IFAW

International Fund for Animal Welfare

Factsheet

Whales and Ship Strikes

Summary

Collisions with ships (or ship strikes as these are known) are recognised as a serious conservation and welfare problem for many whale populations globally.

IFAW works to reduce the risk of ship strikes to whales in known vessel-whale hotspots, while continuing to identify other high risk areas.

Solutions to prevent ship strikes have focused on separating shipping lanes and whale habitat where possible, slowing vessel speeds and providing better information to mariners.

Background

Globally, both the number of ships and the speeds at which ships are able to travel have increased in the last few decades. This means a greater risk of ship strikes and injuries to whales, particularly where shipping activities overlap with important whale habitat.

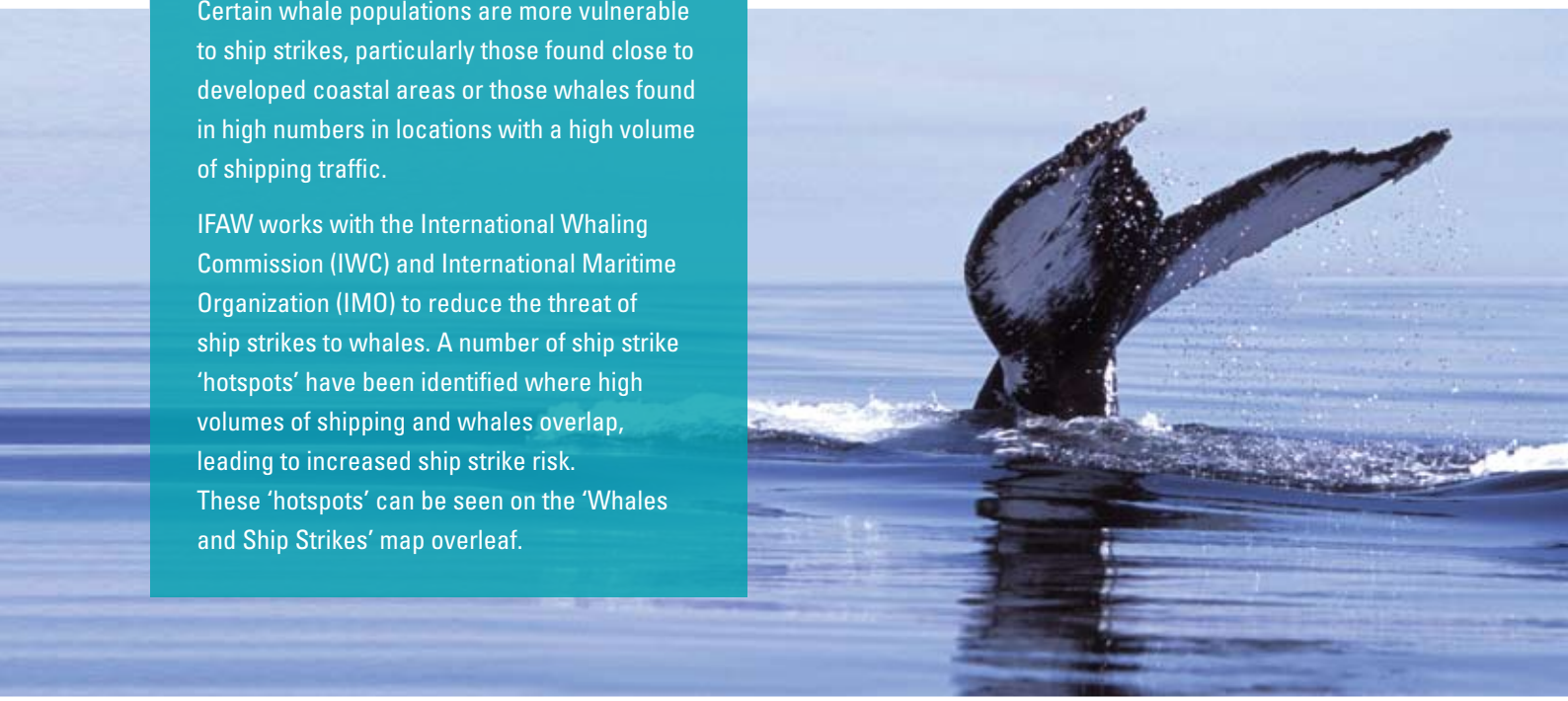
For those whales that are not killed immediately, a collision can result in horrific and serious injuries. Examples of such injuries recorded in live and stranded animals include severed spines, fins and tails (flukes), major internal trauma and haemorrhaging, and propeller wounds. A whale that has sustained a serious injury from a ship strike may suffer a slow, painful death.

Collisions with large ships often go undetected or unreported; mariners are either unaware of hitting whales or do not report an incident. Consequently, the relative lack of reports of ship strikes is likely to significantly under-represent the threat posed by ship strikes.

Ship strike hotspots

Certain whale populations are more vulnerable to ship strikes, particularly those found close to developed coastal areas or those whales found in high numbers in locations with a high volume of shipping traffic.

IFAW works with the International Whaling Commission (IWC) and International Maritime Organization (IMO) to reduce the threat of ship strikes to whales. A number of ship strike 'hotspots' have been identified where high volumes of shipping and whales overlap, leading to increased ship strike risk. These 'hotspots' can be seen on the 'Whales and Ship Strikes' map overleaf.



Reducing risk

Global efforts to reduce ship strikes are underway in several regions, particularly where ship strikes are known to negatively impact endangered whale populations. The solutions that exist for high risk ship strike areas vary depending on many factors; including whale distribution, whale behaviour/ habitat use, and ship routing options and limitations.

Re-routing shipping lanes

The most effective way to reduce collision risk is to separate whales and ships. Measures to avoid known areas of critical whale habitat have been adopted in several areas including a Traffic Separation Scheme (TSS) off the Pacific approach to the Panama canal to minimise overlap between shipping routes and humpback whale migration routes, and changes to shipping lanes in the Santa Barbara Channel, off San Francisco, to reduce ship strike risk to blue whales.

Further high risk areas have been identified where measures may be considered to reduce ship strike risk to whales. For example, a small change in the Hellenic Trench shipping route in the southwest of Greece could dramatically reduce risk to endangered Mediterranean sperm whales. Likewise, a shift in the current TSS to the south of Sri Lanka would avoid very high densities of endangered blue whales and improve maritime safety.

Speed reduction

In certain areas, however, such as the Hauraki Gulf in New Zealand and Stellwagen Bank on the approach to Boston, US, whale distribution and shipping needs mean whale and shipping lanes cannot be separated. In such instances, vessel speed restrictions offer the most straightforward solution to reduce risk.

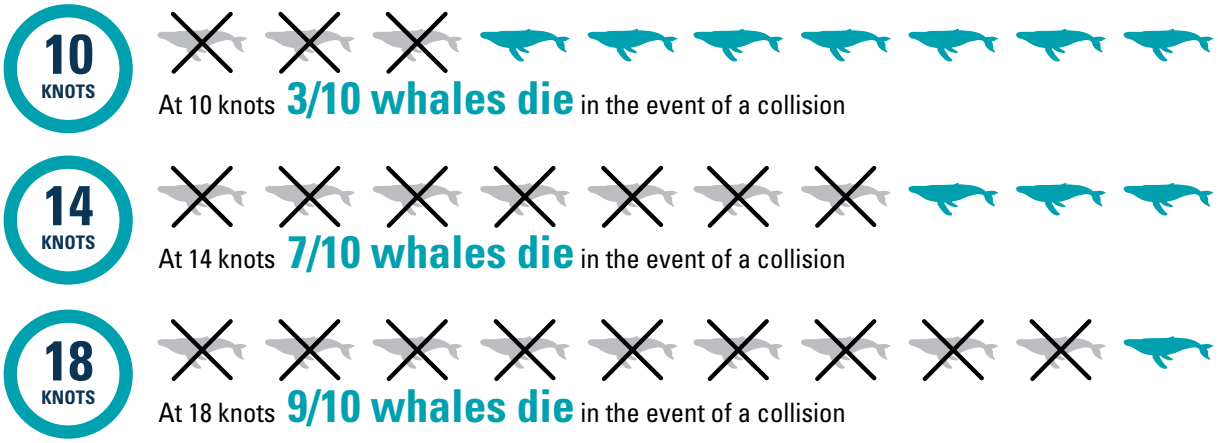
It has been found that **the speed a ship is travelling is an important factor affecting risk. At slower speeds there are fewer collisions and less severe injuries if a collision does occur**. So, in specific areas where re-routing is not an option, ship speed restrictions in critical whale habitat can significantly reduce the risk of lethal ship strike.

Research has shown that speed restrictions and routing measures introduced off the east coast of the US to protect North Atlantic right whales have reduced total ship strike mortality risk levels by close to 90 percent. Slower speeds also reduce the levels of underwater noise from ships, resulting in further benefits for whales.

IFAW

International Fund for Animal Welfare

Effects of ship speed on whale fatality rates

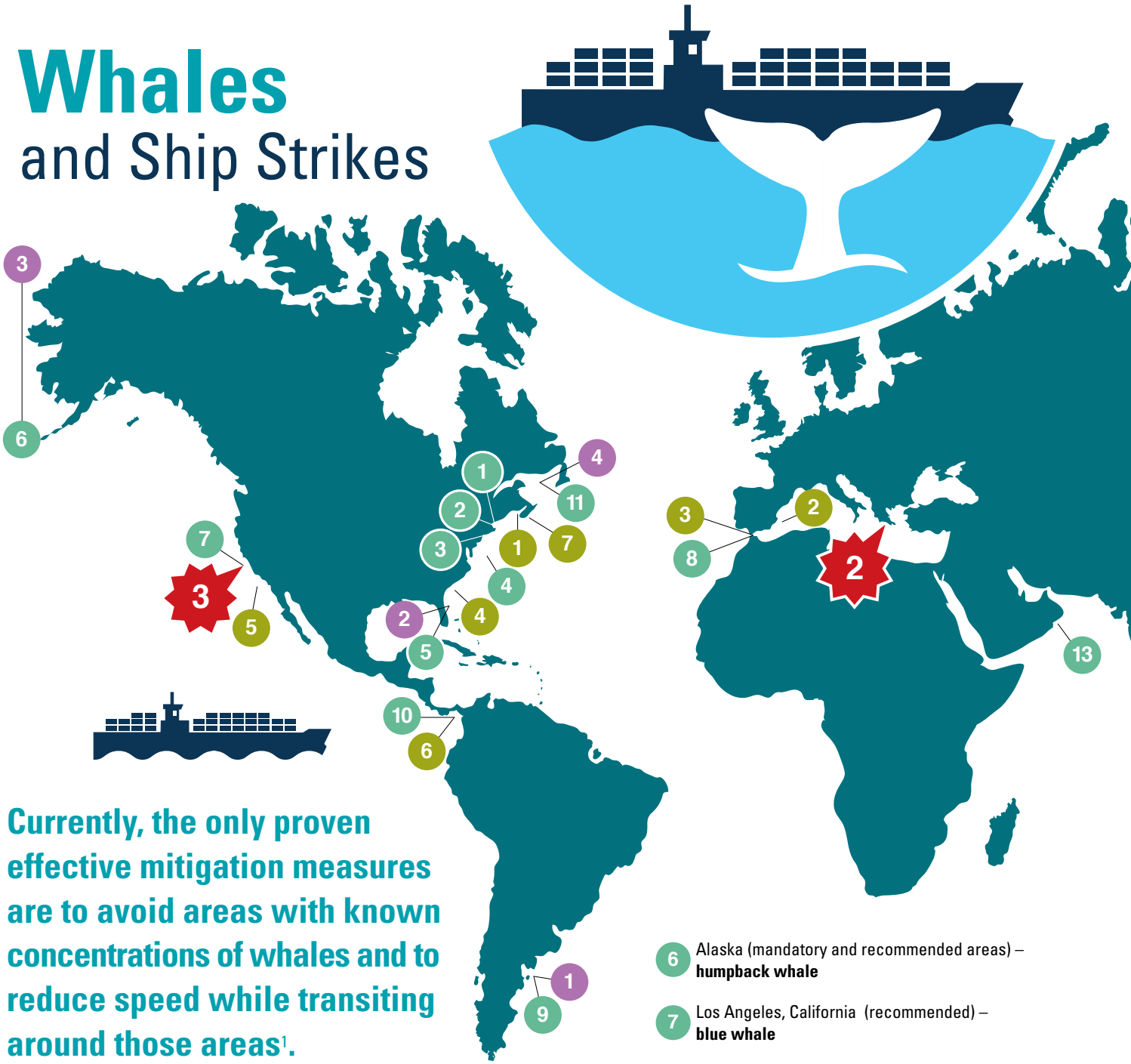


How the shipping industry can assist

- Follow International Maritime Organization (IMO) guidelines; in 2009, the IMO adopted guidelines for minimising the risk of ship strikes to cetaceans (MEPC.1/Circ.674). This guidance document provides information on reducing ship strike risk for both member governments and interested parties, i.e. shipping companies, port authorities. The IWC has also produced advice for specific shipping sectors including cruise ships and sailing yachts involved in offshore races.
- Ensure mariners/captains are aware of permanent and seasonal IMO or national management measures and incorporate this into voyage planning.
- Reduce speeds in specific high risk areas where routing is not an option, e.g. Straits of Gibraltar, Mediterranean and Hauraki Gulf, New Zealand.
- Voluntarily avoid high-risk areas, e.g. Hellenic Trench, Greece, and south Sri Lanka, and support proposed measures at IMO if these are brought forward for such areas.
- Use the Whale Alert app in areas where it is supported, and support its roll-out to new regions.
- Report any ship strike incidents to relevant national authorities and to the **IWC Ship Strike Database**, which is open to the public and aims to increase collection of data on ship strike incidents around the world. Reporting is critical if we are to improve understanding of the ship strike issue and work on mitigation measures to reduce this threat.

Right: A sperm whale washed up dead on a beach in the southwest Peloponnese, Greece, showing clear signs of ship strike.

Whales
and Ship Strikes



Currently, the only proven effective mitigation measures are to avoid areas with known concentrations of whales and to reduce speed while transiting around those areas[1].

International Maritime Organization (IMO)

Mandatory and recommended speed restrictions

USA

1. Cape Cod Bay (mandatory) Seasonal Management Areas (SMA)[2] – **North Atlantic right whale**
2. Race Point (mandatory SMA) – **North Atlantic right whale**
3. Great South Channel (mandatory SMA) – **North Atlantic right whale**
4. Mid Atlantic (mandatory SMAs) – **North Atlantic right whale**
5. Florida and Georgia (mandatory) – **North Atlantic right whale**
6. Alaska (mandatory and recommended areas) – **humpback whale**
7. Los Angeles, California (recommended) – **blue whale**

8 Spain
Straits of Gibraltar (IMO recommended) – **sperm whale**

9 Argentina
Golfo Nuevo, Peninsula Valdes (recommended) – **Southern right whale**

10 Panama
Pacific approaches to Panama Canal (IMO recommended) – **humpback whale**

11 Canada
Gulf of St Lawrence (recommended and mandatory) – **beluga, minke, blue, humpback, fin, North Atlantic right whale**

12 New Zealand
Hauraki Gulf (recommended) – **Bryde's whale**

13 Oman
Port of Duqm, Arabian Sea (recommended) – **humpback whale**

Recommended routes

(voluntary e.g. requested by port or regional authorities)

1. **Argentina**
   Golfo Nuevo, Peninsula Valdes – **Southern right whale**
2. **USA**
   Florida and Georgia – **North Atlantic right whale**
3. **USA**
   Alaska – **humpback whale**
4. **Canada**
   Gulf of St Lawrence – **beluga, minke, blue, humpback, fin**
5. **New Zealand**
   Hauraki Gulf – **Bryde's whale**

IMO established routing

1. **Canada**
   Bay of Fundy – **North Atlantic right whale**
2. **Spain**
   Cabo de Gata (Mediterranean) – **several species**
3. **Spain**
   Straits of Gibraltar/Alboran Sea – **several species**
4. **USA**
   East coast – **North Atlantic right whale**
5. **USA**
   Channel Islands and approaches – **blue whale**
6. **Panama**
   Pacific approaches to Panama Canal – **humpback whale**
7. **Canada**
   Nova Scotia – **North Atlantic right whale**

Areas where IFAW is working towards new measures to reduce risk

1. **Sri Lanka**
   South Coast – **blue whale**

   Year round high densities of northern Indian Ocean blue whales off the southern tip of Sri Lanka coincide with one of the busiest shipping routes in the world.
2. **Greece**
   Hellenic Trench – **sperm whale**

   Core habitat for endangered Mediterranean sperm whales in the Hellenic Trench overlaps with shipping routes, creating a serious ship strike problem.
3. **USA**
   California – **blue whale**

   Although some measures have been taken to reduce risk, blue whale ship strike risk over a wide area off California remains high.
4. **Russia**
   North East Coast of Sakhalin – **western gray whale**

   Industrial development and shipping activity along the North East coast of Sakhalin threatens the critically endangered western Pacific gray whale.

[1]IMO. MEPC 69: Identification and protection of Special Areas and PSSAs. Information on recent outcomes regarding minimizing ship strikes to cetaceans. Paper MEPC 69/10/3 submitted by the International Whaling Commission (2016).

[2]Seasonal Management Areas (SMAs) are areas with mandatory speed restrictions that are in effect during certain times of the year in correspondence to right whale seasonal movement and aggregation patterns. Vessels 65 feet and greater in length are required to travel at 10 knots or less in these areas along the US eastern seaboard.

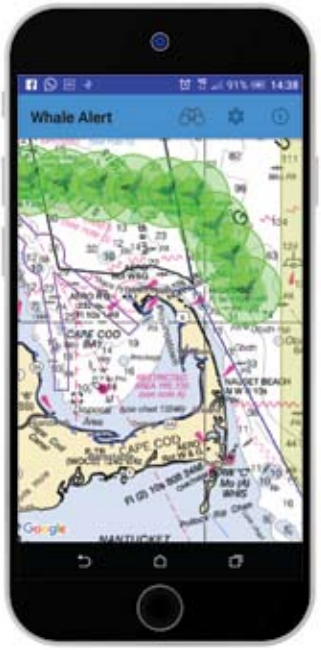
IFAW

International Fund for Animal Welfare

The use of new technologies

Whale Alert

The **Whale Alert app** has been pioneered by IFAW and partners to help reduce the risk of ship strikes and this technology offers a tool for mariners, advising of measures to reduce collision risk, seasonal management zones, etc. The app is already in use on the east and west coasts of the US and Canada with new areas to be added soon. It can be **downloaded for free from the App Store and Google Play**.



About IFAW

IFAW's mission is to rescue and protect animals around the world. We rescue individuals, safeguard populations and preserve habitat. As part of IFAW's efforts to protect whales around the world from the risk of ship strikes, we will continue to identify further high risk areas where ship strikes pose a serious threat to whales, to engage in and encourage research to quantify risks from ship strikes and to identify solutions to reduce this threat.

PHOTO CREDITS:

Front cover: © New England Aquarium/taken under permit authorised by NOAA, **Inside front cover:** © IFAW/S. Cook, **Sperm whale, Greece:** © Filiatranet/Pelagos Cetacean Research Institute, **Back cover:** © IFAW/Vanessa Mignon

Further information

International Fund for Animal Welfare (IFAW), 87–90 Albert Embankment, London SE1 7UD.
Tel: 020 7587 6700 • www.ifaw.org • Email: info-uk@ifaw.org

IFAW

International Fund for Animal Welfare