

UPDATE ON IWC SHIP STRIKE DATABASE

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Introduction

The IWC has been developing a global database of incidents involving collisions between vessels and whales since 2007. The specification and developments have been reported annually to the Scientific Committee (Van Waerebeek and Leaper, 2007; Van Waerebeek and Leaper, 2008; Leaper and Donovan, 2009, Leaper and Donovan, 2010). The IWC-ACCOBAMS workshop strongly recommended continued work to facilitate further development of the centralised database and to encourage reporting of all collision events (IWC, 2010).

The database has been developed through work by individual members of the IWC Scientific Committee, the IWC Secretariat and small contracts for data entry and to a database consultant. These informal arrangements have allowed progress but the Committee also recommended in 2010 that consideration be given to the appointment of a dedicated co-ordinator, noting that this is the practice for other similar successful databases of this scale.

There have been a number of efforts to publicise the database. An IMO circular (MEPC.1/Circ.674) containing a 'Guidance document for minimizing the risk of ship strikes with cetaceans' suggests member Governments should also establish a mechanism whereby ship strikes can be reported, and that any information gathered through national mechanisms should be provided to the IWC. A leaflet available in Arabic, Chinese, English, French, Russian and Spanish has also been developed by the Belgian Ministry of Environment and distributed throughout the shipping industry including details on reporting collisions. There is a section of the IWC website on ship strikes with the data entry system for the database at http://www.iwcoffice.org/sci_com/shipstrikes.htm. Nevertheless, the utility and existence of the database is still not sufficiently widely recognised to encourage mariners and others to report data. Only one unsolicited data entry has been received so far in 2011.

Tasks identified at SC62

- (1) Review all data entries including standardisation of codes from earlier data entries. Enter data from National Progress Reports and papers presented to IWC62. The intended output would be a fully reviewed database that would be available prior to the IWC/ACCOBAMS workshop 21-24 September 2010.
- (2) Develop a database handbook describing and listing all the fields and field codes. This would form a PDF file that could be downloadable from the website to assist with data entry and also provide information on all the fields in the database for those who could not use the schema directly.

Progress on tasks

- (1) Data presented to IWC 62 in National Progress reports have all been entered. All data in the database were also reviewed and codes were standardised. In addition, the database consultant developed tools for identifying duplicate data entries of the same incident within the database. The new system groups individual records or pieces of evidence into a single 'case'. The groupings may be definite, for example a duplicate record of the same information or duplicate records of the same incident from different witnesses, or there may be some uncertainty. Uncertain cases might for example include a collision witnessed at sea and then a stranding examined on-shore where it cannot be ascertained for certain if the same animal was involved. The case tool allows searching by a range of dates or by area. Individual records can only be assigned 'definitely' to one case. Using these tools, duplicate records were grouped into cases, resulting in a summary table of 539 cases that were classified as definite ship strike events (based on data received up until October 2010). The column headings in the summary table are given in Table 1.
- (2) The data review group will review the draft database handbook at SC 63.

Review criteria and classification of incidents

Some of the data review group (Russell Leaper, David Mattila, Simone Panigada, Fabian Ritter, Teri Rowles, Mason Weinrich) met immediately following the IWC-ACCOBAMS workshop to discuss the database and in particular the review criteria and definitions for classifying incidents. It was agreed that the final classification (based on all the evidence) for an incident should be

Definite ship strike

Probable ship strike

Possible ship strike

Not a ship strike

Whale initiated collision

Rejected report - this would be in the case where the data review group had serious concerns over the veracity of the data being reported

For an incident to be classed as 'Definite' the review group would need to be unanimous. If there were conflicting views then the highest category given to the incident would be 'Probable'.

These new classifications included that of a 'whale initiated collision' which had previously been treated in the same way as other collisions. A situation where the vessel was stationary or a whale was judged to deliberately approach a very slow moving vessel would fall into this category.

Discussion

The data entry system and classification tools are basically finished (subject to fixing a few bugs that arise periodically), but have yet to be widely tested due to the lack of new data entry.

The informal arrangements for data entry, including each year's national progress reports have kept the database reasonably up to date, but where we knew of data holders who have done more thorough investigations that have not been reported to IWC, these have not yet been entered. Based on the experience of the last two years when the data entry system has been up and running, it is not realistic to expect a significant number or proportion of collisions to be reported to the database by mariners or scientists who have not been directly involved with the database. This suggests the need for a more pro-active approach in which entries for the database are actively solicited.

References

IWC. 2010. Report of the Joint IWC-ACCOBAMS Workshop on Reducing Risk of Collisions between Vessels and Cetaceans. Beaulieu Sur Mer, September 2010.

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Van Waerebeek, K. and Leaper, R. 2007. Report from the IWC vessel strike Data Standardization Group. 6pp. SC/59/BC12 presented to IWC Scientific Committee, Anchorage.

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Table 1. Column headings and description for the publicly available data summary. The full list of categorical values is given in the database handbook.

ID	Database key
EvidenceDate	Exact date if available
EvidenceDateDescriptive	If exact date not available then a description of known range of dates
LargeArea	Categorical field by ocean/sea area
SmallArea	Descriptive field giving more information on location (note that it was agreed not to make Lat, Long available in the public summary)
ScientificName	Latin name according to IWC list
CommonName	Common species name according to IWC list
IDQuality	Categorical field for the reliability of the species ID
EvidenceType	Categorical field for the type of evidence e.g. collision observed at sea, carcass found at sea, carcass found on-shore, whale stuck on bow
CollisionEvidence	Descriptive field of the evidence that the whale was hit by a vessel
StrikeResult	Categorical field for the fate of the whale e.g. dead, serious injury ...
OtherInfo	Descriptive field of other information
VesselType	Categorical field for vessel type