## Paper for Consideration by WENDWG-14

## Plan for further S-100 products related surveys

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| --- | --- |
| ***Submitted by:*** | WENDWG Office Bearer |
| ***Executive Summary:*** | The paper describes the introduction of survey to determine S-1xx products implementation from 2026 onwards. |
| ***Related Documents:*** | IGIF-S-100 Matrix, WENDWG CL 1/2023, IHO S-100 Implementation plan |
| ***Related Projects:*** | WENDWG work, national and regional reports |

**Introduction/Background**

The WENDWG work is focussed on monitoring and advising IRCC on the development of a world-wide consistent level of high-quality, updated official S-57 and S-101 ENCs, and ENDS (as well as other S-100 products and services), through integrated services that support chart carriage requirements of SOLAS Chapter V, and the requirements of the IMO Performance Standards for ECDIS. WENDWG work supports the S-100 based products and services implementation strategy of the IHO.

**Analyses/Discussion**

Taking into account the planned start of ENDS Phase1/Route Monitoring product generation, the questions introduced by CL1/2023 are no longer relevant after 2025.

From 2026 up to a 100% global coverage with S-101 data at a specified scale band (to be determined), the questions presented in Annex will be ask annually.

The continuation of the IGIF-S-100 Matrix at a global level becomes superfluous when HOs will start the ENDS product generation. The intended discontinuation of the IGIF-S-100 Matrix at global level, however, does not prevent HOs to use the IGIF-S-100 Matrix if they believe that a determination of their ENDS production readiness level is appropriate.

The IHO secretariat will use the results of the annual surveys for the annual report to NCSR. We assume that NCSR may initiated the discontinuation of S-57 production the earlier HOs will archive a 100% global S-101 ENC coverage at a specified scale band (to be determined, see scenario two of the following list).

Assuming the responsible technical working groups determine a comparison table between S-57 usage bands and S-101 scale bands, and assuming further that these S-101 scale bands are accepted as appropriate by Member States, following S-101 ENC coverage scenarios are imaginable:

* For all existing S-57 usage bands coverage, the S-101 scale bands coverage is identical,
* For a specific S-57 usage band coverage, the S-101 scale band coverage is identical,
* For all existing S-57 usage bands coverage, the S-101 scale bands coverage is xx% (xx value TBD),
* For a specific S-57 usage band coverage, the S-101 scale band coverage is xx% (xx value TBD),

We believe that the IMO will not accept the latter two scenarios. They are a deterioration of the current performance.

**Conclusion**

The proposed survey provides both an indication of S-101 coverage per scale band and a completion update of other scale independent ENDS. Some Members States responded on WENDWG CL1/2023 that the questions were not precise enough. The survey addresses these concerns.

**Recommendation**

Each Member State should provide its ENDS production status.

**Justifications and impacts**

The new survey require a more precise specification of ENDS provision status. It forces Member States to calculate the ENDS production progress.

The WENDWG Chair will keep survey responses strictly confidential. Each response will incorporate into a global statistical overview.

The statistical overview will be part of the IHO report to NCSR. HOs fulfil their commitments against IMO.

**Action required of WENDWG14:**

The WENDWG14 is invited to:

1. Discuss the suggested way forward of the years 2026 onwards.
2. Discuss the appropriateness of the survey documents provided in Annex.
3. Advice RHC representatives (present or absent) to explain the survey plan in their respective region.
4. Discuss whether the listed scenarios are useful for the next IHO Strategic plan as a measurable Strategic Performance Indicator.

**Annex**

**S-101 coverage check (regional and national level)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Line** | **Question** |  | | **Answer** | | | |
| 1 | Organisation |  | |  | | | |
| 2 | E-Mail Address |  | |  | | | |
|  |  |  | |  | | | |
| 3 | Do you produce S-101 products? | Yes | Go to line 4 |  | | | |
| No | Go to line 6 |
| 4 | How big is the estimated current S-101 ENC coverage?  Please refer only to the S-101 ENC scale bands provided by your organisation.  The standardisation body recognises that HOs will provide S-101 ENCs only for a subset of listed scale bands.  For large-scale bands (12 and above) compare planned coverage against managed coverage. |  | | Scale Band | | | Estimated Coverage (%) |
| 1 | NULL | 10,000,000 |  |
| 2 | 10,000,000 | 3,500,000 |  |
| 3 | 3,500,000 | 1,500,000 |  |
| 4 | 1,500,000 | 700,000 |  |
| 5 | 700,000 | 350,000 |  |
| 6 | 350,000 | 180,000 |  |
| 7 | 180,000 | 90,000 |  |
| 8 | 90,000 | 45,000 |  |
| 9 | 45,000 | 22,000 |  |
| 10 | 22,000 | 12,000 |  |
| 11 | 12,000 | 8,000 |  |
| 12 | 8,000 | 4,000 |  |
| 13 | 4,000 | 3,000 |  |
| 14 | 3,000 | 2,000 |  |
| 15 | 2,000 | 1,000 |  |
|  | | | | | | | |
| 5 | When did you completed or when do you plan to complete a 100% spatial coverage of S-101 ENC products according to the selected scale bands?  The standardisation body recognises that a 100% spatial coverage of large-scale S-101 ENCs (scale band 12 and above) is not realistic.  100% applies when your organisation managed all planned large-scale S-101 ENC cells. |  | | Scale Band | | | Year |
| 1 | NULL | 10,000,000 |  |
| 2 | 10,000,000 | 3,500,000 |  |
| 3 | 3,500,000 | 1,500,000 |  |
| 4 | 1,500,000 | 700,000 |  |
| 5 | 700,000 | 350,000 |  |
| 6 | 350,000 | 180,000 |  |
| 7 | 180,000 | 90,000 |  |
| 8 | 90,000 | 45,000 |  |
| 9 | 45,000 | 22,000 |  |
| 10 | 22,000 | 12,000 |  |
| 11 | 12,000 | 8,000 |  |
| 12 | 8,000 | 4,000 |  |
| 13 | 4,000 | 3,000 |  |
| 14 | 3,000 | 2,000 |  |
| 15 | 2,000 | 1,000 |  |
| 6 | When do you plan to provide the first S-101 products? | Year | |  | | | |
| 7 | FINISH |  | |  | | | |

**S-10x coverage check (regional and national level))**

|  |  |  |
| --- | --- | --- |
| No. | Prod Spec | Estimated coverage  = % |
| S-102 | Bathymetric Surface |  |
| S-103 | Sub-surface Navigation |  |
| S-104 | Water Level Information for Surface Navigation |  |
| S-111 | Surface Currents |  |
| S-121 | Maritime Limits and Boundaries |  |
| S-122 | Marine Protected Areas |  |
| S-123 | Marine Radio Services |  |
| S-124 | Navigational Warnings |  |
| S-125 | Marine Aids to Navigation (AtoN) |  |
| S-126 | Marine Physical Environment |  |
| S-127 | Marine Traffic Management |  |
| S-128 | Catalogue of Nautical Products |  |
| S-129 | Under Keel Clearance Management (UKCM) |  |
| S-130 | Polygonal Demarcations of Global Sea Areas |  |
| S-131 | Marine Harbour Infrastructure |  |