

WORLDWIDE ELECTRONIC NAVIGATION SERVICES (WENS) PRINCIPLES

Note

- *There has been a request to re-name the WENS.
- *There has been a request to keep the name WENS.

(WEND WG working draft version, 28 August 2019)

The purpose of WENS is to ensure that high-quality, updated official hydrographic services are available to mariners worldwide. These services support hydrographic carriage requirements of Safety of Life at Sea (SOLAS) Chapter V (SOLAS/V), and the requirements of the International Maritime Organization (IMO) Performance Standards for Electronic Chart Display and Information Systems (ECDIS). In addition, these same coordinated services must be available to support mariners not subject to the provisions of ECDIS and should help to facilitate the transition from a paper to digital environment.

Applicability

SOLAS/V, requires signatory States to provide hydrographic services to enhance safety of life at sea. The International Hydrographic Organization (IHO) and partners have developed standards for digital hydrographic services that can functionally replace their analog predecessors. The principles below apply to these digital hydrographic services intended to meet a nation's obligations under SOLAS and include high priority specifications referenced in the IHO Roadmap for S-100 Implementation:

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), S-123 (Marine Radio Services), S-124 (Navigation Warnings), S-125 (Marine Navigational Services), S-126 (Marine Physical Environment), S-127 (Marine Traffic Management), S-128 (Catalogue of Nautical Products) and S-129 (Under Keel Clearance Management).

NOTES:

- *These do not include specifications beyond S1xx. For example Weather Warnings, Inland ENC, Aids to Navigation, or Sea Ice. Removed S-121 per IRCC guidance.
- *Reduced redundant introductory text.
- *In reference to IRCC comment regarding "mandatory" carriage, note that "mandatory" in this case refers to ECDIS and says that we are obligated to provide services that are compatible with ECDIS, not that the new services are "mandatory" at this time.

1. Service Provision

1.1. Member States will strive to ensure that mariners anywhere in the world can obtain up-to-date services for all shipping routes and ports around the world.

1.2. Member States are encouraged to distribute their services through compatible and coordinated network distribution systems to reduce distribution complexity and risk, and to ensure the greatest possible standardization, consistency, reliability and availability of services.

NOTES

*Should distribution of these services all be the responsibility of the RENCs? The provision intentionally does not specify a means of distribution in this version, just that services be compatible and coordinated.

**"Cost" has been removed and a draft (new provision) has been suggested as 1.2a.

1.2a Member States should strive to ensure that services are not cost prohibitive, prioritizing safety above profit.

1.3. Source and authority of services should be preserved in the metadata and remain available to the end user.

1.4. Member States should use the IHO Data Protection Scheme (S-100 Part 15) based for distribution to end users, to ensure data integrity, to safeguard national copyright in data, to protect the mariner from falsified products, and to ensure traceability. When an encryption mechanism is employed to protect data, a failure of contractual obligations by the user should not result in a complete termination of the service. This is to assure that the safety of the vessel at sea is not compromised.

1.5. Noting that the content of many of these services are also valuable as part of a national or regional Marine Spatial Data Infrastructure (MSDI), the coordination and dissemination of these services may be coordinated through the same mechanisms as the services intended for maritime navigation.

2. Rights and Responsibilities

2.1. SOLAS/V, Regulation 9, requires Contracting Governments to ensure that hydrographic products and services are available in a suitable manner in order to satisfy the needs of safe navigation. With mandatory carriage of ECDIS, there is a consequential requirement to ensure that such services, as agreed by IMO, are available in a form suitable for use in ECDIS, in current form and as subsequently updated.

2.2. To meet their national obligations under SOLAS, Member States may either:

a) Provide the necessary services, covering waters bounded by the seaward limit of their

Exclusive Economic Zone, or

b) Agree with other States to provide the necessary service coverage on their behalf.

All States retain the right to provide the services within national jurisdictions and according to national legislation. However, Member States should strive to ensure that comprehensive service coverage is available in all areas regardless of producer.

Notes

*This may be too complex to include here at this stage.

*Jurisdictions should be defined.

*Strengthened coverage statement.

*Added national legislation statement in accordance with IRCC guidance.

2.3. Member States should recognize their potential exposure to legal liability for the quality of their hydrographic services.

Notes

*MS should strive to ensure that the safety benefits of services outweigh the risks associated with service liability.

2.4. The nation responsible for originating the data is also responsible for providing metadata on source, methods of collection, and data quality. Metadata should be consistent with IHO standards and practices.

Notes

*Last line added to help ensure consistency with approach to metadata.

2.5. National entities are responsible for advising the issuing Hydrographic Office (HO) of available information and for advising the NAVAREA coordinator of Marine Safety Information in a timely manner.

2.6. In producing services, Member States are to take due account of the rights of the owners of source data and previously issued products, honoring any use restrictions or copyrights.

3. Coordination of Services

3.1. Redundant services should be avoided, particularly where official, nationally provided services are available. A single producing authority should exist in any given area for each service, though the same authority need not provide all services.

Notes

*Need to recognize the possibility that some services might be better with competition, weather for example. However, the principles should help to ensure that services be

designed and distributed with the intent of minimizing the number of systems and distribution mechanisms required to use them aboard ships.

3.2. When the limits of waters of national jurisdiction have not been established, or it is more convenient to establish boundaries other than established national boundaries, producing countries may define the boundaries for hydrographic service provision within a bilateral (or multilateral) technical arrangement. These limits would be for convenience only and shall not be construed as having any significance or status regarding political or other jurisdictional boundaries.

Notes

*We have not been able to realize this with regard to ENC, so maybe it needs stronger language. Could add something like, "Services will not be released when significant overlaps exist."

3.3. In international waters, the applicable regional hydrographic commission may coordinate limits of services. In areas of national jurisdiction for which there is no agreed hydrographic service provider nation, the coastal State may designate the service provider nation. Services produced under such arrangements should be offered for transfer to the coastal State in the event that the coastal State subsequently develops the capacity to maintain the services. Such transfer should respect the rights of the coastal State and the commercial rights of the producer nation.

Notes

*May need to expand the roles of the RHCs. Each RHC should have a Service Coordination Committee. Much of the WENS data currently sits outside RHC remits.

4. Maintenance and Improvement of Services

4.1. Member States are encouraged to work together on data capture and data management. To the extent possible, data should be widely shared to support continual updates and improvements of hydrographic services.

4.2. Technically and economically effective solutions for updating services are to be established conforming to the relevant IHO standards. The updating of services should be at least as frequent as that provided by the nation for previous analog services.

5. Standards and Quality Management

5.1. Service providers and distributors should employ a documented Quality Management System to help ensure high quality of hydrographic services. When implemented, this should be certified by a relevant body as conforming to a suitable recognized standard; typically this will be ISO 9001:2015.

Note

*Strengthened statement by putting onus on service providers and distributors, not WENS Principles.

5.2. Services provided shall be in conformance with all approved relevant IHO, IMO and World Meteorological Organization (WMO) standards, when they are available.

Note

*Added WMO in accordance with IRCC guidance.

6. Mutual Assistance and Training

6.1. Member States' HOs are requested to participate in capacity building efforts developed nationally, regionally, and through the IHO, by providing subject matter experts, venues, training materials, and open-source applications. Member States are encouraged to coordinate capacity building activities with the IHO Capacity Building Sub-Committee (CBSC). The goal of this capacity building is to increase the availability of high-quality hydrographic services globally.

Note

*Added reference to the IHO CB Sub-Committee.