**SUMMARY TABLE OF SHIP STRIKE MITIGATION MEASURES**

**THAT HAVE BEEN IMPLEMENTED WORLD WIDE**

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| **Measure** | **Situation to which it might be applied** | **Implementation process (and observations)** | **Examples** |
| **Keeping vessels away from whales** | | | |
| Permanent routing measures through TSS, ATBA or port approach routes | Long-term patterns of whale distribution are sufficiently predictable and well understood to enable a robust analysis of the risk reduction that might be achieved. | Implemented through IMO or national regulation if within territorial sea. Proposals should follow the IMO process including data on the problem, the risk reduction achieved and implications for shipping. (Generally well respected by industry.) | Bay of Fundy, Canada Boston, USA California, USA Panama  Cabo de Gata, Spain |
| Seasonal routing measures | Similar requirements to permanent routing but applicable where there are strong seasonal patterns in whale distribution | As above | Roseway Basin, Canada Great South Channel, USA |
| Recommended (voluntary) routes | Similar requirements to permanent routing through TSS or ABTA but not mandatory | Implemented by IMO or coastal state as a non- mandatory measure | Peninsula Valdez, Argentina  Hauraki Gulf, New Zealand  Glacier Bay, USA Ports on US east coast |
| Short-term (days – weeks) and Dynamic routing measures | Implemented in response to short- term observations of whale aggregations or known high risk areas. Need almost real-time reporting systems that can identify such aggregations | Voluntary measures that need to be communicated to mariners. (Can be difficult to encourage compliance.) | DMAs off US east coast Gibraltar Strait, Spain |
| **Slowing vessels down** | | | |
| Permanent speed restriction zones | Long-term patterns of whale distribution are predictable and well understood but routing measures are not practicable. | Can be voluntary or mandatory if implemented in national waters. | East coast of USA (mandatory) Glacier Bay, USA Hauraki Gulf, New Zealand |
| Seasonal speed restriction zones | As above but applicable where there are strong seasonal patterns in distribution | As above | Panama California, US Peninsula Valdez, Argentina |
| Dynamic Management Areas for speed restrictions | Implemented in response to short- term observations of whale aggregations or known high risk areas. Need reporting systems that can identify such aggregations | Voluntary measures that need to be communicated to mariners. (Can be difficult to encourage compliance.) | US east coast |
| **Avoidance manoeuvres** | | | |
| Real-time alerting tools to warn vessels of the presence of whales or aggregations that allow vessels to alter course or slow down | A rapid reporting network of whale sightings or acoustic detections alerts all vessels transiting an area to the locations of whales so that they can alter course or slow down | Individually designed and implemented reporting systems | REPCET, ACCOBAMS,  Mediterranean Sea WhaleAlert, Boston USA |
| Observations from the vessel that allow avoiding action to be taken | Only effective for vessels capable of rapid manoeuvres to avoid whale sightings (e.g. vessels of a few thousand GT or less) | Additional dedicated observers, education and outreach to mariners | Many initiatives |

Further details of the measures given as examples can be found in [SC/65b/HIM05,](https://archive.iwc.int/pages/terms.php?ref=4953&search=%21collection161&k=&url=pages%2Fdownload_progress.php%3Fref%3D4953%26size%3D%26ext%3Dpdf%26k%3D%26search%3D%2521collection161%26offset%3D0%26archive%3D0%26sort%3DDESC%26order_by%3Drelevance) with a bibliography of studies relating to these examples, including evaluations of effectiveness in [SC/66a/HIM04.](https://archive.iwc.int/pages/terms.php?ref=5581&search=%21collection216&k=&url=pages%2Fdownload_progress.php%3Fref%3D5581%26size%3D%26ext%3Dpdf%26k%3D%26search%3D%2521collection216%26offset%3D0%26archive%3D0%26sort%3DDESC%26order_by%3Drelevance)