

PROPOSAL OF A METHODOLOGY TO STANDARDIZE THE REGIONAL ENC SCHEMES. CASE OF STUDY: CARIBBEAN SEA

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NORTH ATLANTIC OCEAN
SOUTHWESTERN SHEET

NCWG-4 Meeting, 6th November 2018

For Symbols and Abbreviations, see Chart No. 1

MERCATOR PROJECTION
SCALE 1:5,881,000 AT LAT. 20°

NOTE

Soundings in fathoms and meters

CONVERSION TABLE FATHOMS TO METERS			
Fathoms	Meters	Fathoms	Meters
1	0.9	10	18.3
2	1.8	11	20.1
3	2.7	12	21.9
4	3.7	13	23.8
5	4.6	14	25.6
6	5.5	15	27.4
7	6.4	16	29.3
8	7.3	17	31.1
9	8.2	18	32.9
10	9.1	19	34.7
11	10.0	20	36.6
12	10.9	21	38.4
13	11.8	22	40.2
14	12.7	23	42.0
15	13.6	24	43.8
16	14.5	25	45.7
17	15.4	26	47.5
18	16.3	27	49.4
19	17.2	28	51.2
20	18.1	29	53.0
21	19.0	30	54.9
22	19.9	31	56.7
23	20.8	32	58.5
24	21.7	33	60.3
25	22.6	34	62.1
26	23.5	35	63.9
27	24.4	36	65.7
28	25.3	37	67.5
29	26.2	38	69.3
30	27.1	39	71.1
31	28.0	40	72.9
32	28.9	41	74.7
33	29.8	42	76.5
34	30.7	43	78.3
35	31.6	44	80.1
36	32.5	45	81.9
37	33.4	46	83.7
38	34.3	47	85.5
39	35.2	48	87.3
40	36.1	49	89.1
41	37.0	50	90.9
42	37.9	51	92.7
43	38.8	52	94.5
44	39.7	53	96.3
45	40.6	54	98.1
46	41.5	55	99.9
47	42.4	56	101.7
48	43.3	57	103.5
49	44.2	58	105.3
50	45.1	59	107.1
51	46.0	60	108.9
52	46.9	61	110.7
53	47.8	62	112.5
54	48.7	63	114.3
55	49.6	64	116.1
56	50.5	65	117.9
57	51.4	66	119.7
58	52.3	67	121.5
59	53.2	68	123.3
60	54.1	69	125.1
61	55.0	70	126.9
62	55.9	71	128.7
63	56.8	72	130.5
64	57.7	73	132.3
65	58.6	74	134.1
66	59.5	75	135.9
67	60.4	76	137.7
68	61.3	77	139.5
69	62.2	78	141.3
70	63.1	79	143.1
71	64.0	80	144.9
72	64.9	81	146.7
73	65.8	82	148.5
74	66.7	83	150.3
75	67.6	84	152.1
76	68.5	85	153.9
77	69.4	86	155.7
78	70.3	87	157.5
79	71.2	88	159.3
80	72.1	89	161.1
81	73.0	90	162.9
82	73.9	91	164.7
83	74.8	92	166.5
84	75.7	93	168.3
85	76.6	94	170.1
86	77.5	95	171.9
87	78.4	96	173.7
88	79.3	97	175.5
89	80.2	98	177.3
90	81.1	99	179.1
91	82.0	100	180.9

MAIN GOAL:

To propose an standardization on the ENC's regional schemes which allows to compile efficient and consistent products, aimed at contribute with a safe navigation through the implementation of a case of study (Caribbean Sea).

BACKGROUND

ENCs (ECC) and INT Paper Charts Committee (ICC)

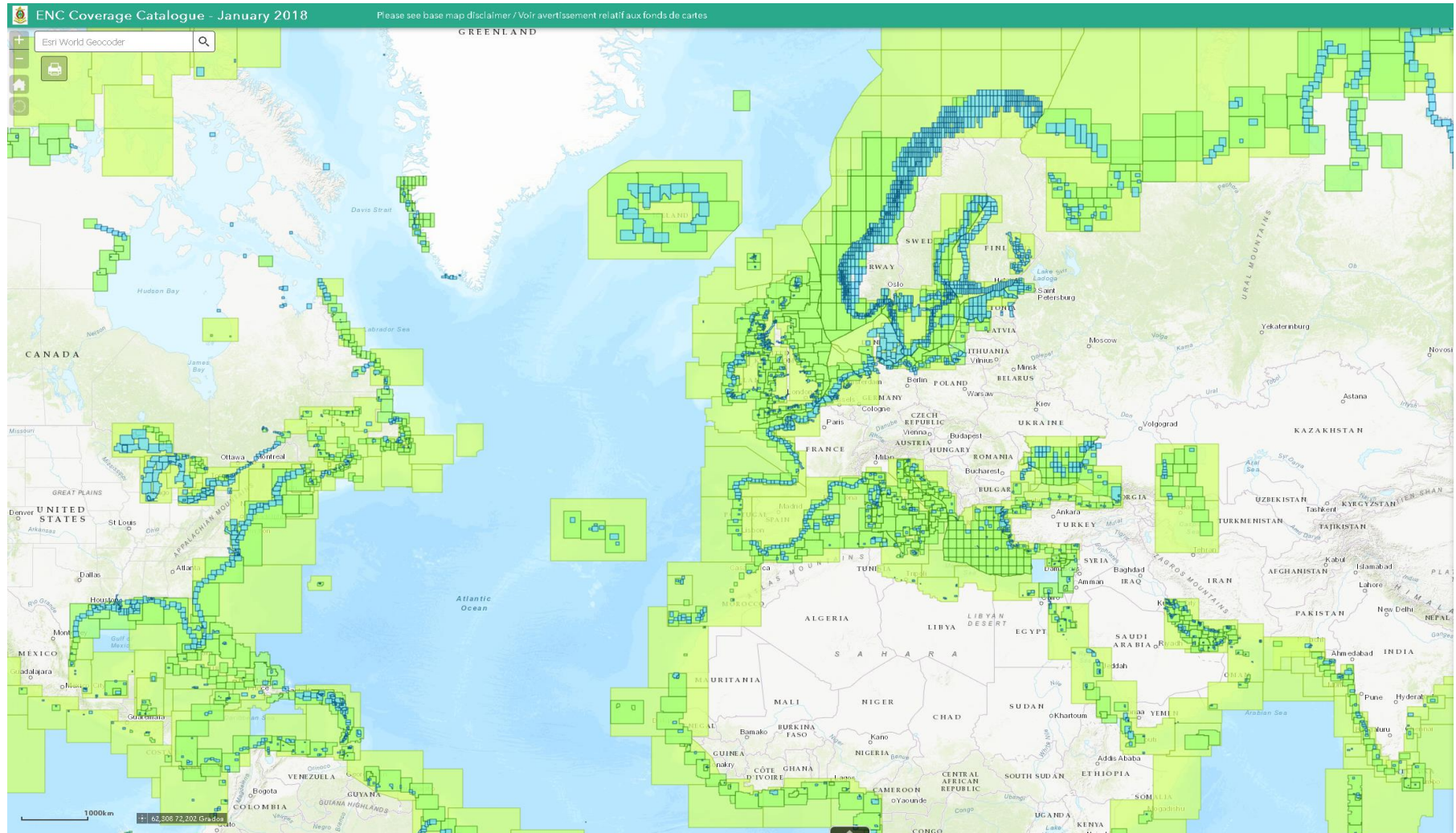
The Committee promotes the availability of the ENC data and INT charts.

MACHC Meeting	Committee	Results and actions
XIII, Guatemala 2012	ECC - ICC	First approach to a consistent plan to compile and maintain the cartographic scheme in the Caribbean region, monitoring the compilation process. The Integrated Cartography Committee of MACHC - MICC is established.
XIV, San Martin 2013	MICC	Stakeholders carry on working, planning and improving their ENCs. The folio is increasing its ENC according the needs of the region.
May 2017 (videoconferencia)	MICC	Still remain to solve some overlap issues both in INT paper charts and ENC. 64 of 252 ports still don't have ENC coverage.
VI, Noruega, 2016	WENDWG6	WENDWG6-04.1A2 Overlapping Data: Report on scenarios and test cases on ECDIS (IC-ENC)
VIII, Argentina 2018	WENDWG	New IHO technical decision: remove the overlaped data in areas with evident risks for navigation. CL 19/2018 Adopted new resolution of IHO.

STATUS

- There were not ENC regional schemes according the standards and there were not approved by all the members states.
- the unpredictable behaviour of ECDIS, in overlapping areas

Source: https://iho.int/iho_pubs/IHO-bulletin/briefmeetingreports/2016/Marzo_SP_2016.pdf

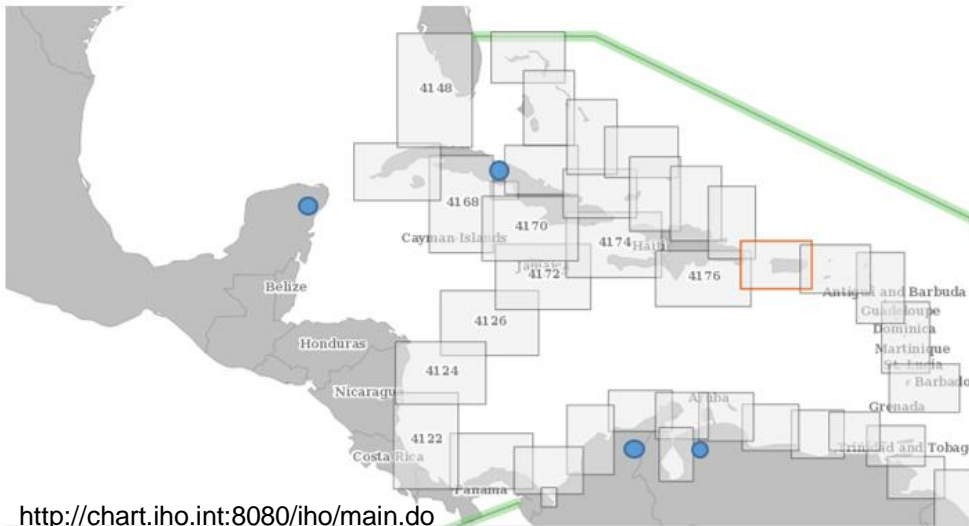


Catalogue online IHO coverage and availability of ENCs

Fuente: <http://iho.maps.arcgis.com/apps/webappviewer/index.html?id=459311d1c7144a2696f44773b922d058>

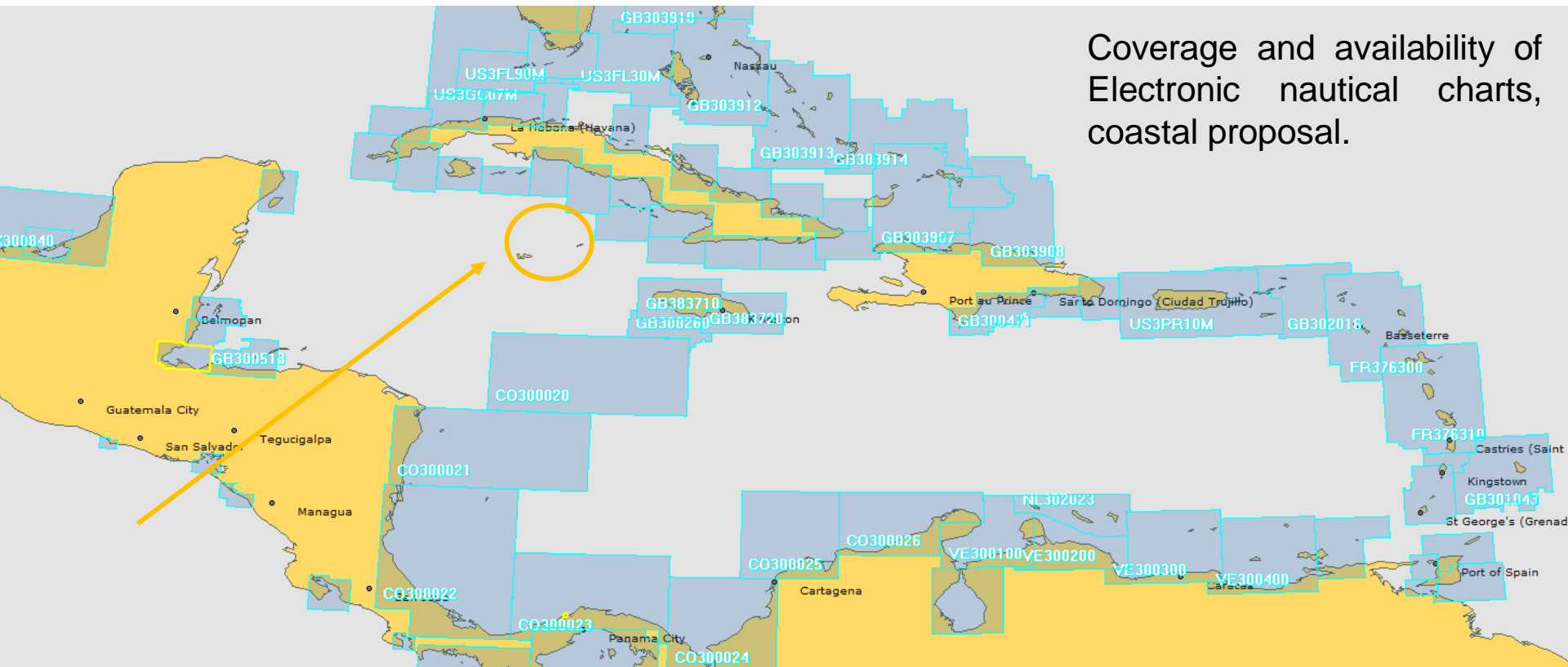
Are the ENC's equivalents to the paper chart Scheme INT ?

- Irregular form of the data
- Different compilation scales

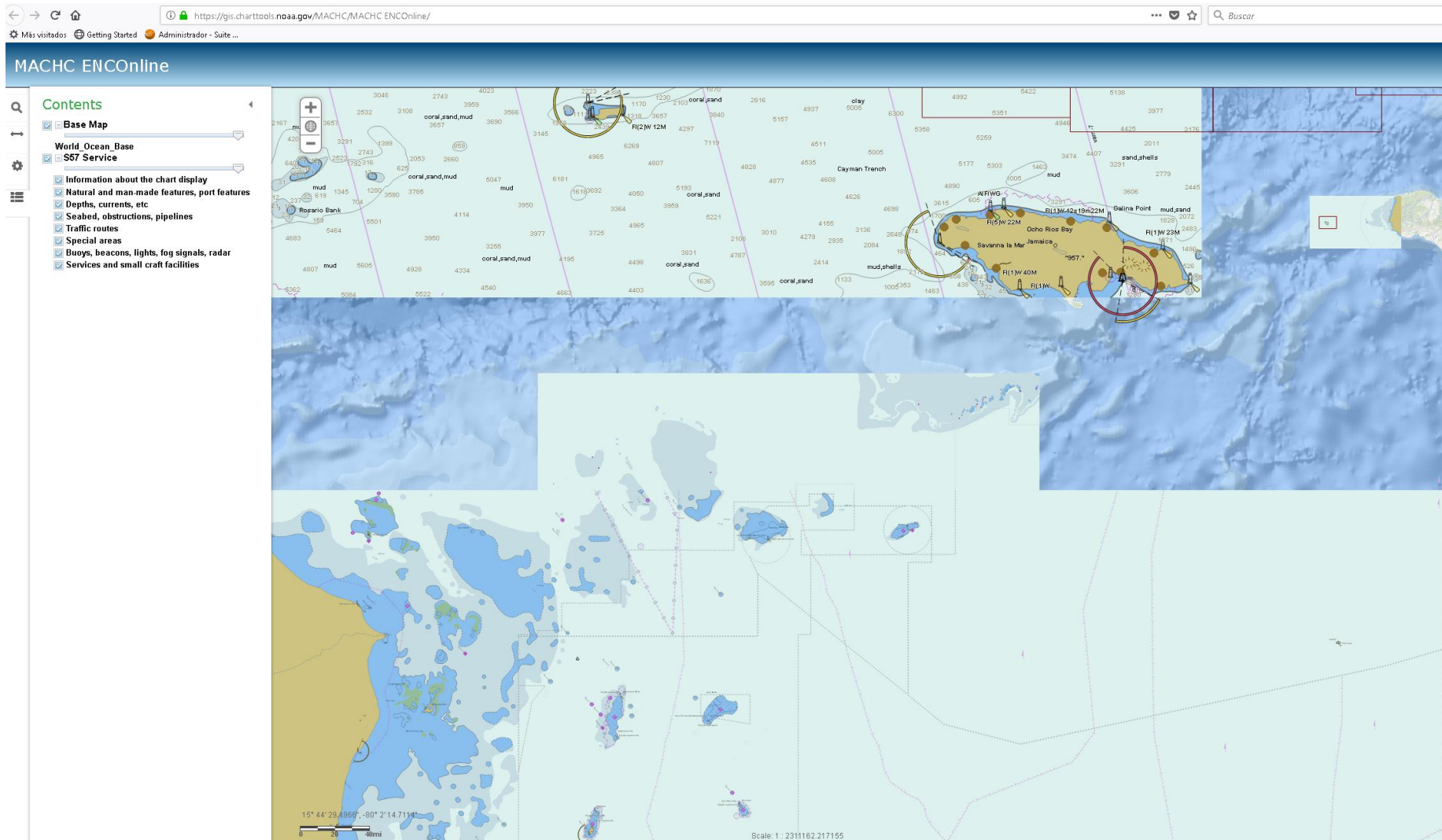


<http://chart.iho.int:8080/iho/main.do>

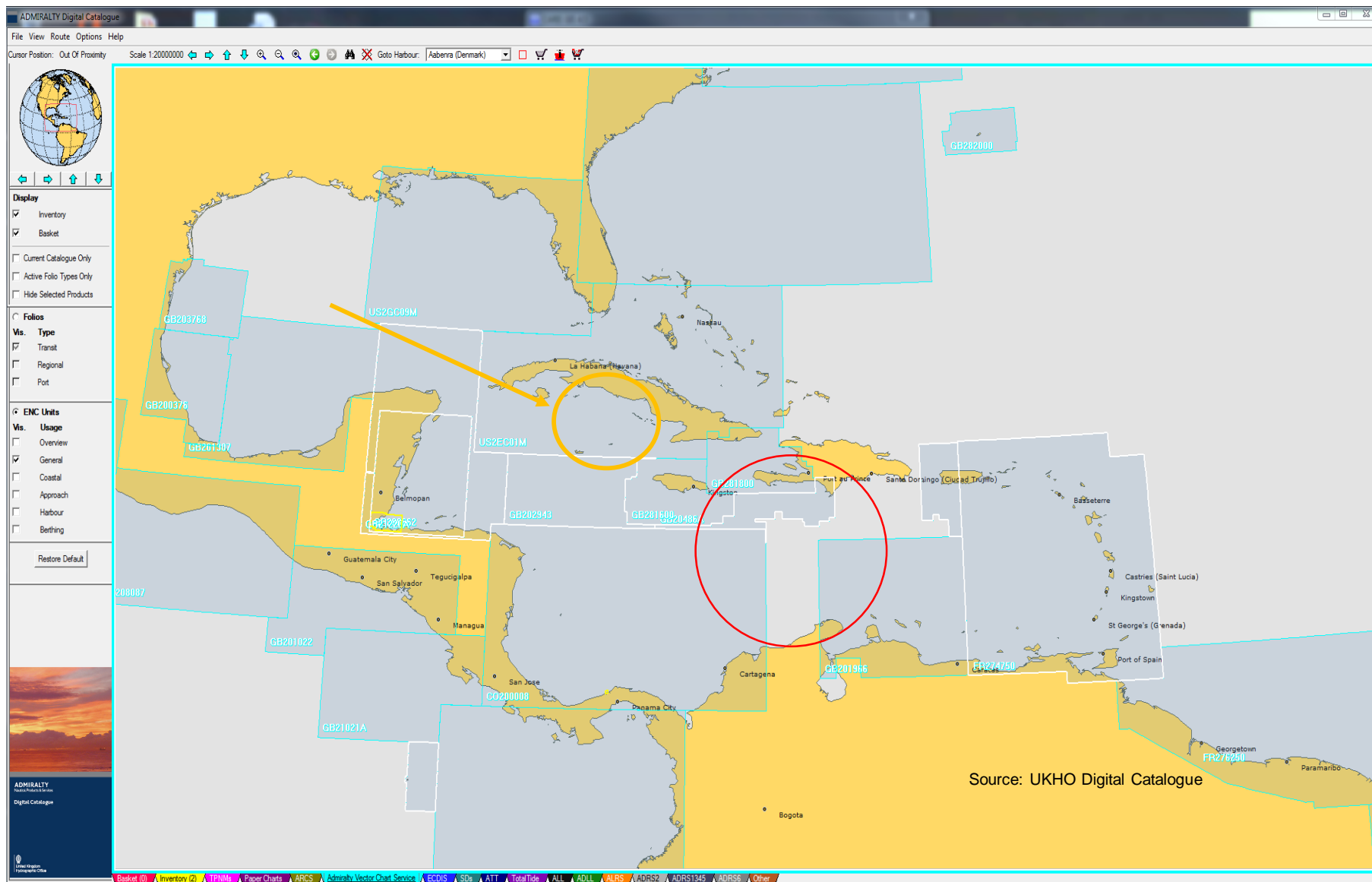
Coverage and availability of Electronic nautical charts, coastal proposal.



➤ Without regional standardized Schemes, Not uniforms SCAMIN values



➤ Gaps, Not full coverage

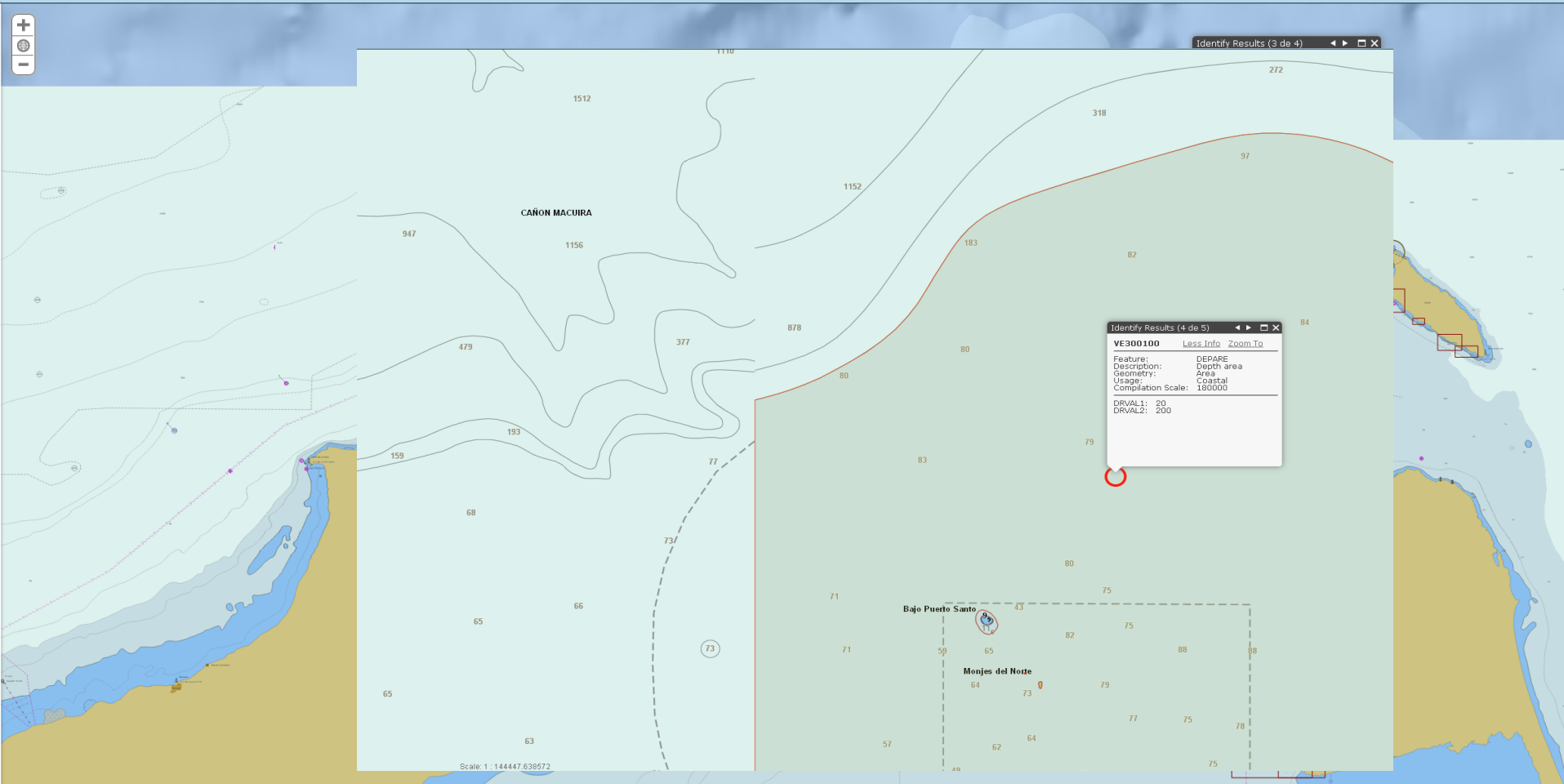


Coverage and availability of Electronic nautical charts, General proposal.

The same Usage band and the same compilation scale

- Not horizontal consistency

ACHC ENOnline



Catalogue online de la MACHC - OHI

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What We want to get with this?

Establish a regional scheme for Usage bands 1, 2 and 3.

How will we do it?

UNIFY :

- Compilation Scale by purpose
- Using similar cell size, coverage area (respectable geographic extent bands 1, 2, 3)
- Rectangular / adjacent cells
- Use of SCAMIN (We all do not apply the recommended by OHI)
- Horizontal Consistency
- Stronger the WEND principles, Agreements between countries.

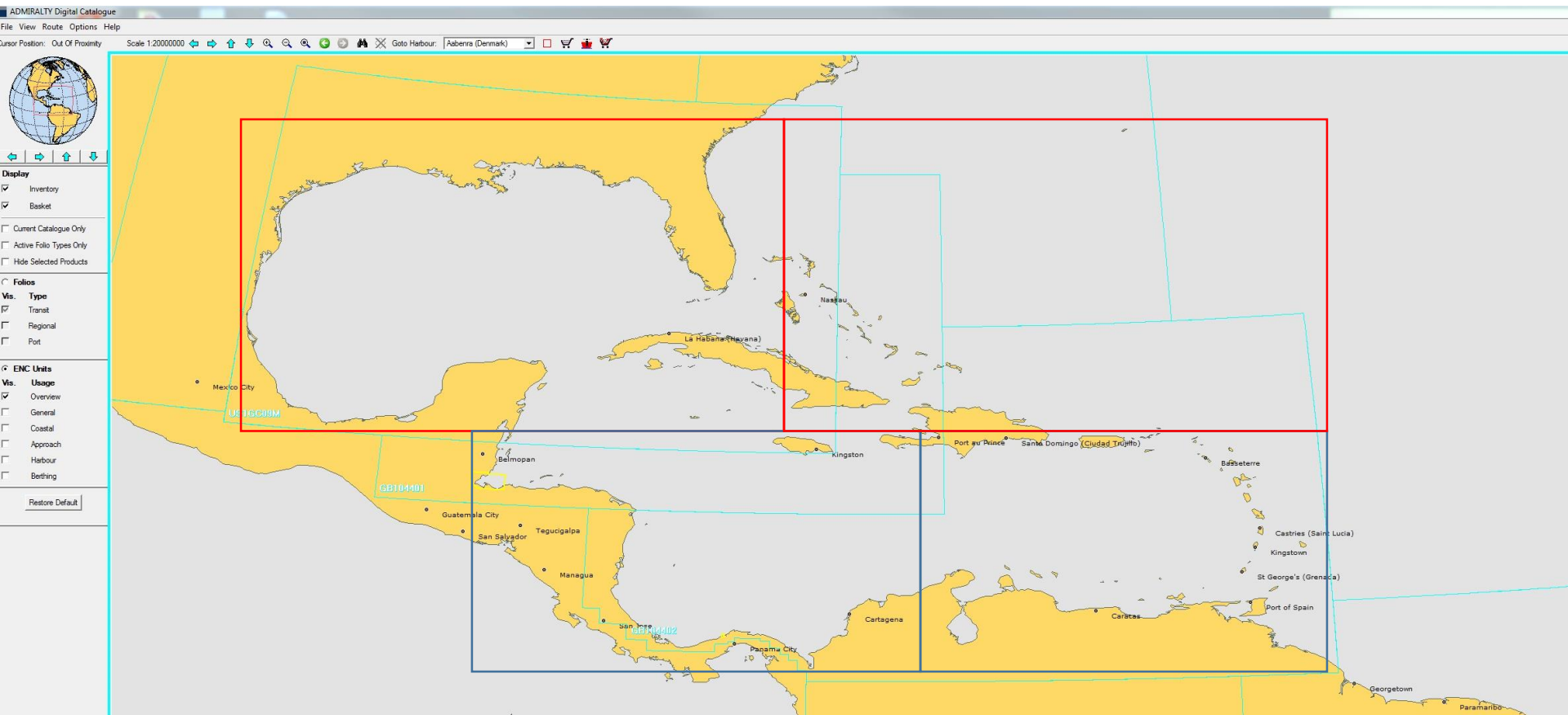
Compilation Scale 180.000



Preliminary Example proposal.

General

Compilation scale 700.000



BENEFITS

- Guarantees display on the ECDIS of uniform coverage and information at the appropriate scales for different nautical purpose.
- Remove areas of overlap
- Avoid gaps
- Organization in production and reduce maintenance by numerous cells
- With more practical for generate the other products

Gracias

NORTH ATLANTIC OCEAN
SOUTHWESTERN SHEET

SOUNDINGS IN FATHOMS

For Symbols and Abbreviations, see Chart No. 1

MERCATOR PROJECTION
SCALE 1:625,000 AT LAT. 50°

CONVERSION TABLE
FATHOMS TO METERS

Fathoms	Meters	Fathoms	Meters
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