

All cetaceans — a group that comprises baleen whales and toothed whales including dolphins and porpoises — are vulnerable to collisions with vessels of all types, but those involving large vessels often go unnoticed or unreported. Most reports are of collisions with large whales but smaller species are also at risk. Animals can be injured or killed, and vessels too can sustain damage. Serious or even fatal injuries to passengers have occurred involving hydrofoil ferries, whale-watching vessels and recreational craft. A first assessment of sailing vessel strikes reported 111 collisions and 57 near misses from 1966 to 2010, 75 per cent of which were reported between 2002 and 2010, suggesting a rising trend. Reports came from all oceans but were most frequent for the North Atlantic. More recently, humpback and sperm whales accounted for 72 per cent of reported collisions where a species was identified, suggesting particular attention should be given to these species. Chances of collision increase with the high speed associated with offshore sailing yacht races — in 2008 alone, there were at least 10 reports of such collisions with whales.



- There have been more than 500 confirmed reports of cetacean ship-strikes since the 1950s, though many such events go unnoticed or unreported.
- Whales have been hunted for meat and oil for over 5,000 years, and more than 3,000 were caught in 2013 even though commercial whaling is prohibited.
- Fin whales, humpbacks and North Atlantic right whales make up more than half the whales affected by shipstrikes.
- The Southern Ocean Whale Sanctuary
 was designed to protect whales against
 whaling, but Japan continues to hunt
 whales in this important pristine habitat
 under the guise of science.
- Hundreds of thousands of cetaceans die each year due to entanglement in discarded fishing gear or as by-catch.

- Undisturbed, some cetaceans can live for at least 70 years and there is evidence from fragments of whaling harpoons that they can live to 120 years or more.
- The average number of reported whale ship-strikes a year has risen from single figures in the 1950s to more than 20 in the first decade of the 21st century.
- Many whales are known to have extraordinary intelligence, cognitive skills and emotions, i.e. personalities.
- Toothed whales navigate and find food with echolocation, and baleen whales produce sounds that can travel thousands of kilometres.
- Unlike most animals, whales breathe consciously, and sleep with one side of their brain at a time, so they can swim and breathe while resting.





Cephas/CC-BY-SA 3.0 A fin whale, with characteristic back-swept fin, gives a hint of its reputation as the "greyhound of the sea".



The pilot whale is one of the largest and more social of the oceanic dolphins – and particularly prone to stranding.

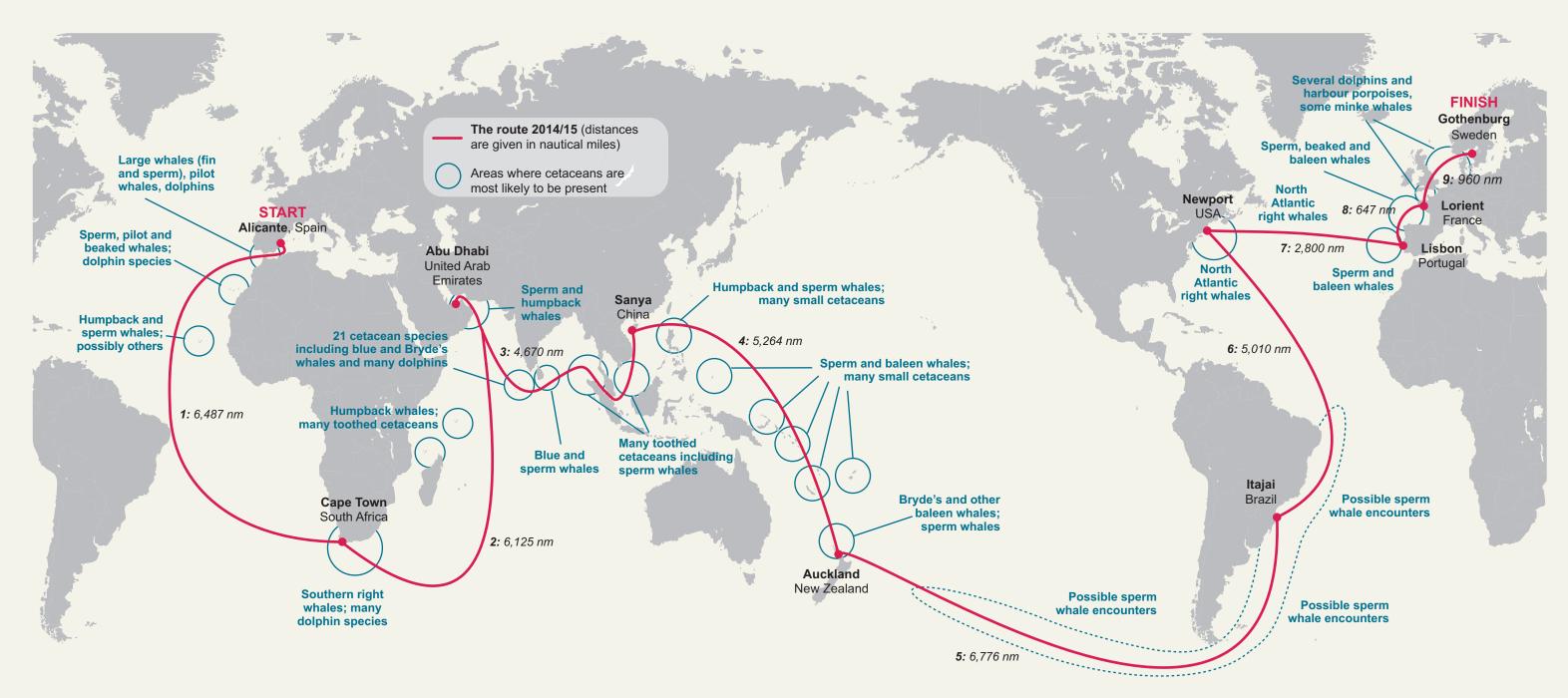
WATCH OUT FOR WHALES **VOLVO OCEAN RACE 2014/15**



The minke is the smallest and fastest of the baleen whales, only 8 metres long and capable of reaching 35 kilometres per hour.



The smallest of the porpoises at barely 2 metres, the harbour porpoise stays close to coastal areas or river estuaries.





Justin Hart/CetaceanWatching Lda

A Sowerby's beaked whale checks what's going on above the water line by spyhopping, a behaviour common to many whales.



A breaching humpback whale can be identified by its particularly long pectoral fins and knobbly head.



Southern right whales have callosities on their heads and lower jaws that are unique to each individual, like fingerprints.



The pygmy blue whale – at a maximum of 24 metres long – is more likely to be seen around Sri Lanka than its larger cousin.



Common dolphins can live in groups of hundreds or even thousands. They are fast swimmers and very agile.



Sophie Webb/NOAA/PD

Bryde's whales can be somewhat erratic, surfacing at irregular intervals and unexpectedly changing direction.



The surface-skimming North Atlantic right whale is highly endangered by ship-strikes, and its numbers are already very low.



Gabriel Barathieu/CC-BY-SA 2.0 At 15–20 metres in length, sperm whales are the largest of the toothed whales and have the biggest brain of any animal.

WHAT YOU CAN DO

Whales range over huge distances and across all the Earth's oceans. So all sailors should inform themselves about whale habitat, protected areas, migration routes and whale behaviour, and remain alert to the danger of collision.

1: PLANNING

- Evaluate voyage timing and routing to minimize risk, and allow for as wide a time window as possible in order to avoid seasons when whale density is likely to be highest.
- Gather information on the seasonal and temporal patterns of whale distribution and movements along your route. Information on features like currents, fronts or seamounts also helps identify cetacean hot spots.
- Try to take routes that cross areas likely to concentrate whales - continental shelf breaks or large oceanic fronts, for example - as close to perpendicular as possible. Try to avoid areas of complex bathymetry such as seamounts and gullies. And, of course, protected areas, migration corridors, areas of seasonal aggregation and prime habitats should be avoided whenever possible.
- For an event, allow for the concept of physical or virtual (defined by GPS) marks to define the race route - for example leaving a particular island to starboard or passing north of a specified waypoint. Also consider conducting acoustic or aerial surveys just prior to the sailing event, as was done in the 2009 Volvo Ocean Race, and consider introducing speed limitations for certain areas.

2: INFORMING OTHERS

- Make sure that colleagues, crew and, in the case of an event, all those taking part are aware of the areas where whales are most likely to be encountered.
- Provide general advice on the species most likely to be encountered. For example, whales tend to aggregate and so seeing one is an indication that there are likely to be others in the area. Some behavioural characteristics are also relevant – a sperm whale lifting its flukes is likely to dive deep for at least 30 minutes whereas a humpback may only dive for a few minutes.
- Brief everyone on what to look for and do in the event of a collision. As pieces of whale skin are sometimes left on a vessel, make sure you have suitable containers and preserving fluid so that skin samples can be stored on board, either cooled/frozen or within sea water, until the samples can be analysed to identify the species involved.

Produced with the support of IWC's ship-strike data coordinators.



To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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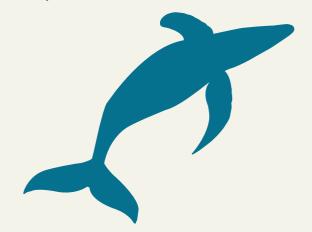
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3: AT SEA

- There is a much lower probability of collision at speeds of 10 knots or less than at 15 knots or more. Consider reducing speed in poor visibility as well as in response to sightings.
- Whales respond to noise. While under sail in areas of known high cetacean abundance, start the engine/propeller, if possible, to warn them of your presence. This will also improve your manoeuvrability.
- Keep a sharp look out having a dedicated observer scanning ahead will help to detect whales at greater distances in areas of known high cetacean abundance. Keep as far from whales as possible and do not approach closer than 400 metres unless unavoidable – remember, modest course alterations can reduce collision risk. Smaller ships, including sailing vessels, can be damaged by collisions and should be prepared for direct avoidance manoeuvres.

4: IN CASE OF A STRIKE

- Note as many circumstances as possible including vessel speed, location, indication of whale behaviour and injuries, damage to crew or vessel, etc. The more information, the better; pictures of the injured whale or vessel damage could be very important.
- Always report collisions to the International Whaling Commission ship-strike database (http://iwcoffice.org/shipstrikes).



RESOURCES

Cetacean habitat http://www.cetaceanhabitat.org

Collisions of sailing vessels with cetaceans worldwide

http://m-e-e-r.de/uploads/media/JCRM Collisions Cetaceans-Sailors Worldwide_2012.pdf

International Whaling Commission http://iwc.int/ship-strikes

IWC Guidance for organizers of off-shore recreational boating events to minimize risk of collisions with cetaceans https://events.iwc.int/index.php/ scientific/SC65B/paper/viewFile/809/752/SC-65b-HIM04.pdf

Marine Protected Areas for Whales, Dolphins and Porpoises (map) http://www. erichhoyt.com/eh/MPA_files/MPAs4Whales_WorldMap_Poster_2011.pdf

NOAA http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/ Reducing risk of collisions with whales http://iwc.int/private/downloads/80ff3jv9j

7oko8gcggcw0ocg8/IFAW%20ship%20strike%20English%202013_web.pdf Report of the Joint IWC-ASSOBAMS workshop on ship strikes http://iwc.int/ private/downloads/eberamrvdugcw8ok0kgkcs4sc/63-CC8.pdf

Ritter, F., 2012. Collisions of sailing vessels with cetaceans worldwide: First insights into a seemingly growing problem. J Cetacean Res Manage 12(1):

UN Atlas of the Oceans http://www.oceansatlas.org/index.jsp Volvo Ocean Race 2014/2015 http://www.volvooceanrace.com/en/home.html WWF http://wwf.panda.org/what_we_do/how_we_work/conservation/marine/ protected_areas/

