

25th Conference of the Meso American - Caribbean Sea Hydrographic Commission

National Report by France

[MACHC Member]



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Top achievement during the year

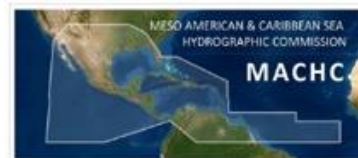
Hydro-oceanographic surveys

- Shom has not received any surveys covering Martinique, the ports of Saint-Martin and the rivers of French Guiana.



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Top achievement during the year

Charting

- ENC
 - 1 new cell produced (in French Guiana - FR473370)
 - 56 FR ENCs available in Region B (schema is now completed)
- INT Charts
 - 1 new edition (*INT4193 - FR7485*)
 - FR INT schema is complete for Region B
- Nat CHARTS
 - 1 new edition (*FR6738*)
 - 1 charts are planned to be issued in 2024/2025 (*FR7482*)

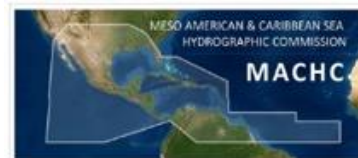
MSI

- No change (no NAVTEX station in French overseas territories, MSI warnings are broadcast through SafetyNet network)



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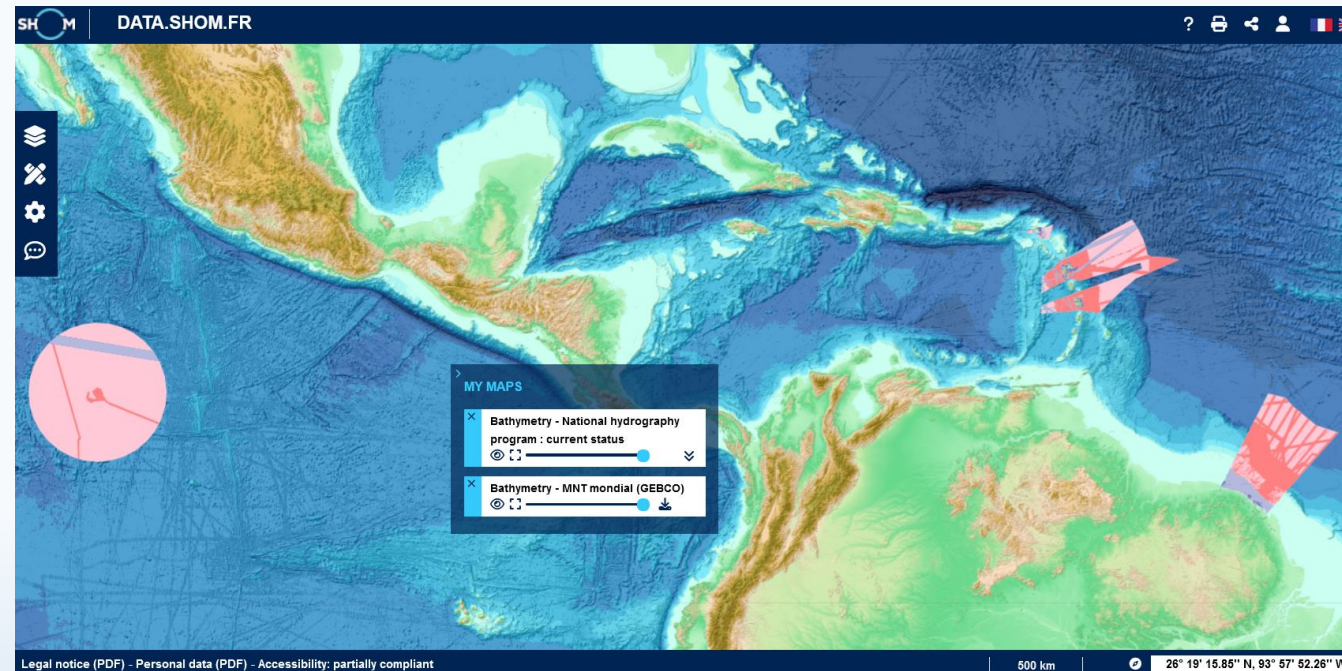
Top achievement during the year

MSDI

- data.shom.fr

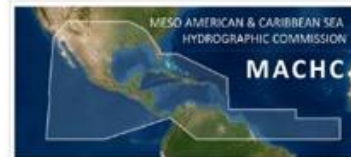
Latest evolutions:

- New layer
 - National hydrography program - current status
- Updated layers
 - Aids to Navigation (AtoN), including improvements on IALA zone B display
 - Bathymetric measurements
 - Tidal table calculations
 - On demand tidal table calculation
 - Global coastline
 - GEBCO worldwide bathymetric DTM



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Top achievement during the year

Evolution of tidal services

There are 14 French permanent tide gauges located in the region : Guadeloupe (3), Martinique (3), Saint-Martin (1), French Guiana (7)



4 new tide gauges in French Guiana : Pointe des roches, Pariacabo, Ile Royale anse Legoff, Saint-Laurent du Maroni.

From 2021 to 2023, the RONIM tide gauge network has been **renovated** : data loggers, transmission equipment and supervision software have been renewed.

The expected results are : better reliability, improved transmission rates and reduced maintenance needs.

The tide gauges in the MACHC region have all been updated.



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Top achievement during the year

Empowering women in hydrography

Training of a Colombian woman hydrographic officer as part of the joint CANADA-IHO Empowering Women in Hydrography (EWH) project. 3-week hydrography training programme offered jointly by the Shom and ENSTA Bretagne in Brest.

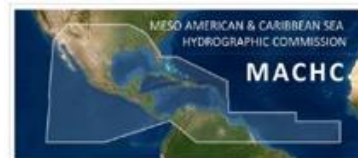


Topographic work in the Shom premises



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Top challenges and /or obstructions

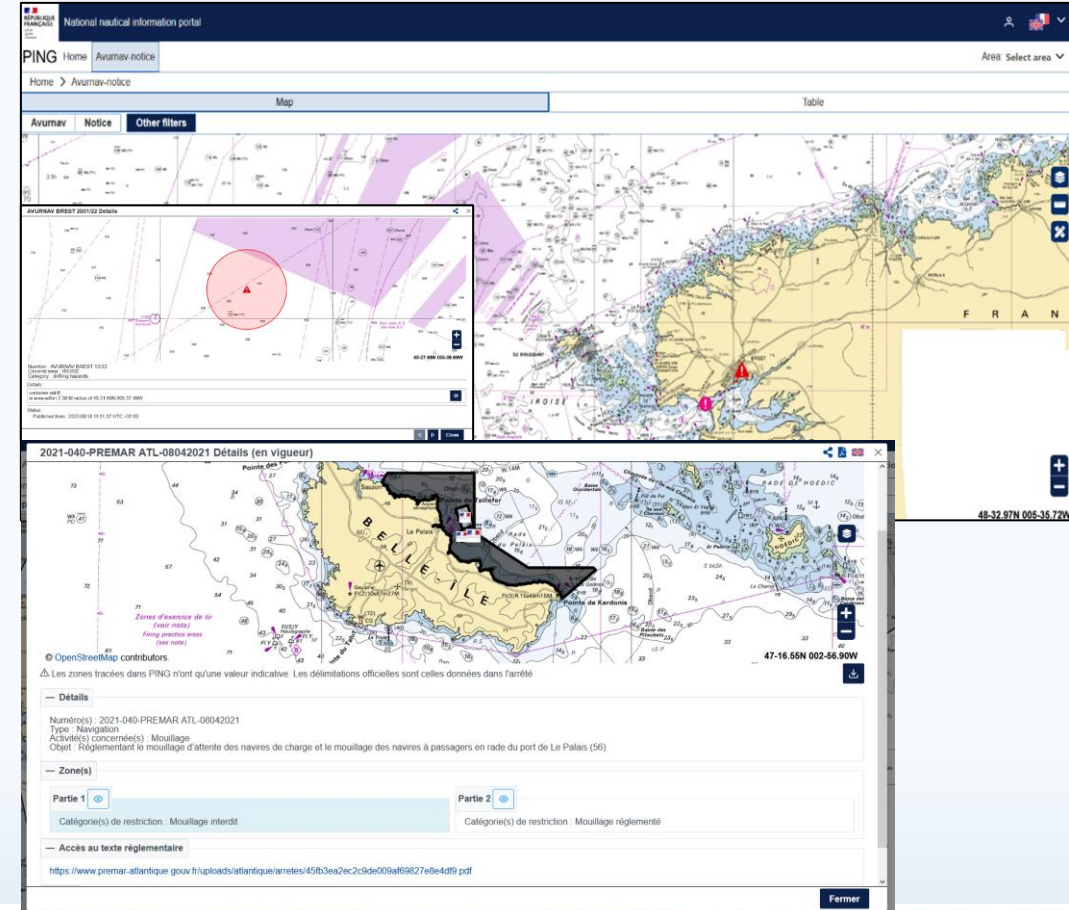
S-124 – French national nautical information platform PING

Shared information system for the transmission, formatting, digitization and posting of nautical information on the Internet

This platform is structured around 3 modules:

- ❖ production and diffusion of navigational warnings,
- ❖ transmission of source information by maritime services and users in order to contribute to nautical information,
- ❖ production and diffusion of maritime regulations in a spatialized form.

Production and dissemination of navigational warnings in compliance with S-124 (as soon as the specification standard is operational) with compatibility with the current NAVTEX and EGC systems



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Top challenges and /or obstructions

Crowdsourced bathymetry - CSB

- 22 November 2022, Publication of an instruction of the French Prime Minister on crowdsourced bathymetry
- Data from crowdsourced bathymetry in French waters are transmitted as a priority to the Shom, or alternatively to one of the following trusted third parties :
 - the European Marine Observation and Data Network EMODnet, via its "Data Ingeneering" portal EMODnet, via its Data Ingestion Portal (<https://submission.emodnetingestion.eu/>);
 - the IHO Data Centre for Digital Bathymetry (DCDB - <https://www.ngdc.noaa.gov/iho/>).
- CSB data : in accordance of the IHO B-12 publication, collected with standard navigation instruments (No MBES or other scientific equipment) during routine manoeuvres.
- CSB data in FR waters to be transmitted to Shom by the trusted nodes before dissemination. Only the validated data sets transmitted by Shom can be distributed through EMODnet Bathymetry and DCDB.



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Top Plans that affect the region

Transformation of the hydro-oceanographic capacities

- **Sketch up of the expected capacities**

- **Ship Dimensions (range)**

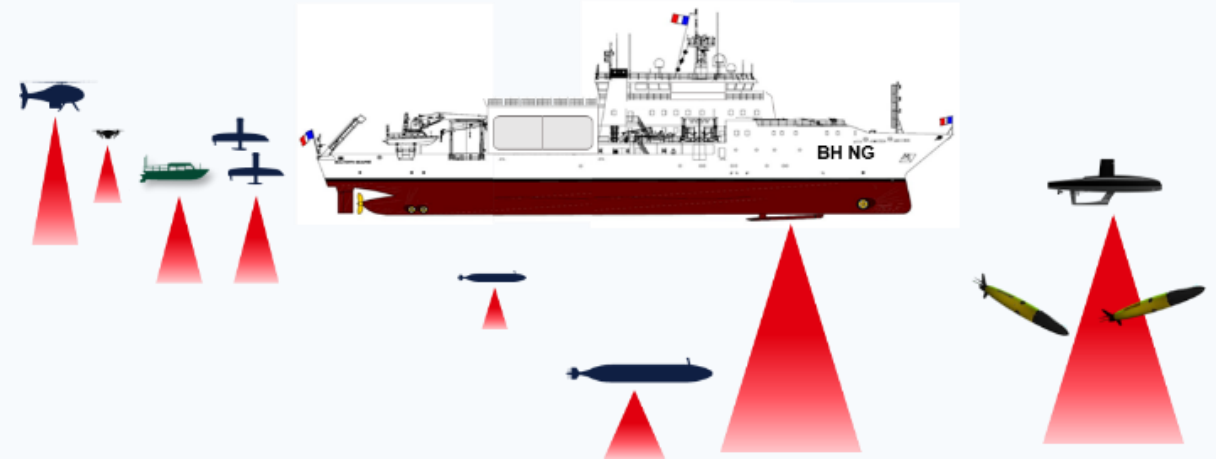
- Length: 90 metres
- Gross tonnage: 3,000 tonnes
- Average operating speed: 10 knots
- Maximum crew : 80 (29 for specialists)

- **Full hydroacoustic suite**

- MBES (shallow, medium, large class), SBP, SBES, ADCP, ...

- **Scientific facilities**

- Handling equipment
 - Stern and mid-ship 'A' frame
 - Comprehensive winch suite
- Laboratories (humid and air-conditionned)



- **Mobile vehicles**

- 2 medium class USV
- 1 hydrographic survey launch
- 1 large oceanic class USV (not on board)
- Micro AUVs
- 1 AUV 6000
- Gliders
- 1 micro and medium class UAV

Top Plans that affect the region

Transformation of the hydro-oceanographic capacities

- **Latest experiments & ops**

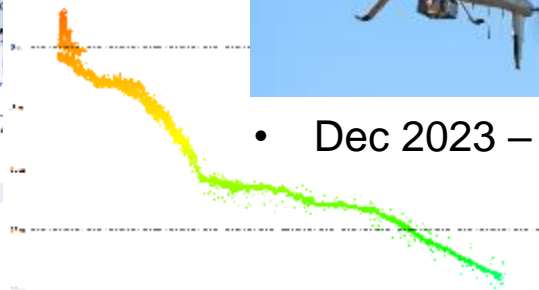
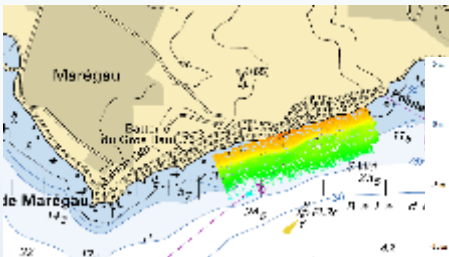
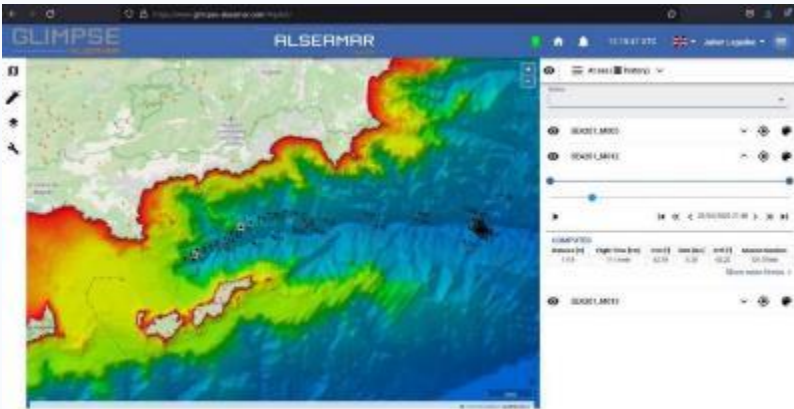
- August 2023 – 2 gliders Sea Explorer (Alseamar) // July 2024 – **1st operational survey**



- October 2023 – 1 USV DriX (eXail)

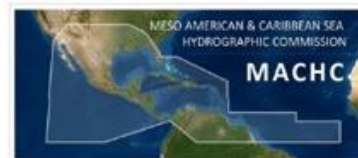


- Dec 2023 – 1 UAV S100 (Schiebel) / Lidar VQ840G (Riegl)

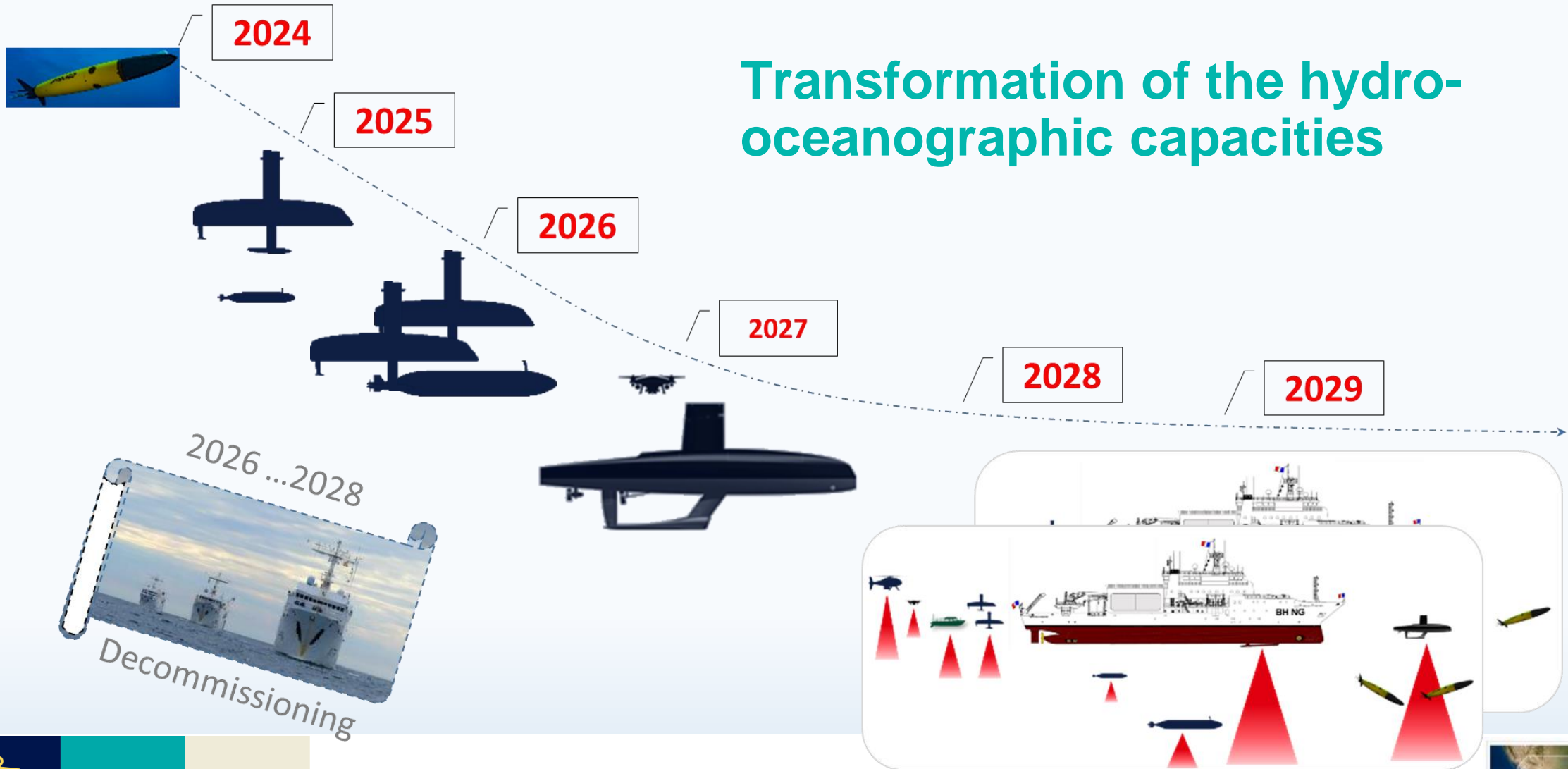


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Top Plans that affect the region



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Top challenges and /or obstructions

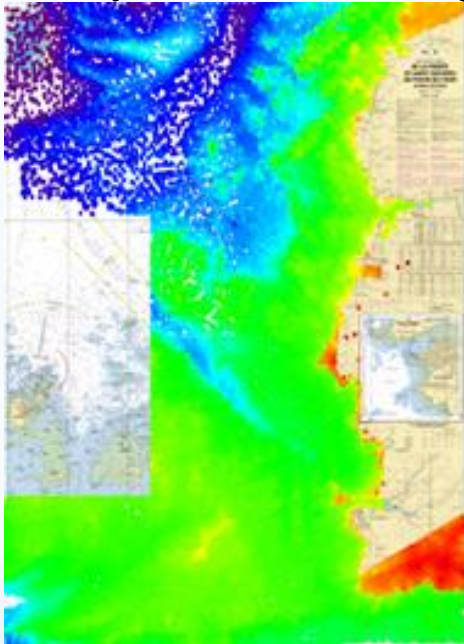
First feedback: two-thirds time savings



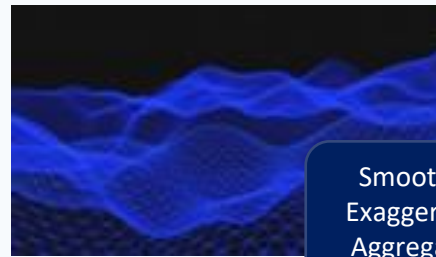
Automatic generalization

Calhypso : a major step forward

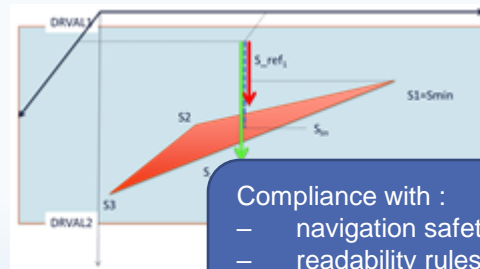
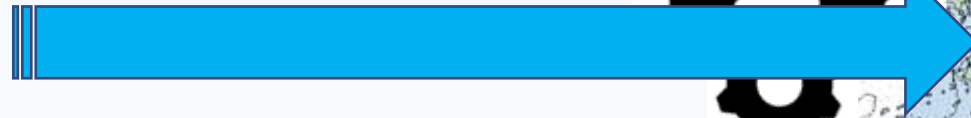
Bathymetric knowledge



65 500 000 soundings



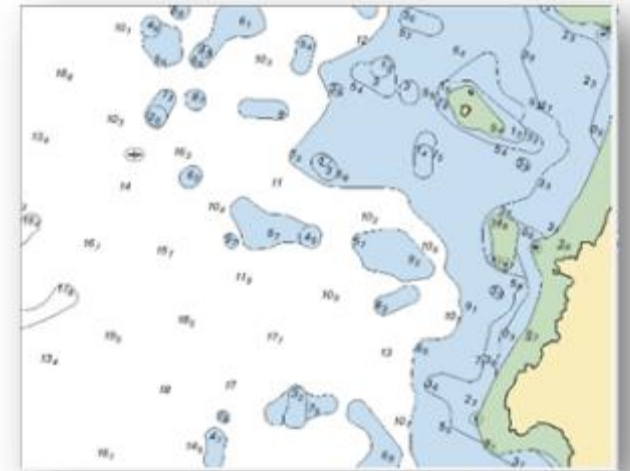
Smoothing
Exaggeration
Aggregation



- Compliance with :
- navigation safety rules
 - readability rules
 - geomorphological relevance rules
 - topological consistency rules



Automated generalized chart



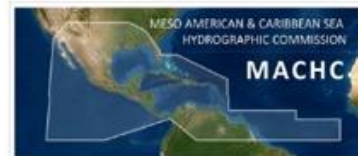
1 417 depth contours

3 033 soundings



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Top Plans that affect the region (3 maximum)

(Charts, surveys, training, other)

Unified Cartographic Source (FCU)

A single charting scale per area

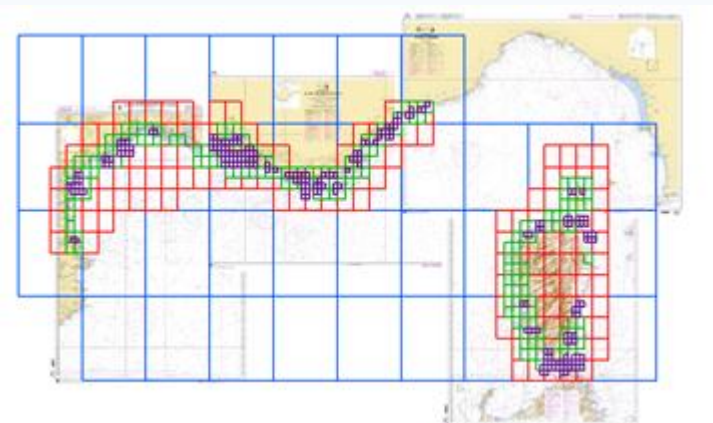
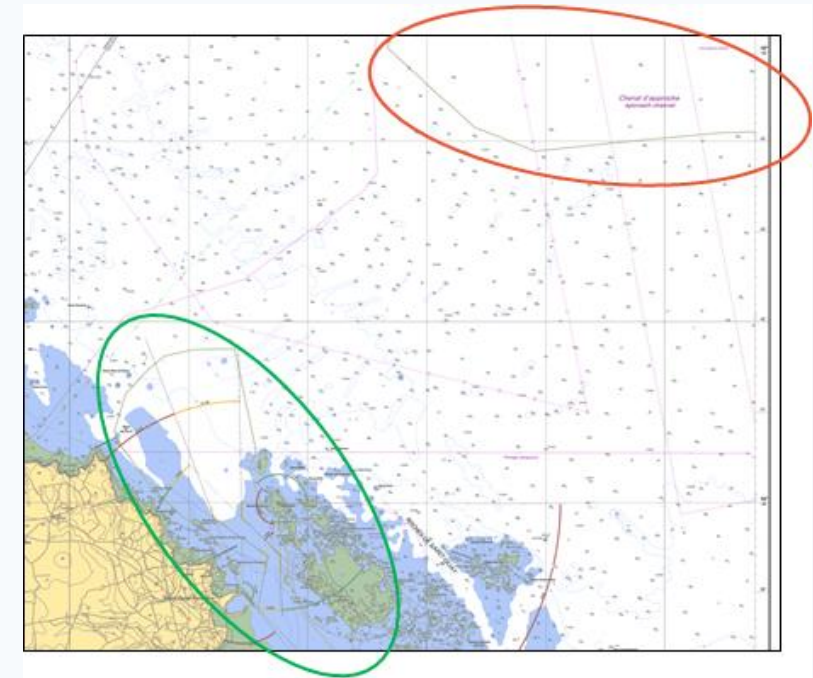
A chart will be a **view/extraction from the FCU**

Limited number of **compilation scales : 6**

Used of **gridded cartographic Source** and **Automation**

ENC will be produced in a grid scheme

Start of production October 2024 by France



Gamme	maximumDisplayScale S-101 (CSLC S-57 – Compilation)	minimumDisplayScale S-101
UB1	1: 1 500 000	/
UB2	1: 350 000	1: 1 500 000
UB3	1: 90 000	1: 350 000
UB4	1: 22 000	1: 90 000
UB5	1: 8 000	1: 22 000
UB6	TBD ^(*)	1: 8 000



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