

D10 – OVERLAPPING DATA & PRODUCTION RESPONSIBILITY

CURRENT POLICY (FROM 24/02/2015)

IC-ENC will consider each case of overlapping ENC coverage individually, following the principles of this policy. For the purposes of this policy, ENC data is considered to be overlapping if the data coverage of two or more cells of the same compilation scale and / or navigational purpose covers the same geographical location, and is greater than 5m in width (as measured ‘on the ground’).

When a new cell is received for validation, a test for overlapping data with existing coverage will be performed. When an overlap is identified, the following procedures will be followed:

1. Is the overlapping data from the same producer? If yes, this will be an “HO must correct” issue and the cell returned to the producer for improvement action.
2. If the overlap is between two different producers, and both members of IC-ENC:
IC-ENC will risk-assess the content within the area of overlap, reporting results to both producers, an evaluation will be made of the estimated time for a successful resolution of the overlap
 - If this resolution is expected to be swift (up to one month), the overlap issue will be resolved before the new ENC is issued to VARs
 - If the resolution is expected to be delayed (longer than one month), IC-ENC will facilitate the work of the two producers to align the content of the affected ENCs to be as consistent as possible with each other, noting any fixed national production policies. This is to reduce, as far as possible, the level of risk resulting from variation in the charting of identical entities and/or identical geographic areas. After completion of this process (up to the pragmatic level of achievable agreement between the affected producers), IC-ENC will then issue the new ENC to its VARs, by following the process in step 5 below.
3. If the overlap is between two different producers, a member of IC-ENC and a member of another RENC:
As step 2, but IC-ENC’s liaison will be with its member and with the other RENC
4. If the overlap is between two different producers, a member of IC-ENC and a non-RENC nation
As step 2, but IC-ENC’s liaison will be with its member and with the other nation using the published IHO contacts list:

Note: In steps 2, 3 and 4, if the data is in Usage Band 1, the result of the initial risk assessment is highly likely to be ‘very low’ due to the purpose of the ENC (planning).

5. When IC-ENC issues a new ENC that creates overlapping coverage:
 - IC-ENC will list this in the README.TXT file sent to the VARs.
 - IC-ENC will add the new overlap to its master file, which includes IC-ENC's risk assessment of the overlapping coverage. This master file will be distributed to WENDWG Chair (annually, to inform the ENC coverage report) and geographically relevant entries distributed to RHC Chairs as required, to support regional ENC dialogue.
 - IC-ENC will re-assess the overlap risk-assessment each time a new edition or update file is received for the area, reporting back to both HOs and maintaining the master file if the assessment requires it.

IC-ENC will not make an assessment of the production responsibilities or sovereign rights of a member to produce and issue the ENCs IC-ENC receives from it. IC-ENC's service and feedback reports are focussed on quality assurance and data issues alone, with the driver of ensuring safety at sea.

JUSTIFICATION

Overlapping data between cells within the same usage band is not allowed. Product Specification paragraph 2.2 states: *“Cells with the same navigational purpose may overlap. However, data within the cells must not overlap. Therefore, in the area of overlap only one cell may contain data, all other cells must have a meta object M_COVR with CATCOV = 2 covering the overlap area. This rule applies even if several producers are involved.”*

IHB Circular Letter 47/2004 dated 5 July 2004 states: *“There must be no overlapping data between cells of the same navigational purpose (see S-57, Appendix B.1 clause 2.2), except at national boundaries, where, if it is difficult to achieve a perfect join, a 5 metre overlapping buffer zone may be used.”*

Research has also identified that overlapping data causes serious problems for users of certain ECDIS which display both overlapping cells. The navigator is then presented with different representations of the same area, and which may cause data consistency problems, most notably with inconsistent depth areas. This would undermine the important safety contour feature of the ECDIS, and which navigators use to determine safe waters.

However, overlapping data is often the result of political considerations and not technical policies, and as such resolution times are long and/or indefinite. The IC-ENC policy reduces risk in these areas as far as possible. The release of overlapping data is the final stage after all other options have been explored. The data will have been harmonised as far as possible, in terms of content. IC-ENC re-assesses the risk each time change is introduced (by update or new edition).

IC-ENC offers production advice, support and a quality assurance service to its members only, its remit is not to assess, define or comment on national jurisdiction and areas of production responsibility. IC-ENC is not placed to offer arbitration

between parties with differences based on political considerations. Its members work in collaboration with each other and so IC-ENC must accept that all ENC's it receives have been produced in good faith. Therefore, previous policy D9 (ENC's beyond national waters) has been withdrawn.

IC-ENC collates, maintains and communicates information about overlaps to:

- VARs (so that they are informed of all new overlapping data in the IC-ENC folio at the same time it is delivered to them)
- WENDWG Chair (so the IHO can be responsive to IMO requests for information and assessment on progress with adequate ENC coverage and other charting matters)
- RHCs if required (to assist these bodies with ENC issues, schemas etc)

The current policy is the result of collating member feedback from IC-ENC Circular Letter 2014_14, and builds on IRCC endorsed WENDWG approach to processing overlaps (IRCC6 – Decision 15 refers). For further information see IC-ENC Papers produced for Steering Committee 15 (papers SC15.8.1a-d)

CONTROL MECHANISM

Visual Assessment check – ICE-WP2 refers. Data Coordinator is responsible for implementing the policy in a consistent manner.

The “Master IC-ENC Member Overlaps and Gaps Analysis Spreadsheet” details each instance of an overlap or gap between IC-ENC members’ data, along with the date that the issue was last reported to the relevant HOs, and other relevant tracking information.

ANNEX A CRITERIA FOR ASSESSING THE RISKS

(source ref. WENDWG03-5, 6)

The severity of the risk presented by any overlap is likely to depend on the following factors:

- 1. The geographical location of the overlap**, i.e. port approaches worse than deep water.
- 2. The shipping density in the area**, i.e. many ships worse than few.
- 3. The size of the area of overlapping data**, i.e. large is worse than small.
- 4. The scale of the overlapping cells**, i.e. large scale most likely worse than small scale, but the quality of the different scales is also a factor as some ECDIS will display the larger scale automatically where overlaps occur.
- 5. Shipping route patterns**, i.e. the direction that ships usually transit through the area covered by the overlapping data. A north to south overlap would potentially present a greater risk where ships are heading north or south than east or west.
- 6. Differences in the overlapping data relating to the positions of features and the existence/non-existence of features**, i.e. many worse than few.

RISK DESCRIPTORS

Taking into account the 'Criteria for Assessing the Risks' above, IC-ENC has developed the following descriptors to use as a guide for categorising each instance of overlapping data.

Note; each case of overlapping data will be unique and specific considerations may override this general guidance.

Low:

The overlapping data content poses little risk to the mariner. However, there is always the underlying concern of unpredictable behaviour of certain ECDIS with any type of overlap, and so there is still justification for the two HOs to resolve the overlap.

Examples of criteria:

- A large or small overlap which exists over land or deep water with limited bathymetric depiction.
- The data is mostly consistent between the two cells
- Generally, a low risk would include Overview or General cells (Usage Band 1 or 2) as these cells are mainly used for planning purposes

Medium:

The overlapping data presents some risk to the mariner's safety. IC-ENC will track resolution of the overlap to its conclusion.

Examples of criteria:

- A large or small overlap which exists over deep or shallow water

- There may be several objects captured inconsistently or missing from either cell which require correction as soon as practicable, e.g. caution areas, submarine cables, pipelines, lights, buoys, beacons.
 - i.e. If the same inconsistency of data was identified during IC-ENC's vertical consistency check between two cells in neighbouring usage bands, the validation categorisation would be: HO SHOULD CORRECT
- The display of some features may be impacted when using an ECDIS to view the cells, e.g. disappearing or reappearing objects
- A medium risk could apply to any cells in Usage Band 3-6, dependent on the severity of the issues presented

High:

The overlapping data presents significant risk to the mariner's safety. IC-ENC will proactively track and facilitate resolution of the overlap to its conclusion. IC-ENC will issue such warnings as it thinks fit in the circumstances of the case, and shall bring such warnings to the attention of Value Added Resellers.

Examples of criteria:

- An overlap which presents a high risk to the mariner's safety
- A large or small overlap which exists over shallow water or around busy ports
- There may be important objects captured inconsistently or missing from either cell which require immediate action, e.g. Traffic Separation Schemes, wrecks, depth contours, depth areas
 - i.e. If the same inconsistency of data was identified during IC-ENC's vertical consistency check between two cells in neighbouring usage bands, the validation categorisation would be: HO MUST CORRECT
- A high risk could apply to any cells in Usage Band 3-6, dependent on the severity of the issues presented