

Written evidence submitted by The Sea Mammal Research Unit, University of St Andrews (MM0020)

1. Executive Summary

- The **Sea Mammal Research Unit (SMRU)** at the University of St Andrews has been responsible for providing formal advice to the UK Government on scientific matters relating to the conservation and management of seal populations since 1978. SMRU also frequently advises Government agencies and Statutory National Conservation Bodies regarding cetaceans (whales, dolphins and porpoise) and seals.
- Despite their charisma and public appeal, cetaceans and pinnipeds are difficult and expensive to study and still poorly understood, and poorly protected, especially in offshore areas and in the global south. Globally a quarter of all cetaceans and a fifth of all pinnipeds are listed by the IUCN Red List as **threatened with extinction**.
- Globally, the primary threat to marine mammals in almost all areas is **bycatch in fishing gear**. Other threats include ship strikes, contaminants, overfishing, climate change, underwater noise, water-borne plastics, and coastal development.

For the UK government to effectively manage marine mammals in UK waters and elsewhere it is essential to have basic population and mortality data to underpin informed management actions. This means ensuring that in UK waters there is:

1. Regular, long-term monitoring of both seals and cetaceans so that **distribution and abundance of each species** is well documented, and changes can be identified in a timely manner.
2. Regular monitoring of marine mammal strandings and fisheries bycatch so that data on **marine mammal mortality** rates and causes is available, allowing changes over time to be identified in a timely manner.
3. Research into the **drivers of population change** so that appropriate management actions can be taken.

Considering the above SMRU Recommends the following actions:

- Ensure sufficient resources and governance for **long term monitoring** to understand the status of cetaceans in UK waters. Long-term monitoring of distribution, abundance and mortality will allow us to understand how cetacean populations are changing and how they are impacted by anthropogenic activities, especially fisheries bycatch and climate change, and to respond if substantial declines are reported. It is essential that responsibility for a SCANS programme is assumed by the governments, rather than successive surveys being driven “bottom-up” by the scientific community, as has happened hitherto.
- UK seal populations are relatively well monitored. It is essential that resources are committed to **continue this level of monitoring** and to adequately support the infrastructure and expertise required for monitoring and to investigate and understand drivers of change to provide the

required **information to underpin management**.

- **Fisheries bycatch** is the greatest threat to marine mammals and many other marine megafauna species. There is no concerted focussed global effort to address this problem. There is an urgent need for the UK to take the lead in:
 - 1) research to understand how and why bycatch entanglement occurs;
 - 2) to develop more targeted and comprehensive bycatch monitoring of multiple fisheries; and
 - 3) to develop and test mitigation measures to reduce bycatch in a variety of fisheries.
- To protect and promote the conservation of marine mammals internationally the UK should **invest in the expertise** to ensure the UK can fulfil its obligations under existing international agreements such as IWC, ICES and ASCOBANS. Many species in areas of low income are very poorly protected and will require assistance from countries such as the UK to protect the most vulnerable and threatened species. The UK can therefore ensure that it aids groups and organisations involved in conservation in regions and for species of greatest concern.
- The UK has the potential, and the responsibility, to provide funding and expertise in monitoring and protecting marine mammals in the marine waters of its **Overseas Territories**. These Territories encompass some important marine areas of high biodiversity, the marine mammal populations are often extremely poorly known, and challenges of marine governance often result in weak management.

2. Sea Mammal Research Unit, University of St Andrews

1. The [Sea Mammal Research Unit \(SMRU\)](#) was established in 1978 and is a world leading academic and applied research group focussing on the study of marine mammals and their environment. Its staff and students carry out a range of fundamental and applied studies into the biology, ecology, physiology and behaviour of marine mammals throughout the world. It has led a large amount of work evaluating cetacean populations around the UK and wider EU waters, as well as monitoring and evaluating cetacean bycatch in UK fisheries. With over 40 staff and students, SMRU represents a formidable concentration of expertise and talent in the field of marine mammalogy.
2. SMRU receives funding from the Natural Environment Research Council under the National Capability (National Public Good) programme to provide scientific advice on matters relating to the management of UK seal populations. SMRU also receives funding from the Scottish Government under the Marine Mammal Scientific Support programme (MMSS). This funding enables SMRU to carry out responsive research into emerging issues of policy concern in Scotland.

3. Evidence

3.1 What is the status of marine mammal populations?

Global Status of Marine Mammals

3. There are currently 92 recognised species of cetacean (whales, dolphins and porpoises) and 35 species of pinniped (fur seals, sea lions, walrus, and true seals) (Committee on Taxonomy 2021). Marine mammals occur in all oceans and seas. Despite their charisma and appeal to the public, cetaceans are challenging and expensive to study as they occur far from land and spend most of their lives underwater, and they are extremely poorly known in the open ocean and in marine waters in the global south.
4. The number of species that are recognised changes frequently. New information generated by scientists leads to new species and subspecies being identified. In the last few years, a new species of baleen whale (Rice's whale), a new river dolphin (Indus River dolphin) and a new beaked whale (Ramari's beaked whale) were recognised illustrating how there is still a large amount about marine mammals that we do not yet understand.
5. Whales, dolphins and porpoises: Globally, one in every four (26%, n=24) cetaceans are listed as threatened on the IUCN Red List of Threatened Species (iucnredlist.org). Threatened categories are Critically Endangered, Endangered, or Vulnerable and mean that the species faces a high risk of extinction in the wild. The Yangtze River dolphin was declared the first cetacean to go extinct in 2006, and the Vaquita porpoise found only in Mexico is expected to be extinct very soon. The most threatened species groups are: 1) river dolphins, 2) coastal dolphins, especially those that occur along the coasts of Asia and Africa, and 3) some baleen whales that have not recovered from the devastating effects of industrial whaling (Table 1).
6. Pinnipeds: Globally over one fifth (n=7) of the 35 recognised pinniped species are considered to be Endangered on the IUCN Red List (Table 2). Two species, the Caribbean monk seal and the Japanese sea lion were hunted to extinction.

Table 1 - The most globally threatened cetaceans: Five Critically Endangered (CR) species and twelve Endangered (EN) species

Globally Critically Endangered and Endangered Cetacean Species	Red List Category	Country / Ocean of Occurrence
Baleen Whales		
North Atlantic right whale (<i>Eubalaena glacialis</i>)	CR	USA/Canada, Western Atlantic
Rice's whale (<i>Balaenoptera ricei</i>)	CR	USA, Gulf of Mexico
Sei whale (<i>Balaenoptera borealis</i>)	EN	Global
Blue whale (<i>Balaenoptera musculus</i>)	EN	Global
North Pacific right whale (<i>Eubalaena japonica</i>)	EN	North Pacific Ocean
River dolphins		
Yangtze River dolphin (<i>Lipotes vexillifer</i>)	CR, presumed Extinct	China, Yangtze River
Ganges River dolphin (<i>Platanista gangetica</i>)	EN	India, Bangladesh, Nepal
Indus River dolphin (<i>Platanista minor</i>)	EN	Pakistan, Indus River
Amazon River dolphin or boto (<i>Inia geoffrensis</i>)	EN	Amazon River Basin, South America
Tucuxi (<i>Sotalia fluviatilis</i>)	EN	Amazon River Basin, South America
Coastal dolphins / porpoises		
Vaquita (<i>Phocoena sinus</i>)	CR	Mexico, Inner Gulf of California
Atlantic humpback dolphin (<i>Sousa teuszii</i>)	CR	West Africa
Hector's dolphin (<i>Cephalorhynchus hectori</i>)	EN	New Zealand
Indian Ocean humpback dolphin (<i>Sousa plumbea</i>)	EN	Western Indian Ocean
Irrawaddy dolphin (<i>Orcaella brevirostris</i>)	EN	SE Asia
Narrow-ridged finless porpoise (<i>Neophocaena asiaeorientalis</i>)	EN	China, Japan, Korea
Beaked whale		
Perrin's beaked whale (<i>Mesoplodon perrini</i>)	EN	California, USA

Table 2 - The most globally endangered pinnipeds: seven endangered (EN) species

Globally Endangered Pinniped Species	Red List Category	Country / Ocean of Occurrence
True Seals		
Caspian Seal (<i>Pusa caspica</i>)	EN	Caspian Sea
Hawaiian Monk Seal (<i>Neomanachus schauinslandi</i>)	EN	Hawaiian Islands, USA
Mediterranean Monk Seal (<i>Monachus monachus</i>)	EN	East Mediterranean, west Africa
Eared Seals		
Australian Sea Lion (<i>Neophoca cinerea</i>)	EN	South Australia
Galapagos Sea Lion (<i>Zalophus wollebaeki</i>)	EN	Galapagos and Ecuador
Galapagos Fur Seal (<i>Arctocephalus galapagoensis</i>)	EN	Galapagos, Ecuador
New Zealand Sea Lion (<i>Phocarctos hookeri</i>)	EN	New Zealand

UK Waters

Cetaceans:

7. Except for coastal populations of bottlenose dolphins, all cetaceans found in UK waters are part of larger populations extending into European waters and the wider Atlantic Ocean. This poses a challenge for national level monitoring and management.
8. Large-scale aerial and ship surveys of cetaceans (known as SCANS) were carried out in 1994, 2005 and 2016 to estimate abundance and map summer distribution of cetaceans in European Atlantic waters (Hammond et al. 2021). Another survey will take place this year (2022). The 2016 SCANS survey estimated total abundance of harbour porpoise in European waters at 466,600 (95% confidence interval: 345,300-630,400). There was no evidence for any change in abundance in the North Sea since 1994 or off the West coast of Scotland since 2005. Estimated harbour porpoise abundance was lower in the Celtic and Irish Sea in 2016 than previous years; such a decrease could be a result of environmental change or movement into other areas. In the North Sea, a shift in the distribution of harbour porpoise from north to south was observed between 1994 and 2005, and this pattern was maintained in 2016. A progressive spread of sightings into most of the Channel over these surveys indicates an expansion of harbour porpoise distribution across the Channel. There was no evidence for a change in abundance in the North Sea of white-beaked dolphins or minke whales.
9. The small bottlenose dolphin population that inhabits the east coast of Scotland has been intensively studied by SMRU and colleagues at the University of Aberdeen since 1989. The current best estimate of population size is 224 (95% confidence interval: 214-234) averaged over the period 2015-2019 (Arso-Civil et al., 2021). This population expanded its range during the late 1990s from the Moray Firth, southwards along the east coast of Scotland. Between 2009 and 2019, the population was distributed approximately 50:50 between the Moray Firth and the Tay Estuary and adjacent waters in summer. In recent years, the population has been expanding its range southwards and animals are frequently seen south to the Humber Estuary, occasionally off southern England and even in Danish and Dutch coastal waters (Hoekendijk et al., 2021).
10. Apart from these species, there is currently insufficient information to assess the status of other cetacean species that occur around the UK. This might be possible after the summer 2022 SCANS survey.

Seals:

11. The major grey seal breeding colonies around Scotland and along the English east coast are intensively monitored by SMRU with biennial surveys of the numbers of pups produced. The smaller colonies in Wales and southwest England are less frequently monitored. The UK grey seal population in 2020 was estimated to be approximately 140,000 seals producing 68,000 pups per year (SCOS, 2021).
12. The UK grey seal population has been increasing since regular surveys began in the 1960s, but the overall rate of increase around Scotland has declined over the past decade and growth is now limited to the North Sea. Colonies along the UK east coast are still increasing rapidly. The status of the southwest UK population is not well known but is thought to be stable or increasing. The UK holds approximately 35% of the world population of grey seals, and the other major populations in eastern Canada and the Baltic are also increasing.

13. The UK harbour seal population was estimated to be approximately 44,000 in 2020 (SCOS, 2021). Populations along the English and Scottish east coasts are surveyed annually and those around the North and West of Scotland and Northern Ireland are surveyed roughly every five years. Overall, the UK harbour seal population has increased since the late 2000s and has returned to maximum levels seen in the late 1990s, prior to the reduction due to a phocine distemper outbreak in 2002. However, there are significant differences between regions with increases in the west of Scotland and major declines in the Northern Isles, eastern Scotland, and a recent dramatic fall in numbers of the English east coast population.

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

Whaling

14. It is believed that almost 3 million whales were killed during commercial whaling activities in the 70 years between 1910 and 1980. Most species were reduced to such low numbers that hunting became impractical. The International Whaling Commission (IWC) moratorium on commercial whaling came into effect in 1986 and at that point the majority of whaling ceased. Many whale populations are now recovering.
15. In the North Atlantic, Norway continues to catch minke whales under objection to the IWC moratorium on commercial whaling implemented in 1986. Iceland also has a reservation to the moratorium but has not taken any whales since 2018. In 2019, Japan left the IWC signalling the end of its research whaling programmes in the North Pacific and Antarctic. Japan continues to catch whales in the North Pacific but is no longer bound by IWC regulations (Hammond et al. 2017).
16. Indigenous whaling of several species of large whale continues to be managed by the IWC including: bowhead whales and gray whales in North Pacific; minke, fin, humpback and bowhead whales off Greenland; and humpback whales off St Vincent and the Grenadines. Sperm whales are also hunted in Indonesia.

Dolphin hunting / Aquatic wildmeat

17. Intentional targeted hunting of dolphins by local communities occurs across most of the world, especially in the tropics and subtropics. Animals are captured (or sometimes taken opportunistically), and the meat and/oil are consumed for local subsistence or used for traditional purposes. The consumption of aquatic animals is widespread, in some places has been sustained for millennia, and can be an important source of nutrition, income, and cultural identity to communities. It has been estimated that worldwide, as many as 100,000 small cetaceans from 56 species are killed annually for human consumption or to use as bait in fisheries that themselves often target over-exploited species, such as sharks. Cetaceans are known to be widely targeted in the Solomon Islands, St Vincent and the Grenadines, Peru, Ghana, Indonesia and Sri Lanka as well as many other places (Ingram et al. 2022). The drive hunts of pilot whales and dolphins in the Faroe Islands and in Japan are well known and frequently attract public attention and criticism, but in fact the human impacts on many coastal and riverine cetacean species in many other parts of the world is far greater.

Seal hunting

18. Commercial markets for meat, oil and sealskins fuelled commercial hunting of seals on a large scale from the late 18th century through the early 20th century. The fact that seals haul out on land make them much easier to kill than whales; clubs and harpoons were used historically but current

hunting is by shooting. Seal meat and fat remain important in the diet of many polar communities, and the skins are still used locally. Several seal species are hunted extensively, including:

- Walrus: several thousands are killed annually by native people around the Arctic.
- Ringed seals: >100,000 seals are taken each by native hunters in the Arctic.
- Harp seals: still hunted commercially in Canada and Greenland. Takes have reduced over the past 20 years due to lack of demand and changes in sea ice conditions, but numbers killed are still substantial, e.g. 155,000 harp seals were taken in the NW Atlantic in 2019.
- Hooded seals: large scale commercial hunting has ceased but several thousand are killed in Greenland each year by native hunters.
- Caspian seals: populations were drastically reduced by the Soviet Union during 20th century. Kazakhstan has discontinued but Russia continues a commercial hunt of pups (scale unknown).
- Cape fur seals: still hunted commercially in Namibia (for skins of pups and genitals of males) with 2019 quota of 60,000 pups and 8,000 adult males.

19. Commercial hunting of harbour seal pups for their skins continued in the UK, in The Wash and Shetland, until the early 1970s. Large scale culling of grey seal pups and breeding females was carried out sporadically until the late 1970s in Orkney, the Hebrides, and the Farne Islands. In the past 30 years, fisheries and aquaculture protection were the main reasons for seal shooting and unknown numbers of both species were taken under the so-called netsman's defence provision of the Conservation of Seals Act, and under licence to protect fisheries and aquaculture in Scotland. However, the deliberate killing of seals has been effectively banned throughout the UK since 2021. In Scotland, licences can only be granted to shoot seals in order to protect or conserve endangered populations of other species, e.g., wild salmon.
20. As of 2020, grey and/or harbour seals were still being killed in Iceland, Norway, the Faeroes, Sweden, and Finland either for protection of fisheries or as game animals.

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

21. Much has been written about human impacts on marine mammals and there is a range of anthropogenic activities that can harm individuals and potentially have an impact on populations.

Fisheries Bycatch/Entanglement

22. Accidental fisheries entanglement is the greatest threat to most marine mammals globally (with more than 650,000 marine mammals killed each year, Read et al. 2006). Among broad fishing gear types, gillnets induce high bycatch mortality and thus represent a particular concern. Most of the species highlighted in section 1 as endangered are declining due to accidental entanglement in fishing gear. Reducing the risk to marine mammals from fisheries requires a multi-pronged approach coupling technical solutions with socio-economic and political interventions (Jog et al. 2022).

Noise

23. Underwater noise generated by vessels, pile driving, underwater explosions, acoustic deterrent devices, sonar including from military vessels, and seismic surveys can have physical and

behavioural effects on marine mammals including injury, hearing impairment, disturbance, displacement, and masking of important sounds disrupting communication, navigation, and foraging, sometimes leading to mortality. In the UK, the focus has been on the effect of pile driving during the expansion of the offshore windfarm industry, the use of acoustic deterrents in aquaculture, seismic exploration for new oil and gas fields and the effects of military activity (naval sonar and explosions).

Ship Traffic

24. Ship strike is a leading cause of death and stranding in some species of large whale. In some places (e.g., US east coast) shipping lanes have been moved to avoid areas that are important for whales to reduce the likelihood of strikes. Reducing vessel speed decreases the chance of strikes and reduces underwater noise (Cates et al. 2017).

Contaminants/pollution

25. Marine mammals can accumulate high contaminant burdens in their blubber due to the bioaccumulation of pollutants (biomagnified up the food chain). Toothed whales are at greater risk than baleen whales, due to their higher trophic level. Persistent organic pollutants (POPs) such as polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs) and polybrominated diphenyl ethers (PBDEs) are a particular concern. High concentrations of PCBs have been found in some European cetaceans (Jepson et al. 2016). Heavy metals such as mercury, and emerging compounds such as flame retardants and plasticisers are also of potential concern.

Climate change

26. How marine mammals respond to changes in their environment depends on their adaptability, and the temporal and spatial scale of perturbation (Learmonth et al. 2006, Gulland et al. 2022). Climate change may impact marine mammals through biotic factors (e.g., changes in food webs, changes in body condition) or abiotic factors (e.g., changes in sea temperature and loss of sea ice). It may also increase exposure to predation, pathogens, toxins, and risks associated with human activities, which potentially affect reproductive success and survival. Climate change will clearly have a negative impact on some species (e.g., some ice-dependent species), but may have a positive impact on others.

3.4 How effective are the global protections of marine mammals?

27. There are few overarching global mechanisms that protect marine mammals, but most countries administer their own protections individually. In international waters and areas beyond national jurisdiction (ABNJ), which comprise 40% of the ocean, there are no protections in place for small cetaceans. Even at the national level, in most countries there are little or no activities to evaluate marine mammal populations, manage them or reduce human impacts on them. In the absence of a global regulatory body, efforts to tackle hunting of small cetaceans are being handled on an ad hoc basis by other international bodies, such as the UN Convention on the Conservation of Migratory Species (CMS). Generally, the global protections for small cetaceans are inadequate, as exemplified by the substantial number of species or populations that are declining and/or threatened with extinction.
28. A few successful examples of global protections are:

- The **International Whaling Commission** under the **International Convention for the Regulation of Whaling** is the primary global framework that has successfully provided protection to whales, but its remit is limited to historically hunted large whales and does not cover other marine mammals.
- The 1989 **United Nations moratorium on high seas large-scale driftnets** and worldwide ban in 1992 was extremely effective in removing one of the most destructive fishing gears from the ocean. Prior to this ban, fisheries bycatch of cetaceans was even higher than it is now.
- The **Marine Mammal Protected Area Task Force of IUCN** (www.marinemammalhabitat.org) is systematically identifying the most important habitats for marine mammals globally and compiling an online e-Atlas and database of the key habitats that require protection.
- The **US Marine Mammal Protection Act of 1972** is the most rigorous national legislation covering marine mammals. This established a national policy to prevent marine mammals from declining beyond the point at which they cease to be significant functioning elements of the ecosystems of which they are a part. Its implementation requires systematic gathering of baseline data on abundance and mortality rates of each marine mammal population in US waters. Human induced mortality is evaluated and must be addressed if it is found to be unsustainable. Recent fisheries import regulations mean that seafood from overseas cannot be imported into the USA without the source country providing evidence that the provisions of the US MMPA were not violated. This has incentivised countries to monitor marine mammals and bycatch rates in their national waters to avoid being prevented from exporting fish to the USA.

29. Other global and regional frameworks also provide protection for marine mammals. These include CITES and CMS, both of which list many species of marine mammal on appendices that confer a high level of protection. Two sister regional agreements under CMS, ASCOBANS and ACCOBAMS, are not legally binding but encourage parties to take measures to protect cetaceans. The Habitats Directive and Marine Strategy Framework Directive are legally binding directives that require EU Member States to report on the status of marine mammal populations and on measures taken to protect them as part of the aims of achieving Favourable Conservation Status and Good Environmental Status, respectively. The extent to which these frameworks have contributed to the protection of marine mammals is not clear.

3.5 How can the UK better protect marine mammals?

Improved funding and commitment to long-term maintenance of marine mammal monitoring programmes and research into the drivers of population change

30. SMRU echoes the findings of the UK Healthy and Biologically Diverse Seas Evidence Group's recent review of biodiversity monitoring in the UK, that a lack of commitment to sufficient levels of long-term funding inhibits efficient and strategic planning of resources. Many UK biodiversity monitoring programmes are experiencing yearly erosion and/or variations in funding which is often confirmed at short notice for the year ahead, making it difficult to commit to long-term strategic plans, maintain a stable infrastructure, develop and retain expertise required to conduct this monitoring and research, and analyse and interpret the resulting data. This fundamental weakness leads to inefficiency in delivery and undermines the ability to provide the critical information needed for the government to fulfil national and international obligations.

Specific recommendations are outlined below:

Seal surveys

31. As noted above, UK seal populations are well monitored. It is essential that resources are committed to continue this level of monitoring and to adequately support the infrastructure and expertise required. This monitoring has highlighted some recent significant declines in regional seal populations, and it is therefore crucial to ensure that resources are in place to investigate the drivers of such declines and provide the required information to inform management.

Cetacean surveys (e.g., SCANS)

32. Regular updating of robust information on cetacean abundance at an appropriately large spatial scale is essential to provide a basis for understanding the status of cetacean populations in UK waters and how they are impacted by anthropogenic activities, especially fisheries bycatch. For cetaceans, at present, this information comes primarily from the series of SCANS surveys, which are integral to cetacean assessments undertaken under the auspices of OSPAR and which inform MSFD and UK Marine Strategy assessments of Good Environmental Status. It is essential that responsibility for a SCANS programme is assumed by governments, rather than successive surveys being driven “bottom-up” by the scientific community, as has happened hitherto. Part of the current SCANS project is to consider and recommend a governance structure for future SCANS surveys, to report in 2023. The 2022 SCANS survey follows the previous one by 6 years to match with Europe-wide reporting schedules; this periodicity needs to continue.

Passive acoustic monitoring

33. Passive acoustic monitoring (PAM) is useful for monitoring the presence of acoustically active species. Submerged microphones allow recording of long time-series of sounds and allow determination of species presence (e.g., Stanistreet et al. 2017). This can therefore give a much finer picture than the broadscale snapshot provided by visual surveys such as SCANS. Networks of monitoring stations provide long-term data, but analysis of these records is complex and requires specific expertise. Limited parts of the UK already have this in place (e.g. the East Coast of Scotland ECOMMAS programme, <http://marine.gov.scot/information/east-coast-marine-mammal-acoustic-study-ecommas>), but investment and further development of analytical capability is required. Expansion of this programme is required to provide comprehensive coverage and allow for a larger proportion of UK marine mammals to be monitored.

Monitoring strandings

34. The UK has an excellent long-term record of monitoring marine mammal strandings around our coasts, and continuation of this is essential to understand changes in species distribution and causes of death (Williamson et al. 2021).

Monitoring and reducing bycatch

35. There is an urgent need for the UK to invest in 1) research to understand how and why bycatch entanglement occurs, 2) development of more targeted and comprehensive bycatch monitoring, and 3) development of mitigation measures to reduce bycatch. We urge publication of the UK Bycatch Mitigation Initiative as soon as possible. In addition, although it is recognised that reducing bycatch to as low as zero as possible is the ultimate goal, the current objective stated in the UK Fisheries Act that “bycatch of marine mammals be reduced to zero,” is unrealistic. A more nuanced

approach of implementing bycatch thresholds may be a more practical way to manage the marine mammal bycatch problem.

3.6 What role can the UK Government play to protect and promote the conservation of marine mammals internationally?

Investment in expertise

36. Long term investment in science and scientists with skills and expertise required is critical for providing evidence-based advice internationally. For example, assessing conservation status, monitoring and mitigation options to help in the global protection of endangered species. We need to ensure UK provision of leadership in research assessment of conservation status, and provision of advice and assistance in monitoring and mitigation options to help those involved in conservation in regions and for species of greatest concern.

Funding to underpin existing agreements

37. Support is needed in terms of required resources to ensure the UK's obligations under existing agreements such as IWC, ICES and ASCOBANS are fulfilled. Typically, funding for involvement in providing scientific advice and membership of scientific committees and advisory boards from the government is extremely limited.

Global multi-national and inter-agency efforts

38. There has been systematic failure to protect some small cetacean species (e.g., the baiji and now the vaquita). These species are often in regions deeply embroiled in political and social issues or in areas of conflict (currently the Black Sea). Species in these regions are still poorly protected (e.g., killed for bushmeat, fishery interactions) and will require continuous and committed support from countries such as the UK to assist them in protecting the most vulnerable and threatened species.

Extend meaningful protection to marine mammals in British Overseas Territories

39. Through multiple activities (e.g., international trade, transportation of goods, fishing, and naval operations) the UK impacts marine environments outside its borders. The UK has the potential, and the responsibility, to provide funding and expertise in monitoring and protecting marine mammals in its Overseas Territories. These Territories encompass important marine areas of high biodiversity, the marine mammal populations are often extremely poorly known, and challenges of marine governance result in weak management. Investment and support would be extremely valuable in knowledge sharing, the building of local capacity and maintaining healthy marine mammal populations in areas outside UK borders. Other nations, notably France, have undertaken marine mammal monitoring in all their overseas territories in (the Indian Ocean, the Caribbean and French Polynesia) (Laran et al. 2017).

Consider the use of trade policy to encourage better marine mammal conservation practice

40. As noted in paragraph 28, the US has recently revised fisheries import regulations by restricting imports from countries which can provide evidence that the provisions of the US MMPA were not violated. This is one example of the type of approach that could be considered to incentivise countries to monitor and protect marine mammals.

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