

# IC-ENC

## COOPERATION ARRANGEMENT

Version 7.4

Adopted by the Issuing Authorities

that supply their Maritime Data Products through IC-ENC

| Version | Date          | Reason for Change  |
|---------|---------------|--|
| 7.4     | November 2022 | Minor updates throughout following SC23 and consolidation of Working Group TORs. |

## **TABLE OF CONTENTS**

### **INTRODUCTION**

### **COOPERATION ARRANGEMENT - PRINCIPLES OF OPERATION**

|           |  |
|-----------|--|
| Section 1 | PURPOSE AND OBJECTIVES OF THE COOPERATION ARRANGEMENT    |
| Section 2 | TERMS OF REFERENCE FOR THE STEERING COMMITTEE            |
| Section 3 | OUTPUTS OF IC-ENC HEADQUARTERS AND REGIONAL OFFICES      |
| Section 4 | RESPONSIBILITIES OF PARTICIPANTS                         |
| Section 5 | RESPONSIBILITIES OF UKHO & HOSTS                         |
| Section 6 | IC-ENC FINANCIAL ARRANGEMENTS AND COSTS OF PARTICIPATION |
| Section 7 | ACCESSION TO THE PRINCIPLES OF OPERATION OF IC-ENC       |
| Section 8 | WITHDRAWAL AND TERMINATION                               |

### **TERMS AND DEFINITIONS**

### **ANNEX A – VALUE ADDED RESELLER ASSESSMENT PANEL TERMS OF REFERENCE**

### **ANNEX B – STEERING COMMITTEE SUBORDINATE BODIES - TERMS OF REFERENCE**

### **ANNEX C – STATEMENT OF INTENT TO JOIN IC-ENC**

### **ANNEX D – MEMBERSHIP ARRANGEMENT - RECOMMENDED TEMPLATE**

### **ANNEX E – IC-ENC FINANCIAL MODEL**

### **ANNEX F – DOCUMENT CHANGE HISTORY**

## INTRODUCTION

### **Issuing Authorities that supply Maritime Data Products through IC-ENC, hereinafter called the Participants, have decided to cooperate as set out in this Cooperation Arrangement**

1. **Noting** the obligations placed on Contracting Governments by Chapter V of the SOLAS Convention;
2. **Noting** that in order to ensure the greatest level of harmonisation and consistency in the establishment of Electronic Navigational Chart (ENC) Services to international shipping, the International Hydrographic Organization (IHO) Member States have agreed the Worldwide Electronic Navigation Database (WEND) concept and a set of associated WEND Principles.
3. **Noting** that the IHO Member States have endorsed the development of the WEND100 Principles in order to support IHO's S100 implementation decade;
4. **Having considered** that the best way to implement the WEND/WEND100 Principles for Maritime Data Products, most prominently ENCs, is to supply them officially through a Regional ENC Coordination Centre (RENC), being IC-ENC;
5. **Noting** that IC-ENC is operated by the United Kingdom Hydrographic Office (UKHO) for, and on behalf, of the Participants;
6. **Noting** that to maximise the WEND/WEND100 Principles, the Participants have determined to establish IC-ENC Regional Offices, hosted by other National Hydrographic Offices, hereinafter called Host(s);
7. **Noting** that the IC-ENC Steering Committee represents the RENC interests of Participants;
8. **Noting** that Participants may have separate Bilateral Arrangements with UKHO covering their relationship with IC-ENC;

This Cooperation Arrangement describes the principles of operation and governance for the IC-ENC, it is not legally binding under international or national law.

# IC-ENC COOPERATION ARRANGEMENT - OPERATING PRINCIPLES AND GOVERNANCE

## Section 1 PURPOSE & OBJECTIVES OF THE COOPERATION ARRANGEMENT

1. The purpose of this document is to continue and strengthen the cooperation of the Participants of the International Centre for Electronic Navigational Charts (IC-ENC).
2. The objective of this document is to describe the principles of operation of the IC-ENC (a RENC), which is operated by UKHO, to:
  - 2.1 Enable Participants to cooperate in coordinating and harmonising the production of Maritime Data Products (MDP, see Terms and Definitions) and updates to ensure the integration, uniformity, timeliness and quality of the data needed to:
    - 2.1.1 Satisfy the requirements of international shipping in the carriage and use of electronic navigational charts and other related products that meet the relevant standards of the IMO and the IHO;
    - 2.1.2 Contribute to the safety of navigation, the protection of the environment and the effective operation of maritime activities.
  - 2.2 Assess and review the operation of the IC-ENC.
  - 2.3 Ensure that all core and non-core RENC Services (see Terms and Definitions) are delivered by UKHO for all IC-ENC Participants, and Production Support and Validation Services by the Hosts.

## Section 2 TERMS OF REFERENCE FOR THE STEERING COMMITTEE

### Membership

1. The IC-ENC Steering Committee (SC) consists of a representative from each Participant.

### Scope

2. The Steering Committee will help to determine the strategy for the future operation of the IC-ENC. The scope will include consideration of technical and business issues related to the production, validation and distribution of MDPs and their updates, and to the services delivered by the IC-ENC.

### Tasks

3. The SC will assess and review the operation of the IC-ENC and provide proposals, assistance, advice and guidance to the UKHO on the development and operation of the IC-ENC to ensure that it meets its objectives.

4. The SC will help to determine the strategy for the future operation of the IC-ENC, and review and endorse the Work Plan, but will not be involved in the day-to-day operation of IC-ENC.
5. The SC will determine solutions on issues related to the harmonisation of MDP production and distribution policies between the Participants, tasking a Technical Conference (TC), Distribution Working Group (DWG) and Production Support Working Group (PSWG) to discuss and provide recommendations on technical and policy issues surrounding the production, content, application and availability of MDPs. The SC will approve the Terms of Reference of these subordinate bodies (see Annex B).
6. The SC will establish, task and disband, any other subordinate bodies as necessary to accomplish specific tasks or to carry out specific functions.
7. The SC will review and endorse the IC-ENC Budget. The SC will keep the cost base of the IC-ENC under review and call for audits if any explanations for variance against the IC-ENC Budget are not satisfactory.
8. The SC will monitor and assess the experiences accruing from operating the IC-ENC and employing the WEND/WEND100 Principles as well as other IHO Standards and Regulations.
9. The SC will review progress and identify further opportunity for areas of harmonising MDP technical and distribution arrangements between RENCs.

#### **Responsibilities of the SC Chair & Vice Chair(s)**

10. The SC will elect a Chair for a period of two years. The SC may also elect a Vice Chair(s), for a period of two years. IC-ENC will provide the Secretariat for the SC.
11. The SC Chair is responsible for the conduct of SC meetings and the circulation of SC Circular Letters to ascertain the collective view of members, and to inform the IC-ENC General Manager (IC-ENC GM).
12. The SC Chair acts as the representative of the Participants, as and when required.
13. The SC Chair and Vice Chair(s) have no executive authority over the IC-ENC operations.
14. The SC elects individuals to the Chair (and Vice Chair) position(s), not a Participant. Individuals from UKHO are not permitted to hold the role of Chair or Vice Chair.
15. The SC Chair will review the decisions regarding Value Added Reseller (VAR) applications (see Annex A), informing the SC if required.
16. In the event that the SC Chair is temporarily unable to discharge the responsibilities of the post, the Vice Chair will assume the position of Chair for this limited time. In the event that the SC Chair is unable to complete the two year term, the Vice Chair will assume the position of Chair until the SC elects a new Chair. In either of these scenarios, if the SC has elected more than one Vice Chair, the specific individual that assumes the position of Chair will be agreed between the Vice Chairs & IC-ENC GM.

## Meetings

17. The SC will usually hold a “Steering Committee Meeting” (see Terms and Definitions) at least once per year. Other meetings may be held to consider urgent business at the request of the Chair. Notification of the meeting will be sent to all Participants not later than 3 months before the date fixed for each meeting. An agenda will be circulated to all Participants not later than 1 month before the date fixed for each meeting. Business not on the agenda will only be discussed by special permission of the Chair. Between meetings, business may be conducted through correspondence (usually by electronic communication).
  - 17.1 In addition to full “Steering Committee Meetings”, supplementary “Informal SC Sessions” may be held to allow informal discussions between IC-ENC and Participants on RENC business. These may be “in person” or be “virtual” using online conference technology.
18. Representatives from the IC-ENC office(s) will attend the SC meetings to report on the operation of the IC-ENC.
19. In addition to Participants and representatives from the IC-ENC, other individuals or organisation may attend SC meetings. These will either be as Steering Committee Guests, Observers or Expert Contributors (see Terms and Definitions section).

## Voting and decision making

20. The IC-ENC General Manager (GM) has a defined level of authority, set to balance the practicalities of day-to-day operations with the advice and involvement of the SC, defined as:
  - 20.1 The IC-ENC GM is empowered by the UKHO CEO to take decisions affecting the day-to-day business operations of IC-ENC, provided this is:
    - Within the direction set in the Work Plan.
    - Within the limits of the IC-ENC GM Letter of Financial Delegation (which is available to members).
  - 20.2 Where a decision is required on an issue beyond the Work Plan, the IC-ENC GM will require final approval from UKHO CEO. Prior to this, the IC-ENC GM will seek opinion, guidance and advice from the SC, via the Chair.
21. The aim for the SC is to provide guidance, express advice and comment by consensus. If consensus is not achieved, a vote will be conducted. In the event of a vote being conducted, each Participant will have one vote (see Section 7). Voting can be done at SC meetings, or between meetings via the IC-ENC Circular Letter (CL) system. The outcome of any SC vote will be to express the view of Participants to help to determine the strategy for the future operation of the IC-ENC.
  - 21.1 At SC meetings, a quorum will exist when a total of at least half of all the Participants are present, or have submitted their opinion to the Chair prior to the meeting, who will represent their views during discussions. Reference to the subject must have been provided in the meeting papers. The vote result at SC meetings will be the simple majority of votes (whereby the highest number of votes for any one option will be recorded as the result). If a quorum does

not exist, majority vote at the meeting will form the Chair's recommendation under a vote by IC-ENC CL.

- 21.2** Voting by CL can be conducted following a SC meeting (as above), or at any time between meetings. The CL will contain a recommendation by the Chair and be sent to all Participants via email. Participants will have two weeks to return their vote to the IC-ENC. 'Silence procedure' will be used (no response equates to approval of the recommendation). The view supported by the majority of Participants will be deemed the vote result.
- 22.** The reaction to, and outcome of, the SC guidance, advice and comment are an integral part in determining Participants' customer satisfaction (customer value) as required for ISO 9001 Quality Management and for the Lean business principles as adopted by UKHO. Additionally, the SC will help to establish success metrics (e.g. Key Performance Indicators, KPIs), which will be used to assess IC-ENC's performance.
- 23.** Decisions taken outside of SC meetings, in accordance with the processes described in this section of the Cooperation Arrangement will, for clarity and transparency, in addition to confirmation by CL, be summarized to the SC at the next SC meeting.

### **Section 3      OUTPUTS OF IC-ENC HEADQUARTERS AND REGIONAL OFFICES**

- 1.** The IC-ENC, through the GM, is responsible for achieving the Work Plan.
- 2.** Subject to clause 2.2. below, the IC-ENC will not alter Participants' MDPs in any way and will accept no product responsibility or liability for MDP contents or structure.
  - 2.1** For new Participants, IC-ENC Headquarters will conduct a verification (content) assessment of new ENC content, providing reports to the Producer, before inclusion in IC-ENC folio available to VARs. The IC-ENC will aim to meet a performance target of 30 working days to provide this report to the Producer.
  - 2.2** IC-ENC will seek specific approval from Participants if a requirement is identified to edit or adapt member data for a specific purpose/project objective. An example is the conversion of S-57 ENC data to S-101 to support the development of associated IC-ENC Services. Such data will NOT be provided within distribution service(s).
- 3.** The IC-ENC will validate all MDPs using a combination of software tools, ECDIS systems and manual assessment. Feedback reports will be provided to the producing Participant, focussed on improving the MDPs for the user and using categories previously agreed with the Participant under the IC-ENC Partnership Approach to validation service.
  - 3.1.** IC-ENC will maintain a Knowledgebase (see definitions) to inform its categorisation of feedback identified. The Knowledgebase will be made available to IC-ENC Participants.
- 4.** The IC-ENC will aim to meet SC established success metrics / Key Performance Indicator (KPI) targets which will be included in the Work Plan and Budget documentation, performance against these targets will be reported to the SC quarterly.

5. The IC-ENC will supply the MDPs that are ready for release to the network of Value Added Resellers (VARs) on a (at least) weekly cycle, who then have a maximum period (as defined within the contract, and dependent on the nature of the MDP) within which to make the new data available to the end users. VARs are significant maritime industry companies, and the VAR appointment process is carried out by IC-ENC, through the GM, with the assistance of the VAR Assessment Panel (see Annex A).
  - 5.1 Once appointed, all VARs (including the VAR operated by UKHO) are subject to the same contractual terms.
6. MDPs will be available for sale under a consistent set of licensing terms, as designed by IC-ENC through the DWG, and approved by the SC, but with the wholesale price set independently by each Participant (which is valid for one calendar year – 1<sup>st</sup> January to 31<sup>st</sup> December). If required, IC-ENC will respect any national factors which need to be accounted for, for specific Participants.
  - 6.1. The licensing model is designed to support an appropriate range of users (e.g. vessels, online users, etc), via ‘user-friendly’ terms and conditions. The corresponding pricing model is designed to provide a framework without undermining the Participants’ autonomy in setting their own MDP price(s).
7. The IC-ENC, through the GM, will manage the appointment and subsequent business relationship with the VARs (which will include a regular audit of VAR sales & activities, to confirm conformance with the VAR contract), reporting to the Participants on a quarterly basis the sales volumes, and managing the settlement of payments to the Participants. Noting that UKHO is an appointed VAR, IC-ENC will manage the relationships with VARs in a sensitive and impartial manner. VAR information, data, correspondence etc will be protected by IC-ENC Headquarters (i.e. kept confidential by using appropriate operational and governance “firewalls”, with access limited to only appropriate personnel).
  - 7.1 If requested by a Participant, the IC-ENC will supply the Participant with ad hoc information on VAR activity regarding the Participant’s MDP folio in a timely manner (provided the disclosure does not breach commercial business rules, e.g. with respect to confidentiality etc)
8. Transfer/availability of MDPs (unencrypted) between Participant, the IC-ENC offices and VARs will be done securely. Only encrypted MDPs will be transferred out from/made available by VARs to end users, using an approved data protection standard (the default for ECDIS users is IHO S-63 for S-57 ENC’s and S-100 Part 15 for S1XX Products).
9. If expressly authorised to do so by a Participant (via IC-ENC Circular Letter 2019/12 response form, or its successor), IC-ENC Headquarters will make available those MDPs to providers of services aimed at supporting non-ECDIS users (for example, small leisure craft). Costs and revenues of the non-ECDIS navigation management service will be reported in a separate section of the IC-ENC Budget reviewed by the SC, but only be applicable to those Participants using this non-core service.
10. The IC-ENC, through the GM, will work with other RENC organisations with a view to harmonising RENC technical, licensing and distribution arrangements, enhancing the status of MDPs and RENCs within the international hydrographic community and improving the data quality and services available to the mariner.



11. The IC-ENC, through the GM, will work with IHO Committees and Working Groups, and Regional Hydrographic Commissions, on technical and strategic issues with a view to enhancing the status of MDPs and RENCs within the international hydrographic community. Each Participant (unless expressly informed otherwise) authorizes IC-ENC to supply IHO Secretariat with CATZOC files to support calculation of IHO Strategic Performance Indicators. In addition to this, if expressly authorised to do so by each Participant, the IC-ENC will submit those MDPs and/or their metadata files (as expressly defined by the Participant) to the IHO Secretariat to populate their databases.
12. The IC-ENC, through the GM, will prepare the Work Plan and the IC-ENC Budget (see Terms and Definitions), for review and endorsement by the SC.
13. The IC-ENC's working language is English, both for written documents and meetings. An IC-ENC Regional Office may use another language for internal/regional co-ordination as required.
14. The IC-ENC Regional Offices will conduct the Production Support and Validation core RENC Services.

#### **Section 4 RESPONSIBILITIES OF PARTICIPANTS**

1. Each Participant will supply its MDPs to IC-ENC, on a non-exclusive basis, and will remain liable for the content and structure of its MDPs. Each Participant remains the owner of its MDPs.
2. Each Participant will maintain its MDPs for navigationally significant changes and supply updates (for example ENC New Editions and Updates) to IC-ENC in a timely manner.
3. Each Participant will support the principle of continuous improvement of their MDPs, and;
  - 3.1 Make available appropriate resources to act on the improvement recommendations made in the validation feedback reports.
  - 3.2 Actively participate in IC-ENC Quality Improvement initiatives, through meetings, correspondence, data exchange and knowledge sharing with the IC-ENC offices and other Participants.
4. The Participant will support the IC-ENC's standard distribution policies, which are reviewed by the SC (through the DWG) (e.g. keeping the wholesale price stable for each calendar year, 1<sup>st</sup> January to 31<sup>st</sup> December), and respond as required with respect to variable policies (e.g. System Electronic Navigational Chart (SENC) distribution). IC-ENC will respect, as far as possible, any national factors which need to be accounted for, for specific Participants. This does not prevent the Participant providing their own local/alternative services - as the MDPs are supplied to IC-ENC on a non-exclusive basis. However, because the IC-ENC financial model is based on a fixed fee per sale, Participants are expected to remain conscious of the IC-ENC funding mechanism when establishing other arrangements.
5. Each Participant will inform the IC-ENC of any change to its MDP wholesale price(s) in writing before 15<sup>th</sup> October, to take effect on the following 1<sup>st</sup> January. If notification of change is not received, the existing wholesale price(s) will remain in place.

6. Each Participant will submit an invoice to IC-ENC for payment for money owed from the sales of its MDPs in a timely manner.
7. Each Participant will promptly inform the IC-ENC GM and the SC Chair of any developments, claims or other important issues concerning its MDPs or the IC-ENC.
8. Participants may be invited to attend IC-ENC events (e.g. SC Meetings) through funding from the IC-ENC Budget. Each Participant retains the 'duty of care' towards its representative(s), and appropriate travel insurance etc must be in place.
9. Any dispute regarding the interpretation and implementation of this Cooperation Arrangement will be resolved only by consultation among the Participants.

## **Section 5 RESPONSIBILITIES OF UKHO & HOSTS**

1. As Operator of the IC-ENC, the UKHO will supply the UK based resources (staff, information technology, accommodation), and all general support functions (e.g. Human Resources support, Health and Safety), required to deliver the IC-ENC Work Plan.
2. The UKHO will maintain clear financial accounting for the IC-ENC activities, to allow transparent and auditable IC-ENC reporting, ensuring transparent and auditable justification for all charges made to the IC-ENC. These costs will form the basis for setting the annual "fixed fee" per MDP sold and the fee will be set to comply with the IC-ENC's not for profit status (see section 6).
  - 2.1 The UKHO will support regular audits of the IC-ENC End of Year Financial Report by a third party (see section 6)
3. The IC-ENC has a Headquarters (HQ) office operated by the UKHO, and Regional Offices hosted by other HOs which contribute to the IC-ENC outputs. The IC-ENC HQ coordinates the work of the Regional Offices via regular interaction and engagement. Regional Offices are subject to the initial and ongoing agreement of the SC.
4. Unless where provided by IC-ENC, Hosts will supply the non-UK based resources (staff, information technology, accommodation), and all general support functions (e.g. Human Resources support, Health and Safety), required to deliver the IC-ENC Work Plan.
5. The "IC-ENC Regional Office Governance" document describes this further.

## **Section 6 IC-ENC FINANCIAL ARRANGEMENTS AND COSTS OF PARTICIPATION**

1. The IC-ENC is a not-for-profit organisation. There are no joining fees or annual standing charges for the Participants. The IC-ENC's operating costs (including staff, accommodation, information technology, training, travel etc) are presented in the IC-ENC Budget which is endorsed by the SC. Expenditure is initially covered by the UKHO and Hosts, and then reimbursed by IC-ENC.

- 1.1. SC requires IC-ENC to recognise the interests of the Participants (e.g. financial return on investment, intellectual property aspects, etc) in all spend of the IC-ENC Budget.
2. The IC-ENC retains a Fixed Fee (see Terms and Definitions section) for each MDP sold, in each service, using this revenue to fund its activities, as described in the Work Plan & Budget, and all other IC-ENC operational costs as endorsed by the SC. The amount of the Fixed Fee(s) is recommended annually by the IC-ENC GM, taking account of the financial position (deficit or surplus), and future forecasted operating costs and revenue, for agreement by the SC.
3. The intention is for the Fixed Fee(s) amount to be set to recover the actual IC-ENC operating costs, without accruing a sizeable surplus. IC-ENC will therefore reduce the Fixed Fee if required, and IC-ENC GM will apply this operational change pragmatically during the year. Any decrease will be communicated to the SC. However, if an increase is recommended, it will be communicated to the SC, for consideration, by 30 September at the latest and recommended to take effect from the following 01 January at the earliest. This is to give Participants sufficient time to include this information in their annual wholesale price setting.
4. Each Participant will cover its own costs arising from being an IC-ENC Participant, unless otherwise included in the IC-ENC Budget.
5. Costs incurred by the SC Chair and/or Vice Chair(s) in relation to activities undertaken in their duties required to perform these IC-ENC roles will be refunded by IC-ENC.
6. IC-ENC operates in the United States dollar and will provide settlements to participants in this currency only.
7. Annex E describes the IC-ENC financial model and process, with further explanatory comments.

## **Section 7 ACCESSION TO THE PRINCIPLES OF OPERATION OF IC-ENC**

1. The IC-ENC GM will inform the SC on the signing of a new Statement of Intent to Join IC-ENC (at Annex C, Part 1) with an Issuing Authority related to the provision of MDPs to the IC-ENC. On completion of this signing, the Issuing Authority has begun the process to become a Participant of the IC-ENC (with benefits and restrictions as described in the Statement of Intent to Join IC-ENC), with the expectation of the signing of a Bilateral Arrangement with the UKHO (see Section 7, paragraph 2) in due course.
2. The IC-ENC GM will inform the SC on the signing of a Bilateral Arrangement with an Issuing Authority related to the provision of MDPs to IC-ENC. On completion of this signing, the Issuing Authority is a Participant as described in this document.
3. Annex D provides the recommended template for the Bilateral Arrangement.
4. With a view to standardisation, established Participants are encouraged to update their Membership Arrangements to the current template contained at Annex D. This is to achieve standardisation, and support IC-ENC's new MDP services. Annex C Part 2 is an interim step for Participants to confirm their intentions.

5. The IC-ENC GM has delegated authority from UKHO CEO to sign IC-ENC Membership documentation.

## **Section 8 PARTICIPANT WITHDRAWAL**

1. If a Participant considers withdrawing from IC-ENC, it will promptly notify the SC Chair and the IC-ENC GM.
  - 1.1 The Participant should consult with the IC-ENC GM about the reasons for and consequences of the withdrawal and the possibility of preventing it, before it presents a formal notice of withdrawal.
2. In the event that a Participant decides to withdraw from IC-ENC, the following procedure will apply:
  - 2.1 Notice of withdrawal from IC-ENC must be given in writing, and the Participant must give the period of notice as defined in the appropriate document:
    - 2.1.1 Statement of Intent to Join IC-ENC/Continue Cooperation (Annex C): No defined period, however if the Participant's MDPs are distributed by IC-ENC, the aim is for these users to not be disadvantaged.
    - 2.1.2 Bilateral Arrangement (Annex D): Twelve months is defined in the recommended template.
  - 2.2 The withdrawing Participant and the IC-ENC GM (a UKHO post) will jointly decide on the arrangements necessary to effect the dissolution of the relevant activities.

## **TERMS AND DEFINITIONS**

### **Definition of terms used in this Arrangement to ensure a common understanding:**

#### **Circular Letter**

A letter issued (usually by email) by IC-ENC to inform Participants of relevant information, for example date of next Steering Committee meeting. It may be for information only, or request a response from each Participant, for example when an SC vote is conducted outside of a meeting. If a response is requested, a two week response period is usually used.

#### **Electronic Chart Display and Information System (ECDIS)**

A navigation information system which with adequate back-up arrangements can be accepted as complying with the up-to-date chart required by regulations V/19 and V/27 of the 1974 SOLAS Convention, as amended, by displaying selected information from a System Electronic Navigational Chart (SENC) with positional information from navigation sensors to assist the mariner in route planning and route monitoring, and if required display additional navigation-related information.

#### **Electronic Navigational Chart (ENC)**

A database, standardised as to content, structure and format, issued for use with ECDIS on the authority of government authorised Hydrographic Offices (HOs). It contains all chart information necessary for safe navigation and may contain supplementary information in addition to that contained in the paper chart (e.g. sailing directions), which may be considered necessary for safe navigation.

#### **Fixed Fee**

The IC-ENC retains a Fixed Fee per MDP subscription from the revenue collected from the Value Added Resellers for the subscription (i.e. the wholesale price as set by each Participant). The remainder of the revenue is paid to the Participant. The Fixed Fee is set for a 12 month subscription period, and reduced pro rata for shorter periods.

#### **Host**

An organisation (usually a Hydrographic Office) which provides the facilities (e.g. accommodation, technology, general infrastructure) and resources (e.g. support functions, personnel) required to operate an IC-ENC Regional Office.

#### **IC-ENC Budget**

An (at least) annual estimate of IC-ENC's income and expenditure prepared by the GM for SC review and endorsement. An update (forecast) is provided to the SC at each SC meeting. The IC-ENC Budget will align with the rolling three-year Work Plan period, with detailed content for Year 1 and an overview for Years 2 and 3. The IC-ENC Budget will clearly distinguish the core services (applicable to all Participants) and the non-core services (applicable to only those Participants using the services). This will be achieved using unique cost centres, and the IC-ENC General Manager is responsible for directing IC-ENC costs into the appropriate IC-ENC cost centre, subject to approval from IC-ENC Financial Controller. See Decision SC21/4.

#### **IC-ENC Headquarters**

IC-ENC Headquarters provides all four of the core IC-ENC services (Production Support, Validation, Distribution, Revenue Management). In addition, all other IC-ENC business related activities, corporate governance and organisational management are conducted at IC-ENC Headquarters.

### **IC-ENC Regional Office**

IC-ENC Regional Offices deliver two of the four core IC-ENC services (Production Support, Validation).

### **IMO SOLAS Convention**

International Convention for the Safety of Life at Sea developed by the IMO. The contracting governments undertake to promulgate all laws, decrees, orders and regulations and to take all other steps which may be necessary to give the present Convention full and complete effect, so as to ensure that, from the point of view of safety of life, a ship is fit for the service for which it is intended.

### **IMO Performance Standards for ECDIS**

Minimum performance requirements for ECDIS, adopted by IMO 23 November 1995 as Assembly Resolution and published as Annex to IMO Resolution A817(19) (15 December 1995 and its later amendments).

### **International Hydrographic Organization (IHO)**

Inter-governmental organization with the object of (following the IHO Convention):

- To promote the use of hydrography for the safety of navigation and all other marine purposes and to raise global awareness of the importance of hydrography;
- To improve global coverage, availability and quality of hydrographic data, information, products and services and to facilitate access to such data, information, products and services;
- To improve global hydrographic capability, capacity, training, science and techniques;
- To establish and enhance the development of international standards for hydrographic data, information, products, services and techniques and to achieve the greatest possible uniformity in the use of these standards;
- To give authoritative and timely guidance on all hydrographic matters to States and international organizations;
- To facilitate coordination of hydrographic activities among the Member States; and
- To enhance cooperation on hydrographic activities among States on a regional basis.

Its International Convention entered into force in 1970 and its amended version entered in force in 2016. It has its Secretariat located in Monaco.

### **International Maritime Organization (IMO)**

The specialised organisation of the United Nations responsible among others to provide machinery for cooperation among Governments in the field of governmental regulation and practices relating to technical matters of all kinds affecting shipping engaged in international trade, and to encourage the general adoption of the highest practicable standards in matters concerning maritime safety and efficiency of navigation.

### **Issuing Authority**

The official agency which issues the MDPs and their updates validated to comply with the relevant standards and quality requirements. For IC-ENC, this is usually a National Hydrographic Office, but in some cases will be other organisations.

### **Knowledgebase**

The repository of IC-ENC's accrued knowledge and understanding of MDP quality aspects, their significance, and action a Participant can consider taking to improve the product. It is used by IC-ENC in its quality control routines, and made available to IC-ENC Participants to

assist with their own internal validation and production. It was formerly known as the “Errors Database”.

### **Maritime Data Product (MDP)**

A geospatial dataset that conforms to a data product specification, produced by a Participant to support the IMO Maritime Services<sup>1</sup> and supplied to IC-ENC under the principles described in Annex C and/or Annex D. For example, an ENC in either S-57 or S-101 format, an S-102 gridded bathymetric file, other S-1XX data products, and so on

1. Within this definition IMO Maritime Services are those set out in resolution MSC,467(101) which states *Maritime Service refers to the provision and exchange of maritime related information and data in a harmonized, unified format.*

### **Participants**

Issuing Authorities that supply their Maritime Data Products through IC-ENC.

### **Regional Electronic Navigational Chart Coordinating Centre (RENC)**

An organisation, as conceptualised in the Worldwide Electronic Navigational Chart Database (WEND) principles of the IHO, through which IHO members can co-operate to resolve overlaps and gaps in coverage, ensure compliance with encoding standards, provide a world-wide consistent level of high quality data and support the provision of co-ordinated end-user services, etc

The IHO WEND/WEND100 principles encourage Member States to distribute their MDPs through a RENC in order to share in common experience and reduce expenditure, and to ensure the greatest possible standardization, consistency, reliability and availability. Notwithstanding the RENC references within the WEND/WEND100 Principles, it is the IC-ENC Participants which set IC-ENC services, via the Steering Committee.

### **“Pay As You Sail” (PAYS) Subscriptions:**

These services from IC-ENC VARs are based on an ENC folio being pre-loaded onto the ECDIS for which an up-front “Planning Fee” is charged and renewed on a quarterly basis. The use of the ENCs is monitored during the voyage and then appropriately charged for. There are limited subscription options available for PAYS services. A Joint RENC PAYS Specification underpins these services. Each IC-ENC Participant can choose whether or not to support PAYS.

### **RENC Services - core**

The core RENC services of the IC-ENC (from SC19 discussions) are:

- Production Support:
  - IC-ENC ENC Validation Training courses – up to three courses per year, for up to 15 funded students on each course
  - Technical Conference (yearly, unless otherwise decided)
  - ECDIS software supply and support
  - Access to IC-ENC Knowledgebase
- Validation: IC-ENC standard Quality Assurance processes
- Distribution: supply to and management/support of VARs, sales reporting and auditing
- Revenue Management: standard processes

Core services are applicable to all Participants, SC has endorsed the IC-ENC 2021-23 Work Plan to develop/maintain core services for S-57, S-101, S-102, S-104, S-111, S-122.



## **RENC Services – non-core**

IC-ENC non-core services are services which a subset of the IC-ENC Participants use. As not all Participants use them, these non-core services are considered via their own sections of the IC-ENC Budget. The non-core services are:

- Non-ECDIS navigation management service (as discussed at SC21 and subsequently through IC-ENC Circular Letter 2019/12).

Further non-core services may be added in the future.

## **S-100**

The IHO S-100 standard is a framework that is intended for the development of digital products and services for hydrographic, maritime and Geographic Information System (GIS) communities. It comprises many S-100 based “Products Specifications” (PSs). Some of these are published; others are in development, whilst in some other cases have only been identified and are not in active development.

## **S-1XX (Product)**

A general term to indicate reference to one of more of the S-100 based Product Specifications, and/or the products produced by IC-ENC Participants under the specification. Primary examples are:

- S-101 Electronic Navigational Chart
- S-102 Bathymetric Surface
- S-104 Water Level Information for Surface Navigation
- S-111 Surface Currents
- S-122 Marine Protected Areas

## **System Electronic Navigational Chart (SENC)**

In ECDIS, means a database, in the manufacturer’s internal ECDIS format, resulting from the lossless transformation of the entire ENC contents and its updates. It is this database that is accessed by ECDIS for the display generation and other navigational functions, and is equivalent to an up-to-date paper chart. The SENC may also contain information added by the mariner and information from other sources.

## **System Electronic Navigational Chart (SENC) Distribution:**

Some of the Value Added Resellers offer SENC services, where they convert the ENC data into their proprietary SENC format before they encrypt and distribute the data to their customers. This conversion is done under controlled conditions within an independently accredited system and using type approved software. Each IC-ENC Participant can choose whether or not to support SENC Distribution.

## **Steering Committee Expert Contributor**

An individual or organisation invited to attend part of a single SC meeting to provide expert contribution on a specific agenda item. Invitation issued at discretion of Chair.

## **Steering Committee Guest**

An individual or organisation invited to attend a single SC meeting (all or part), invitation issued at the discretion of Chair. For example, an ENC Issuing Authority considering joining IC-ENC.

## **Steering Committee Meeting**

The SC will convene in a meeting format regularly, usually once per year. The meeting may be conducted as a face-to-face event (which is the default option), or as an on-line (“virtual”) event if a face-to-face meeting is not appropriate. The Chair will recommend the format for



each Steering Committee Meeting, taking account of the proposed agenda topics, and any other pertinent factor such as national/international travel restrictions.

### **Steering Committee Observer**

An individual or organisation invited to attend SC meetings. The SC is required to approve the status of Observer, and this status is continuing until revoked.

### **Subscription periods (traditional, i.e. in advance):**

Value Added Resellers are allowed to sell subscriptions down to a minimum period of 3-months (which IC-ENC will charge 30% of the price), and in one month increments between 3 and 12 months. IC-ENC retains a fixed amount per subscription, this amount is set for an annual subscription, which is also reduced accordingly for shorter subscription periods.

### **Value Added Reseller (VAR)**

An organisation that markets and distributes services which include the MDPs supplied by IC-ENC, and which are designed in such a way that they add overall value for the user, for example by bundling complementary navigational products together within a single and tailored licensing structure.

### **WEND (Worldwide Electronic Navigational Chart Data Base)**

The concept of a common, worldwide database of ENC's, produced to IHO standards, designed specifically to meet the needs of international maritime traffic using ECDIS which conform to the IMO Performance Standards for ECDIS. Governed by the IHO's WEND Principles, through the Inter Regional Coordination Committee (IRCC, <https://iho.int/en/ircc>) and its subordinate WEND Working Group.

### **WEND100**

The concept of a common, worldwide database of S-1XX Products. The eventual successor to WEND. Governed by the IHO's WEND100 Principles (currently being developed through IHO's WEND Working Group)

### **Wholesale Price:**

Each Participant sets its own wholesale price. This price covers the provision of updates for a period of one year. IC-ENC requires this to remain stable for each calendar year (January to December). Under the contract, IC-ENC is required to give 2 months notification of price changes (so by end of October), and this informs the requirement for Participants to inform IC-ENC by 15<sup>th</sup> October.

### **Work Plan**

Description of the work/tasks to be achieved by IC-ENC, providing detailed activities for the next 12 months and considering a (rolling) three-year overview. It is reviewed and endorsed by the SC annually to help to determine the strategy for the future operation of IC-ENC.

## **ANNEX A –VALUE ADDED RESELLER ASSESSMENT PANEL TERMS OF REFERENCE**

### **1. Overall Aim**

The Value Added Reseller Assessment Panel (VAP) is established by the Steering Committee and managed by the IC-ENC Headquarters to help to provide an assessment function of companies applying to be appointed IC-ENC Value Added Resellers (VARs).

### **2. Objectives / Tasks**

**2.1** To contribute to the process of assessing VAR applications, by:

2.1.1 Having available three independent assessors (from amongst the Participants) who have the necessary expertise and knowledge to perform VAR assessments, and who are anonymous to the VAR applicants, known as the VAR Assessment Panel (VAP).

2.1.2 Conducting assessments of VAR applications in accordance with the standard VAR assessment procedures.

### **3. Composition / Responsibilities**

1. VAP membership shall be open to representatives from all Participants. However, given the specialist commercial skills required to perform a VAR application assessment, the IC-ENC will select the three most suitable representatives on a case-by-case basis for each VAR application assessment.
2. The VAP shall meet as necessary, and work via correspondence, to fulfil its objectives and tasks.
3. Travel and subsistence expenses incurred by participants attending face-to-face VAP meetings (in the unlikely event one is needed) shall be met by the central IC-ENC budget.
4. VAP members are aware that there is a commitment required for VAP activities. Normally this will be not more than two working days per annum, via correspondence and/or meetings.
5. The VAP shall provide a recommendation to the IC-ENC GM regarding the VAR application, however IC-ENC GM will make the decision. The IC-ENC GM shall inform the SC Chair of both the VAP recommendation and the IC-ENC GM decision, with an explanation if the decision does not conform to the recommendation. The SC Chair may choose to inform the SC.
6. A summary of VAP activities (including any VAP recommendations and IC-ENC GM decisions) will be expressly reported to the SC at each meeting.

## ANNEX B – STEERING COMMITTEE SUBORDINATE BODIES - TERMS OF REFERENCE

|  |  |   |
|--|--|---|
| <p><b>1. Overall Aim &amp; Objectives</b></p> <p>1.1 The Technical Conference (TC), Distribution Working Group (DWG) and Production Support Working Group (PSWG) are subordinate bodies of the IC-ENC Steering Committee (SC).</p> <p>1.2 Their overall aim is to provide:</p> <ul style="list-style-type: none"> <li>• Advice and guidance to Participants, and proposals / recommendations to IC-ENC SC, on all aspects of the production, assurance, distribution and revenue management of Participants' MDPs</li> <li>• Advice, guidance, and challenge to IC-ENC on its operations and services to Participants.</li> </ul> <p>1.3 The overall objectives are:</p> <ul style="list-style-type: none"> <li>• TC: to support Participants, through IC-ENC services, achieve greater quality and global consistency with their MDPs.</li> <li>• DWG: to support Participants, through IC-ENC services, achieve global availability and appropriate financial return for their MDPs.</li> <li>• PSWG: to support Participants, through IC-ENC services, develop and maintain the skills and experience required to produce their MDPs.</li> </ul>                      |  |   |
| <p><b>2. Tasks</b></p> <p>2.1 The tasks of the subordinate bodies are:</p> <ul style="list-style-type: none"> <li>• To contribute to the development of the IC-ENC Work Plan</li> <li>• To critically examine and challenge IC-ENC's performance &amp; progress against the Work Plan items and SC endorsed IC-ENC success measures.</li> <li>• To contribute to defining the service definitions, descriptions and service levels applicable to IC-ENC's services to Participants</li> <li>• To help the SC define and then monitor/review IC-ENC service success measures</li> <li>• To provide help and guidance to IC-ENC on customer satisfaction feedback, user feedback, and inputs regarding Participants' MDPS and IC-ENC service levels.</li> <li>• To help IC-ENC formulate, as required, combined IC-ENC input to relevant IHO Working Groups and IHO initiatives, industry bodies and stakeholder groups, and the wider MDP community.</li> <li>• To alert and inform the IC-ENC Steering Committee to any relevant topic or development that needs its attention or approval.</li> <li>• To undertake any specific tasks as directed by the SC.</li> </ul> |  |   |
| <p>2.2 The tasks specific to the TC are:</p> <p>To provide advice, assistance, guidance and proposals on all technical aspects of the production, content, validation, quality control and</p>   | <p>2.3 The tasks specific to the DWG are:</p> <p>To provide advice, assistance, guidance and proposals on all aspects of the distribution and revenue management of Participants' MDPs and IC-ENC's services, including:</p> | <p>2.4 The tasks specific to the PSWG are:</p> <p>To provide advice, assistance, guidance and proposals on the production of Participants' MDPs and the IC-ENC Production Support service, including:</p> |

|  |   |   |
|--|---|---|
| <p>distribution aspects of Participants' MDPs and IC-ENC's services, including:</p> <ul style="list-style-type: none"> <li>• Consideration of technical topics of mutual interest and the exchange of views on any relevant MDP-related issues</li> <li>• The multi-lateral cooperation of the Participants to the mutual benefit of all</li> <li>• The technical problems encountered by Participants and by IC-ENC and make recommendations for resolution</li> <li>• Improvements in the quality and scope of the IC-ENC's MDP validation processes</li> <li>• Contribution to the development of MDP related standards and publications</li> </ul> | <ul style="list-style-type: none"> <li>• RENC licensing policies, terms, and conditions, etc</li> <li>• RENC sales reporting format, content, etc</li> <li>• RENC distribution assurance processes (assessing conformance to distribution policies)</li> <li>• Data protection (technical standard, encryption, systems, etc)</li> <li>• Distribution technology (how data arrives to the user)</li> <li>• User feedback of the MDPs: ECDIS, non-ECDIS, navigation support, non-navigation, etc</li> <li>• Options to monitor, promote and support the increased use of Participants MDPs.</li> <li>• Monitoring the work of the IC-ENC VAR Assessment Panel.</li> <li>• Examining the ongoing performance of appointed companies into IC-ENC distribution services, and provide advice, guidance, and opinion to IC-ENC</li> </ul> | <ul style="list-style-type: none"> <li>• Identification and prioritisation of the training needs of, and learning/development opportunities for, IC-ENC Participants.</li> <li>• The functionality, maintenance and development of the IC-ENC Learning Management System.</li> <li>• Helping IC-ENC to design, develop and deliver services that meet the needs of the Participants.</li> <li>• The format of IC-ENC's training and support to Participants, e.g. face-to-face, online, blended.</li> <li>• Contribution to the review of feedback received, in order to identify and champion good practice, and to identify areas of improvement.</li> <li>• Contributing to peer review and quality control regarding the content within IC-ENC's Learning Management System.</li> <li>• Co-ordination of IC-ENC Participant's contribution to IC-ENC Production Support service.</li> </ul> |
| <p><b>3. Composition, Responsibilities and Procedures</b></p>  |   |   |
| <p>3.1 The subordinate bodies shall be open to representatives from all Participants. However, given the different purposes of these groups, attendees are likely to have appropriate knowledge and experience.</p>  |   |   |
| <p>3.2 Representative(s) of other stakeholders (for example other HOs, RENCs, Value Added Resellers, Distribution Partners, Industry, other subject matter experts etc.) or individuals may be invited to attend meetings as Observers, Guests or Expert Contributors, at the discretion IC-ENC.</p>   |   |   |
| <p>3.3 The subordinate bodies shall meet as necessary to fulfil its objectives and tasks (as a minimum, once per year). Meetings may be face-to-face, online, or a combination of the two. Between meetings business shall be conducted by correspondence.</p>   |   |   |
| <p>3.4 The date and venue of any face-to-face meeting shall be announced by IC-ENC at least three months in advance. The date and format of any online meeting shall be announced at least one month in advance. Meeting papers will be issued at least one week in advance.</p>   |   |   |
| <p>3.5 If it is required to convene face-to-face, the IC-ENC Budget will fund attendance costs (i.e. travel and subsistence expenses) incurred by attendees, subject to its inclusion in the IC-ENC Budget (which is endorsed by SC).</p>  |   |   |
| <p>3.6 IC-ENC shall provide a Chair and Secretary for the subordinate bodies.</p>  |   |   |

|   |
|---|
| 3.7 The delegate(s) selected by each Participant to attend the subordinate bodies will actively participate in the preparation, event and post-meeting actions.   |
| 3.8 The aim is for the subordinate bodies to reach decisions by consensus, or else by voting. The voting procedure will follow the same principles as the SC voting process (see IC-ENC Co-operation Arrangement, Section 2). In this case, "Chair" is relevant subordinate body Chair)                 |
| 3.9 The subordinate bodies do not have IC-ENC budgetary approval authority, but may decide how SC approved funds are used, and/or make proposals to SC regarding the IC-ENC Budget.   |
| 3.10 Working groups and project teams may be created by the subordinate bodies to undertake detailed work on specific topics, with a Co-ordinator. The terms of reference and rules of procedure of the working groups and project teams will be approved by the subordinate body Chair as appropriate. |
| 3.11 The Draft of the subordinate body Minutes/Report shall be distributed by IC-ENC within one week of any meeting to attendees, and attendees' comments will be returned within one week of the date of despatch. The Final version will be distributed within three weeks of any meeting.            |
| 3.12 The subordinate bodies will report periodically to SC (as a minimum, once per year to support the annual SC meeting)   |
| 3.13 The working language of the IC-ENC, including the subordinate bodies, is English.  |

**ANNEX C PART 1 – STATEMENT OF INTENT TO JOIN IC-ENC**

**STATEMENT OF INTENT CONCERNING COOPERATION BETWEEN**

**THE ORGANISATION NAME AND THE INTERNATIONAL CENTRE FOR ENCs**

The International Centre for ENCs (IC-ENC) is a Regional ENC Coordinating Centre (RENC), an organisation through which national Hydrographic Offices work together to ensure a high quality and consistent international electronic navigation dataset.

The *Organisation Name (Organisation Initials)* has the responsibility and obligation to produce Maritime Data Products (MDPs).

The (*Organisation Initials*) and the IC-ENC agree to cooperate on the production, validation and distribution of (*Organisation Initials*)’s MDPs.

This Statement of Intent recognizes that (*Organisation Initials*) has begun the process to become a Participant of IC-ENC, via a Bilateral Arrangement with the UKHO.

Whilst the Bilateral Arrangement process is in progress, this Statement of Intent means that IC-ENC will provide *Organisation Initials* with:

- Support and advice on the production of MDPs, including full access to the IC-ENC Knowledgebase
- An independent validation service
- A route to market for its MDPs
- Sales reporting and financial settlements to *Organisation Initials* (where appropriate)

During this period, *Organisation Initials* will:

- Supply its MDPs to IC-ENC; this is on a non-exclusive basis, and so does NOT prevent *Organisation Initials* from supplying its MDPs to other governmental or commercial organizations, to other RENCs, or to users.
- Remain liable for the content and structure of its MDPs
- Accept IC-ENC’s core commercial and technical policies
- Be invited to participate in the IC-ENC technical working groups receive training and relevant technical support
- Be invited to participate in the IC-ENC Steering Committee, via observation and contribution to discussion. The aim of the Steering Committee is to reach a consensus, but in the event of a vote, only those who are Participants through a Bilateral Arrangement will cast a vote.

This Statement of Intent does not represent a legally binding commitment under international or national law.

In the event that *Organisation Initials* decides to terminate cooperation with IC-ENC, *Organisation Initials* and IC-ENC will work together to ensure that all existing users of *Organisation Initials* ’s MDPs are not disadvantaged.

Signed by:

.....  
IC-ENC General Manager

.....  
Head of...,  
Organisation Name

Date.....

Date.....

**ANNEX C PART 2 – STATEMENT OF INTENT TO CONTINUE S100 COOPERATION**

**STATEMENT OF INTENT CONCERNING CONTINUED COOPERATION BETWEEN**

**THE ORGANISATION NAME AND THE INTERNATIONAL CENTRE FOR ENCs for  
MARITIME DATA PRODUCTS**

The *Organisation Name (Organisation Initials)* is a Participant of IC-ENC for ENC-based services.

The (*Organisation Initials*) and the IC-ENC agree to extend their cooperation to include Maritime Data Products (MDPs)

This Statement of Intent recognizes that (*Organisation Initials*) has begun the process to update its Membership Arrangement to include reference to MDPs.

Whilst this is in progress, this Statement of Intent means that IC-ENC will provide *Organisation Initials* with:

- Continuation of all existing ENC-based services, as defined within the IC-ENC Work Plan.
- Continuation of non-Core services which the Participant has chosen to use.
- New services as defined in the IC-ENC Work Plan, with the aim of supporting *Organisation Initials* MDP activities, including; Production Support (training, help, advice etc); quality assurance, distribution, revenue management.

During this period, *Organisation Initials* will:

- When available, supply its MDPs to IC-ENC; this is on a non-exclusive basis, and so does not prevent *Organisation Initials* from supplying its MDPs to other governmental or commercial organizations, to other RENCs, or to users.
- Remain liable for the content and structure of its MDPs
- Accept IC-ENC's core commercial and technical policies (which are subject to endorsement of the Steering Committee)
- Be invited to continue its participation in all IC-ENC groups, such as Steering Committee, Technical Conference, Distribution Working Group, continue to receive training and technical support

This Statement of Intent does not represent a legally binding commitment under international or national law.

In the event that *Organisation Initials* decides to terminate cooperation with IC-ENC, *Organisation Initials* and IC-ENC will work together to ensure that all existing users of *Organisation Initials*'s MDPs are not disadvantaged.

Signed by:

.....  
IC-ENC General Manager

.....  
Head of...,  
Organisation Name

Date.....

Date.....

## **ANNEX D – IC-ENC MEMBERSHIP ARRANGEMENT – RECOMMENDED TEMPLATE**

*This is the recommended template for the bilateral arrangement between UKHO and Participant in relation to membership of IC-ENC. While the aim and intention is for all membership arrangements to follow this template, it is acknowledged that there may be adjustments required to meet specific national considerations – however, the services and outputs that each member receives will be the same.*

### **ARRANGEMENT FOR THE OPERATION OF INTERNATIONAL CENTRE FOR ENCs (IC-ENC) BETWEEN THE UNITED KINGDOM HYDROGRAPHIC OFFICE (UKHO) AND [OTHER PARTICIPATING HO]**

#### **1. PURPOSE AND SCOPE OF THE ARRANGEMENT**

1.1 The purpose of this Arrangement is to encourage cooperation between the UKHO and *[other participating HO]*, represented by the signatories, in the operation of a Regional Electronic Navigation Centre (RENC) known as International Centre for ENCs (IC-ENC). It formalises the terms for the operation of IC-ENC by the UKHO and the inclusion of Maritime Data Products (MDPs) produced by *[other participating HO]* in the database(s) maintained by IC-ENC.

#### **2. IMPLEMENTATION, REVIEW AND TERMINATION**

2.1 This Arrangement will come into effect from the date of the last signature and will continue in operation until superseded by a revised version or terminated according to the principles in paragraph 2.3 below. Both Participants' responsibilities under this Arrangement will be suspended in the event of Force Majeure. If the Arrangement is so suspended the Participant giving notice of suspension will inform the other Participant immediately the resumption of this Arrangement becomes possible.

2.2 This Arrangement may be revised at any time by the written, mutual consent of both Participants.

2.3 This Arrangement may be terminated by either Participant giving at least twelve months' notice in writing of its intention to do so. Termination will come into effect at the end of a calendar year. Such notice of termination will be followed as soon as practicable by negotiations to seek to resolve outstanding differences between Participants.

#### **3. PRINCIPLES**

3.1 The UKHO will operate IC-ENC, on a not-for-profit basis, to process official MDPs from IC-ENC Participants into an integrated electronic navigation database which it will release (in whole or in part) to Value Added Resellers on the authority of those Participants. The Value Added Resellers will, in turn, develop and market a range of electronic navigation services.

3.2 *[other participating HO]* will supply its official MDPs to IC-ENC. Where *[other participating HO]* also supplies its MDPs to other organisations, it will ensure that the other organisations are not allowed to provide services that could be passed off as the services of the participating HOs or IC-ENC.

3.3 The Participants will cooperate in establishing and maintaining procedures for the supply and updating of MDPs which comply with the standards agreed by the International Hydrographic Organization (IHO) and International Maritime Organization (IMO).



3.4 A Steering Committee, consisting of representatives from participating nations, will help to determine the strategy for the future operation of IC-ENC but will not be involved in the day-to-day operation of IC-ENC. Working Groups established by the Steering Committee will also advise on technical and commercial matters. The IC-ENC Co-operation Arrangement describes the Terms of Reference of the Steering Committee and its Working Groups.

#### 4. **THE SERVICE PROVIDED BY IC-ENC**

4.1 IC-ENC will validate MDPs and their updates, received from *[other participating HO]* making use of the IC-ENC Knowledgebase which it will maintain and make available to *[other participating HO]*. IC-ENC will supply feedback reports to *[other participating HO]* from the results of its validation. In the event that IC-ENC receives an MDP or update from *[other participating HO]* that fails validation (“questioned data”) and IC-ENC considers that it requires amendment to ensure it complies with the relevant IHO standards, IC-ENC will notify *[other participating HO]* immediately. If, notwithstanding IC-ENC’s concerns, *[other participating HO]* insists that the “questioned data” must be released without amendment, then IC-ENC shall have an absolute discretion to release the “questioned data” with such warnings as it thinks fit in the circumstances of the case, and shall have the right to bring such warnings to the attention of Value Added Resellers and end-users.

4.2 IC-ENC will collate all available MDPs into its database(s) which it will update at least weekly. From this database, IC-ENC will produce data exchange sets which it will make available to Value Added Resellers. When approval has been received from *[other participating HO]*, IC-ENC will also allow Value Added Resellers to supply ENC’s in SENC format.

4.3 IC-ENC will not supply data direct to end users but will distribute MDP through appointed companies, known as Value Added Resellers. IC-ENC will manage and support the Value Added Resellers and appoint them according to published criteria.

4.4 Value Added Resellers will be expected to maximise the sale of MDPs. They will define their services that are offered to end customers and will be required to add value to the electronic navigation database, for example, through product bundling and the use of flexible licensing models.

4.5 Value Added Resellers will receive/access MDPs from IC-ENC in a secure manner. They will be required to implement IC-ENC-approved licensing terms and conditions, and data security measures before releasing the data to their Distributors or end users.

4.6 IC-ENC will operate a financial system for invoicing Value Added Resellers, auditing their sales reports and conducting credit management. Financial accounts will be maintained that allow IC-ENC to calculate the revenues due to participating HO’s.

4.7 Where approval has been received from *[other participating HO]*, IC-ENC will also supply *[other participating HO]’s* MDPs to other appointed organisations with the intention to allow these organisations to produce derived products. Appropriate procedures, as defined by IC-ENC, will be used regarding secure data transfer, licensing terms and conditions, appointment criteria, data security, financial processing, and so on, for these derived products.

4.8 The IC-ENC Cooperation Arrangement describes the services provided by IC-ENC in greater detail.

#### 5. **PROCEDURES**

5.1 *[other participating HO]* will notify IC-ENC of their planned MDPs by means of regular updates to production schedules in a format and frequency as jointly determined by the Participants.

5.2 *[other participating HO]* will validate all its MDPs, and their updates, before providing them to IC-ENC. All electronic navigation data and updates supplied to IC-ENC by *[other participating HO]* will comply with the relevant IHO Product Specifications. The latest editions of the relevant IHO standards should be used unless the Participants jointly decide otherwise.

5.3 The transfer of/access to MDPs between *[other participating HO]* and IC-ENC will be carried out in a secure manner in accordance with procedures jointly decided by the Participants.

5.4 *[other participating HO]* and IC-ENC will establish points of contact within each organisation for all communications.

## **6. INTELLECTUAL PROPERTY RIGHTS**

6.1 IC-ENC will recognise and respect the intellectual property rights in the MDPs, their updates and associated information supplied by *[other participating HO]* to IC-ENC and will use all reasonable endeavours to protect these rights in its dealings with any Third Party.

6.2 IC-ENC has the right to copy and distribute the MDPs, updates and other associated information supplied by *[other participating HO]*, as required to provide its services.

6.3 *[other participating HO]* will take all reasonable steps to ensure that any data supplied to IC-ENC (including, but not limited to, MDPs, updates and associated information) is free from Third Party intellectual property rights. In the event that such rights are identified, *[other participating HO]* will obtain the necessary consent(s) from the Third Party before supplying the data to IC-ENC. If data is supplied to IC-ENC, and a Participant subsequently receives any claim from a Third Party that IC-ENC's use of that data violates the intellectual property rights of that Third Party, then that Participant will promptly inform the other of that fact. Neither Participant will make any admissions in relation to any claim without the consent of the other Participant (which will not be unreasonably withheld or delayed). The Participant against which any such claim has been made, will always consult with the other Participant, and each Participant will render such reasonable assistance to the other as is necessary in order to settle the dispute either by out-of-court settlement or in legal proceedings.

## **7. LIABILITY**

7.1 Liability, in the case of a claim by a Third Party, rests primarily with the supplier of the product used by the Third Party.

7.2 However, the Participants to this Arrangement jointly determine that:

7.2.1 Liability for the MDPs supplied by *[other participating HO]* to IC-ENC, rests with *[other participating HO]*, provided that no material modifications have been made by IC-ENC.

7.2.2 Liability for any material modifications made by IC-ENC and for faults caused by IC-ENC's processing systems shall rest with the UKHO as operator of IC-ENC.

7.2.3 Liability arising out of the use by a Third Party of "questioned data" (as defined in 4.1) shall rest with *[other participating HO]*.

7.3 In the event of a claim being made by a Third Party, the Participants will as between themselves apportion liability, including any right of indemnity, on the basis of paragraph 7.2. Any damages awarded and payable to the Third Party by one of the Participants will be paid in full by that Participant. The other Participant will then refund its portion of the damages on the basis of paragraph 7.2.

## **8. FINANCIAL ARRANGEMENTS**

8.1 *[other participating HO]* will be able to set the wholesale price(s) at which IC-ENC will sell its MDPs. The wholesale price will be inclusive of the product and any updates for twelve calendar months.

[*other participating HO*] may change the wholesale price at 1 January each year by giving IC-ENC notice in writing of the change by the previous 15 October.

8.2 IC-ENC will charge a fixed fee for each MDP sold to contribute towards recovering its operating costs. IC-ENC will review this fee each year, and will notify [*other participating HO*] of any change by 30 September. The IC-ENC Cooperation Arrangement describes the IC-ENC financial model in more detail.

8.3 Each quarter, IC-ENC will inform [*other participating HO*] of the volume of sales of its MDPs and of any excess revenue payable after the fixed fees have been deducted from the revenues collected. The payments due from IC-ENC to [*other participating HO*] will be made on a quarterly or annual cycle, as chosen by [*other participating HO*].

8.4 [*other participating HO*] will provide an invoice to IC-ENC in order for payments to be made. Payments will only be made to the declared bank account (which will not be a personal account):

Account Name: \_\_\_\_\_

Account no: \_\_\_\_\_

Sort code: \_\_\_\_\_

Swift code: \_\_\_\_\_

IBAN: \_\_\_\_\_

BIC: \_\_\_\_\_

Address: \_\_\_\_\_

9. **CONFIDENTIALITY OF THE ARRANGEMENT**

9.1 Once signed, the details of this Arrangement may only be released to a Third Party by consent of both Participants. Notwithstanding the foregoing, each Participant may disclose confidential information to the extent that it is necessary to do so by reason of any applicable law or governmental administrative provision, but will inform the other Participant and will inform the entity to which such disclosure is made of the confidentiality commitments to which the information is subject pursuant to this Agreement.

10. **DEFINITIONS**

10.1 Some terms in this Arrangement are used as defined below. Where these definitions apply each term begins with a capital letter.

|                      |   |
|----------------------|---|
| Force Majeure        | This includes, but is not limited to strikes, lockouts, riots, sabotage, acts of war or piracy, destruction of essential equipment by fire, explosion, storm, flood or earthquake, and delay caused by failure of power supplies or transport facilities. |
| Participant          | The UK Hydrographic Office as the operator of IC-ENC or [ <i>other participating HO</i> ].  |
| Third Party          | Any person, organisation or institution, including another Hydrographic Office, other than a Participant to this Arrangement.   |
| Value Added Reseller | An organisation appointed by IC-ENC to distribute MDPs and that is able to add value to the products, for example, by bundling them with other products.  |

Distributor A distributor appointed by, and supplied by, a Value Added Reseller to enhance the availability of MDPs to the end user.

Maritime Data Product A geospatial dataset that conforms to a data product specification, produced by a Participant to support the IMO Maritime Services and supplied to IC-ENC under the principles described in this document. For example, an ENC in either S-57 or S-101 format, an S-102 gridded bathymetric file, other S-1XX data products, and so on.

.....  
*[signed]*  
General Manager  
IC-ENC  
United Kingdom

.....  
*[signed]*  
*[other participating HO]*

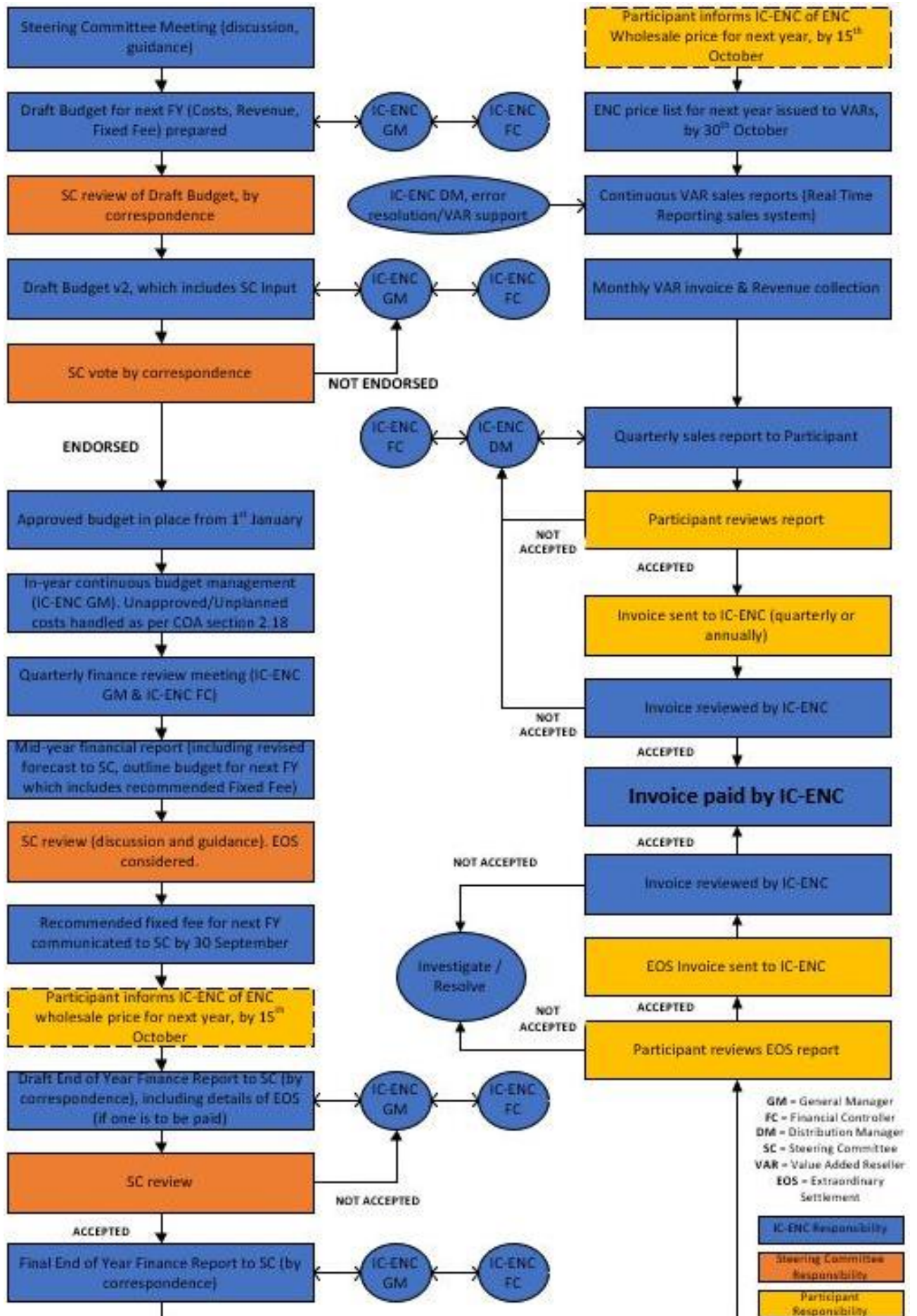
Date

Date

## ANNEX E – IC-ENC FINANCIAL MODEL & PROCESS

1. Further to the description of IC-ENC in Section 6 above, the IC-ENC financial model is designed to be straightforward and not introduce barriers to entry. It promotes the ethos of working together as a group as far as possible. The Steering Committee has agreed (see Decision SC21/3) that IC-ENC's financial model must be able to easily include new Participants (to IC-ENC, or to those deciding to take up non-core services after they have launched). The financial arrangements will be those applicable at the point in time they join in.
2. As described in this COA, IC-ENC Participants supply their MDPs to IC-ENC on a non-exclusive basis. IC-ENC's funding is based on retaining a 'fixed fee' from MDP sales reported to IC-ENC, and any one Participant will not contribute more than 20% of IC-ENC's operating costs.
3. The SC, through the IC-ENC risk register, has considered and understands the potential risk to IC-ENC's financial sustainability if Participants establish direct MDP supply arrangements to IC-ENC VARs, and the implications of this on the 'ethos of working together' that the IC-ENC funding model is designed to promote.
4. The principle of 'holistic funding' was endorsed by the SC via IC-ENC Circular Letter 2019/10. Holistic funding can be described as "The data a member issues via IC-ENC is generating the funding that provides the IC-ENC services the member receives, plus the revenue that is returned to the member".
5. This approach means that new, non-core, services established by IC-ENC can be launched without a prohibitively high fixed fee of their own (which might have been detrimental to service uptake). The SC recognised that this funding methodology is appropriate because all IC-ENC services can be considered to be of benefit (directly or indirectly) to marine vessels/users, financial forecasts can be made with a high degree of confidence, and it builds on the established and proven 'fixed fee' concept.
6. Under the principle of holistic funding, only those Participants using particular non-core services are funding them.
7. Although IC-ENC operates in United States dollars (USD), some internal accounting records are maintained in Pounds Sterling (GBP) because UKHO is the Operator of IC-ENC. Under this arrangement, UKHO accepts carrying the gains or losses which result from differences in financial exchange rates. This is different from any exchange rate effect reported to the SC in the IC-ENC Budget (a result of IC-ENC's Headquarters office incurring costs in GBP and converting to USD for IC-ENC's financial reporting).
8. The flow diagram below describes the IC-ENC Financial model and process; budget setting and review, fixed fee(s), and the responsibilities of the IC-ENC, SC and Participants. It includes a review and comment period for SC to consider the End of Year Financial Report, before final publication. IC-ENC financial reports will contain the last year's figures for comparison purposes (Action SC23/2). From Q1/2021, the End of Year Financial Report is audited by a third party, and the results published to the SC. It shows that payment from IC-ENC to Participant will only be made in response to an invoice being supplied.





## ANNEX F – DOCUMENT CHANGE HISTORY

| Version | Date  | Reason for Change   |
|---------|---|---|
| 1.0     | December 2003                               | Original  |
| 2.0     | November 2012                               | Amended by IC-ENC Steering Committee 13   |
| 3.0     | March 2013                                  | Re-written to describe governance and operating principles, following a series of review by Participants at Steering Committee 12 and 13, and via correspondence.   |
| 4.0     | June 2016                                   | Amended to reflect discussions/decisions at Steering Committee 15 and 16.   |
| 5.0     | July 2018                                   | Prepared to assist SC20 discussions (not published).  |
| 5.1     | August 2018                                 | Amended following SC20 discussions, for SC review (not published).  |
| 5.2     | December 2018                               | Amended following SC review of v5.1 (not published).  |
| 5.3     | March 2019                                  | Amended following SC review of v5.2 (not published).  |
| 5.4     | May 2019                                    | Editorial amendments to v5.3 following feedback from Participants, prepared for endorsement at SC21   |
| 6.0     | July 2019                                   | Published following SC endorsement of v5.4. See IC-ENC Circular Letter 2019/09  |
| 6.1     | November 2019                               | Updated to include relevant actions, decisions and discussion at Steering Committee 21. Endorsed by SC by vote. See IC-ENC Circular Letter 2019/20 and 2019/22.   |
| 7.0     | DRAFT PREPARED TO SUPPORT SC ONLINE SESSION | Updated based on SC responses to the IC-ENC S-100 Options paper, and other governance updates throughout, including SC Terms of Reference to include best use of communication technology. NOT PUBLISHED. |
| 7.1     | February 2021 (Draft)                       | Updated following SC online sessions Nov 2020 and SC endorsement of IC-ENC 2021-23 Work Plan & Budget. NOT PUBLISHED.   |
| 7.2     | May 2021 (Draft)                            | Further draft reflecting comments in response to CL 08/2021. Formatting and editorial enhancements also applied. Annexe F move to Definitions and Annex G removed. NOT PUBLISHED.                         |
| 7.3     | October 2021                                | Additional changes required to support new version endorsement at SC22 meeting, including development of Chair/Vice Chair section. Endorsed by Steering Committee at meeting SC22.                        |
| 7.3.1   | June 2022                                   | DRAFT ONLY, prepared to assist discussion at SC23 in July 2022  |
| 7.3.2   | October 2022                                | DRAFT for SC consideration following SC23 meeting. Minor updates and consolidation of Working Group TORs.   |