

PROPOSED CHANGES TO GUIDELINES FOR THE IMPLEMENTATION OF THE WEND PRINCIPLES
as submitted to XVIIIth IHC

The International Hydrographic Organization (IHO) is encouraging the transition from paper charts to electronic navigation through its support of a carriage requirement for ECDIS. It follows that the IHO should ensure that mariners are well served by adequate ENC services.

Noting that there are significant improvements required related to coverage, consistency, quality, updating and distribution of ENCs for many parts of the world and that this needs urgent attention, the WEND Working Group invites IHO Member States to apply the following guidelines for the implementation of the WEND Principles (IHO Resolution 1/1997 as amended).

1. Responsibilities of Coastal States

1.1. A mandatory carriage requirement for ECDIS means a consequential obligation on Coastal States to ensure the provision of ENCs.

1.2. If the Coastal State is the producing and issuing authority (in terms of SOLAS V 2.2) then responsibility for the ENCs should lie with it regardless of whether the production and maintenance is undertaken with the assistance of other Member States and/or commercial contractors, or another Member State.

1.3. Where agreement is given to another Member State to produce and issue ENCs on behalf of a Coastal State the producing / issuing Member State should carry the responsibility for the ENC.

1.4. States providing source data to another State for the compilation of ENCs should advise that producer State of update information in a timely manner.

1.5. Member States should take into consideration the complexity and resource requirements of the ENC production and maintenance task in relation to their own capabilities and options when deciding how to best ensure the provision of ENCs for their waters.

1.6. Subject to appropriate agreement within the RHC, it is acceptable for a Member State or a group of Member States to produce ENCs as an interim measure to fill gaps in existing coastal States' coverage to promote contiguous coverage. Such ENCs should be withdrawn when adequate coverage is made available by the coastal State. Further guidance on dealing with gaps is offered at the Annex to these guidelines.

1.7. The S-57 standard requires that there is no overlap of ENC data within usage bands. ECDIS systems will operate unpredictably in areas where overlapping ENC data is present; for this reason overlapping ENC data is not acceptable in end-user services. Where overlapping coverage exists the producing States should recognize their responsibility and take the necessary steps to resolve the situation. In situations where overlapping data cannot be resolved through negotiation, the ENC producer(s) can anticipate that an end-user service provider may need to take action itself to eliminate the overlap or discontinue services until the issue is satisfactorily addressed. Any such action to eliminate overlap should be communicated in advance to the affected ENC producer(s), IRCC, IHB and IMO and be based on guidelines that emphasize navigation safety, such as the following:

1. Scale of the data compiled in the ENC,
2. Currency of data in the ENC - i.e. most recent surveys, shoalest soundings, wrecks, rocks, and obstructions,
3. Avoidance of dividing navigationally significant features between producers. For example, Traffic Separation Schemes should be handled by one producer or the other.

Further guidance on dealing with gaps is offered at the Annex to these guidelines.

1.8. Exceptionally, a dedicated Member State may create additional ENCs to facilitate unified coverage where such production is undertaken specifically to address issues inhibiting provision of ENC coverage for the safety of navigation in accordance with the long term aims of the WEND Principles. A Member State undertaking such production should have very valid reasons for its actions and, beforehand, should have made reasonable efforts to negotiate with and come to some agreement with the State that has jurisdiction over the area in

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Comment [u2]: Review the consistent use of 'coastal States', Coastal States, States and Member States.

Comment [u3]: Consistent with next paragraph

Comment [u4]: Sequence change

Comment [u5]: In accordance with the Annex A amplification

Comment [u6]: NL noticed a different statement in Annex A where first of all the RHC-IRCC-IHB have to be informed before action will be taken by the ISSP. Even IMO will be informed according to Annex A. NL prefers the statements in Annex A with a strong pro-active role and obligation for RHCs, RENC, IRCC and IHB.

Comment [u7]: preferably by the appropriate RHCs

question. RHCs should place a high priority on filling ENC gaps and dedicate these Member States for the intermediate filling of the gaps-

1.9. In order to ensure uniform quality and consistency of the WEND, Member States should cooperate in accordance with clause 1.3 of the WEND Principles.

1.10. To ensure that the WEND database is maintained to the highest quality standard Member States that identify an error or any other deficiency in an issued ENC, or that receive information indicating such a deficiency, must bring this to the attention of the ENC producer so that the problem can be resolved at the earliest opportunity. Member States should act to ensure that appropriate actions are taken so that the safety of navigation is not compromised.

2. Reference Standards and Implementation

2.1. Harmonization means the uniform implementation of S-57 and other applicable standards, according to common IHO implementation rules as described in S-58, S-65 and the S-57 Encoding Bulletins.

2.2. Member States not wishing to join a RENC should make appropriate arrangements to ensure that their ENCs meet WEND requirements for consistency and quality and are widely distributed.

3. Capacity Building and Cooperation

3.1. Assistance to coastal States may cover aspects such as development of an ENC production capability, ENC quality and the role of RENCs in ENC validation and distribution.

3.2. It is essential that coastal States have established cartographic capability and infrastructure prior to undertaking ENC production and maintenance tasks themselves so as to ensure that the ENCs within the WEND database meet the high quality standards necessary to fulfil SOLAS requirements.

3.3. IHO Member States should consider ENC related projects as high priority capacity building initiatives.

4. Integrated services

4.1. Member States and RENCs should cooperate to ensure that ENCs are harmonised to the same quality standards thereby facilitating integrated services.

4.2. Member States only need to consider the use of S-63 if they intend to deliver a service to end-users. Data Servers (i.e. service providers) and equipment manufacturers are responsible for implementing S-63 and form part of the 'S-63 trusted circle' (i.e. are entrusted to protect the ENCs and the encryption process).

**PROPOSED AMPLIFYING ANNEX TO THE GUIDELINES FOR THE IMPLEMENTATION
OF THE WEND PRINCIPLES
as submitted to XVIIIth IHC**

Further Guidance on the procedure for resolving ENC issues

The intent of these Guidelines is to facilitate the provision of ENC coverage by the IHO community to support the use of ECDIS. The IHO commitment to IMO is to provide ENC coverage of appropriate quality and updatedness that is the equivalent to that available in an international paper chart series or in national paper chart series and should be employed to achieve this aim. This Annex is intended to outline the procedures to be employed to resolve issues such as gaps and overlaps where these undermine the IHO commitment to IMO, the WEND Principles and there is otherwise no likely or timely alternatives.

NB: The Guidelines (including this Annex) are NOT intended to be used to improve on existing chart coverage to meet the extended requirements of some sections of the shipping industry (e.g. cruise companies). In many cases these extended requirements cannot be met due to the inadequacy of survey data which may also prevent the conversion of existing paper charts into ENCs. In these cases the provision of ENCs by the responsible national HO will have to await new survey work.

A. Dealing with Gaps in ENC coverage

Where gaps in Coastal States' ENC coverage remain then RHCs will need to take action and a Member State or a group of Member States will need to provide the required ENCs as an interim measure. The following procedures should be undertaken in priority order until there is satisfactory resolution, agreed by the RHC, to close the gaps where it is feasible to make quality ENCs from existing paper chart coverage:

- a. Each RHC shall identify gaps in ENC coverage within their area of responsibility and desired timeframe for resolution, noting initial targets for coverage of shipping routes and priority ports, as well as subsequent coverage requirements.
- b. The RHC shall liaise with the relevant Coastal State to determine whether the State has the capacity to meet the required timeframe as well as quality and maintenance requirements. If these requirements can be met the Coastal State shall then fill the identified gap in ENC coverage.
- c. In the event the Coastal State cannot meet these requirements, or cannot meet the timeframe, the RHC shall report these concerns to the WEND Working Group for further consideration and reporting by the IHB.
- d. If the identified gap is covered by an existing paper chart produced under a Bilateral Arrangement between the Coastal State and an ENC producer nation, the producer nation shall be invited by the RHC to produce and maintain interim ENC coverage under its own producer code until such time as it may be possible to hand the ENC and its maintenance back to the Coastal State. If there is more than one producer nation then the RHC will decide which one of them will release the ENCs.
- e. If the identified gap is covered by an existing paper chart produced under an informal arrangement by one or more third party producer nations, the RHC shall determine the most appropriate producer nation. The selected producer nation shall then be invited by the RHC to produce and maintain interim ENC coverage under its own producer code until such time as it may be possible to hand the ENC and its maintenance back to the Coastal State.
- f. If a Bilateral Arrangement is subsequently created between the Coastal State and a producer nation, or the Coastal State establishes the capacity to adopt and maintain the interim ENC under their own producer code, this arrangement shall supersede those already in place with the interim ENC handed back to the Coastal State or the nominated producer nation.

B. Dealing with Overlaps in ENC coverage

Where there are overlaps in Coastal States' ENC coverage then RHCs will need to take action to ensure that safety of navigation is not compromised. The following procedures should be undertaken:

- a. RHCs should create and maintain, through periodic audit, an inventory of (or some means to identify and note) areas of overlapping ENC and highlight those areas where there are navigationally significant differences in the overlaps;
- b. RHCs should take a proactive approach to resolving overlap issues within their regions. They should produce a risk evaluation report for areas of overlap where navigationally significant differences exist

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and submit this to the IRCC Chair and the IHB. Appropriate action should then be initiated to inform IMO; the RHC report should highlight:

1. the desired actions to be taken by the Governments of the involved producer States and the risks associated with inaction,
2. the action that may be, or has been, taken, in the interests of maritime safety and protection of the marine environment, by an End User Service Provider (EUSP) to eliminate the overlap (including the withdrawal of ENC) pending the satisfactory resolution of matters by the coastal States concerned.

c. Where urgent action is required to alert mariners to navigational significant issues then RHCs should initiate promulgation of appropriate warnings directly with the regional NAVAREA coordinator keeping the IRCC Chair and IHB informed.

d. RHCs should maintain records of instances where independent action has been taken by an End User Service Provider to eliminate an overlap. RHCs should request an explanation from EUSPs where such action has been taken if this has not been provided. This is particularly relevant for areas where coverage is not distributed via a RENC.