

27th IC-ENC Steering Committee Meeting (SC27)

Rio de Janeiro, Brazil

23–25 June 2026

Contribution to the IHO Work Programme 2026

Goal 1 Maintain RENC liaison

High level summary:

- IC-ENC successfully launched its S-100/S-101 validation service on 23 January 2026, meeting the IHO milestone. By mid-year 37 S-101 ENC's are in active service alongside over 16,000 S-57 ENC's, from over 50 member states.
- The West Africa regional office and training centre (Nigeria) was opened, expanding IC-ENC's global network.
- The IHO Director of Technology, Dr. John Nyberg, addressed the meeting, framing S-100 transition as a shared commercial and safety interest. He called for mentoring models pairing experienced technical working group members with developing hydrographic offices, secondments to the IHO Infrastructure Centre (Busan, Republic of Korea), accelerated open-source tooling development, and sustained IMO engagement by Member States.
- The activity fund contribution level was confirmed at USD 0.10 per unit for 2027, with total projected 2027 income exceeding USD 800,000 including voluntary contributions.
- The IHO–ICENC Memorandum of Understanding was endorsed. A mature MOU draft is in circulation. The governance and procurement structure for IHO use of IC-ENC-administered funds was supported.

Details:

The 27th IC-ENC Steering Committee Meeting (SC27) convened in Rio de Janeiro with approximately 40 in-person delegates and 30 online participants, hosted by the Brazilian Hydrographic Office (DHN). James Harper (IC-ENC General Manager) co-ordinated proceedings, with Admiral Ayo Olugbode (Nigeria) presiding as the acting Chairman. The meeting agenda was adopted with one addition raised by Australia: synchronisation of S-57 and S-100 release schedules.

The meeting format reflected an evolution from three to two plenary days, supplemented by a stakeholder seminar day on 23 June hosted by DHN. Industry presentations from CARIS, UNISAM and UKHO highlighted the potential of automation, estimated 20-year S-57 maintenance obligations, and the importance of user-centred production validation. Brazil's DHN was congratulated for producing its first S-101 ENC, currently in test.

S-100 and S-101 Service Development. IC-ENC confirmed the successful launch of its S-100/S-101 validation service on 23 January 2026. As of SC27, 37 S-101 ENC's are in active service from several member states, with further cells pending release. S-102 and S-104 products are also in service. Validation capacity is expanding. S-57/S-101 validation training is in progress at the Latin America office, with S-101 production/validation training announced for late 2026.

The production philosophy debate was substantive. The UKHO position is a stacked regional approach to concentrate S-101, S-102, S-104, S-111 and S-124 production in defined priority areas rather than building a full national catalogue prematurely, to avoid administrative overhead before OEM systems are ready.

The IHO Director of Technology (Dr. John Nyberg) noted that IC-ENC has met its 2026 milestone but stressed the S-100 gap remains significant. He urged IC-ENC members to encourage their national hydrographic office counterparts to engage in IHO technical working groups, and to support secondments to the IHO Infrastructure Centre in Busan. He flagged IMO engagement as critical: an informal working group on S-100 testing is in the process of being established at NCSR, and Member States, not IHO as observer, are the decision-making body at IMO. His central argument was that a fragmented or incomplete S-100 world is a direct commercial risk to IC-ENC members: supporting IHO is investment in the system IC-ENC depends on, not charity.

The Activity Fund contribution level was confirmed at USD 0.10 per unit for 2027, unchanged from 2026, with voluntary over-contributions bringing projected 2027 income to over USD 800,000. The operating balance stands at over USD 500,000. Since inception in 2023, 39 project proposals have been received and tracked; completed highlights include: S-97 general product specification guidelines updated to align with S-100 Edition 5.2.1 (endorsed at HSSC, proceeding to member approval); open-source library updated with S-102, S-104 and S-111 reader/writer/validator capability, now enabling QGIS display of S-102; S-101 validation test datasets to improve consistency across vendor tools; and WMO S-412 product specification update aligned to S-100 Edition 5.2.0 to support weather products in the future S-100 ECDIS suite.

A mature IHO–IC-ENC MOU draft has been circulated and a Letter of Intent was signed at the IHO Assembly. The governance structure, covering financial thresholds, strategic plan alignment matrix, reporting cadence and audit regime was endorsed by the Steering Committee. An active procurement test case was presented: UKHO’s Chris Jones (TWCWG Chair) identified a requirement to update S-104 and S-101 product specifications; a proposal was submitted to IHO, assessed against both strategic plans, approved and tendered; the contract was placed with a supplier, with Chris Jones acting as subject matter expert for deliverable assessment. IHO invoices IC-ENC upon acceptance; IC-ENC pays IHO; IHO pays the supplier. Key lessons: SME involvement is essential throughout; the IHO Secretariat role is critical to reduce IC-ENC administration burden while retaining oversight.

Breakout group conclusions were broadly aligned: the activity fund should be retained at USD 0.10; the MOU approach is endorsed; programme thinking should extend to multi-year projects rather than one-off items; investment priorities include open-source tooling, an accessible training curriculum, marketing materials explaining S-100 benefits in non-technical language, interoperability production guidance, S-98 pitfall communications, and access for cartographers to observe S-100 sea trials.

Three decisions were taken on Distribution Policy and S-100 Pricing. First, the ENC Onshore control framework was endorsed: authorised use cases are defined by usage type rather than location, clearly distinct from online viewing services and onboard navigation, with annual VAR compliance reporting required. Second, an indicative S-100 pricing model and methodology were approved in principle, with national pricing autonomy retained; the central pricing cut-off for January price changes was moved from 15 October to 20 September to give the distribution chain greater lead time. Third, the distribution working group was tasked to develop a subscription model for online viewing services to stabilise end-user pricing.

Distribution Assurance: The Pay as You Sail (PAYS) fleet grew in the past year, with reporting accuracy trending toward 99%. Non-reported ENC’s are partly attributable to geopolitical AIS jamming and

spoofing. The SafeTrack audit tool continues to mature. A new VAR has been approved, the first in approximately ten years, and is expected to launch within three to six months.

Australia reported simultaneous S-57/S-101/S-102/S-104 publication on its first multi-product release. IC-ENC explained that pipelines were built per product standard with no automated cross-product synchronisation currently in place. IC-ENC confirmed that it will contact members to agree hold/sequence arrangements when parallel releases occur, and that the Technical Conference will investigate policies and tooling for cross-product validation and synchronisation across the full S-100 product family. The S-100 Phase 2 roadmap was noted and supported.

S-124 Navigational Warnings. An options paper (A–D, ranging from RENC non-involvement to full RENC distribution) was presented. Key themes: RENCs must not assume development or issuing authority over MSI, which remains the national HO's responsibility; S-124 must remain advisory to respect State sovereignty; some members advocated a 'wait and see' approach. It was noted that the potential for S-124 MSI features may affect ENC chart content, warranting HO visibility. IC-ENC will attend the WWNWS in September 2026 and return with outcomes for Steering Committee consideration in autumn/October correspondence.

Upcoming meetings:

TBD