Common dolphin *Delphinus delphis*

Biodiversity Action Plan

Background

The common dolphin (*Delphinus delphis*) is the smallest delphinid species found in Manx waters. It is monitored by the voluntarily run charity Manx Whale and Dolphin Watch (MWDW) who have collected data on this and other cetaceans since 2006.

Description

The common dolphin is a small odontocete around 2.5m in length with a distinctive yellow and grey hourglass pattern along the flank contrasting a dark dorsal and white ventral colour. They are a fast, active, and gregarious species and will often bow ride boats. Often seen in mid-sized pods of up to 50, they can form large pods of 100-200 animals.

British Isles Distribution

The common dolphin is found on the continental shelf waters around western Britain and Ireland, the western approaches of the Channel and into the Irish Sea.

Isle of Man Distribution

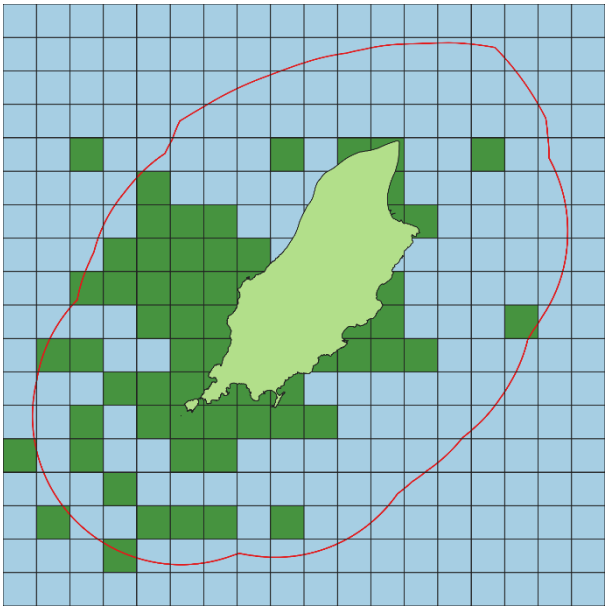

Figure 1: Common dolphin sighting presence from boat-based sightings and public sightings reported from 2006-2022 in Manx waters.

Through the surveys of MWDW since 2006 it has been established that the common dolphin is observed every year in Manx waters, typically a few miles offshore of the west or south coast. Common dolphins can be seen in large pods of up to 100-200 animals and are usually seen in the summer months.

There is no robust population estimate for common dolphins in Manx waters. MWDW currently holds 21 well-marked individuals, 1 right, and 1 left in a photo-identification catalogue. Photo-identification is much more difficult for common dolphins due to their speed and large group sizes.

Common dolphins were not observed in the Irish Sea during the SCANS-III survey. Anecdotally there is no sign of a dramatic change in common dolphin numbers using Manx waters each year though in the last few years there have been sightings of particularly large pods (~200) with the presence of young calves.

Habitat Range and Site Fidelity

Common dolphins are fast and highly mobile and morphological and genetic assessments suggest that there is only one population using the north east Atlantic from Scotland to Portugal with strong gene flow across the region (Murphy et al., 2013). There is no data on habitat range for individual dolphins in the north east Atlantic. It is likely there is highly fluid movement of the animals which appear in Manx

waters in the summer months, and there is an overall low abundance of the species in the Irish Sea through the summer.

Ecology - Diet

Common dolphin stomach contents from English channel strandings on the Normandy coast showed whiting (*Merlangus merlangus*), pout (*Trisopterus luscus*), horse mackerel (*Trachurus trachurus*), mackerel (*Scomber scombrus*) and smaller numbers of cephalopods (*Eledone cirrhosa, Sepiola atlantica*) (Pierrepont et al., 2005). Strandings from Ireland showed herring (*Clupea harengus*) and sprat (Sprattus sprattus) were also important (Brophy et al., 2009).

Commuting

As odontocetes common dolphins don't undertake regular long-distance migrations. However, as it is believed a single population uses the area of the north east Atlantic from Scotland to Portugal, there is likely to be movement across this range. Common dolphins move in and out of Manx waters with presence in the summer months and absence in the winter.

Breeding

Common dolphins have a gestation of 11-12 months and will typically give birth in the summer months. Large pods of close to 200 common dolphins have been observed in Manx waters in the summer with a number of young calves. Calves have been observed suckling and mating has been observed within these large pods suggesting some importance for Manx waters in this regard.

Legal protection

Under international conventions the common dolphin is listed on Appendix II of CITES and Appendix II of the Bern Convention. It is also covered by the Bonn Convention under the terms of the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS) which was extended to the Isle of Man in 2017.

Common dolphin, and all cetaceans, are protected by Manx law under Schedule 5 of the Manx Wildlife Act through which it is an offence to intentionally or recklessly kill, injure, take, or disturb any scheduled species.

Threats

Current factors affecting this species may include:

Physical Disturbance

By-catch is a significant problem for common dolphins with a large proportion of stranded animals in the north east Atlantic showing evidence of incidental capture, or by-catch (Murphy et al., 2013). This may not be a significant problem in Manx waters due to the types of fisheries here but will affect the wider common dolphin population. The Bay of Biscay in particular poses significant by-catch risk for this species.

Acoustic Disturbance

Common dolphins, as all cetaceans, will be sensitive to underwater noise which has the potential to cause injury or disturbance. This can lead to displacement from foraging areas, reduced foraging success, and increased energy expenditure. They are likely to be susceptible to loud noises caused by both military and seismic activity as well as activities such as pile driving. Marine mammals can also be affected by temporary or permanent auditory threshold shifts on exposure to loud noise and masking of biologically important sounds (prey and conspecifics) due to chronic noise such a ship traffic. Small

odontocetes have been seen to show lateral spatial avoidance to seismic airguns (Stone and Tasker, 2006).

Chemical Pollution

The high trophic level of common dolphins exposes them to the bioaccumulative effects of endocrine disrupting chemicals such as PCBs as well as heavy metals such as cadmium and mercury. 73% of common dolphins tested from strandings on the southwest coast of the UK were found to have PCB levels above toxicity threshold values (Law et al., 2013).

Habitat Degradation

Any effects of habitat degradation are likely to be felt through consequent changes to prey range, availability, and quality.

Prey Changes

As a highly mobile and active species common dolphins likely live an energetically expensive life. The species has been found to preferentially select high-energy prey and disregard low-energy prey even when they are abundant (Spitz et al., 2010). A decline in suitable prey may cause altered distribution for the common dolphin or reduced body condition and a decline in reproductive output.

Climate Change

Climate change may not directly affect common dolphin distribution around the Isle of Man, but any effects will likely be felt through consequent changes in prey distribution and abundance.

Reason for BAP

As top marine predators cetaceans are good ecosystem indicators. Though only five cetacean species regularly use Manx waters there are aspects of their ecology which are poorly understood and they face numerous threats.

Aims

The aim of this BAP is to ensure the ongoing monitoring of common dolphin as an internationally protected species and as part of the Manx cetacean community with ambitions to improve knowledge gaps wherever possible.

Linked BAPS

It is advised that this action plan is taken forward in conjunction with species action plans for other marine megafauna species:

Risso's dolphin – *Grampus griseus*

Minke whale – *Balaenoptera acutorostrata*

Bottlenose dolphin – *Tursiops truncatus*

Harbour porpoise – *Phocoena phocoena*

Seals (grouped) – *Halichoerus grypus* and *Phoca vitulina*

Basking shark – *Cetorhinus maximus*

It may also be of relevance to link species action plans for fish species of known prey importance for the common dolphin:

Whiting – *Merlangius merlangus*

Herring – *Clupea harengus*

(Curled octopus - *Eledone cirrhosa*)

Delivery Options	Active	Challenges
Land-based surveys ○ Surveys at locations around the Isle of Man since 2006. Dependent on suitable weather conditions and	Yes	Staff funding

the availability of staff and volunteers with transport to reach sites		
Boat-based surveys ○ Ad-hoc surveys in Manx waters since 2007. Dependent on suitable weather, the availability of a boat skipper and staff and volunteers	Yes	Staff funding Boat fuel funding Boat skipper availability
Public sightings scheme ○ Collation of sightings reported by members of the public into an online database	Yes	Staff funding
Acoustic surveys ○ MWDW does not currently undertake any acoustic surveys in Manx waters but owns a towed-hydrophone to introduce these when possible	No	Staff funding Boat fuel funding Boat skipper availability
Photo-identification study ○ MWDW currently conducts photo-identification of common dolphin and compiles a catalogue for Manx waters (though this is more difficult than for other species)	Partial	Staff funding
Strandings ○ Strandings are monitored on behalf of DEFA by Manx Wildlife Trust (MWT), with data being fed to the Cetacean Stranding Investigation Programme (CSIP) in the UK. Strandings are reported by members of the public to MWDW and MWT and communicated to an MWT managed stranding volunteer network ○ No common dolphins have yet been further sampled due to infrequency of strandings and limited funding	Yes No	Funding for sample testing
Annual review and update of this document	June 2024	

Delivery Plan	
Action	**Lead**
Land-based surveys ○ Ongoing use of the same survey sites to allow continuity of data collection and possible detection of any long-term population changes	MWDW
Boat-based surveys ○ Continuation of ad hoc surveys whenever possible ○ Re-introduction of line-transect surveys throughout Manx territorial waters to generate population estimates	MWDW
Public sightings scheme ○ Continued collection of public sightings to maintain long-term dataset, and increased awareness of species identification and reporting	MWDW
Acoustic surveys	MWDW

○ Introduce towed-hydrophone surveys alongside transect surveys to generate population estimates	
Photo-identification study ○ Continue compilation of Manx catalogue, undertake matching to other British Isles catalogues, and produce a publicly available photo-identification catalogue	MWDW
Strandings ○ Continued monitoring of strandings ○ Sample collection for contaminant analysis and stomach content analysis where possible	MWT/DEFA

References

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