions and stakeholders in countries where resources are not available for this type of work.

5.5 International Policy and Initiatives

While there are many initiatives that the UK could undertake directly to promote the conservation of marine mammals internationally, it can also **influence international policy and support international initiatives** through its contributions to International Conventions and forums such as the IUCN, the Convention of the Law of the Sea (UNCLoS), the Convention on Migratory Species (CMS), the International Maritime Organisation (IMO), the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS), the International Council for the Exploration of the Sea (ICES), and the International Whaling Commision (IWC).

Since its formation in 1946, the **International Whaling Commission** has annually convened international scientists with a wealth of expertise in cetacean research and management, and in recent years, has implemented a range of global conservation-oriented initiatives including a Bycatch Mitigation Initiative, a Stranding Initiative, a Large Whale Entanglement Response Network, and numerous working groups, workshops and expert panels focused on the issues of

most pressing concerns to cetacean populations around the globe. While the UK already contributes to the IWC, both financially and through its delegations and national experts that participate in meetings, additional concerted support would help to ensure the effectiveness and wider reach of the IWC's conservation initiatives. The same is true for the CMS, which has a number of 'Concerted Actions' for threatened cetacean species and populations, ASCOBANS, which focuses on cetaceans exclusively, and for the IUCN, which has passed a number of motions relevant to marine mammal protection and bycatch reduction, which now require support from member countries and organisations to implement.

The UK can also play a stronger role in promoting measures in the **International Maritime Organisation** that relate to marine mammal conservation - most notably measures related to reducing the risk of ship strikes for large whales, and underwater noise that affects all marine mammals (Erbe, 2019). Measures that should be supported include the designation of Particularly Sensitive Sea Areas (PSSA), Traffic Separation Schemes (TSS), Seasonal Management measures in migration corridors, feeding, and breeding grounds, and voluntary as well as mandatory speed reductions, which have been proven to reduce the risk of ship strike as well as reducing CO^2 emissions and underwater noise (Leaper 2019).

5.6 Protecting 30 by 30

The UK has taken a leading role in pushing for 30 percent of the world ocean to be protected by 2030 (the 30 by 30 target currently in draft with the UN Convention on Biological Diversity), now agreed as a commitment by more than 100 countries. There is a risk that this could turn into a check-the-box target without meaningful habitat protection. Alternatively, this could be an important starting point for ecosystem conservation to not only support marine biodiversity including marine mammals but to help address climate change by maintaining a healthy ocean. One strategic approach would be for the UK to step forward to show an example by making meaningful effective protection with adequate funding for 30% of its own seas, as well as to assist globally through the overseas territories, Commonwealth, and beyond to develop expertise and funding mechanisms that will make effective habitat protection possible.

One tool that could help with identifying important areas to protect is the Important Marine Mammal Area network, produced by the IUCN SSC/World Commission on Protected Areas, joint Marine Mammal Protected Area Task Force (www.marinemammalhabitat.org) (Tetley *et al.,* 2021).

5.7 Protection for marine mammals in Areas Beyond National Jurisdiction (ABNJ)

Many populations of marine mammals are far ranging, regularly crossing national borders. In addition, many whale and dolphin populations spend prolonged periods in ABNJ. It means that effective protection of those species requires international coordination to both agree conservation objectives and management approaches in Regional Seas and find mechanisms to effectively manage the threats to marine mammals in ABNJ.

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