

Geospatial World Forum 2026 Amsterdam, Netherlands | 28 – 30 April 2026

Contribution to the IHO Work Programme 2026

WP 1 Promote and raise awareness of the IHO’s work and S-100 standards framework in multilateral geospatial and ocean governance fora; maintain relationship with the UN Committee of Experts on Global Geospatial Information Management (UN-GGIM)

High level summary:

- Dr. John E. Nyberg participated in the Geospatial World Forum 2026 in Amsterdam, Netherlands, delivering two presentations and contributing to a panel session on hydrographic infrastructure, Blue Economy data, and international governance.
- The IHO’s S-100 framework was presented as a strategic architecture for hydrospatial data independence — enabling nations to own, control, and commercially leverage marine data produced in their waters, beyond its traditional role as a navigation standard.
- Small Island Developing States (SIDS) were framed as Large Ocean States, with the case made that data sovereignty is an existential governance issue: 39 nations collectively governing approximately 30% of the world’s oceans, many without full control of the hydrographic data in their own Exclusive Economic Zones.
- The critical link between supporting data (currents, tides, water levels, environmental layers) and the Blue Economy was articulated, with concrete examples across offshore renewable energy, fisheries management, marine spatial planning, and port resilience showing how data gaps translate directly into foregone investment and constrained governance.

Details:

The Geospatial World Forum was held in Amsterdam, Netherlands from April 27 to May 1. The Forum is one of the leading international platforms for geospatial professionals, policymakers, and industry leaders. The 2026 conference brought together participants from across the geospatial landscape, providing a high-profile forum for the IHO to advance its strategic messages on S-100 implementation, hydrographic infrastructure, and data sovereignty as it relates to Capacity Development.

Keynote: IHO Standards and the Path to Data Independence

Dr. Nyberg delivered the keynote address to the Hydrospatial Infrastructure & Blue Economy Seminar, presenting the IHO’s S-100 Universal Hydrographic Data Model not merely as a next-generation navigation standard, but as a comprehensive marine data framework with far-reaching implications for national sovereignty, Blue Economy investment, and ocean governance.

The keynote structured its argument around five interconnected challenges: the gap in global hydrographic data production; data distribution and ownership inequities; the need for sustainable international standards infrastructure; the critical role of supporting data (bathymetry, water levels, surface currents) in enabling S-100 product suites; and the often missed opportunity of positioning IHO standards as a cross-sector framework beyond navigation.

A central message was that hydrographic data sovereignty, nations owning, controlling, and commercially benefiting from marine data collected in their waters, is a critical governance challenge. The IHO’s S-100

architecture, with its built-in support for data and access control, was presented as a key technical enabler, but one that must be complemented by national data policies aligned to UN-GGIM frameworks and commercial arrangements structured to retain in-country control from data collection to distribution.

The IHO Technology Infrastructure Centre and its role in ensuring equitable, sustainable access to S-100 implementation for all Member States was highlighted, as was the importance of IHO standards to the full breadth of ocean economy sectors: marine spatial planning, offshore renewable energy, fisheries, disaster response, and climate adaptation.

Presentation: SIDS, the Ocean & Data Sovereignty

Dr. Nyberg presented a dedicated presentation which made the case for framing Small Island Developing States as Large Ocean States in both policy and funding contexts. SIDS collectively control approximately 30% of the world's oceans, with an average Exclusive Economic Zone 28 times larger than their land area. Despite this, many operate under Primary Charting Authority arrangements in which survey data collected in their waters, and products derived from it, are primarily held and managed by partner hydrographic offices, sometimes limiting their ability to assert full co-ownership.

The presentation set out four calls to action: recognise SIDS as Large Ocean States in development finance and policy frameworks; invest in national hydrographic capacity through emerging low-cost technologies and regional cooperation; assert data sovereignty using the S-100 architecture and the IGIF-Hydro framework; and use IHO standards for marine spatial planning, environmental monitoring, and disaster response, positioning SIDS as sovereign producers of their own ocean intelligence under the UN Ocean Decade.

Panel Session: Hydrospatial Infrastructure, Blue Economy, and the Road to a Global Data Roadmap

Dr. Nyberg participated in a panel session covering four thematic areas:

Scope and governance of hydrospatial infrastructure: The distinction between hydrographic charting as a safety function and hydrospatial infrastructure as a strategic national asset was presented as a governance and investment question. Nations that do not fully own and control hydrospatial data describing their territorial waters, seabed resources, and coastlines are, in a meaningful sense, operating without full maritime sovereignty. The IHO Infrastructure Centre was cited as a shared technical foundation enabling equitable S-100 implementation.

Supporting data and Blue Economy consequences: The session's main point was that S-100 is technically ready but the supporting data, including high resolution bathymetry, currents, tidal models, water levels, environmental layers, may not exist for much of the world. This was framed not as a standards problem but as a data infrastructure problem with direct economic consequences across offshore renewables (project financeability), fisheries (market access certification), marine spatial planning (evidence-based governance), and port resilience (climate adaptation).

Governance, financing, and a credible roadmap: The multilateral governance architecture already exists through the IHO, Regional Hydrographic Commissions, UN-GGIM, and the Ocean Decade. What is missing is coordination discipline and systematic inclusion of hydrographic data collection in Blue Economy and climate finance portfolios. Dr. Nyberg proposed a three-element roadmap: a mapped global baseline, time-bound national commitments, and embracing technology pathways.

Closing takeaway: The S-100 framework provides the architecture; the Blue Economy provides the economic case; the governance and financing tools exist. What has often been missing is the political will to treat hydrographic data as the critical national infrastructure it is.

Photo



Follow-up and upcoming meetings:

The IHO Secretariat will consider future participation in the Geospatial World Forum based on the relevance of the programme to IHO strategic priorities, including S-100 implementation, hydrographic capacity development, and the Blue Economy.