

IC-ENC REPORT

1 Introduction

The International Centre for ENC (IC-ENC) was formed on 1st July 2002, and is one of the two RENCs operational today. IC-ENC operates from two offices, the headquarters in Taunton, England and a regional office (AUSRENC) in Wollongong, Australia.

IC-ENC provides independent ENC quality assurance and international distribution management services to its members. IC-ENC's mission is to contribute to safety of life at sea by promoting the creation and use of fit for purpose ENCs.

IC-ENC membership stands at 26 nations from Europe, Africa, South America, Asia and Australasia. The IC-ENC database now contains 2,500 ENC cells. Full details on IC-ENC coverage, and on ENC coverage world-wide, can be found in the IC-ENC graphical catalogue.

IC-ENC makes its database of ENCs available through a number of appointed Value Added Resellers (VARs) who are then each responsible for collating this together with the data available from other RENCs and HOs, and distributing the result within their own tailored, integrated services as described in the WEND Principles.

This is slightly different to the distribution model of Primar-Stavanger who also collates the data from other RENCs and HOs together with their RENC database, and distributes this within their own tailored, integrated service. Primar-Stavanger is therefore one of IC-ENC's appointed VARs.

For the most up-to-date information, please refer to www.ic-enc.org

2 Quality Assurance

The IC-ENC members consider it essential to apply a final independent quality assurance process, prior to ENC release, to ensure the supply of high quality consistent data to end users. This promotes confidence in the use of ENCs and enhances the total credibility of an ENC service. Recent feedback from VARs has suggested that this additional independent review stage has significantly improved the reliability of the data they receive from IC-ENC compared with the data they receive from non-RENC members, making it much easier to integrate this data into their services.

In the last year, IC-ENC has invested significant resources to fundamentally re-engineer its quality assurance processes, and has recently introduced the "Partnership Programme" which provides a more tailored service to meet the specific needs of individual members; and takes into account the stage each is at with their ENC production and data improvement / harmonisation programmes. As part of this programme, IC-ENC has introduced a comprehensive range of new data consistency checks, providing feedback on the conformance of the ENC data to the IHO ENC Consistency Recommendations, as well as a detailed assessment of how the ENC data performs in an ECDIS as part of a consistent and seamless navigational database.

These checks are in addition to the S-58 checks that IC-ENC has always done, and which are complemented by an improved errors database which now provides additional invaluable background information to its members about the nature of particular error messages.

When combined, all of this feedback provides IC-ENC members with an improvement action plan.

Furthermore, IC-ENC is about to embark on a data consistency audit of the existing ENC database in order to provide more structured and comprehensive feedback on more general and commonly occurring data quality and data consistency issues. This will help IC-ENC to work more closely with its members to support them in their future ENC production work.

3 Data Consistency

IC-ENC has always championed ENC data consistency with its members, following the findings from its research work conducted in 2003 – and which subsequently led to the publication of the IHO ENC consistency recommendations. Given the available coverage at the time, most of this research was based on an evaluation of the ENC data in the North Sea and surrounding areas.

Achieving a high standard of consistent and easy to use ENC cells is particularly important in regions like the North Sea, with its congested waters and many ENC producing nations. At the same time, these nations were amongst the earliest to produce ENCs, and so now face the greatest legacy issues. It was therefore no surprise that IC-ENC's early research identified a wide variety of significant data consistency problems with the coverage of the North Sea at the time, and which made it very difficult (and potentially dangerous) for the mariner to rely on this coverage for primary navigation.

Nearly five years on, and reviewing the feedback IC-ENC is now providing its members in this region, it is clear that the database of ENCs has significantly improved. Progress has accelerated notably in the last 6 – 12 months, as more IC-ENC members in the region push ahead with their harmonisation programmes, and more examples of bilateral initiatives become apparent.

This has resulted in a more widespread adoption of the standard compilation scales; SCAMIN attribution; use of meaningful values of CATZOC values and consistent depth areas; and masking of features which extend beyond the limits of cells. The effect of these measures has been to make the presentation of the ENC data on an ECDIS less cluttered and more consistent – giving the mariner more confidence and allowing him to spend less time fighting with his display settings as he pans across, and zooms through, the database during his voyage.

Even so, further progress is still required given that individual nations remain at different stages in their improvement programmes. Examples of outstanding issues that IC-ENC is aware of from its validation work include:

- At least one nation has still to introduce SCAMIN attribution. Considering the complexity of the waters being covered, and hence the density of information on display, this makes it very difficult to find a suitable display setting – particularly when transiting between ENC coverage at different navigational purposes (e.g. when moving from the coastal to the approach, and then to the harbour coverage).

- Heavy use of INFORM, particularly around offshore platforms, and caution areas contributes to clutter.
- Inconsistent assignment of compilation scales to particular navigational purposes – for instance usage band 1 coverage along the English Channel currently varies from 1:180k to 1:1.5m along the median line. Similarly the band 2 coverage along the northern North Sea between UK and Norway varies from 1:180k and 1:700k. There is no band 2 coverage along the Dutch/Belgian coast, and so you need to purchase the band 3 coverage instead which gives broadly the same scale ENC's as provided in the band 2 coverage in the adjacent UK waters. This is not a problem in itself, so long as the mariner is provided with sufficient information to make an informed purchase decision when compiling his folios, or if VARs take these anomalies into account when compiling their own tailored folios.
- Significant CATZOC anomalies exist at the border between two nations, and in some cases this border runs along important TSS features where on one side it appears the survey is only category C, and on the other side it is category A1/A2 – this will undermine the confidence of the mariner.
- At least two nations are not conforming to the standard compilation scales, making it virtually impossible to apply SCAMIN in a reliable fashion to ensure a consistent de-cluttering of data across national coverage boundaries.
- Not all nations are following the COMF recommendation, which results in examples of small data overlaps and gaps which may have unintentional affects on the ECDIS display. These gaps often occur in areas containing important routing measures.
- Different policies between nations regarding the handling of temporary and preliminary notices to mariners has resulted in inconsistent content between different ENC's as the mariner zooms into his database.

IC-ENC is aware that in most of the cases above, the nations affected have specific action plans either planned or in hand, with some of these operating on a bilateral or even multi-lateral basis. IC-ENC therefore expects the situation in this region to continue to improve significantly in the near future, and so will continue to monitor this progress, and work with its members to provide whatever support it can.