

IHO SECRETARIAT – PROPOSALS FOR MEASURING SPI ASSIGNED TO IRCC

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International Hydrographic Organization

1.BACKGROUND

2. ASSUMPTIONS AND DRIVING FACTORS

3. PROPOSALS FOR SPI 1.2.2 – 1.3.1 – 2.1.1 – 2.2.1 – 2.3.1

4. WAY AHEAD



- International Hydrographic Organization
- 1. Assembly Decisions
- 2. Council Actions
- 3. Identification and allocation of SPI (IHO Sec, HSSC and IRCC)
- 4. IRCC actions (1st Workshop and Letter 01/2021)
- 5. IHO Resolution 12/2002
- 6. RHCs and IRCC Subordinate bodies feedback
- 7. IHO Secretariat internal *Brainstorming* held in Jan/Feb 2022
- IHO Secretariat identified SPI 1.2.2 1.3.1 2.1.1 2.2.1 2.3.1 to elaborate proposals and provide metrics
- 9. For SPI 3.1.1 3.2.1 3.2.2 3.2.3 the proposed metrics from IRCC Letter 01/2021 are supported



INO ASSUMPTIONS AND DRIVING FACTORS

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ASSUMPTIONS:

- A. Keep it simple
- B. Use of existing digital tools available at the IHO Secretariat
- C. No need (and no time in view of A-3 in 2023) to wait for the development of fully new tools based on information not available yet

DRIVING FACTORS:

- A. Diverging national and regional approaches to the IHO Strategic Plan and necessity of tailored "Gap analysis"
- B. Main focus on quality rather than quantity in defining the metrics to apply to the SPI assigned to IRCC
- C. MSDI portal not ready before 2024

IHO PROPOSAL TO MEASURE SPI 1.2.2

International Hydrographic Organization Based on the assumption that ≤ 200 m depth contour defines the navigationally significant area, it is proposed to carry out the following steps:

- 1. RENCs invited to consider possibility of extracting 200 m contour lines from ENCs
- 2. IHO Secretariat to compile a 200 m contour data set (including generalization), to provide a single <u>polygonal</u> line/area for the area of every RHC
- **3. IHO Secretariat** to detect all the ENCs at large scale (UB5 to UB4, and UB3 in some cases) having more than 50% coverage (cell limits) within the 200 m polygonal limit
- **4. IHO Secretariat** to calculate statistical distribution of those large scale ENCs versus CATZOC values (and vice-versa) for each RHCs and make them publicly available version-controlled on the IHO website (INToGIS)
- **5. IRCC14** to endorse the targets and thresholds (CATZOC A2, B, C) for IHO SP2021-2026 from which % versus the detected large scale ENCs can be considered as: % *good*, % medium, % poor, % unassessed
- 6. RHCs to consider a standing agenda item at their Conferences/Meetings to ensure consistency between C-55 and SPI 1.2.2.



IHO PROPOSAL TO MEASURE SPI 1.2.2

International Hydrographic Organization An experimentation phase is underway between the IHO Secretariat and PRIMAR:

SEE THE SLIDES IN ANNEX



IHO PROPOSAL TO MEASURE SPI 1.3.1

International Hydrographic Organization Under the assumption that a <u>Questionnaire</u> to the IHO Member States is the most viable solution, the potential questions to ask are the following:

- 1. Has the Institution a plan for future dual fuel provision of S-57 and S-101 ENCs?
- Which of the three options proposed by HSCC will be taken?
 Option 1 HO provides dual production (S-57 & S-101)
 Option 2 HO converts S-57 to S-101 and update production tools to produce S-101 only
 - Option 3 HO continues with production of S-57 only

3. Does the Institution have a production software which can be enhanced with conversion / production functions for S101 or other S1XX products?



IHO PROPOSAL TO MEASURE SPI 2.1.1

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Starting from the assumption to use the Map of national MSDI portals as "IHO MSDI portal" and establish a procedure to count the number of hits on the IHO Online Catalogues - Map of National Geo-portals, by using the access to the Map through the IHO website or using a directly link, it is proposed to carry out as follows:

1. IHO Secretariat to extract the number of accesses to the Map of National Geo-portals per year using the GIS tools

IHO PROPOSAL TO MEASURE SPI 2.2.1

International Hydrographic Organization Starting from the assumption that the metrics should be extracted from Publication C-55, and considering the two available ranges (≤200m and >200m) to measure the percentage of adequately surveyed area per coastal state, to determine the percentage of adequate surveyed areas, the **IHO Secretariat** to execute the following steps:

- To extract the columns of adequate surveyed areas ≤200 m and >200 m from C-55 database
- 2. For the coastal States with more than one region, the value will be defined by the weighted average of the regions with the weight defined by the area of the region in relation with the total area of all regions. The areas will be computed using the GIS tools
- 3. Coastal States without values will not be considered as well as the disputed areas
- The final two values (≤200 m and >200 m) will be defined using the mean (average) of percentages of the coastal States.

IHO PROPOSAL TO MEASURE SPI 2.3.1

Partly

None

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<u>The Shared Guiding Principles for Geospatial Information Management adopted by the UN</u> <u>General Assembly and issued in September 2015 are used as guidance for the preparation</u> <u>of a Questionnaire</u>.

This approach is based on the assumption that national and regional contexts for each HO will vary, and the interpretation of the guiding principles will also differ between member States. The Questionnaire strives to create an initial impression of the global situation which in turn, will guide the development of a measurement schema to periodically track progress. The Questionnaire is comprised of both quantitative indicators and qualifying comments, allowing for statistical analysis, plus the identification of common trends and challenges faced by MS in the implementation of the guiding principles. The following sectors are covered in the Questionnaire: **Example: Hydrographic data advocacy: Does your government**

- 1. Innovation
- 2. Governance
- 3. Compliance

Example: Hydrographic data advocacy: Does your government actively promote the application of hydrographic data beyond safety of navigation in support of sustainable development, economic growth, disaster risk reduction and climate change?



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1. DISCUSSION WITHIN IRCC

WAY AHEAD

1.IRCC14 ENDORSEMENT TO PROCEED

- 2.FORMALIZATION OF THE PROPOSALS FOR SPI 1.2.2 1.3.1 2.1.1 2.2.1 2.3.1 via IHO CL/OTHER (BY JUNE 2022)
- 3.IHO MS AND RHCs CONTRIBUTION GATHERING (BY 31 OCTOBER 2022)
- 4. PROVISION OF METRICS BY IHO SECRETARIAT (BY DECEMBER 2022) TO PRESENT TO A-3 through "2022 IHO ANNUAL REPORT"



TANK YOU FOR THE ATTENTION







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IHO PROPOSAL TO MEASURE SPI 1.2.2

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ANNEX



An experimentation phase is underway between the IHO Secretariat and PRIMAR:

FREEDOM TO CHOO

Based on the assumption that < 200 m depth contour defines the navigationally significant area, it is proposed to carry out the following steps:

- 1. **RENCs** invited to consider possibility of extracting **200 m** contour lines from UB3 (or UB4 if needed in some areas)
- 2. IHO Secretariat to compile data (including generalization), to provide a single polygonal line for every RHC
- **3. IHO Secretariat** to select all the ENCs at large scale (UB5 to UB4, and UB3 in some cases) having more than 50% coverage (cell limits) within the 200m polygonal limit
- 4. **IHO Secretariat** to calculate statistical distribution of UB versus CATZOC values (and vice-versa) for each RHCs and make them publicly available version-controlled on the IHO website
- 5. IRCC to adopt at IRCC-14, by RHCs, the targets and thresholds (CATZOC A2, B, C) for IHO SP2021-2026 from wras: % good, % medium, % poor, % una:
- 6. **RHCs** to consider a standing agenda ite ensure consistency between C-55 and :

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1. Distribution of CATZOC in each usage band **PRIMAR**



- Unassessed distribution (CATZOC:6)
 - decreases from 90% in UB 1(Overview) to 22% in UB 6 (Berthing).
- A1 distribution (CATZOC:1)
 - increases from 0% in UB 1(Overview) to 24% in UB 6 (Berthing).
- CATZOC B+C distribution
 - ~equal in UB2, 3, 4, 5 and 6



Navigationally significant areas

- Usage Band 3 and 4 (UB3 and UB4)
- Areas shallower than 200m (<200m)



DEPARE with CATZOC

• Combination of DEPARE and CATZOC (M_QUAL) is required for calculation



Calculation for the indicators

- Calculate the areas of DEPARE (< 200m) combined with each CATZOC value of the selected ENCs:
 - "Good" ... A1 + A2
 - "Medium" ... B
 - "Poor" ... C + D
 - "Unassessed" ... U

CATZOC value	Shallower areas (< 200m)	
1 (A1)	20%	٦
2 (A2)	30%	ſ
3 (B)	20%	
4 (C)	10%	J
5 (D)	15%	ſ
6 (U)	5%	

Category	Indicators
Good	50%
Medium	20%
Poor	25%
Unassessed	5%



Actions to be considered by IRCC

- pursue experimentation with PRIMAR until IRCC14
- on behalf of IRCC, IHO Secretariat to seek authorization from IHO MS (producer countries) to use CATZOC data, DEPARE, etc., for internal purpose only (CATZOC layer in INToGIS, SPI 1.2.2 ...)
- RENC to consider the provision of these data to the IHO Secretariat through a dataflow to produce on a monthly/yearly? basis



Reference

- Distribution of CATZOC in Mediterranean and Black Seas
- Without consideration of the areas shallow/deeper than 200m

