

Promoting Awareness and Recording of Cetaceans in Northern Irish waters



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Overview



- Diversity of cetaceans
- Conservation status
- ISCOPE research contract
- Sightings, strandings, monitoring protocol
- Educational resources
- Northern Ireland Cetacean Review

Diversity of cetaceans



- Encounters traditionally viewed as exceptional events
- Low profile, conservation and designation constrained – lack of data
- Diversity compares favourably to Ireland and UK
- 17 species - 6 frequently recorded
- 24 species in RoI – 28 species in UK
- Most records - Irish Whale and Dolphin Group database
- Transferred to CEDaR

Harbour Porpoise *Phocoena phocoena*



- Occur around whole coast - especially inshore
- Concentrations around Portrush, Strangford, Newcastle

Bottlenose dolphin *Tursiops truncatus*

Glenarm, March 2008



- Similar distribution to porpoises
- More rarely recorded - larger groups

Minke whale *Balaenoptera acutorostrata*

Dundrum Bay, Co. Down, 2005



- Elusive cetacean – hard to track
- Sightings from Belfast Lough, Strangford, St. John's Point

Killer whale *Orcinus orca*

Belfast Lough, 2007



- Recorded occasionally - Copeland Islands
- Usually inshore, singly or in small pods

Historical cetacean records

Blue whale, Magilligan 1907



Conservation Status



- Cetaceans protected by range of legislation and policies
- National, European and international levels
- Politically, NI conservation is part of regional UK approach
- Geographically, much in common with Republic of Ireland



Applicable Legislation and Policy:

- EC Habitats Directive (92/43/EEC) – Annexes II and IV
- Conservation (Natural Habitats, etc.) Amended Regulations 2007
- UK Biodiversity Action Plan

EC Habitats Directive (92/43/EEC)



- All cetaceans listed - Annex IV (strict protection)
- Harbour Porpoise and Bottlenose Dolphin - Annex II (SAC)

EC Habitats Directive

*“For aquatic species which range over wide areas, such sites shall be proposed only where there are **clearly identifiable areas** representing the physical and biological factors essential to their life and reproduction”*

EU Expert Group (2000) - Criteria for Site Selection

- Continuous or regular presence
- Relative abundance
- High ratio of young to adults

- Monitoring is challenging
- Highly mobile - live underwater – difficult to observe
- Live so long – hard to track over periods of time relevant to their survival
- Extremely difficult to establish impacts of environmental stressors (climate change, pollution, ocean noise)
- EC HD defines animal populations within national boundaries.
Fundamental problem for most cetaceans - range widely

Generic Threats



- Generic threats are understood
- Need for basic data to establish whether these are issues in NI

Natural causes



Incidental capture in fishing gear



Marine debris, toxins



Disturbance and collision with boats



ISCOPE research contract

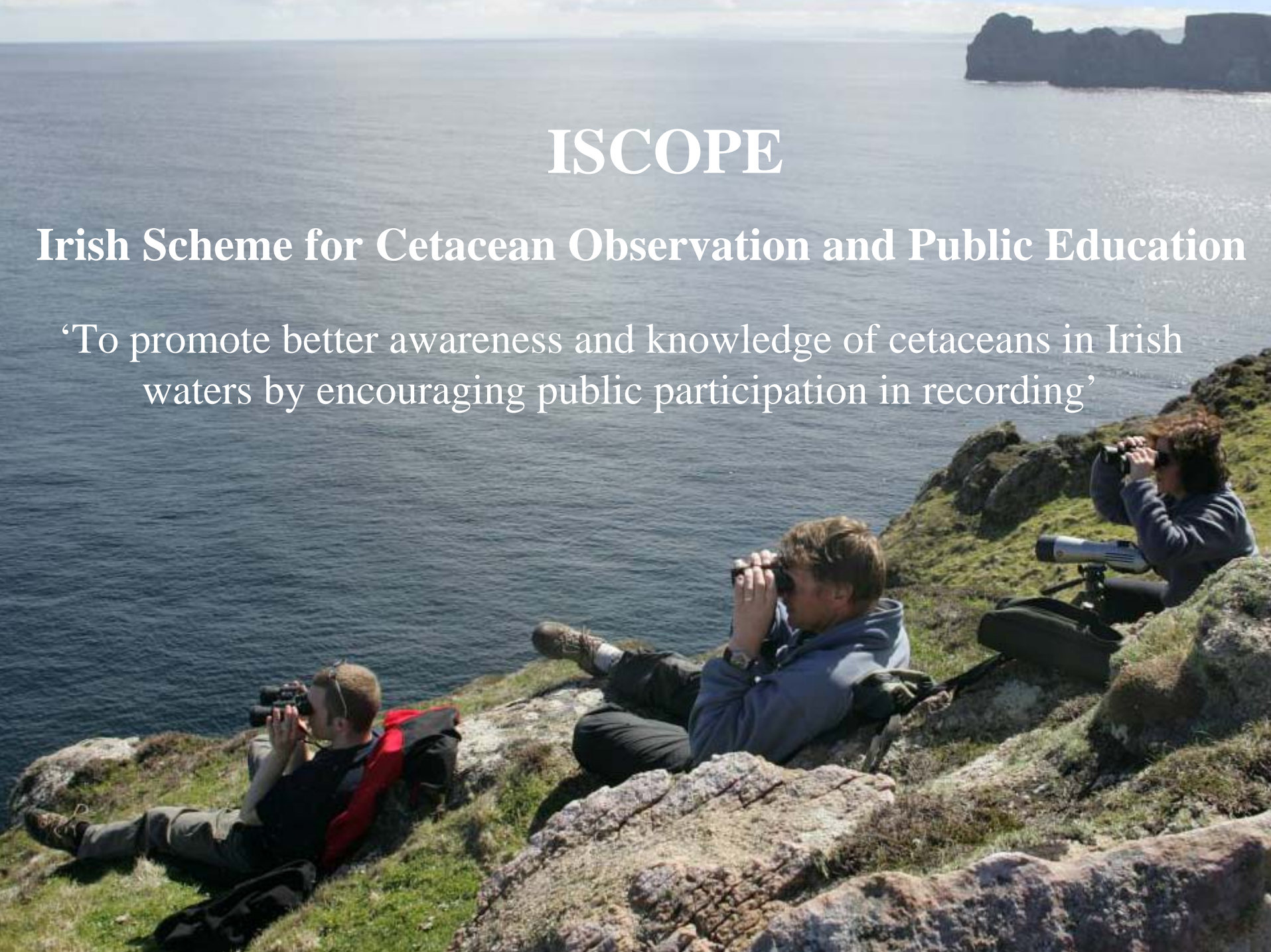


- Monitoring cetaceans and identifying habitats difficult
- Sighting and stranding schemes for this purpose
- Irish Whale and Dolphin Group developed ‘**ISCOPE**’ initiative
- All-Ireland scheme
- Jointly-funded by EHS, NPWS, HC, MI
- Aims to establish baseline information – voluntary recorders

ISCOPE

Irish Scheme for Cetacean Observation and Public Education

‘To promote better awareness and knowledge of cetaceans in Irish waters by encouraging public participation in recording’



ISCOPE objectives:

- Increase awareness of cetaceans in Irish waters
- Encourage greater participation in cetacean recording schemes
- Organize training workshops to improve identification and recording skills
- Carry out quantified effort watches at selected sites
- Exploit “ships of opportunity” to increase seasonal and geographic coverage
- Improve reporting and identification of stranded animals
- Maintain cetacean database

Sightings, strandings, monitoring protocol



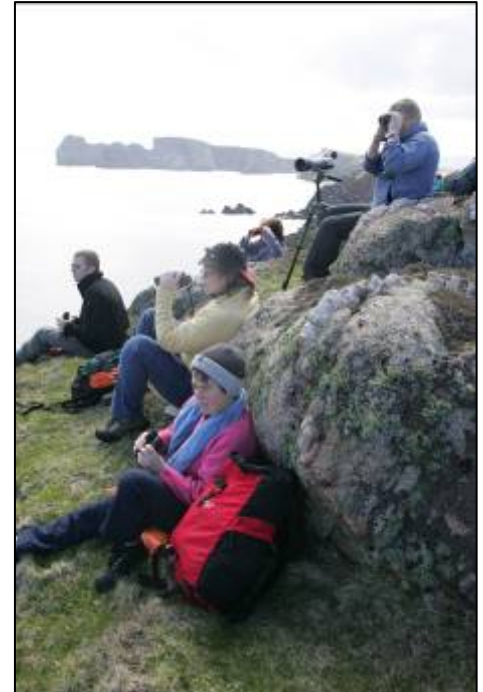
- Sightings scheme (casual and constant effort)
- Stranding scheme
- Protocol for standardised monitoring

Casual Sightings Scheme

- Sightings occurring while engaged in another task
- Reported online at www.iwdg.ie

Constant Effort Sightings Scheme

- Dedicated watches from vantage points
- Shore-based or boat-based
- Amount of effort is quantified
- Relative abundance estimates can be generated
- Useful for identifying ‘hotspots’



Stranding Scheme

- Useful for recording rare species which drift onto coast
- Strandings may not reflect distribution of live cetaceans
- Sick animals may swim from preferred habitats
- Carcasses can drift



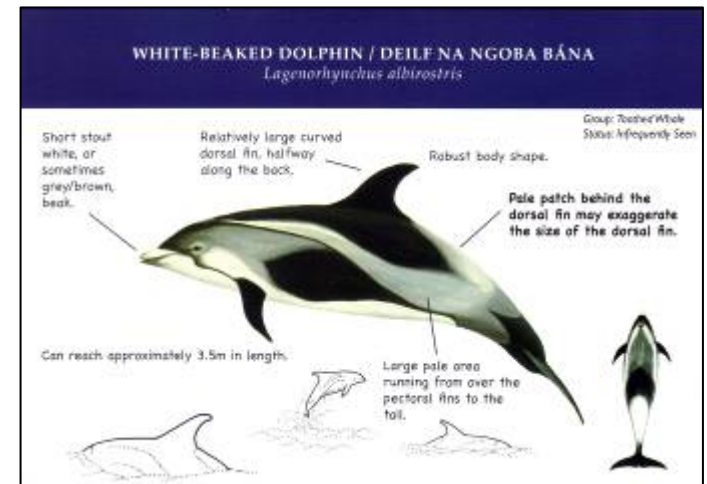
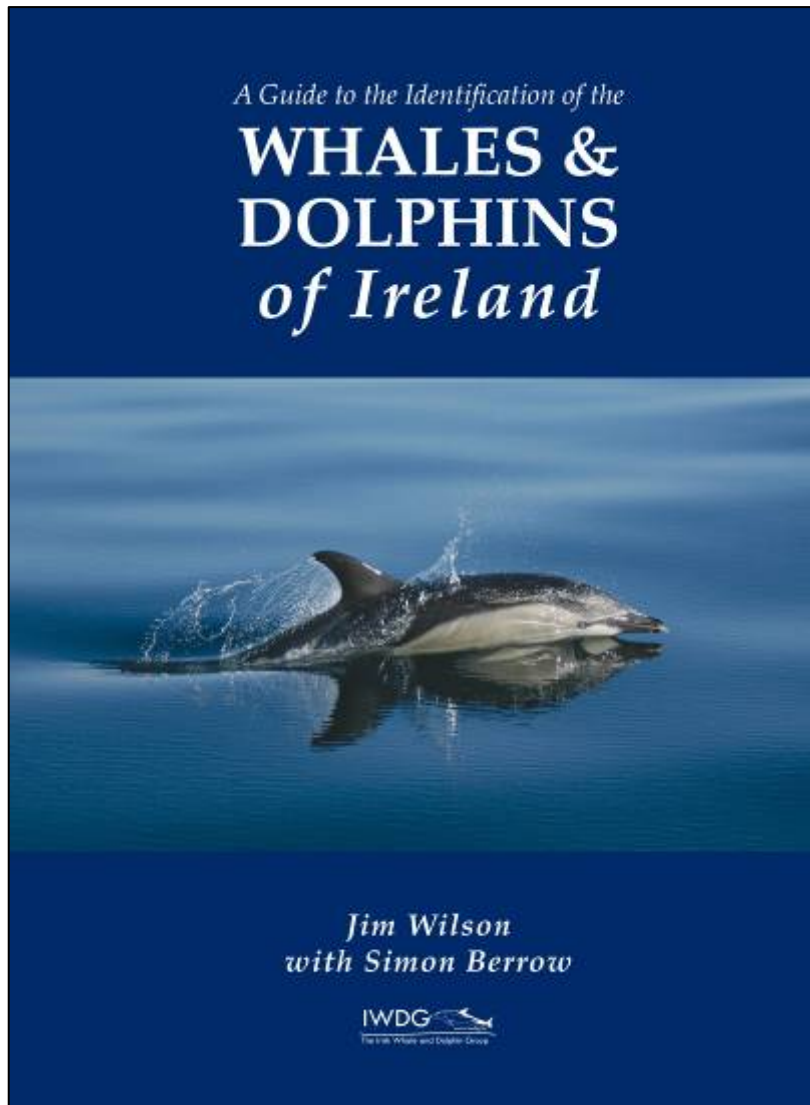
Monitoring Protocol – effort watches

- Standardised methodology for recording cetaceans
- Minimise environmental and personal variables
 - e.g. Watches conducted in sea state 2 or less
 - e.g. Minimum of 6-10 km visibility
 - e.g. Minimum of 100 min duration

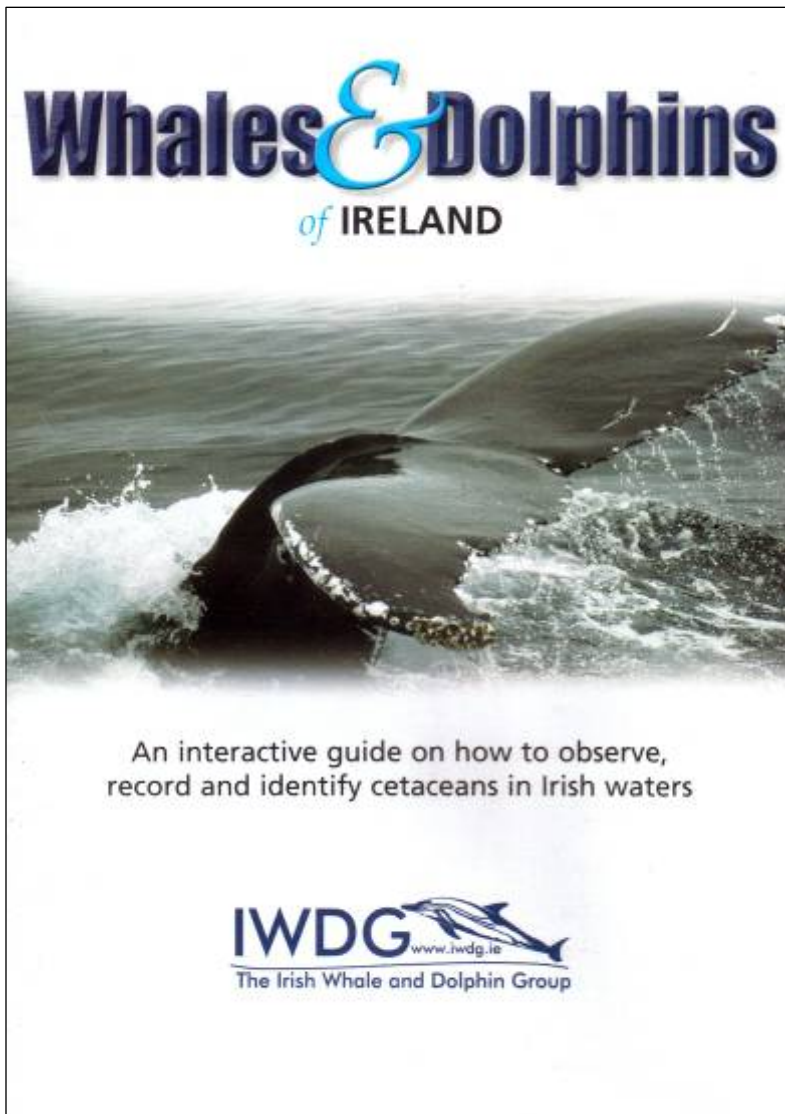
Educational Resources



- Training and education – core elements of ISCOPE
- Strong emphasis on building partnerships
- Supporting biological recorders via resources
- Non-technical background
- Clear, practical, accessible
- Superb tools for raising awareness



- Full colour illustrations
- Key identification features
- Observation techniques
- Maps indicating distribution
- Distributed to NI schools



- Instruction on how, where and when to whale watch
- Species profiles
- Illustrations and film
- Contributing to schemes

BOAT USER'S GUIDE TO Irish Whales & Dolphins

Illustrations by Jim Wilson



Human to same scale



Fin whale *Balaenoptera physalus*
Adult length 18 to 22 metres



Humpback whale *Megaptera novaeangliae*
Adult length 11.5 to 15 metres



Minke whale *Balaenoptera acutorostrata*
Adult length 7 to 10 metres



Harbour porpoise *Phocoena phocoena*
Adult length 1.4-1.9 metres



Common dolphin *Delphinus delphis*
Adult length 1.7 to 2.4 metres



Bottlenose dolphin *Tursiops truncatus*
Adult length 1.9 to 3.9 metres



Killer whale *Orcinus orca*
Adult length 5.5 to 9.8 metres



Risso's dolphin *Grampus griseus*
Adult length 2.6 to 3.8 metres

How to identify the species you've encountered

You are unlikely to observe many of the 24 Irish cetacean (whales, dolphins and porpoises) species, as some are rare vagrants, or only occur seasonally in late autumn and winter, while others tend to occur in deeper waters off the shelf edge. This identification guide illustrates the eight species that make up the majority of all Irish cetacean sightings.

Profiles of all 24 species are available on the IWDG website www.iwdg.ie. The best way to confirm your identification is to take a photograph or video, so if there is likely cetacean activity up ahead, get your camera ready, before things get too hectic.



Birds, Insects, Marine
Irish Sea Fisheries Board



Surfacing sequences and description

How to locate cetaceans

Whale-watching is best carried out during calmer periods of sea state <2 in good visibility. Binoculars may not be that useful on smaller boats, as they are difficult to hold steady and limit your field of view. Keep scanning along the horizon, focusing on areas with large concentrations of seabirds or diving gannets, which may reveal feeding dolphins or whales. Investigate any peculiar surface disturbances thoroughly.

Find out more at the IWDG website www.iwdg.ie

How you can contribute to whale conservation?

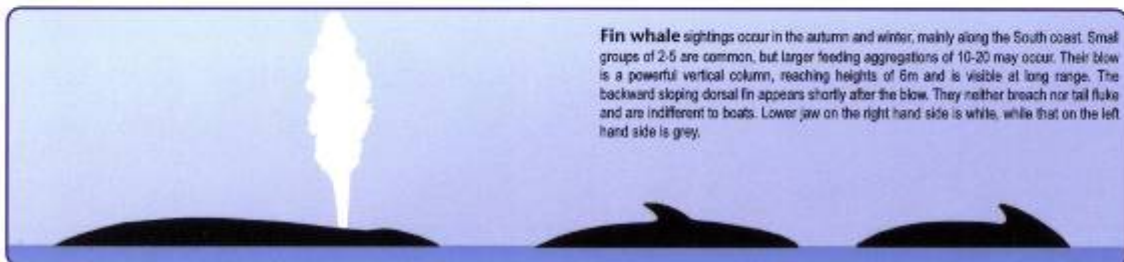
The IWDG co-ordinate an All-Ireland cetacean sighting scheme which collates, validates and stores all sightings on a central database. Your sighting will help improve our current understanding of these magnificent animals. Please report your sightings:

- On-line via the IWDG website www.iwdg.ie sighting section.
- By emailing full details: date, time, position (or nearest location), species (if known), group size, behaviour, with relevant field-notes, photographs or video footage to sightings@iwdg.ie
- Phone or text 086-8545450
- Sightings forms are available from: IWDG, Merchant's Quay, Kilmish, Co. Clare.

Recommended code of conduct

Boat-based whale-watching usually involves some level of disturbance to the cetaceans. You can help minimise disturbance by using the following guidelines:

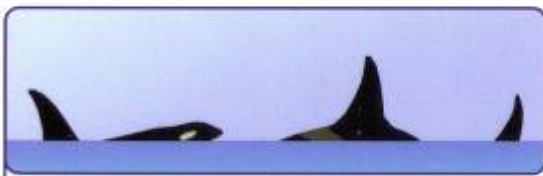
- Reduce speed to less than 7 knots when a cetacean is seen.
- Keep a steady course, with a slow 'no wake' speed.
- Do not cut across their path or criss-cross in front of them.
- Do not encircle, or corral animals between boats.
- Avoid spending more than 30 minutes with the same animal(s).
- If unsure of a whale's position, stop and put engine in neutral until it is re-sighted.
- Be particularly careful if adults with calves are present.
- Do not swim with cetaceans for your own safety and theirs.



Fin whale Sightings occur in the autumn and winter, mainly along the South coast. Small groups of 2-5 are common, but larger feeding aggregations of 10-20 may occur. Their blow is a powerful vertical column, reaching heights of 6m and is visible at long range. The backward sloping dorsal fin appears shortly after the blow. They neither breach nor tail fluke and are indifferent to boats. Lower jaw on the right hand side is white, while that on the left hand side is grey.



Humpback whale Sightings are increasing along the Irish south coast. Their large, bushy blow may be visible at long range. They are the only frequently seen whale that lifts its tail-fluke out of the water. They may be approachable, and at close quarters both the knob-like tubercles on their head and the pronounced hump forward of the dorsal fin can be seen. They may breach, and slap their pectoral fins on the surface.



Killer whale (Orca) Sightings of the largest member of the dolphin family occur sporadically off all coasts, usually in small groups of 2-5 individuals. The most distinctive feature is a tall, triangular, dorsal fin, reaching up to 2 m in adult males, which is visible at long distances. The distinctive white eye-patch and a pale saddle behind the dorsal fin combine to give them a striking appearance, which should cause little confusion.



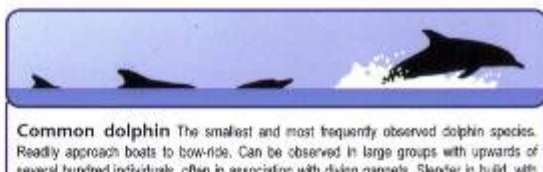
Minke whale Smallest and most commonly observed baleen whale, appearing in all Irish waters, generally on their own. As with all whales their dorsal fin is located two-thirds along the back. Have distinctive white band around their "flippers" (pectoral fins). The blow is generally not visible, but may be audible if close. Unlike humpback whales, they do not raise their flukes out of the water, but may breach for sustained periods.



Risso's dolphin Large and can appear along any coast, generally in groups of less than 10 individuals. May approach boats but generally will not bow-ride. Adults very pale, often white in colour, with extensive scarring all over their bodies. Tall dorsal fin, located mid-way along the back, and bulbous head with no distinct beak may result in some Risso's being mistaken for killer whales.



Bottlenose dolphin Large, of robust build, and will be familiar to many, as "Fungie" and "Flipper" are bottlenose dolphins. Will approach boats to bow-ride and are more frequently seen in smaller groups of 5-15 along the south and west coast. Unlike the common dolphin, has a shorter beak, and are plain grey with no obvious colour pattern.



Common dolphin The smallest and most frequently observed dolphin species. Readily approach boats to bow-ride. Can be observed in large groups with upwards of several hundred individuals, often in association with diving gannets. Slender in build, with long beak and an hourglass pattern on their sides, with a yellowish patch sweeping from the eye to the dorsal fin.



Harbour porpoise Our smallest cetacean. Shy, do not bow-ride and generally avoid boats. They have a gentle "rolling" motion, revealing a small, dark back and triangular dorsal fin located mid-way along the back. They generally create little surface disturbance and the head and tail are rarely visible.

Northern Ireland Cetacean Review



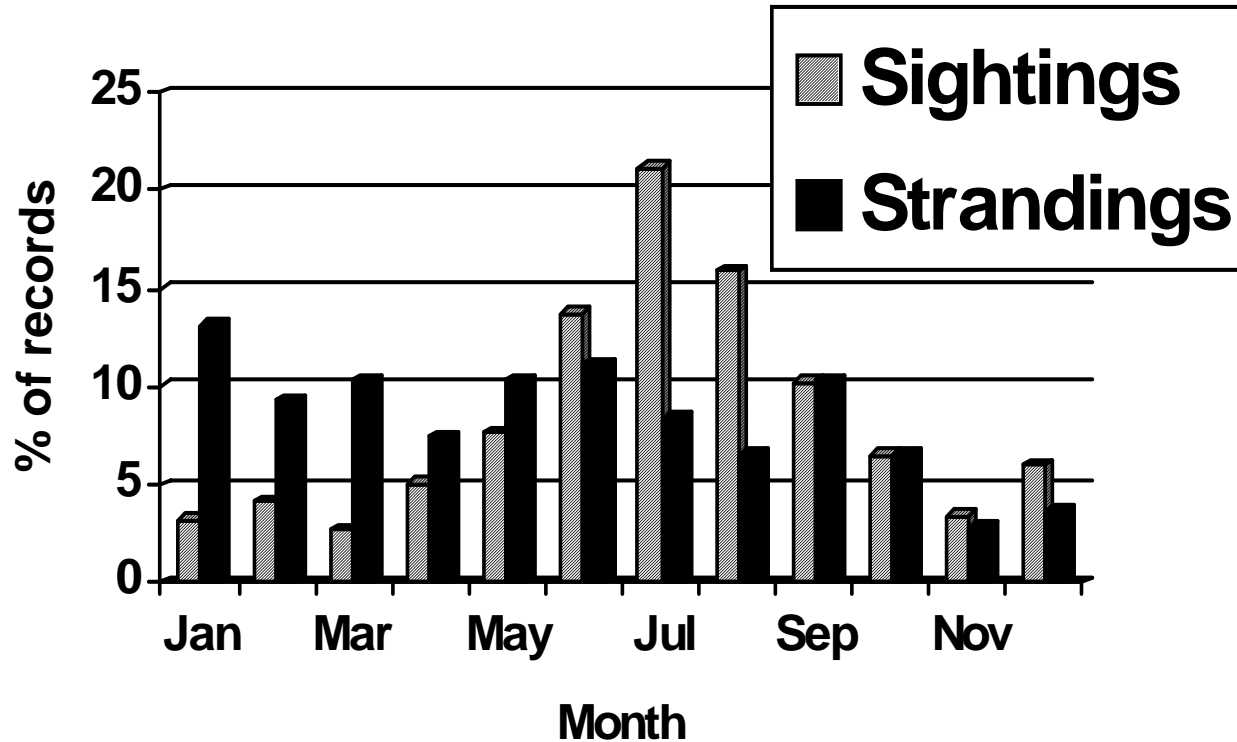
“Review of all cetacean sightings and strandings data for Northern Ireland with recommendations on the designation of Special Areas of Conservation”

- Critical stock-take of available data - to 12nm
- Particular emphasis on Annex II species
- Recommendations for future monitoring

Overall Review



- To date, 17 species recorded in Northern Ireland
- Relatively low abundance – high diversity
- All since 1970s, 1 species only recorded historically
- Both Annex II species recorded



- Sighting and stranding records for all months
- Peak in sightings in summer
- Peak in strandings in winter

Sightings Review



- 801 cetacean sighting events - 3903 individuals
- At least 9 species
- 30 sites with effort watch data
- Total 370 watches – 554.25 hours effort

Frequency of sightings

Species	%	Sightings	Individuals*	Mean number of Individuals per sighting
Harbour porpoise	78.7	630	2894	4.6
Minke whale	4.5	36	61	1.7
Bottlenose dolphin	4	32	337	10.5
Killer whale	1.9	15	44	2.9
Risso's dolphin	1.7	14	60	4.3

Strandings Review

- 116 cetacean stranding events
- At least 17 species
- Occurred on all NI coasts
- Most strandings - north Antrim
- All but 1 were single strandings



Frequency of strandings



Species	%	Strandings
Harbour porpoise	36.2	42
Minke whale	12	12
White-sided dolphin	7.8	9
Striped dolphin	5.2	6

Conclusions

- Identification of SACs currently constrained by lack of data
- Four sites identified for further monitoring:
Rathlin Island, Portrush, Portmuck, Whitehead

Recommendations

- Implement programme of systematic watches from these sites, using standardised protocol
- Deploy PAM equipment for at least 12 months to explore habitat use and seasonal occurrence

Summary

- ISCOPE initiative highly successful project
- Raising awareness & increasing recording effort
- Established network of recorders
- Supported by suite of resources
- 110 individuals contribute to sightings scheme
- Constant effort watches - 30 sites
- Improved capacity for protecting cetaceans
- Baseline upon to build more comprehensive monitoring

Thank You!

