

First Expert meeting of the UN-GGIM & IHO Joint Working Group on Marine Geospatial Information
with the theme “Advancing Integrated Marine Geospatial Information Management”

Chiang Mai, Thailand
4 – 8 May 2026



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Republic of Korea

Korea Hydrographic and Oceanographic Agency



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THE PARADIGM SHIFT:

From safe navigation to a seamless digital ecosystem

TRADITIONAL(PAST)

Navigation-focused,
single-purpose paper
charts



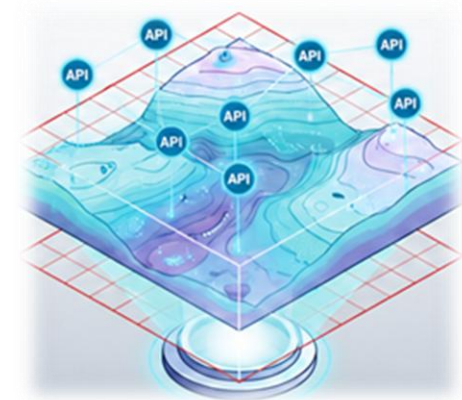
TRANSITIONAL(PRESENT)

Digital databases, 3D
marine maps, and targeted
safety applications



ECOSYSTEM(FUTURE)

S-100, FAIR principles
and Digital Twin of the
Ocean



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Where is your country today in enhancing the management and use of marine geospatial information ?

Current State: Standardizing Foundation

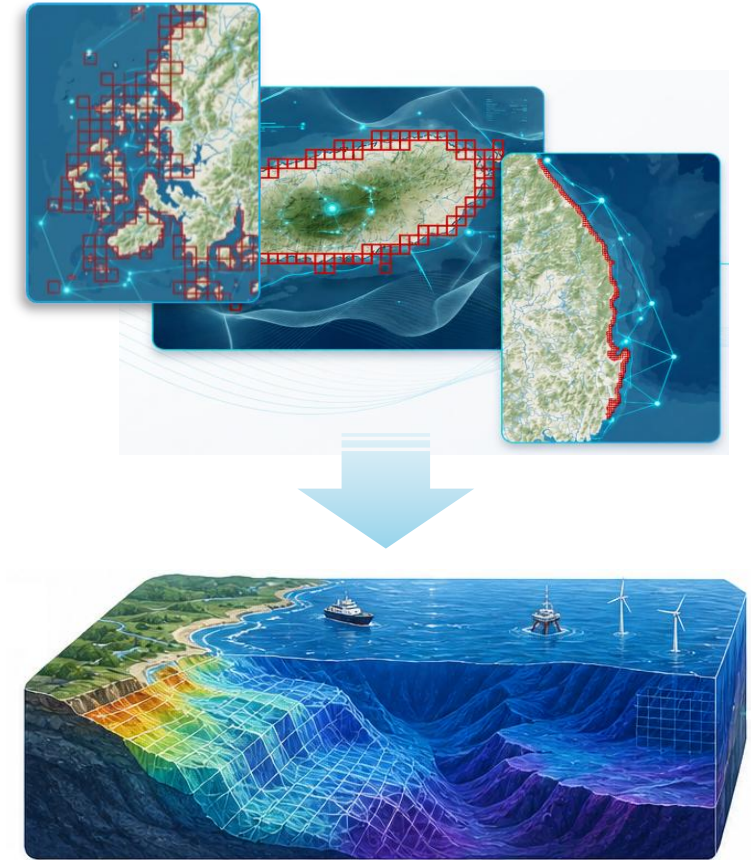
- KHOA leads the national production of marine spatial data, achieving standardized, seamless land-sea base mapping project

Core Products

- 3D marine maps, precision bathymetry, and user-centric public services like the 'Safe Sea' app

Global Coordination

- Active, ongoing engagement in IHO, UN-GGIM, EAHC



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Where does your country aim to be in the next five years?



Governance: National marine geospatial framework aligned with UN-IGIF-Hydro, IHO C-17, and national policy; strengthened S-100 management via the IHO Infrastructure Centre



Foundational Data: Marine base map as the authoritative reference for planning, development, environment, and disaster response



Interoperability: Seamless land–sea and 3D services based on S-100/OGC standards, shared metadata, and APIs



Integration: Regular cross-sector collaboration across hydrography, environment, fisheries, planning, disaster management, and industry



Sustainability: Shift from pilot projects to continuous national operations, update cycles, and broader public–private reuse



What do you see as the main challenges in reaching this “ideal” situation within the next five years?



DATA & INTEROPERABILITY: Inconsistent metadata across agencies limits. Significant technical gaps remain in vertical datum alignment for seamless land-sea transitions.



POLICY & LEGAL: Fragmented laws across sectors make it difficult to mandate a standardized marine map as the national standard.



MARKET & CAPACITY: High market fragility-84.2% of marine data business relies heavily on public sector contracts. Severe shortage of specialized S-100 and AI talent.



What potential opportunities could help address some or all of these challenges?



**Offshore
Wind act**

Creates an explosive market demand for high-quality geospatial data



**Open-Source
Adoption**

Enables rapid, low-cost API integration, empowering startups



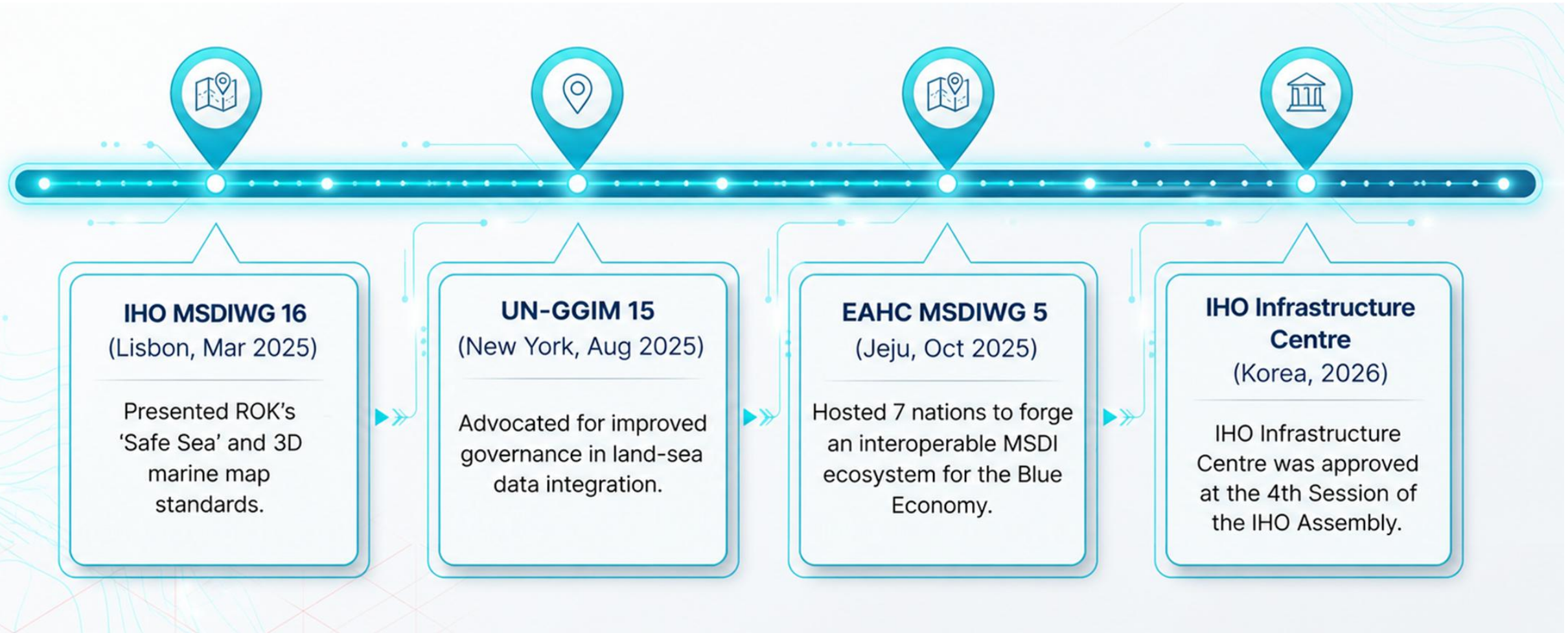
**Land-Sea
mapping**

Seamless land-sea base mapping



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How familiar are you with the UN-IGIF, and IHO C-17?



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What kind of support would you like to receive from UN-GGIM-IHO Joint Working Group?



Harmonized Guidance: Practical guidance linking UN-IGIF-Hydro and IHO C-17, with clear crosswalks and simple maturity assessment tools, to support consistent implementation across countries.



Technical Methodology: Shared global algorithms and metadata mapping approaches, developed with ISO/TC 211 and OGC, to support seamless land-sea integration and S-100 alignment.



Capacity Development: Targeted international training to address common capacity gaps, including S-100 implementation, 3D data management, AI ready metadata, and open data architectures.



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