

# IHO Data Quality Survey

The International Hydrographic Organisation (IHO) Data Quality Working Group (DQWG) has produced a questionnaire in an attempt to gauge the mariner's current perception of data quality. The questionnaire provides the mariner with an opportunity to give feedback on existing methods of representing data quality and to comment on a range of new concepts put forward by the DQWG.

Mariners having experience in using navigational charts and products and would like to participate in the questionnaire, an on-line version can be found at <https://www.surveymonkey.com/s/IHODQWG>.

All bathymetric datasets, regardless of the method of acquisition, contain a level of uncertainty with regards to their accuracy. With modern positioning systems, sophisticated echo sounders and tide gauges, the quality of these datasets is better than ever before. However, when we come to use this data in the production of navigational charts, we are placing it next to data that may have been collected using a leadline and sextant. This can pose a problem for the user of the chart, the mariner, who when faced with a mass of soundings must make a judgement as to which ones he can trust and which ones he can't.

In the early 1970s the first source diagrams appeared on British Admiralty Charts. This represented the first real attempt to provide the Mariner with a means of judging the quality of the underlying survey data by delimiting the zones where different surveys had been used in the compilation. Unfortunately, despite the presence of a source diagram, marine accidents still occur where vessels navigate in areas where the underlying survey is not of sufficient quality. On the 8th September 2006 the jack-up barge, Octopus, towed by the tug Harald, ran aground in Stronsay Firth, Orkney Islands, causing over £1m worth of damage. The Marine Accident Investigation Board suggested that whilst the Captain of the tug should have made better use of the source diagram, "Relevant IHO/IMO working groups should investigate ways of ensuring that ECDIS displays provide a clear warning or indication to the mariner whenever the survey data used to produce the electronic chart in use is of poor quality."

The International Hydrographic Organisation (IHO) Data Quality Working Group (DQWG) originally established in 2005 was reformed in 2007 to investigate how the quality of hydrographic survey data could be better presented to the mariner. It is widely accepted that the current methods of representing data quality to the mariner rely too heavily on an understanding of the relevance of quality indicators such as survey date and acquisition method. In the case of Electronic Navigational Charts (ENCs), the mandatory S-57 quality attribute CATZOC (Category of Zone of Confidence), represents the quality of the survey data in a specific area in terms of positional accuracy, depth accuracy and seafloor coverage. However, CATZOC only gives an impression of the quality of the bathymetric data at the time of survey. In areas of high seabed mobility a Mariner could be easily misled by seemingly good quality data which no longer represents the true nature of the seabed. The issue is confused further by a lack of consistency in the way in which ENC producers determine CATZOC values for legacy surveys they use in their products.

The deadline for participation in the questionnaire is 27th May 2011.